NATURE IS OUR TEACHER: MORE-THAN-HUMAN COMMUNITIES WITHIN THE DEEP NATURE CONNECTION MOVEMENT

by

Jennifer Ann DeMoss

(Under the Direction of Julie Velásquez Runk)

ABSTRACT

The 1977 Intergovernmental Conference on Environmental Education in Tbilisi, Georgia, solidified the goals of environmental education: to foster awareness of human dependence upon global ecological processes in order to encourage attitudinal and behavioral changes. Over time, recognizing that informational tactics were not always fostering behavioral changes, Western educators made epistemological reforms, prioritizing the affective dimensions of human-environment interactions. However, educators have only recently been revising their stances on the humanistic assumptions underlying Western educational practices. Some scholars believe that rejecting the ontological status of nonhumans as resources for human consumption is a key to stemming environmental destruction, and that posthuman educational practices are one method for challenging human exceptionalism. Educators with the Deep Nature Connection Movement, an affiliation of nonformal environmental education programs spread across North America and Western Europe, work upon a similar premise that nonhumans are knowledgeable agents who desire to contribute to multispecies societies, who can be educators in their own rights. In this dissertation, I explore how one affiliate of the Deep Nature Connection Movement, The Human Nature School in Traverse City, Michigan, seeks to foster collaborative,

more-than-human communities within youth and adult educational programs. Using participant observation, video-cued multivocal ethnography, and semi-structured interviews, I determined that their storytelling practices and embodied methods contributed to an ethos in which humans and nonhumans are mutually permeable and intelligible. I also found that their caretaking-conservation practices reflect emancipatory positions on nonhuman beings, upsetting oppressive assumptions that nonhumans should be subservient to humans. Here, I outline their methods of engaging more-than-human collaboration in northern Michigan landscapes, and the emancipatory pedagogies that emerge from their educational practices.

INDEX WORDS: Posthumanism, Multispecies ethnography, Conservation, Environmental education, Emancipatory education, Decolonization

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DEDICATION

I dedicate this dissertation to my family, especially my parents, Sandra and William Zeigel, who made fieldwork in the frozen North (and basically every other good thing in my life) possible. I thank my extended family and ancestors for giving me the opportunity to try out this gift called life. Thanks for loving—or at least tolerating—each other long enough to get me here. I am truly grateful.

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There are too many plants, too many animals, too many elements, too many beings of all shapes and sizes and corporeal states to name and acknowledge here. You have all my gratitude for making and shaping me, and I hope to have something to offer you one day, too.

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

Nicholas[1] and the twins, Gabby and Zach, waved to me as I pulled up to the gravel pit. The gaggle of teens stood, confident and relaxed, slouched in the glaring sun on one of the hottest northern Michigan afternoons I had witnessed. The heat was exacerbated by the sparseness of shade in the gravel pit—most of the trees were thin young saplings, or stunted adults finding their ways in the dust and dryness. The kids sucked on candy cigarettes and playfully pushed each other as I got out of the car and walked towards their makeshift camp, a hastily pitched tarp over a fire pit with long logs for seating. They offered me a can of La Croix, yelled out, "Jen's here, Jen's here," over and over just for fun, and then we settled down to talk through the scenario.

Scenarios are a key component of pedagogy at Human Nature School (HNS), a nature connection program in Traverse City, Michigan that was the site of my dissertation research for almost two years. They happen once or twice during a semester, which can extend for four months for the homeschool groups who attend HNS, or last a week during summer camps. Scenarios are a culminating event: the students, generally 7 to 12 years of age, are mandated to synthesize the animal tracking, plant identification, stalking, bird language, or other skills they've learned during their HNS programs to solve a sort of living puzzle. Teen and adult volunteers act out the scenario, and the younger participants have to come up with a plan of action based on what they noticed in the scenario.

[1] Participants have consented, as per my Human Subjects protocol, to use their real names.

As an example, one scenario in a summer 2016 scout camp involved a witch from Russian folklore, Baba Yaga (played by an adult volunteer), capturing a hiker and her young son (played by the HNS program director and her son) because they had been littering in the forest and hitting the trees. The summer camp kids had to sneak up on Baba Yaga and her henchwitches, "accidentally" overhear how to free the captives, and do so without any of the witches spotting them. They had to use the sneaking skills associated with the "scouting" theme of the camp. They were also supposed to learn that hurting the forest was bad—Baba Yaga would have let the two hikers pass unharmed had they been treating the woods with respect. Because the summer campers spend less time involved with HNS, the summer scenarios can be chaotic. The scenario in the gravel pit was no exception. The description that follows is my impression of the events of that day, which are related to the overarching themes of conservation and nonhuman sociality I explore in my dissertation project with the Human Nature School.

The scenario: a secret party

Nicholas started talking as soon as I stepped out of the car, and didn't stop for the next few hours. "I'm Fred," he said, pulling a beanie down over his long, brown hair. "I'm the bossy one. You're the lazy one who lays in the hammock while we're all working. Gabby's the wizard." Gabby smiled a gap-toothed smile at me and began pulling on rainbow balloon pants reminiscent of MC Hammer. "Remi and William will be here soon to set up the music for the party. You need to start tagging the trees we're going to cut down. They'll be here soon." He handed me fluorescent orange flagging tape and pointed to the scrubby growths of pin cherry, aspen, and dying white ash that ringed the sandy flats of the pit. The gravel hill marked with sandy deer trails rose above us to the north. I negotiated with the kids to take the role of the wizard—really

an untalented magician in a top hat—then flagged a few scrawny cherry trees. No doubt about it, we were the bad guys, chopping down trees to fund a secret party in the woods. It would be the job of the summer campers, who would soon arrive upon the scenario, to sneak up and figure out what we were doing and how they could stop us.

Remi and William arrived, William laughing ceaselessly about the ridiculousness of the whole situation. They ransacked the car I was parked behind for trash and started throwing La Croix cans on the ground. An enormous speaker, also dragged from the trunk of the car, ended up perched precariously on its roof. Remi hooked up his iPhone and dance hall music engulfed the gravel pit, startling two joggers running in the hills above us. Soon Remi (DJ Macaroni), Gabby (Flo), Zach (Carl), William (no name), Nicholas (Fred), and I (Junebug the magician) were ready for the party.

A few minutes later, it began. The HNS directors were secretly texting Nicholas with their whereabouts so that the scenario could run "smoothly." Nicholas received a text and turned to report to us.

"Everyone, phase one is starting," he whispered.

"What does that mean?" I asked.

"It means, Junebug, that they can see us. We need to start talking about the party. And make sure to repeat yourself a bunch to make sure they get the message."

At once the most inane, repetitious conversation began, shouted over a thumping bass line:

"Hey Fred, when's the party gonna start?"

"It starts at six, I said. The food's gonna get here at three. Junebug, start tagging those trees like I told you to."

"Man, I can't wait for the party tonight, I love secret parties. How many people are coming?"

"Two hundred people! We texted everyone we knew!"

"Wow, a secret party in the woods! It's gonna be great. When are they coming to chop down all the trees to sell for the party?"

"They're coming tomorrow and then we can sell the wood to make money for this awesome party."

"Wait, are you sure we're supposed to be out here having this party?"

"Who cares, no one will ever find out until it's too late. And then we'll have all the money from the trees."

"Let's just chop down the whole forest!"

"Yeah the whole forest!"

"Burn the whole place down!"

"DJ Macaroni, turn the music up!"

I pretended to show Gabby a few very bad magic tricks while Remi flipped through tunes and Nicholas chewed on pack after pack of candy cigarettes. Gabby and Zach built a tiny fire, pretending they had no idea how to do so safely. William crushed empty La Croix cans on his head and laughed hysterically. As I faked juggling and whipped my cape about dramatically, I kicked trash strewn across the camp in a wide arc.

Slowly, hiding behind shrubs and small trees, the children began to surround us. Someone threw a handful of popper fireworks in the scrubby forest to the east and our whole group, led by a bossy Nicholas, followed to investigate. There was mass confusion, dictated by our leader who consulted his cell phone for minute by minute updates.

“Ok, I think we need to wait here for a minute to let them catch up,” Nicholas whispered, and our small, sweaty band of illicit partiers stood restlessly in the shade while the scouts crept closer. When we turned back to the tiny fire under a perilously swaying tarp, a blur of blond hair and tan legs ran by the fire, dumping sand on it to put it out. Quickly, the tousled heads of more children began to appear, peeking above the hoods of the cars. Small bodies scrambled up the sandy hill, their arms full of the trash I had strewn about the camp. Small hands snatched orange flagging tape off the trees I had tagged. La Croix cans began appearing on the top of my car as a small revenge. I would later find a popper attached to the driver’s side door.

After consulting his iPhone oracle, Nicholas moved on to the next stage of the game and secreted the water guns from under a car. When finally one of the adults accompanying the raiding kids popped out of the forest, Nicholas sprayed her with a soaking blast and the kids burst from their hiding spots in a frenzy of chaos. They tore through the camp, ripping at water guns and wigs, accusing my group of being polluters and generally bad people. Once the battle was over, I took off my top hat and wizard cloak and sat in a circle around the still-smoking fire with the staff and summer campers of Human Nature School.

Kriya Miller, one of the directors and founders of Human Nature School, along with her co-founder and husband Matt Miller, led the debrief. She first asked the kids what my teen-aged co-conspirators and I were planning to do. Accusing fingers pointed towards Nicholas and a chorus of high-pitched voices tattled on the enormous—and possibly illegal—party this heinous ringleader was planning in *their* woods. When asked how they were going to fund the party, those accusing eyes turned to me, Junebug, the wizard who would cut down a barely-surviving forest just for fun. In increasingly excited tones, the kids jostled for space to tell how they snuck up on our clueless band of merrymakers in the woods. We picked up your garbage, they sneered.

We put out your fire, they taunted. You were going to sell the trees, they accused. We ruined your party, they guffawed. The debrief turned into a triumphant bedlam as the kids howled their delight at foiling our rotten, polluting plans.

That week of summer camp came to an end with the scenario. While the group of about 25 kids packed up their backpacks and continued to taunt us on their way back to their waiting parents, our band of party planners began packing garbage back into cars and taking down flagging tape the kids had missed. It had worked just as Matt and Kriya had planned a few days before in their tiny office: the summer campers hated us, in a jesting, little kid way. We were polluters of their beloved forest, and therefore the enemy. And, although they were a cadre of nature-deprived public school children on summer vacation, they had managed to somewhat successfully sneak their way into enemy territory, kind of like scouts of lore. Just another day's work at Human Nature School.

Setting the scene: Human Nature School

Human Nature School is one of hundreds of non-formal education programs that do nature connection work. And that work is hard to describe in terms of environmental education in a public-school sense. The nature school doesn't have a particular curriculum. There are no grades attached to anyone's performance. Their classroom is the ever-changing landscape of the Grand Traverse Commons—it would be impossible to fit all the kids into HNS's tiny 10' X 20' cement block office. Although the instructors use scientific literature, such as birding guides or a chart of aquatic insects, more likely than not they will rely on seasonal cues than teaching tools to guide their activities for the day. Games are more prevalent than any sort of strict lesson. And though the kids may learn about the beech bark scale denuding Michigan forests, they will not be

harassed by tirades of a dying earth as I was in my own days of environmental education, when I was pretty sure I would perish at an early age from pollution or a swarm of killer bees, along with all the polar bears.

If that's what nature school is not, then what is it? Human Nature School is affiliated with the diffusive Deep Nature Connection Movement (DNCM), a group of over 300 non-formal education programs all over North American and Western Europe[2]. They operate on a teaching model that is thought to mimic the cycles of nature and life called the 8 Shields Model. Each shield is associated with a cardinal or ordinal direction, a time of day, a season of the year, a stage in the development of humans and other animals, and games that exemplify those cyclical qualities. Rather than being guided by a particular learning objective, programs at HNS and other schools like it are motivated by instructor interest, ecological availability, and student attention. Kids who lose interest in animal tracking might well settle in for a day of carving, or some fast-paced games based on bird and other animal behaviors. They might spend the last half hour of the day in quiet contemplation at the edge of a grassy field, instructed to use their senses to reach out to the quietest sound, or the tiniest flicker of movement from birds flitting from shrub to shrub.

While knowledge of the environment is at a premium—it is crucial that kids be able to name and identify the correct plants when being taught to forage for wild edibles amidst poisonous plants—a main objective for these programs is to get participants into relationships of care with nonhumans. The nonhumans available for companionable relationships include plants, (mostly wild) animals, stones, elemental forces like water (lakes and rivers) and fire, wind, spirits, whole forests or specific landmarks, or celestial bodies, but generally not human-made

[2] I will return to the biases inherent to this geography later in this dissertation.

items. No one is trying to get people to have relationships of care with ink pens or railroad tracks, though they might be guided towards gratitude for those technologies. Rather, nature connection proponents want humans in more industrialized areas to pay attention to the diverse occupations of nonhumans rather than the endless antics of humans endlessly available on TV and computer screens.

Participants are thought to build that care through supported exposure and guided attention to the nonhumans who foster possibilities for life on earth. Knowing the names of the black capped chickadee or staghorn sumac is not enough. Even knowing some interesting facts about their habitats is not enough. However, caring about the particular birds, plants, stones, raccoons, and other components of one's local environment is an essential element of being nature connected. And, just like relationships among humans, relationships of care across species lines are as diverse as the participants.

Relationships of care with nonhumans, or at least of careful attention, are not new. Indigenous communities worldwide have been lauded for their intimate ecosystem knowledge and meticulous efforts to shape landscapes in ways that benefit multiple species (Agrawal 1995, Johnson 2009, Toledo 2002); animistic societies have long been the study of anthropologists (Bird-David 1999) and mythologized by authors promoting pan-shamanistic practices (Francis 2017, Orr 2012). The Human Nature School and the DNCM in general trace their lineage to such ideas; however, they are also based in the precarity of human survival in the present moment. DNCM programs are emerging in the midst of seemingly insurmountable global climate changes. And why wouldn't they? Educational interventions have been considered key components of mitigating environmentally destructive behavior for decades (Carter and Simmons 2010). However, information-based lesson plans on environmental degradation have

not lived up to their promises of delivering strikingly new changes in environmental behavior (Kollmuss and Agyeman 2002, Rotas 2105). The world is still being fracked, developed, burned, paved, and stripped at an astounding pace. Some educators have suggested a switch to the emotional and affective dimensions of environmental education: How do we teach kids to care about the natural world enough to participate in it with some grace (Chawla 2006, Halpenny 2010, Pooley and O'Connor 2000)? What are the conditions that have led to such devastation that scientists are calling it the "sixth mass extinction" (Ceballos et al. 2017)? The current situation is not a driverless train speeding us all to oblivion; it's the result of a series of decisions made over an almost unthinkable amount of time by an almost unimaginable amount of people. What kinds of tools are available to make better decisions? What educational methods are available to promote life on a damaged planet (Tsing et al. 2017)?

Some educators advocate attention to the fundamental premises behind relationships with nature (Haraway 2008, Merchant 2005, Monbiot 2014, Snaza et al. 2015). Enlightenment philosophies and Cartesian duality are common scapegoats for the current environmental situation—knowledge is gained through rational, sometimes scientific, disembodied mental means, relegating feelings and human bodies to a more primitive category (Farnell 1999). Feelings, or relationships with nonhumans that are not based on material facts, are non-rational according to this model. Snaza et al. (2105) place humanistic education—which is based off human needs and accomplishments at the expense of nonhumans—squarely within the Cartesian duality. Educational methods that continue to reproduce the duality between humans and nonhumans, intellect and feeling, body and mind, will only serve the current path of environmental destruction.

Posthuman education is a foil to humanistic educational traditions in which human interests are the sole purview of educational ventures (Snaza 2015). Educational schemes, in a sense, create the conditions under which humans learn how to be humans; how to distinguish human bodies from others. "Schematically we can say that humanism is the belief that there exists such a thing as "human" coupled with the belief that this human should be the center of one's concerns, a belief that we call anthropocentrism" (Snaza 2015:20). Posthumanism also provides a different ontological engagement with education—what kind of human subjects does public education produce? How does humanistic education promote environmental degradation by segregating categories of humans and Others who are meant to be exploited? How does this type of education impede the complex relationships that are possible across innumerable differences? From a contrasting posthuman approach, how does treating a cardinal or a chickadee as a teacher with a similar status to human teachers affect pedagogy? What educational alternatives elide the central position of humans in educational programs, and move humanity away from environmental devastation?

While there are excellent prescriptions in scholarly literature for developing what are called posthuman or more-than-human pedagogies in Western industrial contexts (Morris 2015, Taylor et al. 2012), to date much empirical research on more-than-human relationships has involved indigenous cultural revitalization efforts (see Battiste and Henderson 2009, Beckford et al. 2010, McCarter et al. 2014, Simpson 2002, 2014) or the inclusion of indigenous science into research and classrooms (see Battiste et al. 2000, Berkes et al. 2000, Cajete 1994, Deloria, Jr. and Wildcat 2001, Jacob and Blackhorn 2018). There is less research on how those notions of nonhuman agency and social and emotional connections with nonhumans shape Western educational opportunities within the human-altered landscapes that define the Anthropocene

(Crutzen and Stoermer 2000, Pacini-Ketchabaw and Nxumalo 2016, Taylor 2017). This lacuna exists despite newly emerging educational forms that embrace more-than-human relationships, such as those provided at Human Nature School. Research experiences with nature connection programs throughout the U.S., a lifelong interest in alternatives to current environmental paradigms, and rollicking literature that questions the central tenets of human being have led to the central questions that drive my inquiry into posthuman education methods.

Research questions

The overarching question for my dissertation is this: How does nonhuman social interaction within wilderness education affect pedagogical opportunities for teaching about conservation? In other words, how does regarding nonhumans as knowledgeable participants in human society shape environmental education? This question is centered around key concepts in anthropology and other disciplines, and requires no small amount of reflection on one's own philosophy about the liveliness of nature. Scholars have been asking, how does the colonial baggage of empire affect one's ability to see nonhumans as something beyond a resource to be captured for human consumption (Blaise et al. 2013, Plumwood 2006, Velásquez Runk 2009, West 2005)? What is the disciplinary view of nature's role in society? Is it possible to take research participants' views on the agency of nonhumans as a baseline assumption within an anthropological narrative (Blenkisop and Piersol 2013, Nadasdy 2007)? This is all to say that my work is not a treatise on the functionalism of anthropomorphism, or of animal metaphors in NCM pedagogy. It is rather a question of how one can address the liveliness of nonhuman companions who shape human societies and the possibilities of life on earth. And, in a landscape that has experienced multiple

regimes of relation since human occupation—some benign, some catastrophic to many members—this is a pressing question.

In order to broach the subject, this inquiry is broken into three key components, as detailed below.

1. Environmental educators who have abandoned solely informational tactics have begun to advocate for experiential and transformative environmental education (Bonnett 2003, D'Amato and Krasny 2011, Flowers and Barrett 2014, Lane 2012). In particular, educators are questing for the kinds of outdoor experiences that can engender feelings of compassion and caring for nonhumans in hopes of ceasing environmental destruction (Chawla 2006, Delia and Krasny 2018, Halpenny 2010, Kellert and Wilson 1993). Experiential education can be considered total sensory immersion in one's selected environment, which relates to embodiment, "a way of living or inhabiting the world through one's acculturated body" (Weiss and Haber 1999: xiv). Also called "techniques of the body" by Mauss (1973[1934]) and "habitus" by Bourdieu (1977), research into embodiment conceives of human bodies as the seat of culture, with cultural habits being both acted out and disseminated through bodily practice (Delamont and Stephens 2008, Crossley 2007, Csordas 1990, Lock 1993, Marchand Trevor H. J. 2010, Shilling 2017). Much research on embodiment has focused on varieties of sensory experience (Guerts 2005, Hockey and Allen-Collinson 2009, Howes 2005, Ingold 2009, Pink 2009, Stoller 1989) and bodily education into communities of practice (Lave and Wenger 1991, Harris 2007, Grasseni 2007, Ingold 2011), along with topics such as race (Gravlee 2009, Lee 2014), gender (Butler 1998, Halberstam 2005), and control and resistance (Foucault 1995, Scheper-Hughes and Lock 1987). I will contribute to this robust body of theory by

analyzing the alternative sociality of bodily practice within the DNCM. A foundational premise of the Deep Nature Connection Movement is that human beings need to connect with their bodies in order to connect to nature. This is done through multiple routes, including outdoor activities that direct and educate the senses (Ingold 2011). Students are taught that their bodily movements can help them communicate with nonhumans and create alternative multispecies social relationships. Therefore, a concern of this dissertation is how bodies are educated into multispecies communities of practice. To this end, I ask what are the concepts and methods that surround the practices of including nonhumans as active partners in nature connection education, and where do they originate?

2. As stated above, relationships of care with nonhumans are associated with current themes in environmental education (Chawla 2006, Delia and Krasny 2018). These relationships are often touted as the key to developing more widespread conservation behavior. Educators are implored to consider teaching science outdoors (Becker et al. 2017, D'Amato and Krasny 2011, Hammerman et al. Higgins and Humberstone 1999, Rickinson et al. 2004) and have school gardens (Blair 2009, Pfleger 2015) so that children can live their lessons and potentially avoid the damages of Nature Deficit Disorder (Louv 2008). Over the past few decades, hundreds of nonformal outdoor education programs have been established to acquaint North Americans with nonhumans in ways that are thought to foster relationships of care. However, caring can still take place in ways that perpetuate feelings of human superiority. The Enlightenment-era mandate of human exceptionalism, embedded in formal educational institutions, is blamed for a multitude of environmental sins (Taylor 2017, Merchant 1995, Luke 2002,

Horkheimer and Adorno, 2002). Championing a posthuman vision for education, Snaza (2015) argues that educational humanism congeals the ontological category of human, trapping students within a rationalist hierarchy that precludes meaningful understandings of nonhuman subjectivity and agency. What, then, does conservation look like within Western posthuman educational forms that attempt to place human beings into equitable social relationships with nonhumans? The Deep Nature Connection Movement, according to its founders, is not a conservation movement. The purpose is to grow fulfilled human beings who foster companionship across vast material differences. However, there is a cognate for conservation within the pedagogy: caretaking. On the surface, caretaking means that one has knowledgeable relationships of care with local landscapes and can perform some sort of management based on those relationships. In this section, I ask what activities exemplify caretaking; what comparisons can be made between conservation and caretaking; and how do relationships of care with nonhumans and ecological knowledge affect caretaking activity?

3. Anna Tsing and her coauthors wrote this brief passage in their edited volume, *The Arts of Living on a Damaged Planet*. They speak of our earth, haunted by spectres of the past, as well as potential ruined futures, the literal science fictions of possible worlds: "As humans reshape the landscape, we forget what was there before. Ecologists call this forgetting the "shifting baseline syndrome." Our newly shaped and ruined landscapes become the new reality. Admiring one landscape and its biological entanglements often entails forgetting many others. Forgetting, in itself, remakes landscapes, as we privilege some assemblages over others. Yet ghosts remind us. Ghosts point to our forgetting showing us how living landscapes are imbued with earlier tracks and traces." Active

forgetting of baseline landscapes is a key theme in ethnoecology literature that discusses the loss of ecological knowledge (Berkes et al. 1996, Gómez-Baggethun et al. 2010, McCarter et al. 2014). Atran and Medin (2010) have written that Western settler knowledge of the colonized North American continent is cripplingly scarce. At the same time, stories that remind people of their collective pasts, make sense of the world, and instruct us are firmly within the purview of anthropology (Basso 1996, Campbell 2008, Hurston 1990, Maggio 2014, Levi-Strauss 1978, Malinowski 1948). Research has explored indigenous narrative practices to continue and revitalize cultural heritage (Barnhardt and Kawagley 2005, Elder 2008, Kimmerer 2013, Smith 1999). In this article, I discuss how members of the Nature Connection Movement seek to modify human relationships with nonhumans through narrative practices. Educators in this movement use storytelling arts to define the types of ecological relationships that are necessary for emotional and practical connections to nonhumans to occur. They consider their work to be a makeshift practice of cultural revitalization. I discuss here key themes of these narrative practices and how they are deployed to direct attention to nonhumans and depict the relational worlds that nature connections educators seek to build through practice.

Research site

The route from the south to the north end of Michigan's lower peninsula follows centuries of indigenous people's trails (Pohl and Brown 1997). Ojibwe, Bodewadmi, Odawa, Fox, Sauk, Huron, Menominee, Miami, and other indigenous peoples carved the footpaths that would become a system of major and minor highways cutting through a state known as "the Mitten" for its iconic shape. One such trail, which traversed from Detroit northward to the Mackinaw Bridge,

is now the main artery I-75 through the state, and part of a route I traveled at least a dozen times on my way to my research site in Grand Traverse County.

The interstate tours pervasive scenes of urban and rural life: flat green farmland veined with concrete and spotted with the urbanity of Detroit, Flint, Saginaw, and Bay City. The monotony of the interstate stops at the M-72 exit at Grayling, leading to another imbricated layer of travel—this highway used to be a footpath linking the northward trail towards the peninsula's tip to the Grand Traverse Bay on the western edge. Traveling towards the setting sun on trips from southern to northern Michigan, I passed through the sandy Grayling jack pine plains, the fire prone home of the Kirtland's warbler. In smaller northern towns were repeated scenes of Family Fare supermarkets, ubiquitous outfitters vying to rent out the latest watersport supplies (or skis depending on the season), gas stations, cafes, scores of thrift shops and party stores, and seemingly most prevalent, the small hotels, motels, and motor home parks that cling to the highway's edges. Temporary lodgings—bed and breakfasts or weekly rentals slumping beside gas stations and chain restaurants—dot a region known since post-intensive logging days as a vacation paradise, a respite for the frazzled nerves of southern city dwellers. Shuttered downtown storefronts sit vacant, symptomatic of slow economic decline and the migration of commerce to strip malls. Lumberyards hum at the towns' edges, chewing up trees secreted from behind idyllic forested scenery. Where once Anishinaabek peoples walked their long-established path for trade and travel, settlers and visitors from all parts of the planet drive to catch a glimpse of the "Pure Michigan" endorsed by the state advertising campaign.

What do they come for, the mobs striking off for the cool northern summers? Still driving west past scrubby woods and the occasional tall white pine standing sentinel by highway's shoulder, one answer is easy to see: water. Northern Michigan in particular cradles deep pockets

of glacially carved lakes punctured by rivers and creeks. M-72 leapfrogs over the Au Sable River, narrowly avoids Lake Margrethe, skims past Dollar Lake, straddles the mighty Manistee, crosses Black Creek and a narrow northern vein of that same Manistee River; is diverted across a branch of the Boardman River, Barker Creek, Battle Creek, Williamsburg Creek, Yuba Creek, and Acme Creek before finally washing out to the glittering East Arm of the Grand Traverse Bay. At sunset the bay's reflection is dazzling enough to blind, the water so close it seems that one could easily slip from the road to the depths. A quick left onto Highway 31 on a summer day leads to a clot of traffic meandering slowly into Traverse City, Michigan.

People escape to Traverse City in droves, and the tourism industry has followed them. The Grand Traverse Bays and the narrow finger of the Mission Peninsula flank the north side of Highway 31. On the south side are the commercial enterprises that characterize Traverse City today: restaurants, hotels, gift shops, and shopping plazas. Every June and July, 500,000 people descend upon this town of about 15,500 inhabitants for the National Cherry Festival (L'Heureux and Brown 2013). Film, music, and arts festivals, microbreweries, wineries, and well-advertised recreation opportunities draw even more in from all over the world. Yachts bob in the west bay all summer. It seems as though fireworks pop throughout the entire month of July.

Depending upon one's occupation and feelings about "fudgies," as tourists are often called (along with numerous expletives), the post-season lull that follows Labor Day tends to bring either a sigh of relief or seven months of money woes. For some the money woes are year-round—low wage jobs are not sufficient to pay for housing in many parts of Traverse City (McGillavary 2015). The popularity of Airbnb and skyrocketing property values, particularly for lakefront property, have pushed lower income residents to surrounding Benzie and Leelanau Counties, or smaller townships in Grand Traverse County. Residents complain that housing costs

are leading to an exodus of young people and to large populations of homeless residents, some of whom face hypothermia trying to survive the winter camping in local parks, or are attacked by intoxicated tourists in the summer (Stanton 2014, Thompson 2016). Human Nature School instructors teach the children not to approach homeless camps—in part to preserve the privacy of people living in the tents and in part to protect the kids, since a colloquial belief (true during my time in Traverse City) is that at least one homeless person is found frozen to death every year in the park. Glamorous airbrushed images of Lake Michigan are only a small part of what tourism actually means to Traverse City.

Though the glittering inland ocean has had over a century of careful marketing to fuel tourism growth, another industry has historically drawn people to the area, one more closely related to this dissertation's subject. In 1885, the Northern Michigan Asylum, headed by James Munson, opened its doors. Variously known as the State Hospital and the Regional Psychiatric Hospital, the asylum functioned in a time when beauty, pleasure, fresh air, and wholesome exercise were considered curative for mental disorders (Curtis and Smith 1972). Patients farmed the land surrounding the hospital and raised livestock on 1,600 acres of property less than a mile from downtown Traverse City (Steele 2001).

The farming program ended in 1957 and the hospital, its patient population dwindling, closed its doors in 1989 (Grand Traverse Commons Master Plan). The buildings rotted through seasons of ice storms and muggy heat, until their renovation began in 2000 through the Grand Traverse Commons Redevelopment Corporation and the Minervini Group, a real estate and construction firm (Schneider 2010). Though some small buildings remain in disrepair, the former main Asylum building and surrounding grounds is now a shopping complex with restaurants and cafes, condos, a brewery, offices, and small shops selling luxury items (Fig.1). Most importantly,

the old hospital is backed by 500 acres of forest and fields with miles of hiking trails over state, township, and privately owned land. Dubbed the Grand Traverse Commons, the area is popular with dog walkers, mountain bikers, homeless folks who camp there, children's school and recreation groups, hikers, drug users, foragers, and still others. My dissertation research took place largely in this 500-acre area with a long history of use.

During my drives to northern Michigan, I had my sights set on one place: The Commons. The former centerpiece of main building 50, considered a fire hazard, was dismantled decades ago (Grand Traverse Commons Master Plan). In its place squats a small, tan box of an entryway with narrow halls leading to even narrower offices. One of those tiny offices is my destination on a Tuesday morning in early September 2016. As I walk through the circle drive towards the main entrance on the south side I see a few familiar cars: a battered green Subaru station wagon that I know from experience reeks of spilled milk on the inside; an off-white Ford truck spotted around the wheel wells with rust blooms from road salt. I open the inner doors and the building exhales the smell of coffee and eggs. I stop almost immediately at the first door to the right, but as I try to open it, a teenager's sandaled foot blocks it. "What's the password?" I hear him yelling from his place on a plywood storage bench to the right door jamb. I can see that just inside a shepherd puppy is wagging her tail so hard her entire rear end is getting whiplash. A blonde 7 year-old peeks through the crack at me as well: Wilder. He's wearing a fake stick-on mustache that he claims makes him look like famous tracker and wilderness survival expert Tom Brown, Jr. I push past the giant foot into the tiny office space, giving the teenager, Riley, a thump on the head, and settle onto a lopsided burgundy office chair. I have arrived for the morning meeting at Human Nature School. This scene of breakfast smells and teasing bedlam is repeated three to five times

a week for the two years I spent observing and participating in the hectic lives of the school's educators and participants.

Figure 1.1: Building 50 of the Grand Traverse Commons. This was the main hospital area housing patients. The first floor is primarily offices and stores, with the upper floors renovated into condos. Human Nature School operates out of an office to the far right of the picture on the first floor, when they are not outside.

Forest types of the Grand Traverse Commons

The Commons area where Human Nature School operates is a mixture of forest types that sprang up post-logging and farming. Traveling west from the main commons buildings, past the main building 50 and various scattered restaurants housed in former administrations buildings, is a gravel drive leading to the Cedar Cathedral Trail. The trail starts off in a path flanked by Kids'

Creek to the north and an enormous hill (called cistern hill) to the south (Figure 1.2). In the hilly portions of the park like cistern hill and the park entrance, dominant tree species are sugar maple, American beech with remnants of white ash (*Fraxinus americana*) taken by the emerald ash borer (*Agrilus planipennis*) standing with skeletal limbs. Eastern hemlocks are predominant on the shaded, northern hillsides and are a favorite of porcupines (*Erethizon dorsatum*) who nestle in their branches and eat their bark in the winter. Douglas firs (*Pseudotsuga menziesii*), a favorite of chipmunks (*Tamias striatus*), who eviscerate the cones and leave small middens of their scales and cores, were likely planted by Dr. James Munson when he envisioned the Commons as a botanical garden. A predominant understory tree of these hillsides is the hop-hornbeam (*Ostrya virginiana*), so easy to identify from fissures like claw marks running down its bark. A rare sight in the park is the red oak (*Quesrcus* rubra), followed by the basswood tree (*Tilia americana*). Though a listing of all the herbaceous and shrubby plants of these mesic, mineral rich areas would be a dissertation unto itself, some of the salient ground species, used or noted by Human Nature School in their pedagogy, are the wild leeks or ramps (*Allium tricoccum*), sweet delicious trout lilies (*Erythronium americanum*), trilliums (*Trillium spp*.), doll's eyes (*Actaea pachypoda*), a poisonous plant that instructors like to warn about and blue cohosh (*Caulophyllum thalictroides*), another delicious looking plant that's not safe for eating.

Figure 1.2: The Cedar Cathedral path leading into the Commons park. Outside of this image to the right is Kids Creek; on the left side of the picture is the beginning of a steep slope up to the top of cistern hill. In this image Matt Miller, HNS executive director, is leading a group of Foxes in for a day of homeschool programming. There is an uprooted red oak, whose root ball can be seen in the upper center background, where the kids stopped almost every time they passed by to look for salamanders and pretty stones.

Following the trail, one finally enters the namesake cedar cathedral, a thin slice of swampy ground with cedar roots growing in mats just beneath the soil (Figure 1.3). It's possible to jump on the mat like a muddy trampoline. The dominant tree species is, of course, Eastern white cedar, with a smattering of paper (*Betula papyrifera*) and yellow (*Betula alleghaniensis*) birches. Kids' Creek cuts through the middle of the cathedral, its banks thick with muck that children love to jump in and. On the edges of the swamp grow contorted willows (*Salix spp*.), red

raspberries (*Rubus ideaus*), box-elders (*Acer negundo*), and red-osier dogwoods (*Cornus sericea*) that dot the wetlands and some dry uplands. Another prevalent species is buckthorn (*Rhamnus cathartica*), an invasive species that causes an unpleasant "catharsis" when mistaken for a black cherry and eaten.

Figure 1.3: The Cedar Cathedral. This group of homeschoolers is practicing sit spot, an outdoor sensory meditation. Some of them are sitting on or in the banks of Kids Creek, which cuts through the cedars. Kids often smear the stinky black mud from the creek onto their skin as camouflage.

Passing through the cathedral into the open air, one is faced on the north with mullein hill, a small scrubby hill covered in short grasses (*Poaceae spp.*) and mullein plants (*Verbascum thapsus*) that are used alternatively for hand drill fire kits or backwoods toilet paper. To the south are stag-horn sumac (*Rhus typhina*), whose ruby berries are handy for a sun tea. Taking the left fork will carry a walker to the spring, and heading straight ahead leads to fire hill (Figure 1.4). Human Nature School instructors will decide the direction based on the season and activity. If it were winter, then a crew of bundled children and adults would forge up fire hill to a bald. A gap in the forest reveals a grassy meadow, flanked by a copse of beeches and sugar maples and the thorny, dreaded Bradford pear (*Pyrus calleryana*). It is here on this hill, beneath sturdy but stunted trees, that HNS is able to build fires on state land. Walking further west would take one to the gravel pit described in the beginning of this introduction (Figure 1.5).

Figure 1.4: A group of winter camp attendees with Matt Miller on fire hill.

The alternate path down to the spring overlooks a grassy meadow with yarrow (*Achillea millefolium*), mulberry (*Morus rubra*), and widely spaced hawthorn (*Crataegus spp.*). This path leads over the spring to a cool copse of white pines that at times leak sap all over the blanket of needles below. A highly-coveted hawthorn shades the spring—it is thought by local herbalists to have more power since it grows over water. The kids have an ambivalent relationship with the spring. On any given day they can be seen damming it up, cleaning it out, throwing things in it, stomping in it, prohibiting others from stomping in it, splashing in it, quietly observing it, wading in the clay bank beneath it, trying to drink from it, yelling at their peers not to drink from it…the spring is an endless source of fascination and a popular place for instructors to take their students.

Traveling south from the spring is a path leading to yet another popular ecotone: swamps and meadows on the fringes of the Commons property. A cattail wetland dominates the southern edge of the property. The wetland is a mix of the native broad leaved cattail (*Typha latifolia*) and the invasive, fast moving narrow leaved cattail (*Typha angustifolia*). Just north of the wetland is off limits to the kids: a broad swath of wild parsnip (*Pastinaca sativa*) has been sprayed with herbicides numerous times to prevent its spread, and the plant's sap can cause a phototoxic rash to exposed areas. Just west of the cattail swamp is a grassy plain punctuated by copses of aspens and the medicinal balsam poplar (*Populus balsamifera*), whose stinky buds are used in skin soothing salves. Morel mushrooms (*Morchella esculanta*) grow throughout the aspens. This area is a popular place for sit spots due to its mixture of open meadow with edges, and a good place for games.

Figure 1.5: The gravel pit. The kids are making arrows for archery practice. Instructors who want to use projectile weapons always take kids to the gravel pit, where the slope acts as a back stop.

Last but not least: the apple orchard (Figure 1.6). The orchard is a remnant of the former asylum's farming history, and is located on the south end of the Commons, just west of the historic preserved barns where a famed milk cow Colantha Walker was once housed. The orchard produces tart, tongue-slapping apples of many varieties, and it's always a favorite during fall days when the kids want to pick apples or dry apple rings, or simply swing from the twisted branches.

The Grand Traverse Commons has meant so much to so many people. It has been smothered and delivered by ice, traversed and well-loved for subsistence, razed for commerce, farmed for asylum patients, landscaped for aesthetics, and planted by the footsteps of daily visitors. Though some gawk at what they perceive as "untamed" beauty, it is hard for me to walk its paths without seeing converging paths of multiple generations. The next sections of this dissertation contend with how the participants and instructors of Human Nature School navigate complex social relationships with the much-loved and modified Commons landscape, and each other.

Figure 1.6: The apple orchard. The orchard is a remnant of the asylum's farming program.

Methods

To learn how nonhuman social interaction within wilderness education affects pedagogical opportunities for teaching about conservation I joined the Human Nature School community from August 2015 to Jul7 2017. I used multi-modal methods to understand how bodies are educated to become nature connected, how relationships of care with nonhumans are entwined with the specific ways that HNS participants practice conservation, and how their proposed modifications to human societies intersect with goals of posthuman relationships. I relied on participant observation with children and adults, and complemented that quotidian work with semi-structured interviews, landscape walking interviews, and DSLM and GoPro videos and video elicitation. All research was approved by UGA's Human Subjects Committee, the Human Nature School, and by individual consent to be in the research by children and parents. I did not include the preschoolers in this project, because many parents of children in that age group felt uneasy about their participation. In the paragraphs that follow I will briefly describe how I used each of these methods to answer my research questions.

Throughout the research, I sought to integrate with the Human Nature School's multiple kids and adult programs. In discussing research methods, I will refer to the different HNS programs and thought it useful to overview them here. The Human Nature School operates a variety of programs on various schedules. The following illustrate HNS's yearly schedule (Table 1.1). I volunteered with or attended all of these programs during my time with HNS.

Table 1.1: HNS Kids' Programs and Schedule

Kids' Programs	Frequency
Homeschool programs for children ages 7 – 12. These programs are broken into two age groups: children ages seven to nine are in one group called "Foxes," while children ages 10 to 12 are in a group called "Coyotes." The groups are headed by at least two adult instructors accompanied by volunteers. Typical group size is 12 to 15 children. Homeschool programs operate during fall, winter, and spring semesters that mimic public school schedules. On homeschool days the teaching team is at the Commons between 8 am and 4 pm, with kids arriving at 9 am and leaving at 3 pm. During my time at HNS a majority of the attendees are kids who had previously attended HNS, and there is always a waiting list.	Twice a week, usually Tuesdays and Thursdays Price per semester: $500
Preschool/homeschool programs for children ages 3 – 6. This group of kids is called "Otters." Typical group size is around 10 kids, with many repeat attendees, though those who age out of the program vie for a spot in the Foxes. The kids arrive at the Commons at 9 am and leave at 1 pm, with instructors and volunteers present from 8 am to 2 pm. Preschool operates on a semester schedule, with no winter option.	Every Wednesday Price per semester: $200
Summer camps for children ages 4 – 12. Summer camps are filled with local public school kids or children summering in the Traverse area. They are held during July and August in the Commons, with kids attending from 9 am to 3 pm, and instructors present between 8 am and 4 pm. Kids ages 4-6 could enroll for up to two weeks of wilderness exploration camp, and kids aged 7-12 could enroll for up to four weeks of camps with themes of scouting or wilderness survival skills. The latter camps were broken into age groups, as detailed in the section on homeschoolers above.	For six weeks during July and August Price per week: $150
Afterschool programs for children ages 7 – 12. These weekly afternoon programs took place in the Grand Traverse Commons for public school kids between 4 pm and 7 pm. The programs typically consisted of outdoor games and challenges. HNS currently is not offering this program.	Every Tuesday Price per semester: $150
Teen program for children ages 13 – 17. These monthly programs take place at the Grand Traverse Commons between 9 am and 3 pm, September - May, and consist of both public and home school attendees. Teens play many of the same games as the younger groups with additional challenges, and focus more on bushcraft skills like friction fires, maple tree tapping, or other resource intensive skills. Instructors also work to make participants aware of meditation techniques for emotional control, or confidence building activities. Of all the programs at HNS, this was most sparsely attended, with about five to eight teens showing up per session.	Once Saturday per month, with an end of the year campout Price per semester $300

Table 1.2: HNS Adults' Programs and Schedule

Adults' Programs	Frequency
Apprenticeship Program for adults aged 18 – 99. This monthly program was a combination of nature connection skills passed down from Jon Young and Wilderness Awareness School. Participants generally met between 9 am and 5 pm Saturdays, and 10 am and 3 pm on Sundays, with occasional overnights. Some weekends were devoted to developing skills as a nature connection educator, and HNS leadership asked that apprentices volunteer with homeschool programs. Other weekends focused on the skills associated with being a nature connected person: animal tracking, edible and medicinal plant identification, tutorials on bird behavior, hide tanning.	Once weekend per month between August and May. Price per program: $1,300
Adult skills programs for adults aged 18 – 99 and children with guardians. These courses were one-off skills based courses, such as making soap with lye or learning to identify and process medicinal trees. They were made available as instructors from the area, usually not HNS staff, were able to schedule the classes. Classes typically ran for around 3 hours, and were usually not scheduled over the summer.	One week night per month Price per class: $25 to $50
Extended family meetings. The extended family program is associated with the originators of the Nature Connection Movement. They believed that a community of elders should be in place to act as a sort of guiding committee with the long view of HNS in mind. The exact function of the extended family group was not yet settled when I last visited HNS in 2018.	About one Sunday per month
Committee meetings. Executive direction Matt Miller and the Board of Directors created the Program, Development, and Cultural Committees by the end of 2015 and began organizing meetings by the next year. The Program Committee (now defunct) was in charge of developing new activities for homeschoolers; the Development Committee is in charge of fundraising; and the Cultural Committee is the outreach arm of the HNS, working as cultural ambassadors and scheduling educational events.	Once per month, plus annual events such a fundraisers or community building events.
Board of Directors meetings. The HNS board has been composed of homeschool parents and various community members with close social ties to instructors. They oversee funding and permitting for various events, track the school's budget, and keep track of the outcomes of committee endeavors.	Once per month, usually on a Monday

Method one: participant observation

Beginning in September 2015, I began observations, having received IRB permission from HNS instructors to begin research within homeschool programs. Getting research consent from parents was a lengthy process, and I finally received the last of those permissions by March 2016 (aside from those students who joined for summer programs, or who enrolled in HNS in subsequent semesters). I did, however, easily gain permission from parents and children in summer camps. Participant observation from this project began in August 2015 and ended July 2017, with a brief interlude of involvement with HNS during July 2018.

To gain an in-depth understanding of the HNS community, I joined the program and culture committees, and attended and worked at board meetings, land use meetings for a property under consideration, women's circles, singing circles, grief circles, workshops, fundraisers, parties, and every other community meeting I could attend. I volunteered for all kids' programs and worked in the office doing administrative tasks, like managing databases and social media, or even just cataloguing the bones, feathers, and skins used for nature connection activities. I worked part-time jobs to support myself, much as the motley crew I followed did to supplement their own incomes. In short, I lived my life as a typical, underemployed resident of a small northern town who happened to be particularly devoted to Human Nature School.

To systematize observations, I daily made lists of the people in each program I was observing and, at 15 minute intervals, made sure to focus primarily on their activities and interactions. I wanted the participants, especially the kids, to be used to my scrutiny. I made my notebook a prominent part of my research and transcribed fieldnotes every evening after returning home. Participants seemed to rapidly become accustomed to my habit of writing everything down, and made comments on the rare occasions I showed up without a notebook.

One part of participant observation in my case was to attend to the sensory elements of nature connection. Sarah Pink's (2009) and others' (Ingold 2000, Stoller 1989) exhortations towards sensory ethnography seemed appropriate for this project. Pink (2009:10) explains that,

> Doing sensory ethnography entails taking a series practical and conceptual steps that allow the research to rethink both established and new participatory and collaborative research techniques in terms of sensory perception, categories, meanings and values, ways of knowing and practices. It involves the researcher self-consciously and reflexively attending to the senses throughout the research process, that is during the planning, reviewing, fieldwork, analysis and representational processes of a project.

This mandate is not entirely clear, and I have my doubts that I always attended to the enormity of sensory information provided by groups of children crashing through the woods. However, I did my best to get a "taste" of ethnographic things (Stoller 1989); to attend to animals and plants in the ways that instructors and students seemed to, following their guidance to feel the liveliness of the world around me with senses beyond the ones we are accustomed to relying on out loud; to discover which sounds, or smells are relevant to nature connection practice and which are just "noise" from the bustle of the built world; to try to inhabit the sensory world of what it means to be a nature connected person. Having a few years of preliminary research experiences under my belt, placing myself within this sensory milieu seemed relatively easy. Representing this sensory experience in dissertation form is the more formidable challenge.

Method two: Semi-structured interviews

I carried out semi-structured interviews with HNS instructors to obtain more detailed information about HNS history, pedagogy, and activities. I interviewed all nine adult instructors who worked at HNS during my involvement (including one former instructor, and all of them at least twice); nine adult apprentices (all of them at the beginning of the program, and eight of them at the end of the program after one dropped out); 27 parents; twelve extended family members (all at least twice); and four Board of Directors members. I conducted interviews to learn about their motivations and histories of nature connection practice, the purposes of nature connection pedagogy (what it should feel like and what it should accomplish), their versions of caretaking/conservation, how relationships of care with nonhumans should be formed and maintained; the agency and liveliness of nonhumans, the human/community aspects of connection to nature, how they measure "progress" in nature connection pedagogy, and some of the spiritual and indigenous origins of nature connection, among other topics. An interview session would include descriptive questions and structural questions, such as describe a time in which you felt that a student successfully connected to nature, or what kinds of activities do you think a cohesive elders' council would be doing for Human Nature School? I also included informal list-making exercises, for instance, asking participants to list the kinds of plants they include in their pedagogy, or that they have learned at HNS, since plants are a prevalent topic of conversation.

The somewhat flexible format of semi-structured interviews allowed me to make inquiries of interviewees responses, as per Spradley's (1979). For instance, I strove to ask for the context around certain phrases: when confronted with a commonly used term, "caretaking," I asked informants to describe situations in which they or their students were caretaking. Another

typical question would be, “Can you describe what a typical day at Human Nature School is like?”

I asked the adult apprentices some of the same questions about their motivations for joining the programs. I was primarily interested in their understandings of nonhuman agency, if that was a concept they found valid, and what they considered to be conservation practices. I also asked about their experiences with community dynamics within the apprenticeship programs. I used these interviews primarily to answer questions two and three about understandings of caretaking and nature connection community.

I used interviews with parents of homeschool children in part as background information to answer question one, since I was able to interview parents about their decisions to enroll their children in HNS programs and their kids’ involvement in nature connection activity at home or as part of homeschool curriculum. I was also able to use these interviews to answer question three, since one assumption of nature connection practice is that kids need scaffolding at home to support what they learn at HNS. Parents are invited to become part of the extended HNS community to whatever extent they are able, usually in a volunteer or fundraising capacity.

Extended family members are involved in much of the spiritual aspects of the programs, as they are considered to be closer to “the veil” separating the living from the dead. They are also in more of an advisory role. At the same time, when I last encountered the extended family members they were still confused about how to enact their roles, and only about half of the members had ever volunteered for a homeschool program. They had, however, regularly attended meetings and on two occasions attended a workshop taught by an Anishinaabek elder from Peshawbestown, just north of Traverse City, which was organized to help them grow into their roles as HNS elders. I used interviews with the extended family to understand how ideas of

conservation and nonhuman agency were conceptualized by people who had little practical experience with HNS, and to answer questions about community formation (particularly in the context of indigenous influence), since I was able to watch the extended family from conceptualization to coalescence.

Method three: landscape walking interviews

Inspired by ethnobotany and ethnoecology plant and landscape walks (Johnson 2010, Martin 1995, Thomas et al. 2007,), and the potentials of video as an agile tool, I used landscape walking interviews to answer question two. I used head-mounted GoPro cameras during landscape walks with HNS instructors, as well as a DSLM camera that I focused on them as we walked. GoPro makes it possible to note focal points and social interactions of actors without burdening them with a handheld camera (Fathi et al. 2012). Sarah Pink (2007:244) notes that walking is an underutilized method in anthropology, and "…fundamental to the way that we both perceive and intervene in our environment." I was particularly interested in the ways that place meanings are understood through movement and interaction (Ingold 2000, Johnson 2010, Rival 2002). I wanted to use these walks to tap into how HNS instructors viewed relationships with the landscapes, and their thought processes on how the Commons, as a source of pedagogy, contributes to those relationships. In the vein of Keith Basso's (1996) research with Western Apache informants, I also wanted to evoke memories of place names and salient events that took place during their time teaching.

Landscape walk interviews were some of the first interviews I performed with HNS during fall 2015. I used a 100% sample of the four instructors who were employed with HNS at the time. I did subsequent walks with two volunteers in 2017; they had been with HNS since

2011, when they were enrolled in the first homeschool program. I randomly selected the name of the first instructor to be interviewed out of a hat, and explained the idea to him. I asked him to take me on a route commonly used by Human Nature School, and to think of me like one of the children to the extent that he could. I told him that I wanted to know what kinds of activities he would do/had done in those areas and why; what would he point out to kids and why; if there were any names associated with the areas we visited; and any stories he could think of from his experiences. I repeated this process with the other participants. I further explored their answers to my questions during the interview, asking for instance how they thought the landscape would respond to their presences, and how they understood what those responses were. When they named landscape features, I used a GPS device to mark the names and locations. These interviews lasted from 45 minutes to an hour and a half.

Method four: videos and video elicitation interviews

To complement this sensory approach, I chose to perform videographic methods as well. Cinema has the affective power to *move* one into sensuous synchrony with moving pictures (Rutherford 2003). While films and videos, particularly as research methods, have been widely critiqued for their situated, myopic views (much like the human eye, I'd like to remark), they are nonetheless compelling tools for data collection. A small but growing cadre of ethnographers are turning to video methods to analyze the sensory experiences of research participants, and to elicit memories and concepts during interview processes (Collier 2001, Tobin et al. 2009). Not only do videos allow viewers to access their haptic sensibilities of what they see and hear, they are highly evocative for those who have lived the depicted experiences (Pethö 2015, Henry and Fetters

2012). Video has the ability to help us live, or relive, events from an external vantage point. For creatures of embodied memory, that capacity is remarkable.

My work with video stems from Tobin et al.'s (2009) video elicitation method, in which he and his collaborators used videos in preschools to elicit answers from teachers about tacit educational practices. Because the work at nature connection organizations is dependent upon seasonal opportunities to eat or encounter various forest denizens, and Human Nature School runs on a seasonal semester system, the capture and viewing of the videos I collected also took place once per season. I was constrained by instructors' willingness to allow me to film certain days. For instance, I was not allowed to film the first or last few days of a session. Some programs, such as teen and adult workshops, took place only once a month, a frequency that seemed less than ideal for video data collection. I settled on videoing the youth homeschool programs (ages 7 – 12 years), which took place twice a week and where I received near unanimous support for video methods. The two parents who worried about video representation were satisfied to have their children's faces blurred from any public viewings.

Within the dates permitted for video work, I first randomly selected two days to perform video work, expecting to be taping from 8 am, when the morning meeting starts, to 4 pm when the afternoon meeting ends. I then randomly selected the age group that I would film first (the 7-9 year old Foxes or 10-12 year old Coyotes), assigning the other group to the second randomly chosen day. Following Tobin et al.'s (2009) protocol, I recorded the entirety of the program day with a DSLM camera and a RodeMic Pro hot shoe mounted microphone. As with participant observation, throughout the day I randomly drew participants' names to focus the camera towards their activities for a 15-20 minute period depending upon the number of participants involved. This did not give me an isolated view of each child or instructor, as there are rare clips

focused on single individuals, but rather showed them in varied interaction. I began preliminary filming in spring 2016, after receiving IRB approval from parents and kids, and finished filming in spring 2017. The following table clarifies how I scheduled the videos (Table 1.2). The spring 2016 videos proved to be unusable during elicitation interviews, so I repeated the filming process in spring 2017.

Table 1.3: Video schedule

Spring 2016	**Duration of filming/day**
Coyotes group: April 26	8 hours
Foxes group: May 17	8 hours
Summer 2016	
Coyotes group: July 20	8 hours
Foxes group: July 22	8 hours
Fall 2016	
Foxes group: Nov. 10	8 hours
Coyote group: Nov. 15	8 hours
Winter 2017	
Mixed group: Feb. 10	8 hours
Spring 2017	
Foxes group: April 26	8 hours
Coyotes group: May 4	8 hours
Total filming time	**72 hours**

To perform video elicitation, I had to make some hard choices. At the end of every semester except winter 2017, I ended up with 16 hours of video total. I had to edit down each semester's videos into an elicitation piece that would not overburden the instructors who would be its audience (Tobin et al. 2009). I chose to allot 30 minutes total to each elicitation video, reserving 15 minutes of footage for the Coyote group, and 15 minute for the Foxes. Then, I set about for suggestions on how to make these short videos effective. As visual scholars (Collier 2001, Pink 2011) reminded me, a good image for research is not always the *most* aesthetically pleasing one; I knew not to take an entirely narrative, filmic approach to these videos. Instead, I chose to emphasize the "elicitation" component.

I created elicitation videos by depicting scenes that could prompt questions. First, I included scenes that depicted routine activities in order to ask about their significance and functions. If an activity had proven controversial, I included it to prompt a deeper analysis of it. If I was unsure why or how certain events had occurred, I selected scenes to enable my own questions. I selected long cuts of structured activities. I cut out the long hikes through the Commons area, which sadly consisted of mostly unsteady footage. One hallmark of my selection was interaction: if there was interaction among the human and nonhuman participants, and it was unrepresented in other parts or sessions of elicitation video, I tried to incorporate it into the elicitation scenes. I retained the temporal arrangement of the scenes, and edited them into a stream of video with distinct breaks between each scene.

After editing the video, I scheduled viewing sessions to elicit instructors' responses. The instructors and volunteers who participated in the sessions were the intended audience, although once the co-owner of HNS, Kriya Miller, viewed a video from a summer camp she had not taught. I had envisioned individual sessions to allow viewers more privacy to make comments,

but this turned out to be impractical. Again, participant restraints were a major consideration, and group sessions are generative in that participants riff off each other's observations (Frey and Fontana 1991, Tobin et al. 2009). The HNS co-owners are married to one another, and were unwilling to view the videos separately. One instructor has two small children, and watched the videos alternately with a co-worker, or by herself as her schedule permitted. Another instructor's wife wanted to watch the videos, and as she appeared in one of them, I invited her to all the subsequent screenings. This proved a boon to my research; she wasn't familiar with all of the activities and he paused the video often to explain what was going on to her. Two teen volunteers (and siblings) worked together at almost every camp, one of them very shy, and having them together was a good balance as the shy sister was encouraged to talk by her outgoing brother.

In all, eleven instructors and volunteers participated in the video elicitation exercises, most of them participating for more than one season. While I had initially anticipated editing the videos and screening them within two weeks of filming, in my naiveté I had not understood how much time it would take to edit the videos and document those decision-making processes, much less schedule viewings with participants. Instructors typically watched the edited videos within six weeks of filming.

When instructors viewed the videos I video and audio recorded their responses to my questions and to the events that sparked their interests. I prefaced the viewing sessions with this simple question: what's going on here? As the video rolled and I saw something of interest, I would stop and ask questions, such as, can you describe to me what kinds of activities are happening and why? How does what you are seeing on the screen connect to nature connection practices? Why do you move like you move? I encouraged instructors to stop the videos

whenever they felt like to make comments. Each elicitation session lasted about an hour and a half per viewing, per season.

Now, the rest of the story

In conclusion, I ended up in charge of over 1,000 pages of field notes, hundreds of hours of interviews, well over 100 hours of systematic and off the cuff videos, hundreds of photographs (taken for HNS or to jog my memory), and several treasures: lifelong friends, a rock a little girl carved my face on, bow drill kits, animal skins, and tons of great memories. In hindsight, my data collection seems unbearably small compared to lived experience.

In the next three chapters, I use this corpus to answer my three research questions, and to address next steps in the process of understanding how the Nature Connection Movement interacts with a long history of international environmentalism and the more recent existential threats of climate change. This dissertation provides the foundations and scaffolding of a quest to determine just what nature connection pedagogy in general, and Human Nature School in particular, have to offer in terms of alternative relational forms among humans and the nonhumans we have, in evolutionary terms, "grown up" with.

The chapters of this dissertation follow the format of my query placed at the beginning of this introduction. In the first chapter, I discuss the embodied education practices of Human Nature School that are a foundational component of the Nature Connection Movement. I argue in this first chapter that HNS pedagogy is used to attune participants' senses first to the various evidence that nonhumans exist in local ecosystems in large numbers; second to the various meanings of nonhuman communications; third to humans' impacts on nonhuman behavior, whether plant or animal; and fourth to attune their bodily movements to "rhythms" that make

sense in terms of the grand, bodily conversation that landscapes are constantly in the midst of performing. I liken this pedagogy to an attunement of the body to the landscape, in which the human form can become more like other animals through attention and careful movement, with the goal of making less of an impact on nonhuman lives. This allows nonhumans to teach both how to become a body on a landscape, as well as allowing participants more access to direct lessons from nonhumans who become more available through nature connection pedagogy.

In the second chapter, I analyze what it means to be a caretaker with the Nature Connection Movement. Caretaking's closest cognate is conservation, and in this chapter I delve into the meanings and practices of caretaking, and how caretaking follows some aspects of conservation or stewardship in the U.S. while varying in other ways. I also analyze the emancipatory potentials of caretaking. Caretaking is in a middle ground between fortress conservation and a free-for-all. Caretakers are expected to become knowledgeable, respectful land managers who attend to nonhumans' needs as well as their own. They are guided by those fundamental principles discussed in the first chapter. In this second article, I outline how caretaking is an emancipatory practice designed to foster knowledgeable individuals who make management decisions based less on regulatory mandates, and far more on their own personal experiences with nonhuman relationships.

In the final article, I discuss a critical component of relationships with nonhumans: human community. The DNCM is founded upon the principle that human cognitive separation from nature is a root cause of violence against nonhumans. That separation, argues leadership, is the result of thousands of years of global colonialization and missionizing. Therefore, a fundamental step towards nature connection is what NCM practitioners call "cultural repair." Cultural repair is a fundamental part of the HNS extended family group, and as Matt Miller likes

to say, “Don’t forget, it’s the *Human* Nature School, Jen.” In this article I discuss the functions and protocols of human community repair within the Nature Connection Movement, and how these communities are considered an alternative to what some considered alienating processes of consumer capitalism and modern technology.

In the conclusion, I discuss future directions for this exploratory research. This dissertation provides the foundations—the who, what, where, and why of the DNCM in Michigan and how it connects to broader discourse both in the international movement and conservation, education, and environmental practice in the U.S. In this chapter I will summarize research findings, and make a case for continuing study with the NCM based on the need for drastically different forms of engagement with nonhumans due to rapidly degrading ecosystem processes.

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CHAPTER 2

EMBODIED PEDAGOGY FOR POSTHUMAN EDUCATION[1]

[1] DeMoss, Jennifer A. To be submitted to *Visual Anthropology Review*

Lena stands, tall and lanky, before a group of summer camp kids on the lawn of Michigan's Grand Traverse Commons. The towering cream edifice of the former Traverse City State Hospital looms to the east, and a lawn mower hums in the background. Lena is bespectacled, mid-twenties, smeared with dirt on her legs, face, and clothes, and propped up by an uprooted dead sapling she uses as a walking stick. Before her sit 20 youth, predominantly white boys, equally mussed. Lena is an instructor at Human Nature School (HNS), an informal outdoor education program in Traverse City, Michigan. On the gleaming green Commons lawn, the kids are learning a central lesson within HNS pedagogy: bird language.

"Who can help us move through the forest?" Lena asks over the lawnmower's drone. "Anybody?" She chooses a boy with his hand up who yells out, "I know! Birds." Lena mimics a few bird chirps and continues: "Birds are always talking. Sometimes it sounds like nonsense, but if you know how to identify what the birds are saying, then it's no longer nonsense, it's actually information for you. So, it's kind of like a secret language."

Gesturing to a small group of instructors, volunteers, and a few campers huddled 20 feet away, Lena reveals that they will be playing the roles of birds in a skit. The audience will guess what the birds are trying to say from their voices and body language. During the first skit, the actors look like they're doing the chicken dance. Hunched over, flapping their elbows and wrists, they prance in circles, gazing at the ground. Each one whistles tunelessly. The campers correctly guess the birds are in "baseline" behavior—not stressed, looking for food, singing territorial morning songs.

Figure 2.1: Bird language. Instructors and students mimic the behavior of birds singing their morning songs for an audience of summer campers.

When the skits are over, some campers mimic turkey vultures, running in tight circles around a young summer camper until they fall on him and pretend to devour him. The “prey’s” older brother pretends to soar on a thermal, occasionally flapping his skinny arms and shouting, “I’m a turkey vulture! I feast on the deceased!” He revels in the rhyme, shouting it over and over again.

Human Nature School has been my research site since fall 2015. As part of what is called the Deep Nature Connection Movement (DNCM), with affiliate informal schools across North America and western Europe, HNS strives to help their students create emotional connections to nonhumans through creative play. Students mimic animals in games, imagine themselves as

predator and prey species, meditate on the experiences of plants, and develop hands-on techniques to interact with nature.

The DNCM is reminiscent of developments in anthropology and education, among other disciplines, that question the statuses of nonhumans in human societies through what is called multispecies ethnography, posthumanism, and other terms (Cruikshank 2005, Faier and Rofel 2014, Haraway 2008, 2016, Houston et al. 2018, Ingold 1988, Latour 2005, Tsing et al. 2017). Posthuman scholarship challenges the foundations of Western education, which positions humans at the apex of life on the planet, ignoring the agency and contributions of nonhumans (Ceder 2019, Lloro-Bidart 2016, 2018, Pacini-Ketchabaw and Nxumalo 2016, Snaza and Weaver 2015, Taylor 2017, Taylor et al. 2013). This challenge counters what Anna Tsing et al. (2017) call "the constant barrage of messages asking us to *forget*"—to ignore nonhumans' needs in favor of short term gains.

With many rooting for posthuman principles into Western pedagogy, a central concern is *how* to accomplish this mandate. Some pose that posthumanism is an embodied endeavor, engaging with the porosity of the human body to imagine inhabiting the bodies of other beings (Abram 2010, Foster 2016, Haraway 2013, Spannring 2019), or write of ways that nonhumans *matter*, literally co-creating landscapes and societies (De Wolff 2018, Kirksey and Helmreich 2010, Pacini-Ketchabaw et al. 2016, Tsing et al. 2017, Whatmore 2002). However, these studies tend to offer advice for moving towards posthuman education or explorations of potential posthuman pedagogy (see Nelson et al. 2018, Nxumalo and Rubin 2019, Snaza and Weaver 2015, Pacini-Ketchabaw and Nxumalo 2016, Taylor 2017, 2018, Taylor and Pacini-Kethchabew 2015, 2017), rather than an analysis of pedagogy created to connect participants socially and bodily with nonhumans, or that teaches that nonhumans continually shape pedagogy. This paper

focuses on the tactics purposefully used by an educational movement to bring participants' awareness to the needs and lives of nonhumans, so that humans can approach nonhumans as beloved social companions rather than as resources for extraction, and embody nonhuman activities in the process of getting to know them.

In this article, I will focus on The Human Nature School as a posthuman project, asking here how human bodies in HNS programs are educated to sense nonhumans as social companions, and how participants are encouraged to use their own bodies to forge these reciprocal social relationships. I used video recordings, video elicitation and semi-structured interviews, and two years of participation observation to study HNS's embodied education methods within multispecies communities of practice. In the next section, I outline the literature that shaped this inquiry.

Directed, bodily attention

This article operates from the notion of bodily, directed attention to the world. The concept of bodily movements as an education into society (Mauss 1973) contributed to Pierre Bourdieu's (1977) understanding of *habitus*, the disposition to act in socially prescribed ways. Body movements, rather than being solely the purview of biology, are actually the result of a whole suite of interactions with other humans (Bourdieu 1977, Mauss 1973). Based in part on *habitus*, scholars have argued that research should focus on how people learn through bodily interaction, called embodiment (Crossley 2007, Csordas 1990, 1993, Feld 2005, Howes 2005, Merrild et al. 2017, Pink 2017). Embodiment research follows from the "methodological postulate that the body is not an *object* to be studied in relation to culture, but is to be considered as the *subject* of

culture, or in other words as the existential ground of culture" (Csordas 1990:5, original emphasis).

Interaction, however, takes place in bustling, varied environments. So how does one learn to pick out the most salient environmental aspects, or to move in ways that that make "sense?" One argument places the transmission of bodily knowledge within the "education of attention" (Ingold 2000, 2001, 2015). To accomplish this education, "The novice watches, feels, or listens to the movements of the expert, and seeks through repeated trials to bring his own bodily movements into line with those of his attention..." (Ingold 2001). The accumulation of cultural practices from this standpoint is therefore not a transmission of information, but rather an education facilitated by movement of the whole person within the world. One's educators, explicitly or implicitly, facilitate cultural learning with their own movements in the world, and the things they notice and point out to younger generations to draw their attention. One's attention could be drawn to the characteristics that make a true breeding cow (Grasseni 2004), the features that make river travel dangerous (Mullins 2011), or the characteristics of edible plants and how ocean waves can help or hinder surfing (Prins and Wattchow 2019).

The education of attention draws heavily from Jean Lave and Etienne Wenger's (1991) community of practice theory. They speculated that in order to become a member of a culture, "peripheral" (unskilled) community members take on the practices of skilled cultural members around them. The process is likened to an apprenticeship, such as when young Yucatan women in training to be midwives first observe, then assist, and finally become skilled midwives. There are prolific examples of communities of practice, from Muy Thai and Mixed Martial Arts (Loong 2016), to Venezuelan stick fighters (Ryan 2011), and the embodied lessons of practice abroad (Dealmont and Stephens 2008).

The education of attention is a sensory endeavor, dictated by humans' abilities to smell, taste, see, feel, or otherwise engage with landscapes that, in turn, shape human sensory experiences (Grasseni 2011, Ingold 2011). Sensory ethnographers advocate for an understanding of how experiences shape and are shaped by human senses (Ingold 2011; Pink 2009, 2011; van Ede 2009). This has been used to evoke subjects' experiences of "cleanliness" (Pink 2005, 2015); to understand the experiences of autistic individuals (Alper 2018, Rourke 2019); and to analyze food movements and immigrant experiences (Pink 2008, Stevenson 2015), among numerous topics. A researcher's embeddedness can inform understandings of subjects' experiences with materials, power, landscapes, and self (Pink 2009). Relevant to this project, people also learn through directed, bodily attention with nonhumans, such as listening to a blackbird and understanding, "what importance sounds like," and how birds behave in response to scientists' observations (Haraway 2015:5). Humans and elephants learn to communicate with one another through sensory, embodied relations, whether a trusted elephant is caressing a companion with her trunk and smelling him, or a rider is directing her body with movements of his feet behind her ears (Locke 2017).

Focusing on outdoor education, instructors can direct their students' attention towards salient processes and beings through bodily movements, with a goal of developing skilled ways of moving across landscapes occupied by diverse inhabitants. Educators can promote the creation of relationships with local places rather than just outdoor recreation, with a goal of skillful, less destructive, habitation (Prins and Wattchow 2019). Educators can use stories, guided walks, practiced activities, and repeated observations to help students learn to interact with plants, wind, and water. Habitation "requires purposeful and skilful practice" and favoring knowledge *with* places over knowledge *about* a place (Brown and Wattchow 2016:437).

Attention could be directed towards processes of decolonization (Brown and Wattchow 2016, Prins and Wattchow 2019), or pointed towards the board foot of lumber in a century-old tree. One review found that skilled practice in outdoor recreation also encouraged commitment to environmental well-being (Mullins 2014).

Related to this project, Multispecies and posthuman scholars underscore the importance of learning to focus one's attention and bodily habits towards nonhumans beyond just skilled use during activities like cognitive research, growing agricultural products, or transportation (Despret 2008, Pacini-Ketchabaw and Taylor 2015, Rose 2013, Taylor 2017, Tsing et al. 2017, Warkentin 2010). Piers Locke's (2012:2) work is one example; when riding an elephant, he realized that he was not just studying how humans use animals, "but also rather the social intimacies between two types of person, only one of which happens to be human." Noticing that he was experiencing "interactive bodily comportment" when learning to communicate with elephants, and not just riding a thing that transports people, took a shift of attention from his transactional, Western perspective to that of the Nepalese handlers who insisted that elephants are people, too (Locke 2012:4).

More-than-human sociality

Nonhumans, such as the elephants that Locke (2012, 2017) rode while studying the skilled practices of Nepalese *mahouts*, make the conditions for human societies possible, and thus are integral to our social lives (Ceder 2019, Haraway 2013, 2016, Lloro-Bidart 2016, 2018, Snaza and Weaver 2015, Taylor 2017, Taylor et al. 2013). However, what of considering nonhumans, due to their world-making powers, persons in their own rights? Contemporary and past acknowledgments of nonhuman persons is a global phenomenon, such as the living stones of

Ojibwe ontologies (Hallowell 1960); jaguars who possess the souls of dead humans and help shamans coax game to hunters (Rival 2002); the devaru "superpersons" who share relationships with Nayaka communities in India by approaching them and making themselves known, whether as hills, rocks, elephants, or knives (Bird-David 1999); or glaciers in the Saint Elias Mountains of British Columbia, Alaska and Yukon Territory meet that judge people and are intolerant of the smells of cooking grease according to Tlingit and Athabaskan communities (Cruikshank 2002).

Under the title of "animism," beliefs in the personhood of nonhumans was originally attributed as being "childish," or "primitive," and likened to an early developmental state (Bird-David 1999, Gilmore 1919, Tylor 1871). And anthropologists have long wrestled with the ontological question, what kinds of people are animals, if they are people at all (Bird-David 1999, de Castro 1998, Cruikshank 2005, Descola 2013, Fausto 2007, Ingold 1988, Whatmore 2002, Willerslev 2004, Velasquez Runk et al. 2019)? However, with the ontological turn and earlier revelations came the understanding that some anthropologists are operating within a Western, colonial framework that denigrates the knowledge people outside of European ancestry, and failing to take their interlocutors seriously (Barrett 2011, Bird-David 1999, Nadasdy 2007, Todd 2016, Whatmore 2002, Willerslev 2004). An option to avoid colonial condescension is to take one's interlocutors seriously, rather than assuming their explanations are metaphors. As Paul Nadasdy (2007:26) writes about First Nations hunters' beliefs, "I take seriously the possibility that northern hunters' conceptions of animals and human–animal relations might embody literal as well as metaphorical truths...I focus in particular on the widespread idea that animals give themselves to hunters as part of an ongoing relationship of reciprocal exchange." To do otherwise closes the door to understanding real, complex, multispecies social relationships explained by people speaking quite literally about experiences.

Anthropologists following the ontological turn have analyzed the ways that nonhumans and humans mutually constitute the conditions for human societal and ecological functioning—for instance the ways that humans are able to develop or “become” functioning members of their communities only in the presence of other nonhumans, such as the gut bacteria that make digestion possible (Lorimer 2016, Velásquez Runk et al. 2019). These approaches are called multispecies ethnography (Kirksey and Helmreich 2010) and posthumanism (Castree and Nash 2006) (among other terms) to indicate that humans are inseparable from our environments.

Posthuman theory is a thread that spans disciplines, including education, which explores nonhumans as creative forces in the world (at times called “worlding” [Pacini-Ketchabaw et al. 2016:151]) and their complex entanglements with human societies. In particular, Affrica Taylor (2017), Teresa Lloro-Bidart (2016, 2018), and colleagues (Malone 2019, Nelson et al. 2018, Nxumalo and Rubin 2019, Pacini-Ketchabaw and Nxumalo 2016, Pacini-Ketchabaw and Taylor 2015) have worked to recognize moments of multispecies entanglements with nonhuman companions in educational spaces, diverting attention from nonhumans as objects of lessons to considering them co-conspirators in human education. Affrica Taylor (2017:1450) calls educational practices that refuse to objectify nonhumans as “common world pedagogies,” which,

> ...requires us to radically rethink our agency in the world, to understand that we are just one agentic species amongst many, albeit a formidable and potentially destructive one (Latour 2014; Haraway 2015; Tsing 2015), to refocus upon our mutually productive relations with others in this world (Haraway 2008; Alaimo 2010) and to recognise that a precarious and vulnerable environment simultaneously implicates our precarity and vulnerability as a species (Colebrook 2011; Hird 2013).”

Taylor (2017) credits children in the education programs she studies for eliding the human-nature dualism maligned for environmental destruction, and she blames Western education for introducing that dualism. Whether imitating kangaroos and witnessing their roadkilled bodies (Taylor and Pacini-Ketchabaw 2017) or remarking on the sentience of trees and clouds (Mereweather 2018), children's encounters with nonhumans reflect their animist are tendencies. At the same time, animals shape common world encounters, the case with a raccoon family on a Canadian playground who occupied the children's favorite play spaces, and exerted their agency in using a landscape common to the school and the raccoon family (Pacini-Ketchabaw and Nxumalo 2016).

This project draws from embodiment theory and sensory ethnography, as well as multispecies ethnography and posthuman literature, to explore the educational practices intended to direct HNS participants' attention towards social relationships with nonhumans. The next sections describe the research site and methods employed during this investigation.

Methods

I took part in the everyday functioning of Human Nature School as a participant observer and took detailed field notes. As a participant, the Millers often asked me to play the role of an assistant instructor. For this project, I made observations about the ways that participants (instructors, children, adult students and extended family) were instructed in, and practiced, the bodily movements associated with being a nature connected person. I also recorded stories and remarks about how nonhumans were observed to react to HNS practices, many of which are based on movements and sensory information. This article also draws from semi-structured interviews with staff and volunteers in which I questioned the purposes and perceived efficacy of

their educational methods, and seasonal videos of the children's homeschool programs (see Table 2.1 below). I used videos to evoke sensory memories during interviews (Hayashi and Tobin 2015, Scott and Uncles 2018, Tobin et al. 2009, Tobin and Hsueh 2014, Pink et al. 2017), using a method described below.

For consent to take video recordings of this vulnerable population, I created separate, age-appropriate IRB forms for parents and homeschool children to read (or have read to them) and sign offering consent to be recorded for this project. I indicated on both forms that, because I was collecting video recordings, I would not be able to protect their anonymity if they were to participate. I do not use pseudonyms because participants are participating in lawful activities, and at this time I do not expect their enrollment in HNS, or engagement with this project, to negatively impact their future activities. Children who participated in the project will have the opportunity to revisit their permission when they turn 18, or can request to be removed from the study at any time.

I chose videographic interview methods, inspired by "video cued multivocal ethnography" (Tobin et al. 2009). I used a Panasonic GH3 camera and a RodeMic Pro to video record full days of HNS programs once per season, beginning in summer 2016 with summer camps. HNS programs are usually age segregated: kids are grouped into Foxes (children aged 6-9) and Coyotes (children aged 10-12). Each season I filmed full days of both the Coyotes and Foxes, with filming dates randomly chosen from a list of dates offered by HNS instructors. To randomize filming, I listed each person I would be accompanying into the Grand Traverse Commons on small slips of paper. I set a timer to 20 minute intervals and, each time the timer went off, I randomly selected a name from my pocket and turned the camera towards the person listed. This alleviated my tendency to focus only on instructors when they were talking, and I

was still able to capture footage of each person in a larger context by including landscape and the people they were interacting with in the frame. Of course, the camera's viewfinder offers only a partial perspective (Grimshaw and Ravetz 2009, Haraway 1991).

For each semester of footage with the exception of winter, I edited the video into 30-minute elicitation narratives. Each age group (eight hours of video) was allotted 15 minutes, for a total of 30 minutes of elicitation video. Winter sessions consist of only one cohort, and I used 20 minutes of footage. When interactions, repeated rituals, pedagogical techniques, apparent failures, or other interesting scenes sparked my interest, I included them in the elicitation narrative and recorded viewings with HNS instructors and volunteers approximately six weeks after filming.

Analysis

I focused on instances of conduct in which nature school instructors were intentionally focused on a task that included lessons or interactions (Hayashi and Tobin 2015, Derry et al. 2010). I was able to glean intentions mostly from participant observation, or during interviews.

To analyze methods used to turn attention to nonhumans' beings and doings, I selected four scenes that represent integral genres of nature connection pedagogy. I based my selection upon on repetition of these or similar exercises during two years with HNS, and my understanding of HNS pedagogical methods and intentions discussed during morning meetings.

1. Tracking: I performed a microanalysis of three minutes of animal tracking video with a group of ten kids aged six to nine (Foxes) accompanied by instructor Matt Miller. In the section of video I analyzed, student Molly (Foxes) noticed animal tracks embedded in sidewalk cement. Like platelets clogging an artery, one child stopping induced others to

do the same, sticking together in a clump with heads bent towards the tracks. Executive Director Matt Miller used their curiosity to his pedagogical advantage, and invited the kids to kneel on the sidewalk with him, looking at the small tracks as cars whizzed by.

2. A blindfolded sensory game: I analyzed three minutes of a sensory game with a group of nine kids ages ten to twelve (Coyotes) led by Kriya Miller. In one video selection, instructor Kriya Miller led a preteen homeschool group (Coyotes) in a sensory exercise. The kids nestled into the tall grass near a cattail marsh, and she had them sit close enough to touch. With blindfolds on, most of the faces in the circle pointed towards the ground, and the kids were hunched over, legs crossed, on the ground. Kriya explained the point of the game, to pass around an "artifact" from nature that the kids were likely to recognize. "Blindfolded you're going to have to take it to the next level. Some of them you're going to have to smell...we're going to make sure you have time to touch and visit each object and then we're going to hear what your guesses are."
3. Bird language: I analyzed one minute and thirty seconds of a summer camp bird language skit (the length of a skit depicting one of the birds' "voices") described in the introduction, with one instructor, Jack Hannert; three HNS volunteers, Riley and Emily Dickey and Remi Stiles, and two summer program attendees, Mara and Hayden. In the bird language skit, the summer camp actors demonstrated the "popcorn" alarm, so called because, as a predator passes, each bird flies dramatically upward like a popped kernel of corn in a hot pan.
4. Animal forms: I analyzed two minutes and 13 seconds of an animal forms activity, with 20 kids, four instructors, and two teen volunteers, led by Kriya Miller. On a soggy fall day, homeschool kids from both Coyote and Fox, wearing light jackets and oversized

boots, stood on the Commons lawn. Kriya Miller led the kids, choosing what everyone mimics for animal forms. She chose red-tailed hawk, and some of the kids watched her and mimicked her motions.

Table 2.1: Video schedule

Summer 2016	
Coyotes group: July 20	8 hours
Foxes group: July 22	8 hours
Fall 2016	
Foxes group: Nov. 10	8 hours
Coyote group: Nov. 15	8 hours
Winter 2017	
Mixed group: Feb. 10	8 hours

Using MaxQDA software to analyze the above clips, I specifically paid attention to the posture and movements of participants, the direction of their gazes, instructors' directions and children's reactions, participation, and the spatial arrangements of bodies (Pink 2005, 2006, 2009, Pink and Mackley 2016). With the memo function of MaxQDA, I detailed changes in movement, speakers, expressions, materials, and other aspects of the scenes. I also transcribed dialogue to collate visual and audio materials. This resembled ethnomethodological or conversation analysis, in that I recorded the minutiae of focus within small video clips (Heath et

al. 2010, Mondada 2008, Mlynář 2018). However, I did not perform a detailed analysis of turn taking or tone. Instead, dialogue serves as an adjunct to movements that indicate where attention lies.

Results and Discussion

The 8 Shields pedagogical model

Before discussing *how* nature connection pedagogy tries to obtain multispecies relationships with embodied practices, I first wish to detail the pedagogical model HNS followed during my time there. HNS instructors used the 8 Shields Model, which originates in the DNCM teachings of Jon Young, an outdoor educator who founded two informal nature connection schools: Wilderness Awareness School, in Duvall, Washington (now led by Executive Director Warren Moon), and the 8 Shields Institute in Bonny Doon, California (where Jon Young lives and works for 8 Shields, though Garrett Conway is listed as the Executive Director). Young's backstory—his meeting Tom Brown, Jr., founder of the Tracker School, in New Jersey and being mentored in wilderness skills—is part of lineage stories told by HNS and other nature connection schools and detailed more in a subsequent chapter. Here, I wish to focus instead on the 8 Shields Movement and how it is used as part of everyday programming at HNS.

HNS uses *Coyote's Guide to Connecting with Nature* (Young et al. 2010), a book written by Jon Young, 8 Shields Institute elder community member Ellen Haas, and Wilderness Awareness School graduate (and founder Wild Intelligence in Athens, Georgia) Evan McGown. The book outlines the 8 Shields Model, and was frequently mentioned as a guide to newer HNS instructors and adult community members who wanted a better understanding of nature

connection. Young et al. (2010:197) describe the model as a "natural cycle" oriented to a compass with cardinal and ordinal directions. The compass has many layers of meaning. It can indicate the passage of seasons, starting with spring in the east and ending with winter in the north. It can also map out the course of a person's life, with gestation in the northeast, birth in the east, and ending with north, elderhood, and death.

For the purposes of HNS pedagogy, the compass model can indicate the cycle of a day of nature connection programming, beginning in the northeast with educators planning the day at their morning meeting, and ending for students coming together to share their stories of what happened during the day in the west. Using the 8 Shields compass or model to plan for a day (from 8 a.m. to 3 p.m. in the case of an HNS homeschool program), one would use inspiring "east" activities, such as welcoming students to their program, playing running games to get out some energy at the beginning of the day, and telling stories. The southeast direction would be the next part of the day, motivating students to be excited about something in nature through a game that challenges their attention and knowledge, such as plant identification games or games in which people pretend to be animals. In the south time of day, typically before lunch, instructors used focused activities, like animal tracking or archery as examples. At 8 a.m. each morning of programming (for both children's and adults' programs), we sat in a circle on rickety chairs, storage bins, or the floor and began the day saying what we were grateful for. Afterwards, an instructor would perch on the lid of a wooden storage chest and draw a circle or spiral on a whiteboard on the north wall of the cramped cinderblock Human Nature School office. They would write various tasks on the board that were needed for the "east" part of the day—student sign in, playing running games, telling a story—and assign someone for the "west," when all the students would come back together after spending the day in their Coyotes or Foxes groups in

the case of homeschool groups and tell their "story of the day," which might consist of their favorite parts of the day or them naming something they noticed that day, depending upon the theme. The rest of the day—the south aspect of hard work and focus, or the lazy wandering of the southwest time—was hashed out by individual instructors and their volunteers in the time before students arrived. Also before the students arrived, instructors gathered materials they needed—animal skulls, bow drill kits, saws, hatchets, knives, or any other tools—and took a few moments to refuel on coffee or go to the bathroom before students arrived. The setup for a day of adult programming—gratitude, assignment of roles, hashing out the day's activities—is very similar, though potentially truncated because the class sizes are much smaller.

Another aspect of the 8 Shields pedagogy is that the compass directions can represent the flow of a semester, which is another way HNS uses the model. For example, a semester of homeschool programming in fall or spring would last about 16 weeks. Those weeks were usually assigned compass directions that correspond to the 8 Shields Model. The first two weeks would be assigned the east direction, with the theme of welcoming students back after time off for summer, or winter since that semester in the snow was sparsely attended. The next two weeks or so would be southeast, the next two south, and so on, until the semester would end in the northeast. For a new semester, the cycle would start all over again.

To offer an example of daily planning for a homeschool group, May 10, 2016, was a northwest day. Instructors Chelsea Nester, Kriya and Matt Miller, and Jack Hannert were in attendance, as well as volunteers Riley and Emily Dickey, Cindy Hull, and me. We started off the morning with a sleepy round of gratitudes, and then Kriya at the whiteboard announced that it was a northwest day. I was confused, thinking it was a west day, and Kriya replied that the week before had been a west day. "We had our big group game last time and played together a

lot in the morning. So, we're at northwest, reflections and revelations," and she wrote those two themes on the board. I was assigned to do the morning exercise "Bringing Our Minds Together" (usually just called BMT) by asking the kids who had taken on the challenge of finding three bird feathers, or who had seen a bird feather even if they hadn't collected them. Kriya volunteered to lead the kids in a song about salmon from an indigenous group, though she had forgotten the name of the group and the title of the song. Nester replied, "That would be a good heritage species song," since the northwest direction is also about heritage species, which are those one's ancestors noted as culturally important (Young et al. 2010). Hannert volunteered to tell a story about a man who planted trees. Other roles, such as signing in kids and leading morning games, were assigned, and the instructors separated into their own groups to fill out the rest of the day. Since I was to follow Hannert that day, and he was practicing spoon carving with his group, we discussed trees as heritage species that are useful as wood for carving with Nester (the instructor in charge of training Hannert, who had been recently hired), and games that would teach the kids in his group about tree growth rings. We gathered up the carving knives for Hannert's group and headed outside to begin the day as kids began arriving with their parents.

Students, unless they are adults being trained in the 8 Shields Model, are not aware that there is a theme to each day tied to the model. They may know they are having a "wandering day" (southwest) or that their group will be working on animal tracking for most of the day (south), but they are not made aware that the themes are part of a cycle happening each semester, beginning with the east direction. During that northwest day, when I asked the homeschool kids if anyone had done the Take Home Challenge (like nature school homework), they were not aware that the *Coyote's Guide* (Young et al. 2010:184) recommends paying attention to birds to enable humans, "To see the invisible. To inspire a mental state of extra-ordinary attentiveness

and the practice of moving without creating a disturbance...an ability to listen with an inner calm that allows us to track subtle energetic patterns, to increase our intuition." They mentioned seeing mourning doves, cardinal feathers, a vulture, a bald eagle, a tiny sparrow, and cranes, all without being told didactically that their awareness of birds is an indicator of one's awareness and nature connection.

The situation is different with adults. In March 2016, HNS held an adult apprenticeship bird language day, commensurate with a "northeast day" in the 8 Shields Model (Young et al. 2010). On that cold day, in elder Carol Laughing Waters' sunny weaving room, Kriya Miller explained the "voices" of the birds (male to male aggression, companion calls, juvenile begging for food, for example) and told the assembled adult apprentices, including me as an honorary apprentice, that bird language is "intuitive and accessible" and that birds are homebodies, acting as sentinels for their neighborhoods, looking out for predators like hawks, cats, and owls. What was told in skits or with dramatic stories of bird encounters to spark the curiosity of child attendees was matter of fact for adults. This is combined with the fact that adult apprentices were also given background on the 8 Shields and how each meeting's lessons fit in with each particular point of the compass, including handouts on pedagogy, and plant and track identification.

This is not to say that HNS religiously follows the 8 Shields Model, or that every adult is interested in every aspect of it. For instance, Matt Miller admitted that he hates southwest days. His preference is to work on a project, such as the time he spent with a group making a canoe out of sticks and canvas. When Kriya Miller stated her enthusiasm for a day of wandering and looking at plant life, Miller bemoaned the lack of focus. If instructors have a day planned out that includes activities on an 8 Shields theme, and they don't capture the students' attention, they

move on to other things. During winter sessions, when a main challenge is keeping dry and somewhat warm, instructors don't always write the 8 Shields compass on the board, but rather come up with games and activities, such as making fire in different ways or sliding down large hills in snow pants, that are appropriate for the season and the kids involved. The freedom to use or not use the 8 Shields Model, or to modify it to suit one's needs, is built into its framework. When speaking with Kriya Miller about bringing her training at Wilderness Awareness School to Traverse City, she said she felt like a transplant from Washington trying to apply the 8 Shields curriculum to northern Michigan. I described the model as a kind of global and simultaneously local model, and she agreed, saying, "The 8 Shields curriculum kind of built in the local adaptation because you have to get to know your community, meet people where they are at, get to know the needs of the people you work with." She stated that the 8 Shields is "organized like that," to make people using it mold it to the people and landscapes they encounter outside of the organizations with which they train. Young et al. (2010) write that the model is adaptable to circumstance, and that an instructor will likely accomplish only 50 percent of the activities they had planned for any nature connection program day. They encourage unplanned free time so that students can follow their own curiosities outdoors.

Another aspect of nature connection is the "core routines." These routines are, according to Young et al. (2010: 35) are "learning habits" that can help humans rediscover their "original instructions designed for dynamic awareness of nature." Core routines are supposed to help with what Young et al. (2010:22) call "brain patterning," which is another way of saying that the core routines help people develop the habit of paying attention to nonhumans in certain ways. Young et al. (2010:24) offer the example of a student coming to Wilderness Awareness School and

coming to a few realizations about the beings who have shared their neighborhoods with them all along:

> "We see this over and over, as people come to learn with us and return home convinced that red-tail hawks or American robins have suddenly moved into their area. In truth, the robins, red-tails, and dandelions lived there all along, but because our brains were not yet patterned on them, our perceptions did not include these natural elements."

Core routines are about learning to use human senses, and intersect with Ingold's (2000, 2001) "education of attention," in which human attention is turned, with the help of knowledgeable community members, towards salient aspects of shared landscapes. In this case, the salient features are birds, trees, streams, plants, and myriad other inhabitants of The Grand Traverse Commons, or students' own backyards. Brain patterning is considered a solution to environmental crisis, echoing those who bemoan decision making based on a dearth of ecological knowledge (Atran and Medin 2008, Miller 2005); after all, "As a culture, unless we can shift our focus of attention, we'll continue basing our choices on a sense of reality that doesn't include the rest of nature" (Young et al. 2010:25). The knowledgeable community members are HNS instructors and volunteers, or even other students with more experience (common within homeschool groups when a new student joins), who direct attention by saying, "What bird was that?" "Does anyone have any idea what plant this is?" "I see a track!" "Look, it's poop!" "Matt, what is this?" Nonhumans can also direct attention; a bird crying in a boxelder thicket can reveal the presence of a predator species, or deer dashing across the sloped lawn between the spring and the split willow on the Grand Traverse Commons indicates approaching hikers. Using the core routines, students become apprentices of the Human Nature School

community's sensory milieu, learning specialized skills with guided attention (Cox 2018, Grasseni 2004, Pink 2009).

The core routines of nature connection are listed in *Coyote's Guide* (Young et al. 2010), and include some perennial favorites at Human Nature School. One prominent routine at HNS was the "sit spot," mentioned 275 times in my field notes and interviews, a popular exercise for homeschool programs, although it was also practiced in adult apprenticeship weekends and intermittently during summer camps. The sit spot is meant to be the "core" of core routines, and to help students become comfortable and familiar with a place (Young et al. 2010). During sit spots, one finds a comfortable place outdoors that can be returned to again and again and sits, paying attention to the sounds, smells, sights, and other sensory information, such as how one feels in one's body to be witnessing other beings' lives. Instructor Chelsea Nester considered sit spots to be a way of developing a quiet, meditative mindset that could help her access her intuition and establish communication between herself and nonhumans. Instructor Jack Hannert said that sit spots are either, "a really important mental unwinding time or hyper observation time, or like a fun mix of the two where you're totally spaced out and then you catch like a squirrel movements in a tree and like, what are the squirrels doing?" For former instructor Jake Moran, sit spots were, "the practice of observing with as little activity of my own as possible...and, I don't know, perceiving the world and trying to get a grasp on what's going on," while leaving his senses as open as possible.

The sit spots don't have to be perfect, or happen in a particular way; as Hannert noted, and observations showed, sometimes the kids get up, talk to their friends, or sink up to their hips in a mud pit during sit spots. They are less likely to happen in winter semesters. Some sit spots are guided, like one led by Kriya Miller in which homeschool kids were instructed to stay still

and quiet, away from their friends, and spend their sit spot (about 10 minutes) near a plant that "called to them in the woods." After the sit spot, Kriya asked them how they felt or what they had learned about the plants. One student, Cyan, reported that moss had made him feel calm, while Cali noted that it was possible to eat the leaves of the basswood tree she spent time with. Kriya guided their attention by asking about the use value of the plants when the sit spot was finished, and correcting them on ecological knowledge, such as when a student named Odessa incorrectly guessed that hemlock trees lose their needles. Others sit spots are more free form, in which instructors send their students out for ten or fifteen minutes, and then ask them afterwards what they noticed.

Figure 2.2: Animal forms. Students and instructors crawl on the ground as cougars during animal forms.

While sit spots are more stationary and based on (ideally) stillness and attention to inner and outer stimuli, other core routines are based in movements. One of these is animal forms, an exercise that HNS used on a regular basis, though not nearly as often as sit spots. "What we call animal forms is simply the imitation of the physical and mental actions of animals, birds, and to some extent even grass, wind, and water" (Young et al. 2010:51). Other core routines include wandering across landscapes with no particular destination in mind, tracking animals, telling stories, paying attention to bird language, storytelling, and expressing gratitude. Tracking, bird language, and animal forms were all routines that emerged as part of video analysis.

These core routines of nature connection are thought to contribute to what Young et al. (2010:257) call the "indicators of awareness," and what HNS is more likely to call the "attributes" of nature connection. If one practices the core routines explained in *Coyote's Guide*, they may develop these 8 attributes, also arranged on the 8 Shields compass. Rather than assessing a program's success at, for instance, promoting conservation behavior, or testing the kids on their knowledge of practical botany, the development of these indicators within students is a tool of assessment. According to Kriya Miller, the attributes derive from Lakota Gilbert Walking Bull, who visited Jon Young at Wilderness Awareness School and told him his students were demonstrating the sacred attributes that Lakota clan mothers would use to pick their chiefs. During one meeting of instructors and volunteers at HNS, Kriya Miller passed out a worksheet with the attributes—service to community in the west, awe and reverence in the northwest, self-sufficiency in the north, the quiet mind in the northeast, and so on—and noted that HNS uses the attributes for assessment because they don't have any other metric to work with. She called them the "sacred attributes," and asked if we could all name kids who embodied them. We spent part of the meeting reflecting on which homeschool students displayed attributes such as common

sense, the east attribute, and were able to keep themselves and their friends away from hazards, like volunteer teens Riley and Emily Dickey who, as extended family member Krista Cain observed, “You help kids who are afraid and don’t know what to do.”

Human Nature School did not entirely follow this model during my research with the organization. Some days they followed their own interests, or the kids’, and worked with what the Grand Traverse Commons and their imaginations had to offer. However, the Millers did train in the 8 Shields model while at Wilderness Awareness School, and made an effort to both use it and pass it down to adult apprentices and other volunteers. Instructors relied upon games and activities from *Coyote’s Guide* (Young et al. 2010), like firekeeper, bat and moth, blindfold caterpillar, five-minute fire, meet a tree, plant concentration, stick drag, 100 tracks, sleeping fawn, fire in the forest, deer bounding, and many more, including the core routines of nature connection. The influence of Jon Young, Wilderness Awareness School, and the 8 Shields model was apparent throughout field research.

Being an animal

A key component of nature connection pedagogy is animal mimicry (Young 2019). When writing of animal forms, included in video analysis, Young et al. (2010:51) note that,

> Combined with field guides and journaling, practicing animal forms will imprint search images—multi-dimensional, dynamic models of character and form—in both mind and body, into our very being. This is what “learning by heart” could mean: developing a stronger sense of instinct and intuition, and growing in empathy with what we imitate.”

Animal forms, and other activities, are intentionally being used by HNS to help develop empathetic understandings of the lives of nonhumans in the Grand Traverse Commons. Jon

Young (2019) followed the instructions of his mentor, Tom Brown, Jr., to dance and imitate animals, and that mandate was translated into the animal forms that HNS regularly practiced as part of their morning gatherings with students before heading out into the woods.

The bird language skits, in which people imitate bird calls and behavior, and animal forms, are a small, consistent part of how HNS encourages participants to be "more than human" (Abram 2012, Lorimer 2010, Tsing 2013 Whatmore 2002, 2006), and to experience life as other beings, usually animals. I argue here that HNS pedagogy is not simply meant as an act of mimicry. Instructors are encouraging participants to experience the lives of other beings through nature connection practices, and to forge connections that escape the discrete boundaries of individual bodies (Abram 2010, Haraway 2013, 2016).

On a surface level, bird language skits are a fun way to teach kids about animal behavior. Throughout the video, the two summer campers playing birds, and the audience that is not visible on the screen, are laughing at the skits. In a subsequent scene, in which the birds' voices are "translated" into English, the actors ham it up, yelling out Emily's name as she is approached by the hunter Remi, with her brother screaming a long, drawn out, "NOOOOOOOOO!!!!!!!!!" as Remi pounces on Emily for a second time. Humor is encouraged, from morning meetings before programs begin, when drowsy instructors and volunteers rib each other, to kids making fun of me about my age. While respecting one another is a prized component of HNS, lessons are not presented gravely.

Figure 2.3: Bird alarms. Remi, on the far left, mimics a predator species initiating a “popcorn” alarm, with the instructors and students acting as birds startled upright by his stalking past them.

However, birds’ vocalizations are meaningful even with a dose of humor, not random, and Young (2012) calls them “the eyes and ears of the forest,” because they watch and speak about the movements of other animals, particularly those that might eat them. When teaching an adult group bird language, Kriya Miller said that for humans, “it’s intuitive and accessible to tune into those voices and patterns. Animals tune into it too, and if they can do it we can do it, that’s why I love it.” Bird language skits occurred in every adult and child program I witnessed except for the youngest forest kindergarteners ages three to five. They are an important way of piecing together the lives of very visible animals like birds, and sneaky animals one might only witness because of bird alarms, like weasels (Young 2012, 2019).

Bird language skits—getting a feel for how birds move and sound when scared or aggressive—is more than mimicry or educational performance. It is part of a whole suite of

pedagogical tools to foster “more than human” (Haraway 2013, 2016, Whatmore 2002, 2006) habits. For some communities, breaking down barriers to communication between humans and nonhumans is more an act for people with special roles and direct contact to spiritual realms (Abram 1996, Harvey 2006, Luna 1984, Rival 2002), while at HNS, direct, embodied attention and mimicry are available to anyone who wishes to try knowing what it’s like to be a cardinal or a deer. For example, instructor Chelsea told a story during a weekday homeschool program about a girl who had psychic dreams about what it meant to be a beaver, and could feel what it was like to have webbed feet and a beautiful tail, and asked the kids if they had ever psychically connected with an animal. Two of the younger girls from the Foxes homeschool group said they had. An elder from the extended family who was listening to the story, Carol Laughing Waters, said that was a story she had actually lived, and Chelsea thanked her for psychically sending the story. Bird language skits dovetail onto Chelsea’s dream story. As a core routine of nature connection practice, promoted by Young et al. (2010), bird language is intended to get people’s bodies tuned into what birds are communicating, which can also be “sent” from the birds, as Nester suggested with the beavers, or communicated bodily. For example, during the bird language skit MC’ed by Lena Wilson, she asked the students to try to feel what the birds are saying with their bodies, not just with their intellects. If one is able to feel what the birds feel, and make their movements more amenable to birds, then relationship is possible. If one chooses to ignore bird’s communications, then birds can verbally and corporeally communicate a lack of relationship as well. As Kriya Miller explained to the adult apprentices during our bird language weekend, scaring birds so badly they fly quickly away is a sign of a communication breakdown or bodily mismatch between humans and birds: “Think about that, they’re leaving their homes, it’s like you being so scared you run out of your house just as fast as you can.”

The concept that humans can feel bodily impressions of what it is like to be another animal is not a metaphor within HNS; understanding that they are serious about these embodied connections is key to understanding their pedagogy (Barrett 2011, Bird-David 1999, Nadasdy 2007, Todd 2016, Whatmore 2002, Willerslev 2004); and mimicry is a practice to help students gain embodied connections with nonhumans. Consider this prompt from a game, spoken by Kriya Miller:

> We've been talking about this and we think you're ready to practice to the ancient skills. These skills have been passed on from generation to generation through hunters and trackers, and now we're going to pass them on to you...I want you to close your eyes and use your imagination, the imagination is pretty powerful. With your eyes closed put your hands on your nose. Now I want you to imagine that your nose is growing longer and longer and you're turning into a dog. What can you smell with your dog's nose? Now I want you to put your hands behind your ears and imagine that they're growing bigger, so big you can hear the tiniest sound, you can hear the birds calling over the cars that are miles away. Don't forget you still have that powerful nose...With your eyes closed I want you to imagine that you have the eyes of an owl, you can see the tiniest movement anywhere...Now, arise, quietly, silent, and sneaky, arise.

Animal forms serve dual purposes. First, the exercise is a full body warm up, and a way to get some energy out before the morning circle. However, as Kriya Miller noted,

> ...it's stirring the imagination and for some people that can be a powerful tool. Some people actually feel like they can understand what it's like to be the animal. So, bridging that vast giant gap, it's like if you can imagine it and you can be it, for a lot of kids it comes naturally. It's like you're that much more connected, you're that much more there.

> And you can really think about what would they be eating and how would they be moving, so you just get into the mind of that animal and it bridges that gap cause you want to have a connection versus something way out there in the rainforest or far far away.

The "connection" that Kriya talks about has multiple meanings. When instructor Hannert described animal forms, he mentioned having empathy: "...you are supposed to be imagining yourself as the animal that you're acting like, putting yourself in their feathers and feeling all the things they're feeling and imagining how they view the world. And then to move with them." However, connection for some is literal. Young (2019) describes connection to other beings as "ropes," visible to spiritually astute people, that stretch from the center of a human to the beings one has been observing and mimicking. He has also reported hearing the voices of animals, in his head speaking in English, as a result of creating these ropelike connections. Instructor Chelsea Nester drew from Young's teachings on bodily ropes, saying to a group of homeschoolers, "I'll tell you the true secret of bird language—there are invisible lines going from our bodies out in front of us." HNS elders Tricia Mead, Mary Jo Kage, Jim Coats, Linda Hayes, and Carol Laughing Waters describe connection as a spiritual experience, similarly to Young's (2019) explanation but without ropes. How does one cultivate ropes from the body to the world? Practicing the core routines of nature connection, such as bird language, animal forms, and others.

The animal forms are not only a stretch, or a fun morning game. They are, from Young's (2019) perspective, a method for transcending human experience and gaining embodied knowledge of nonhuman others, much as Siberian Yukaghir hunters mimic elk to take on their perspectives (though incompletely to reduce the risk of permanently becoming elk) (Willerslev

2004), Brazilian Matis communities use animal masks and skins to reinforce relationships with animals (Arisi 2016), stag hunters in 16th century England are supposed to have ritualistically mimicked and hunted stag, "becoming" the animals (Lambert 2019), and bird skin clothes and bird-like masks help Yup'ik hunters in Alaska "identify with prey and embody its point of view" (Hill 2019:440), while shamans gain the spiritual aid of loons by wearing masks and imitating their plaintive call. Mimicry can draw power from the being who is being representing to the one doing the mimicry (Taussig 1993), as in much repeated HNS story of a young Ingwe who, following and observing an old leopard, becomes the inheritor of its power (Powell 1995), or Hannert telling the kids to "channel that ancestor tree energy." Considering that Young (2019) based his pedagogy on interactions and experiences with indigenous peoples, the animistic correlation is unsurprising. As mentioned, HNS participants are not shamans in training (though a few declare an interest in that role), I locate their actions in what Abram (2011:239) calls "kinetic invocations of another animal," the "magician's ability to dream himself into the wild physicality of that Other, allowing his senses to heighten and intensify as he becomes possessed by the carnal intelligence of the creature." Like Michael Taussig (1993), HNS instructors hope that "being" animals will impress the importance of conservation practices that allow for nonhuman flourishing.

Accuracy should accompany mimicry. Although creating emotional connections is prerogative in the DNCM, naturalist knowledge should "come along for the ride," a phrase associated with Young (2011) and repeated by Matt Miller to HNS volunteers. Instructors constantly quiz students of all ages about the name of a bird heard in the distance, or asked, what type of pine has five needles? Games incorporate naturalist knowledge to encourage ecological learning without didactic teaching tactics (Young et al. 2010), and so do "take home challenges"

HNS homeschoolers can complete and then share with the group during morning circles: one challenge was to find out the definition of "circumpolar" and be able to name five circumpolar constellations. Matt Miller once jokingly articulated a "hidden" goal of DNCM games to a group of kids about to play a game of "Dead Ant:" "This is an ecological game about life cycles and cooperation and it's crucial to your nature connection that you understand how these games relate to the real world."

A focus on accurate ecological knowledge—essential for an educational organization that promotes eating wild plants and mushrooms and walking off trail into thickets of thorn and poison ivy—is evident in the analysis of the bird language skit. Consider Remi, the predator. While the birds are singing and feeding, Remi waits silently. When he moves, he is slow, concentrating intently on his intended target, Emily, much like a big cat stalks before pouncing (Elbroch 2014). The characters playing the birds are also in character—flitting around in small circles before coming to a landing near their "food," picking up a morsel (a twig or a rock) and then darting their gazes around to ensure their safety. Two make "companion" calls to gauge each other's relative positions and safety, just as they were taught in bird language lessons (Young 2012). When Riley sees Remi approaches, rather that squawking or screaming, he pops back and pushes a realistic sounding scolding call of an aggravated bird through his teeth. Jack makes the same alarm, and the two summer school campers, new to HNS, mimic their example. While Emily is the "atypical" bird of the bunch, in her absent-minded feeding she accurately represents what happens to birds who pay more attention to feeding than to potential predators.

After the bird language scenario led by Lena, during other demonstrations, and after sit spots (silent outdoor meditations) participants are asked how bird alarms make them *feel*. Do they feel tightness in their chest or guts at times? Do the alarms make them feel afraid? If so,

their bodies are translating the alarms: a bird is in mortal danger. Like posthumanist education prescriptions, students are being taught to learn *with*, and experience *with*, nonhumans, rather than just learning *about* them (Engelman 2019, Haraway 2016, Lloro-Bidart and Banschbach 2019, Snaza et al. 2014, Taylor et al. 2012, Taylor et al. 2013, Taylor 2017). Mimicry allows them to be deposited into a context in which nonhuman subjectivity is literally embodied by human beings. This doesn't only come up during mimicry exercises. After an afternoon sit spot where a group of foxes sat next to a plant of their choice and just silently reached out with their senses, Kriya Miller had questions for the kids: "When you were sitting with the trout lily how did you feel? How did the moss make you feel when you were near it?" Elder Linda Hays said when she wants to enter a forest she asks permission and, "Instead of listening for an answer from the forest, I like to feel for it, with my heart, and if I feel a pull in I enter, and if I feel a push back I stay away." But mimicry allows for the boundary blurring effects of "common world pedagogies," that operate through "embodied and relational learning" (Taylor 2017:1457) and by, "...acknowledging more-than-human agency, learning with more-than-human world rather than about it, paying attention to the mutual affects of human-nonhuman relations, pursuing more-than-human collective modes of thought, and by learning from what is already happening in the world" (Taylor 2017:1449).

How do the kids interact with the mandate to embody nonhumans' experiences? The animal forms video is telling. Though some of the kids have their back to their camera, the visible half of the circle is watching Kriya as she looks out at the circle. A group of three Coyote boys (the older group of homeschool kids)—Shiloh, Rafe, and Tenzin—also watch each other. Twice, Shiloh reaches out to grab Tenzin's arms as though he wants to stop him from pretending to be a red-tailed hawk. Rafe eats his sandwich and half-heartedly rolls his shoulders. Younger

Fox students—Wilder, Milo, Kaia, Emma, and Maran—are pretending with enthusiasm, eyes locked on Kriya. Cy, another Fox, watched Kriya but barely wiggles his shoulders up and down. When Kriya switches to an owl gagging up a pellet, the dynamic changes. Rafe and Tenzin mimic throwing up, while Shiloh watches and laughs. The three coyote boys are still not paying much attention to Kriya. When she switches to coyote, raising her leg to "pee" on the trail, one Coyote boy who had not been participating at all, Shamus, began pretending to pee on Emma. Shiloh finally joins in, raising his leg to pee on Zach. But some of the younger kids, like Kaia, Milo, and Emma, are still, watching Kriya and waiting for the next move. So, does this common world pedagogy (Taylor 2017) help the kids break down barriers between their human bodies and the bodies of nonhuman others? Is this just a warm up for them, a chance to goof off with friends and pretend to hock up a pellet and pee on each other? Surely, if Kriya had meant for this to be a solemn endeavor, she would have picked different subject matter. I do not have recordings of how the kids responded to animal forms. Most of the questions instructors asked were about natural history: identifying plants, bird calls, tracking, searching for animal burrows. However, I do not see the kids' laughter and playacting as a failure of posthuman education. The Millers describe their job as getting kids comfortable outside, not proselytizing spiritual beliefs that adult participants talk openly about. Connecting with the soul of an animal would not be an acceptable topic of conversation. And, posthuman projects with children are "messy," and take place with children who are regularly exposed environmental degradation, inequalities, video, and distracting technologies (Taylor 2017:1456). The kids don't live in a state of "pure and innocent nature," and posthuman bliss might not be possible for a weekly outdoor program. Regardless of the outcomes for each individual child participant, the instructors intended to help students embody nonhuman subjectivity through a multitude of exercises, a premise supported

by posthuman educators (Lloro-Bidart 2016, 2018, Malone 2019, Nelson et al. 2018, Nxumalo and Rubin 2019, Pacini-Ketchabaw and Nxumalo 2016, Pacini-Ketchabaw and Taylor 2015, Taylor 2017), and "an ecology of human-nonhuman relationships in which we (all) are embedded and entangled" (Taylor 2016:13).

While all students may not yet be feeling ropes from their bodies to other beings, feeling the lives of nonhumans, or experiencing the calls of birds in their bodies, their education of attention is evident in field observations. After sit spots, kids and adults of all ages report having seen, smelled, or heard chickadees, hikers, rosebushes, rabbits, squirrels, hawks, trout lilies, owls, cyclists, grasshoppers, birds' nests, yellow jackets, geese, balsam poplar trees, woodpeckers, crows, wild leeks, trillium flowers, porcupines, fish, cedar trees, and myriad other beings. One thing students don't very often report in debriefs after activities, despite ubiquitous presences in some areas of the commons, is the sound and smell of traffic, planes flying overhead, or trash. Their sometimes rapt attention, evident in the animal forms video with younger students watching Kriya Miller's every move, has been directed towards the categories of beings emphasized within nature connection pedagogy, not cars or the noises of traffic.

Additionally, the take home challenges instructors give as practice in between classes, to count the number of geese flying during a sit spot, to find bird feathers, to report back on one animal or plant they've noticed in the blooming of spring, to find plant materials that would be good for creating friction fire, are also doing the work of focusing attention on nonhumans' experiences. As previously mentioned, students direct each other's attention as well, such as when Foxes homeschool student Sylvia said, "Don't eat those berries," pointing out poison nightshade after being taught the plant by Chelsea Nester. Once, when students were playing a blindfold echolocation game called bat and moth, two goldfinches flew through the middle of the

circle of bodies, and everyone stopped for a moment to watch where they went. One student said, "That was cool." In another instance, I noticed that a Coyote student who has been through years of HNS programs was mimicking the instructors, asking other students, "Did anyone notice that thing on the trail?" just as the Millers or others would ask students after passing something interesting. Some students are experts at pointing out hazards they have learned from instructors, which is an east attribute. As Nester noticed, "With Rowan and Penny [two homeschooled Foxes] in a group, you don't have to point out hazards. They're doing the things birds do. 'There's thorns over here, there's thorns over here!' Like yes, blue jay, there are."

HNS instructors encourage these multispecies practices through play, believing that forging connections should be fun. Participants' bodies are the sites of connection, since cognition is considered to be a hindrance, something more appropriate for learning natural history than multispecies connections, according to Young (2019) and instructors. They are supporting "becoming companion species," (Haraway 2013:275) with acts to illustrate the porosity and interchangeability of human and nonhuman forms that aid in mutual understanding of each other's needs and lives. Animal mimicry is therefore a posthuman project in this educational setting, seeking not only to eliminate hierarchies and conceptual barriers between humans and nonhumans (Oakley 2019, Snaza and Weaver 2015, Warkentin 2010), but to help students become, for periods of time, the beings they want to know better.

The shape of embodied learning

In the Deep Nature Connection Movement, "nature" is often referred to as a "teacher." For some, this means making nonhuman bodies available for students' learning in subjects like biology

(Daly and Suggs 2010, Meyer et al. 2016). In other contexts (Bone 2013, Russell 2019, Sauvé 2009, Snaza and Weaver 2014, Taylor and Pacini-Ketchabaw 2015), it means acknowledging nonhumans as agential subjects in educational settings. I argue here that nonhuman bodies are teachers because they bend and shape human companions, who in turn develop skills and attention to nonhuman intimates in HNS's posthuman project.

It is a matter of course that nonhumans shape us, from parasites (Dunn 2011, Lorimer 2017) to commensal organisms (McFall-Ngai 2017). For some (Haraway 2013, Ingold 2011, Latimer and Miele 2013, Nelson 2019, Tsing et al. 2017, van Dooren and Rose 2016, Whatmore 2002), that shaping is a sense of *becoming* human with the assistance of other beings who shape us, lines of lives intersecting in what Haraway (2016:97) calls "sympoietic tangling." Video analysis offers another species of perspective: how the bodies and strategies of nonhumans shape human followers. The first of these practices in one of the core routines of nature connection used by HNS, one lower to the ground, is tracking. Narda Nelson (2019:104) writes of tracking with children that the practice, "feels vital in a society seemingly bent on perpetuating untenable patterns of living underscored by logics that are buoyed be seeing humans as existing apart." For HNS, part of a movement that sees humans as integral to landscapes (Young 2019, Young et al. 2010), tracing tracks and trails is part of being curious about nonhuman inhabitants, and holding them in esteem as mysteries unfold. But first, participants have to know how to move, and how to look.

When walking with the kids down the sidewalk outside the Grand Traverse Commons, as shown in the video analyzed for this chapter, Matt Miller used a pedagogical tactic common to the DNCM: going with "child passions" (Young et al. 2010). This means setting plans to travel to a part of the larger Commons region called Autumn Olive Lane aside for a moment to follow

what interests students, which in this case was tracks embedded in a sidewalk. A Fox student named Molly pointed out tracks embedded in the sidewalk leading east away from the Grand Traverse Commons, which stopped the flow of small human bodies. Matt embodied the necessary posture of a tracker: close to the ground, examining all the clues with his face sometimes close to the tracks, sometimes far away, searching the ground for context clues, like the acorn he took from the grass and tossed onto the tracks. When Matt leaned back after inspecting the tracks, so did the kids, with Grady, whose older sister Molly is also skilled at spotting tracks, especially attentive. The only ones not playing were Miller's son, Wilder, and two of his friends in the Foxes group, Rowan and Marin, evidence of HNS's policy to not force kids to join in activities as long as they aren't distracting or unsafe. The six children paying attention moved restlessly, but carefully watched Matt's face and hands for most of the clip, aside from writing and drinking water. When Matt bobbed forward with tape measure in hand, or pointed out small details in the tracks that typify a squirrels', he was showing them the embodied practices of tracking, as well as the fact that curiosity about animals' lives can easily supersede other plans.

Figure 2.4: Tracking Foxes. Matt Miller leads a group of younger HNS homeschool students in a tracking exploration. The group is kneeling over squirrel tracks embedded in sidewalk cement just outside the Grand Traverse Commons entrance.

The embodiment of a tracker can slip from kneeling on the ground to mimicking animal gaits, as Young (2019) suggests as part of successful tracking practice. During an adult tracking class in HNS, students were guessing the identity of some raccoon tracks. Matt Miller was mimicking the pacing gait pattern that raccoons and bears often do. “This is an animal that uses its hands and sense of touch a lot,” he said, and made the sweet, neurotic handwashing motions of a raccoon cleaning its food. This is another way that animals shape human habits, with instructor encouragement. Moving as an animal moves offers information to help synthesize the habits of an animal students may have only witnessed through their tracks. They are learning *see*, as Ingold (2011:55) writes, not through abstract constructs but by “acquiring the skills for direct perceptual *engagement* with its constituents, human and non-human, animate and inanimate.” I would further say they learn through intentional acts of kinship, using sympathetic magic to bend

their bodies into mimetic correspondence, acting as seekers and conspecifics with the posthuman practices mentioned above (Ingold 2011, Lewis and Owen 2019, Taylor and Pacini-Ketchabaw 2017, Willerslev 2004).

The blindfolded sensory exercise is another way that nonhuman lives and sensoriums shape pedagogy. Sightlessness is meant to get students into the life experience of beings who don't rely on sight as much as humans do, such as bats from an echolocation game of "Bat and Moth" with a blindfolded player as a blind bat, or "Firekeeper," another game where kids sneak up on a blindfolded participant. The clip reveals the assumption that humans should not always be reliant on sight, with Kriya repeating the kids should, "slip into your other senses," listen to birds chirping, and try to access intuitive feelings that might alert them to someone trying to pass an object. HNS instructors sometimes mention how humans are too dependent upon sight, unlike other creatures, reminiscent of is the alleged ocularcentrism of Western culture within a sensory hierarchy (Carruthers 2018, Classen 1997, Grimshaw 2001). For example, during one blindfold game, instructor Jack Hannert asked a summer camp pre-teen, "When you're wearing the bandana does it feel like your other senses are turned on?" Lena Wilson included a blindfolded drum stalk—an exercise in which blindfolded participants are placed around a central figure with a drum, and then have to walk towards the sound of the drumbeat—because "we depend on the eyes so much," and being blindfolded helps with, "noticing the things that we don't normally notice in the outdoor realm."

Figure 2.5: Sensory game. Blindfolded students pass around objects from nature in a sensory game led by Kriya Miller.

Nature connection practice is not solely about dislocating vision from the sensorium. It is instead about locating humans within a multispecies cohort. Deer have acute hearing (Warner 2017). Getting near them means being a deer—thinking innocuous deer thoughts, moving slowly, and being mindful of the wind. Predating them takes even more skill. Take for example the game, Cougar Stalks Deer, from the *Coyote's Guide* (Young et al. 2010). Teen volunteer Riley Dickey was sometimes an instigator for the game, in which a "deer" (Riley) stood at a distance from a group of students, and casually walked away from them as they tried to stalk him and pounce on him. If he heard people sneaking up on him, he would turn around quickly and point out people moving, making them go back to where they started, then turn around and begin the game again. The stealthiest person, who managed to sneak up on Riley without being sent to

the back of the line, won and became the next deer. Kriya Miller mentioned that she likes to add another sensory component to Cougar Stalks Deer by asking students what they noticed about nature—sounds of birds, people talking, hikers, weather—while trying to sneak up on the "deer." The intimation here is that nonhumans are attending to a diversity of stimuli, and relating to them requires a similar sensory attunement. This is not to say that the kids are overtly aware that they are being trained by the sensory capacities of other beings, though nonhumans are known to shape human endeavors from laboratory spaces (Hayward 2010) to digestive systems (Lorimer 2016). They are not always perfect at the game—sometimes kids are so excited they don't even try to sneak and run as quickly as they can, and sometimes they are simply ambivalent about the game itself. However, the intention is there for being shaped by the sensory capacities of predators and prey species.

The embodiment of tracking, one of the core routines of nature connection (Young et al. 2010), means turning one's body and attention towards the ground, attending to the world at the level of deer as they stretch forward to paw with their mouths at tender chickweed. Blindfolded kids in Kriya's activity pawed and sniffed the items they were handed, simulating the sensory worlds of other beings less reliant on vision. Getting to know animals means familiarity with the capacities of the human body. If we envy them, we can also become them, and awaken to the potentials of the human sensorium at the same time (Abram 2011, Foster 2016).

Nonhumans shape the bodies of nature connection participants in another key fashion: courtesy. When commenting on bird language to a group of adult program participants, Matt Miller explained his thoughts about disturbing birds who are feeding when he's walking out the door or down a sidewalk, asking the participants: "Do you walk around the robin so that you don't disturb it feeding? Do you ever think, 'I don't want to disturb that bird's breakfast?'" Kriya

followed up on his thought, saying that paying attention to bird behavior is empowering because it shows that people who might think of themselves as inconsequential can actually see the effect they have on birds if they fly frantically away. That's where bodily courtesy comes in handy. Humans can move in ways that make other animals more comfortable with their presence (Young 2019), such as a type of animal form in which humans move slowly, called fox walking. That is partially what Kriya's admonitions to "settle into your senses," and pay attention to birds during the blindfold game are for—to settle mental chatter and gain bodily awareness that makes it possible to pay attention beyond mental chatter. If a participant doesn't pay attention to their own movements' effects on other beings, they may never interact with them. Tracking, bird language, and the other tools of multispecies belonging help students' bodily "attunement" to the lives of others (Despret 2008, Haraway 2016). Animals are teachers and participants already, voting with their presence or absence their fondness for human handiwork.

Nonhumans are the kinds of beings that you can make commitments to. Matt Miller shared this story about one of his first forays into nature connection during a troubling time:

> "I would to go to Lake Superior and I, you know, I developed a relationship with the lake. It was uncomfortable, kind of, too. I don't know, it was a spiritual experience in which I made a commitment to the lake and nature literally responded. I totally saw the landscape respond and then commitment I made was heard and I had to do it then, you know. So there was a response and I had to follow through."

Posthuman proponents often write of human "response-ability" (Haraway 2016, Taylor 2018, Taylor et al. 2013, Wallace et al. 2018), the ability to engage with nonhumans as agential beings rather than as inert objects or dumb animals. Response-ability opens up the possibility of "following a line of flight away from Nature as rigid, dogmatic, detached, and often

unimaginative, toward different relationships, intensities, and concepts that enable collective forms of existence and new ways for various organisms to respond...” (Wallace et al. 2018:201). It is an openness to surprises, the unpredictable give and take of relationship rather than the rote script of behavioral sciences or geology. Miller was moved by the landscape’s response to an intimate, reciprocal communication. Open response-ability—attention to nonhumans’ participation in everyday social flows—is necessary for multispecies relations.

Conclusion

In light of exhortations to insert posthuman principles into Western education (Ceder 2019, Lloro-Bidart 2016, 2018, Pacini-Ketchabaw and Taylor 2015, Snaza and Weaver 2015, Taylor 2017, Taylor 2018, Taylor et al. 2013), I have outlined some of the posthuman pedagogical tools primary HNS uses to foster multispecies communities of practice. Instructors encourage students to enter the bodies and attention of other animals through mimicry, such as the ubiquitous animal forms and bird language. They model the activities of nature connected, such as through tracking exercises, and attempt to enter nonhuman sensory experiences. They bend their bodies to get on the level of other beings, and move them to correspond to tracks and trails to illustrate proper attention. They treat nonhumans as friends, as companions, as resources, as teachers, and as beings with agency and intelligence, often regardless of their material statuses. HNS disrupts Western pedagogy premised on inanimacy in favor of education that anticipates the worlding capacity of nonhuman co-conspirators (Haraway 2013, 2016, Lloro-Bidart 2016, 2018, Malone 2019, Nelson et al. 2018, Nxumalo and Rubin 2019, Pacini-Ketchabaw and Nxumalo 2016, Pacini-Ketchabaw and Taylor 2015, Taylor 2017).

Does it work? Can an educational endeavor counter narratives of sapien superiority in favor of more generous interpretations of multispecies community? The results are mixed. As noted earlier, the "messiness" of a "becoming" a human being, not only in the presence of larch and pine, but also oil pipelines and video games (Taylor 2017), makes the question difficult to answer. On the one hand, my fieldnotes recall a day working with a group of homeschool Coyotes with Matt Miller and Chelsea Nester. Nester mentioned she was so excited to see a red-tailed hawk, who perched for a while above the head of one homeschooler, causing multiple bird alarms. In my notes I wrote, "Matt said about three times that it felt like such a failure that four kids were sitting near it and no one noticed it." HNS homeschool kids, who might spend one or two days a week at the program, do not have the benefit of living in a society attuned to nonhuman needs, though instructors would like to change that.

But that doesn't mean the education of attention (Ingold 2011) is entirely failing them. One day, Matt Miller and I were walking out of a grocery store and met up with Maggie Raptis, a parent of two HNS students. She praised HNS, and then said something that bent us over in laughter. Quietly, so that her daughter Penny couldn't hear, she whispered, "Yeah it's all great except that now every time she hears a [expletive] bird we have to go and find it." Miller was thrilled that Penny, she of the scribbled squirrel tracks during Matt's tracking exercise, was using bird language outside of the "classroom," and I was pleased to write down one more anecdote about the results of directing attention to the creative activities of nonhumans who make this "worlding" project (Lloro-Bidart 2016, 2018, Malone 2019, Nelson et al. 2018) a home.

In one scene that my mind returns to often, my camera follows Matt Miller as he walks to a thin sapling and begins to harvest it by cutting through its springy body with a knife. Under his breath, he half sings to himself, over and over, "Beautiful little tree, thank you very much,

beautiful little tree, thank you very much." He begins singing this refrain on his walk to the tree, and ends it not long after he has cut the small sapling. It is this scene that makes me delve further past the concept that humans are essentially at the pinnacle of a power hierarchy, with the rest of the nonhuman world held hostage. I can see the wisdom in posthumanism knocking people off the throne for the purposes of decentering them. However, for a moment I am able to see Miller's barely sing gratitudes as a simple gesture between friends, as when someone does something nice for each other. I could hardly expect a human friend to spare a patch of skin for a basket, yet some trees can do so without dying if the cut is made correctly. Cutting the right sapling will ensure vigorous growth of its neighbors who share a root system. This comparison will not hold for every situation. I can't figure how a doe losing her life would benefit from the exchange. But I can see instances in which embodied interaction—living and dying, handing flesh over to flesh—is a kind of relationship whose power entanglements are not given, but perhaps are just bungled by some of the sad things that pass for living and dying nowadays. Miller thanks the sapling as if it were a friend allowing him the pleasure of borrowing something, and perhaps that is exactly the kind of relationship that HNS hopes to foster in others.

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CHAPTER 3

CONSERVATION IN COMMUNITIES OF CARE[1]

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Under a blanket of thick gray clouds, a group of twelve children and five adults huddled beside a fire. Fluorescent snow pants and soggy hats added color to a two-tone landscape of white snow and the brown bodies of trees. The group had taken the slippery trek up Fire Hill to a patch of state land in Michigan's Grand Traverse Commons, one of their few options for a place to build a fire. Matt Miller, one of the group's leaders, was speaking about proper conduct for the group over the next six weeks.

"Our last agreement," he said, "is respect for nature. So, for instance, we don't leave garbage, we don't pick live plants unless we're going to use them, we don't disturb active animal dens."

A few of the kids chimed in with their own examples:

"We don't break branches and we don't pick plants."

"We don't kill bugs."

"If I am harvesting something, especially wild edibles. I like to ask permission from plants and leave something like a song to thank it," Chelsea, an instructor, announced. She continued her thoughts with the gathered adults. "And I'd say if you harvest it, use it…We think about harvesting but we don't think enough about not taking more than you need."

With agreements in place the group packed up their lunches and Matt made paths in the deep snow for the kids to play a game. I watched the commotion, the laughter and red, cold faces, and continued participant observation as a researcher with the Human Nature School in Traverse City, Michigan.

Much has been written on the imperative to love the natural world enough to save it (Adams 2006, Chawla 2006, Milton 2002, Tsing et al. 2017). Similarly, the imperative to encourage children's positive, meaningful experiences outdoors has led to a surge of suggested

modifications to environmental education. Educators are implored to consider teaching science outdoors (Becker et al. 2017, D'Amato and Krasny 2011, Higgins and Humberstone 1999, Rickinson et al. 2004) and have school gardens (Blair 2009, Pfleger 2015) so that children can live their lessons and potentially avoid the damages of Nature Deficit Disorder (Louv 2008). Educators have responded to the growing interest in outdoor-based education with programs based in a variety of philosophies. The Deep Nature Connection Movement (DNCM), of which Human Nature School (HNS) is a part, is an environmental education movement that emerged from an awareness of global ecosystem imperilment. Nature connection educators recognize the growing extinction of experience tied to ecological ignorance (Atran and Medin 2008, Miller 2005), and offer their pedagogical practices as a potential solution.

Nature Connection Movement context and pedagogy

Over the past few decades, hundreds of nonformal outdoor education programs have been established to acquaint North Americans with nonhumans in ways that are thought to foster relationships of care. Some, like the Human Nature School (HNS), are challenging the humanistic basis of Western education. The Enlightenment-era mandate of human exceptionalism embedded in formal educational institutions is blamed for a multitude of environmental sins (Taylor 2017, Merchant 1995**,** Luke 2002: 182, Horkheimer and Adorno, 2002[1947], Devall & Sessions 1985). Educational humanism congeals the ontological category of human, elevating students within a hierarchy that precludes meaningful understanding of nonhuman subjectivity and agency (Snaza 2015, Taylor 2017). HNS dissolves the hierarchy at times, and strives to foster meaningful social relationships with nonhumans through nature-based play.

The DNCM is not promoted as a conservation movement. However, the movement's founder Jon Young (Young et al. 2007:30) seeks to build what he calls a connective culture: "When we say *connection*, we mean a familiarity, a sense of kinship, just as we all experience with our human family." HNS uses one of Young's original terms, "caretaking," to describe environmental protection. Nature connection programs promote a sense of kinship though year-round outdoor education programs that are often attended by homeschooled kids, though there are also summer, weekend, and adult programs.

At the same time, the DNCM positions itself as an educational movement to transform North American society from a culture of environmental destruction to a culture of socio-ecological repair (Young 2019). In educators' endeavors, there are echoes of transformative and emancipatory pedagogies as they encourage participants to assess their beliefs about and behavior towards nonhumans (Böstrom et al. 2018, Chaves and Wals 2018,D'Amato and Krasny 2011, Mezirow 2009, O'Sullivan 2008, 2016, Sterling 2010-2011); and critical assessment of how structural power and ideology shape relationships no matter the species, and nature connection as a source of empowerment (Breunig 2013, Freire 2018, Kahn 2009, Wals 2011. Von Benzoan 2018)Through transformations in ecological knowledge and embodied perspectives fostered by nature connection practice, DNCM mentors assume that "caretaking" activity will begin to flourish along with participants' love of nonhuman nature.

In researching with Human Nature School, I became curious about the relationship between a culture of kinship and caretaking. This line of questioning is becoming more common as scholars theorize social relationships across species lines through multispecies ethnographies (Faier and Rofel 2014, Hayward 2010, Kirksey and Helmreich 2010, Ogden 2010), posthumanisms (Lorimer 2013, Haraway 2008, 2016, Snaza 2017), and literature on the

Anthropocene (Haraway et al. 2016, Lloro-Bidart 2015, Taylor 2017, Tsing et al. 2017). I argue here that relationships of care are entwined with participants' understandings of caretaking, a word that I will further define and compare to natural resources conservation and stewardship. Additionally, I outline how cultural critique within Human Nature School relates to an emancipatory pedagogy.

In the next section I will briefly outline the key literature that scaffolds this inquiry. I will then describe the research site in Traverse City, Michigan, and the key participants who informed this project. Then I will explain my methods and tools of analysis, and discuss the results of this investigation into care and caretaking across material differences.

Stewardship

Stewardship, a concept to which HNS also contrasts itself, has been variously defined, though I appreciate this definition: "the responsible use (including conservation) of natural resources in a way that takes full and balanced account of the interests of society, future generations, and other species, as well as of private needs, and accepts significant answerability to society" (Worrell and Appleby, 2000, p. 263). Stewardship in the U.S. often implies that individuals work with various governmental and nongovernmental agencies to modify species composition and reduce the effects of human development, though it can also take place with individuals who monitor soil quality and invasive species on their own properties (Bennett et al. 2018). The activities surrounding stewardship are myriad: conserving energy and protecting plants and animals (Stern et al. 2008); light logging and farming at the Little Traverse Conservancy in northern Michigan; limiting straw use and leaving no trace; monitoring insects and birds and pulling invasive species with the Michigan DNR (2019). At the same time, stewardship could involve doing absolutely

nothing, as advocated by Attfield (2006), who paraphrases Lovelock's (1995:228) statement: "Stewardship implies that contemporary science can fully explain the Earth, and that people are willing and able to keep the earth a fit and comfortable place for life." Stewardship's biblical origins—in particular humans' dominion over nonhuman life—have also sparked critiques (Palmer 2006).

Multispecies relationships of care

While DNCM participants support conservation efforts, civic responsibility and expert guidance by authorities are not driving forces. Relationships of care with nonhumans are more important. Forging relationships with nonhumans is not a new concept, long within the purview of indigenous scholars (Cajete 1994, Deloria, Jr. 2006, Deloria, Jr. and Wildcat 2001, LaDuke 2008). Some scholars argue that treating nonhumans like beloved companions with whom one shares intimacies of interaction, rather than inert resources to consume, is a powerful tool to counter "the third great extinction" (Chawla 2006, Kals et al. 1999, Milton 2002, Singh 2015, Tsing et al. 2017).

Nature connection as posited by practitioners does not very often take place within public, mainstream educational institutions. As Snaza (2017) points out, relationships of care suggest a level of equality incompatible with Western educational ideals, where humans are at the apex. Posthuman literature, which counters Western humanism, is largely prescriptive, maintaining that alternatives are possible with less focus on *how* people are creating alternative educational forms. Exceptions to this are research on indigenous cultural revitalization efforts (see Battiste and Henderson 2009, Beckford et al. 2010, McCarter et al. 2014, Simpson 2002, 2014) or the inclusion of indigenous science into research and classrooms (see Battiste et al.

2000, Berkes et al. 2000, Cajete 1994, Deloria, Jr. and Wildcat 2001, Jacob and Blackhorn 2018). I undertook this investigation to determine how notions of nonhuman agency and social and emotional connections with nonhumans shape Western educational opportunities at HNS.

Emancipatory and transformative environmental education

However positively portrayed in popular media, nature connection education has been criticized for failing to denounce dominant political-economic regimes that contribute to environmental degradation, instead focusing on individual responsibility and the need to just get outside (Fletcher 2017). Writing specifically about "nature-deficit disorder," Fletcher (2017:54) argues that not only does the term "nature" perpetuate humans' conceptual separation from the rest of the known universe, but environmental education is also caught up in "political-economic structures exacerbating the environmental degradation that these perspectives seek to combat" (Fletcher 2017:232). As numerous authors have pointed out, complex, globalized systems of resources use have led to unevenly distributed environmental decline, often at the expense of marginalized peoples (Delgado-Ramos 2014, Escobar 1999, Peterson 2000, Robbins 2012, Rocheleau 1995). An aim of this research is to explore the cultural critiques that scaffold the DNCM.

Critical assessment of cultural norms and global inequalities is also inherent to emancipatory education practices (Freire 2009, Brookfield and Holst 2011). Notions of emancipatory learning have emerged from Friere's (2009) treatise to oppressed people reclaiming their humanity from their oppressors and practicing their abilities to co-create knowledge; Habermas's (1971) interrogations of positivist knowledge; and Mezirow's (1991) transformative learning theories. An emancipatory education is one in which learners critically

analyze epistemological structures that can go unquestioned within institutionalized learning environments. Scholar bell hooks (1994:4) similarly contrasts, "…education as the practice of freedom and education that merely strives to reinforce domination."

Environmental education is a key node for emancipatory learning practices. Critical student inquiry into environmental issues has been a highly regarded educational strategies (Hungerford and Volk 1990), though educators have been critiqued for failing to address neoliberal influences in environmental education (Jickling and Wals 2008, Kopnina 2015). Rather than questioning overconsumption in industrialized nations, education can become entangled with 'sustainable development,' in which continued economic growth neatly coincides with ecological prosperity (Kopnina 2012, 2015). Dominant narratives couch nonhumans as "natural resources" rather than elements of landscape that evince their own liveliness and agency (Meek and Lloro-Bidart 2017). Kopnina (2012) additionally points out that sustainability continually upholds human desires above all other considerations. In this research project I analyze how the DNCM champions different ontological statuses for nonhumans through critical assessments of U.S. culture.

Research site

Traverse City, home of the Human Nature School, rests in a bay between the Old Mission and Leelanau Peninsulas in northwest of Michigan's lower peninsula. Traverse City is home to around 15,300 people, although seasonal events like the Cherry Festival can add an excess of 500,000 people to the area (https://datausa.io/profile/geo/traverse-city-mi/). At popular destinations like Sleeping Bear Dunes National Lakeshore and the Grand Traverse Bay, tourists are drawn to the glittering waves and golden sand beaches. Real estate values are high and wages

for some workers are too low to afford housing in the area, leading some to bemoan the difficulty of keeping young people in the region (McGillavary 2015).

In 2009, Matt and Kriya Miller, the co-owners of Human Nature School, left Traverse City separately to train in a nature connection immersion program at Wilderness Awareness School (WAS) in Duvall, Washington. The two stayed on for an additional year of WAS training as partners, and then returned to Traverse City to start Human Nature School in 2011 with a small group of kids. Their educational programs take place at the Grand Traverse Commons, a popular 500-acre multi-use park, on the grounds of what used to be the Northern Michigan Asylum.

The educational methods the Millers learned were developed by the DNCM's founder Jon Young. Young's origin stories are widely available, having been incorporated into nature connection pedagogy (Young et al. 2010). At the age of 10, Young met Tom Brown, Jr., a wilderness education who owns The Tracker School in New Jersey. Brown mentored Young in outdoor survival skills, including animal tracking and hunting. He was also inspired by his studies in anthropology, and travels worldwide to learn how indigenous peoples teach their youth valuable subsistence skills. A main goal of nature connection practice is fostering a feeling of being at home outside, whether in urban or rural areas, and his largest audiences are in North America and Western Europe.

Research methods

A primary method for this project was participant observation, and from August 2015 to July 2017, I took part in the everyday functioning of Human Nature School and took detailed field notes (DeWalt and DeWalt 2010). I also performed semi-structured interviews with staff,

volunteers, board members, extended family members (folks in the role of HNS "elders"), and adult and teen students (Spradley 1979).

I also chose videographic interview methods (Tobin et al. 2009). I took seasonal recordings of randomly selected days of Human Nature School children's programs between summer 2016 and spring 2017. These recordings reflect an entire day of programming, from 8 am to 4 pm for each day. I edited each season's videos into 30 minute segments that merited questions, and interviewed instructors as they watched the videos. This article is in part based on transcripts of those recording sessions with eleven instructors and volunteers.

Analysis

Open coding

To determine how participants perceive, practice, and teach caretaking, and their critiques of U.S. culture that encouraged their participation in HNS, I used MaxQDA2018 software to perform qualitative text analysis. The text originated from field notes between August 2015 and July 2017, and interview transcripts from ten instructors, ten adult apprentices, and eleven extended family.

I followed Miles et al.'s (2014:72) suggestion to begin with "First Cycle coding:" a "deep reflection on the meaning of various chunks of data." Using MaxQDA, I developed codes on content related to interactions between humans and nonhumans, caretaking, and discussions critical to North American societies. In vivo coding (Miles et al. 2014) was integral to my preliminary coding process. For instance, the in-vivo code "self-agency of the nonhuman world" originated from one educator's statement. I additionally used process coding, which uses gerunds

such as “using invasive species” to note action. Values coding was also helpful. For example, I used the code “Americans are uncomfortable being outside” from criticisms voiced by Matt Miller and other participants.

For the “Second Cycle coding,” (Miles et al. 2014), I used the Creative Coding function of MaxQDA, placing the original 188 codes on a virtual whiteboard and arranging them into larger thematic categories. For example, I named one second cycle code “moving backwards,” which encompassed ideas about “traditional” social roles, nostalgia for a technological past, and embracing European traditions. I ended up with 25 major themes on caretaking and cultural critique.

I used Excel to create a “conceptually clustered matrix” (Miles et al. 2014:174) to organize and compare analysis results. I used the matrix to cluster participants by their roles at Human Nature School and compare their responses. Each research participant was listed on the vertical axis, while the 25 major themes I used to categorize their responses were on the horizontal axis. In this way, I was able to compare their responses using a clustering factor—their role in the organization—as an organizing principle (Gibbs 2007).

Interactive word tree

I used MaxQDA to create a list of all instances in which animals, plants, and other nonhuman features of landscapes (such as creeks, gardens, roadkill) were mentioned. I categorized each listed element by similar features: such as plants, animals, and landscape attributes. The categories relate to HNS pedagogy; for example, birds are treated differently from other animals by the DNCM.

I selected the most commonly used word in each of four salient categories for further analysis: plants, animals, birds, and landscape attributes. For example, the word tree was featured 902 times, appeared in 80% of documents, and was ranked 48 out of thousands of words. I used the Interactive Word Tree function of MaxQDA to highlight all instances in which "tree" or "trees" was used. Then I coded the function or context of each recorded instance of use. I performed the same analysis with the words "animal(s)" (mentioned 517 times), "bird(s)" (mentioned 422 times), and "water" (mentioned 428) times. After I made the initial codings, I lumped the individual codes into similar themes to gain a finer grained understanding of how caretaking and relationships of care were conceptualized and practiced.

Discussion

Caretaking and stewardship

Matt Miller described caretaking as envisioned by HNS:

> It's almost that kind of intuitive, empathic, emotional connection to actually appreciating and caring for these different things outside of yourself, all these plants and bugs and stuff…you're taking lives and getting chlorophyll on your hands and blood on your hands at times and there's going to be a responsibility in that you're going to be affecting a lot of other lives if you're going to start caretaking and interacting with the landscape. But if you have that intention of overall greater health and wellness in the landscape and you have those basic understandings and values I just talked about, go for it man. You don't need to

> have a degree in botany. I think it's almost like an intrinsic responsibility in the world to be a caretaker of nature.

In some ways, HNS's characterization of caretaking aligns with U.S. stewardship. "Environmental stewardship is the responsibility for environmental quality shared by all those whose actions affect the environment," according to the U.S. Environmental Protection Agency. It is also connected to mandates from a higher power (Attfield 2006, Berry 2006, Van Dyke et al. 1996). Matt Miller once recounted an experience in which he made a "spiritual commitment" to Lake Michigan to be a force for environmental good, while volunteer Julie Green noticed that nature connection practices have a spiritual undercurrent (not an overt part of children's curriculum).

Additionally, stewardship and nature connection have been critiqued for promoting individual responsibility for environmental damage, over the actions of corporate governments (Fletcher 2017, Taylor 2017). HNS participants do perceive their own responsibilities; Bennett et al.'s (2018) analytical framework, including protecting species and managing plant species diversity, would be common practice among HNS participants. Hannert and instructor Chelsea Hummon often noted being aware of overharvesting as caretaking. Other stewardship activities like eating less meat, composting, voting, and consuming fewer plastic products are all familiar to HNS participants, including parents of the homeschoolers who attend.

At the same time, HNS practices do not entirely articulate with stewardship. Bennett et al. (2018) noted that individual stewardship actions often occur in concert with organized public agencies. While HNS participants do gather for group projects, the pedagogy confirms individuals' abilities to make their own decisions about landscape management. Kriya Miller explained,

> You actually have a real live connection to changing the landscape around you versus just having ideas of what will work or what people will think will work. And so the connection piece I think is huge because it's really empowering, because it empowers us to actually take part in this process…you don't have to depend upon what other people say or think or tell you to do. Connecting to how we're actually shaping the world around us and having an awareness of that is very empowering, I think, to starting those steps to being a good caretaker.

There is potential here for land management that elides bureaucratic functioning (Singh 2013, 2015).

There is also a lack of interest in what the Millers call "no touch zones." Stewardship sometimes takes the form of protection from public intervention. For HNS, with hands-on curriculum, fortress conservation is anathema. Table 3.1 shows the main contexts in which participants interacted with, or spoke of, nonhumans. "Active use" indicates participants harvesting nonhumans—such as cutting limbs for canoeing building—or speaking of use. "Passive use" includes tracking animals or observing bird signs. "Not for human use" indicates those times that participants spoke of nonhumans' use of other nonhumans, or for purely conservation reasons. Of these interactions, 60% (1367/2268) consisted of active and passive use of nonhumans. In contrast, 7% (167/2268) consisted of nonhumans outside of the context of human use. Seeing themselves as integral parts of landscapes, and recognizing that "wilderness" in North America has in fact been managed by indigenous peoples (Anderson 2005, Nash 1994), they argue for capable, beneficial interactions with nonhumans.

TABLE 3.1: Quantitative analysis of popular uses of most commonly mentioned nonhumans

	Friendship (E.g., talking to, spiritual connection, relationship, reverence)	**Not for human use (E.g., conserving, animal habitat, agency, hazards)**	**Active use (E.g., hunting, making medicine, craft materials, swimming in, landscaping)**	**Passive use (E.g., tracking, paying attention to, identifying, drawing, as teachers)**	**Narrative use** (E.g., in stories, as metaphors, in songs)	**Part of landscape** (E.g., landmarks, watersheds, rain, as part of landscape)
Tree	180	**91**	**242**	**269**	66	54
Animal	157	**19**	**68**	**255**	18	NA
Bird	74	**2**	**51**	**257**	37	NA
Water	39	**55**	**208**	**17**	37	72
Total	**450**	**167**	**569**	**798**	**158**	**126**

Stewardship is also based concepts of human dominion over nonhumans (Attfield 2006, Berry 2006, Van Dyke et al. 1996, Taylor 2017), with exceptions of stewardship by some indigenous peoples (see Beckford et al. 2010, Descola 2013, Hunn et al. 2003). While HNS participants certainly use nonhumans—much caretaking consists of respectful plant harvesting—they assume that nonhumans have agency in management. As Hannert remarked, “I think talking is an innately human characteristic. But I think that everything is communicating in its way if

you listen." Ideally, individuals can *ask* the world what kind of intervention would be most helpful.

The care in caretaking

Developing relationships of care with nonhumans is a hallmark of the DNCM. As Kriya Miller remarked, "For me the biggest thing…is the relationship part, 'cause that's going to stir that heart of the student with nature, stir that desire to be in good relationship and to care for it." Extended family member Stephanie Mills explained, "I think they are fostering sort of a mature and reciprocal relationship with the natural world." DNCM philosophy posits that nonhumans have the awareness to enter into relationships with humans—that in fact they "miss" being in relationships of care with Western humans (Young 2019).

HNS methods consist largely of games to help kids learn naturalist knowledge. However, DNCM activities also help students learn to move their bodies for multispecies relationships. "Sit spots"—outdoor sensory meditations—are meant to still participants' minds and bodies so that they become aware of the activities and voices of nonhumans. The walking version of sit spot is called "fox walking," where one walks slowly and quietly in imitation of a fox. Kriya Miller noted the following about students mimicking animals, "Some people actually feel like they can understand what it's like to be the animal…it's like if you can imagine it and you can be it, for a lot of kids it comes naturally. It's like you're that much more connected, you're that much more there." These are processes of attunement to the lives and habits of nonhumans as agents who *matter*, who affect and can be affected by human behavior (Descola 2013, Ingold 2000, Latimer and Miele 2013, Latour 2011, Taylor 2017, Haraway 2003, 2016, Singh 2003, 2005, Taylor 2017, Tsing 2012).

Thinking of beings other than humans as agents is an old concept. Within anthropology this stance has historically been called animism, a term E. B. Tylor (1871) described in *Primitive Culture* as a belief in souls animating nonhuman bodies. Tylor relegated these beliefs to "primitive" peoples, but Descola (2013) points out that relationships with animate and agential landscapes are widespread over time and space. And whether the agents are glaciers (Cruikshank 2005), stones (Deloria, Jr. 2006), cup corals (Hayward 2010), or mushrooms (Tsing 2012), nonhumans are increasingly implicated in human social lives. DNCM pedagogy creates relational forms for Western environmental education in which nonhumans are expected members of social lives, while their bodies are also used for subsistence and beyond.

In thinking of nonhuman agency in relationships of care, HNS draws attention to nonhumans' responses. Reciprocity is often measured by proximity, taking into account that nonhumans socialize differently from humans (Descola 2013). If animals remain around humans without being scared away, they are considered accepting of a human's presence. To some adult participants, relationship includes a plant allowing itself to be noticed. There is agency here; Green summed it up by saying, "Plants want to be of service [to humans], they want to be honored;" plants can communicate when they do not want to be harvested; and nonhumans can run away. However, there is a burden on humans to modify their behavior. Matt Miller calls this "the attitude in which you are approaching your space," and some of their curriculum could be considered exercises in conduct.

At HNS, nonhumans are considered agents who can make decisions about how and when they would like to be used. They do not have the same power as humans within relationships (Meek and Lloro-Bidart 2017), a point the Millers have made in homeschool programs. Through directed attention to their lives (Ingold 2000, 2011) their needs can be made clear, should they

choose to share. This does not erase the fact that nonhuman subjectivity is not entirely knowable (Lloro-Bidart 2016). However, caretaking is recognizing that existence is a shared proposition.

Transformative and emancipatory education

My analysis of participants' social critiques was driven in part by Fletcher's (2017: 232) call to problematize "…the (neoliberal capitalist) political-economic structures exacerbating the environmental structures that [environmental education] perspectives seek to combat." Many HNS participants seemed motivated to attend because the DNCM seemed like an attractive alternative to "mainstream" North American culture. Of the 25 adults interviewed for this article, 22 mentioned maladaptive cultural responses they thought nature connection would remedy. Nor did interviewees consider fracking, species extinction, Forest Service clear cuts and monocultures, excessive plastic packaging, pesticide use, littering, the emerald ash borer and beech scale, or myriad other environmental ailments they (at times bitterly) lamented solely the purview of individual citizens. One purpose of the DNCM is to transform this structural violence by directing attention towards nonhuman lives in ways that make exploitation less likely.

Transformative learning theory (TLT) was conceived and developed primarily by Mezirow (1991, 2000) through his analysis of the processes and contexts of perspective transformation in higher education. TLT includes what O'Sullivan (2008:30) calls the "great work" of bringing about "a new order of social justice and ecological balance." He incorporates Paolo Freire's (2009) emancipatory position in which educational processes are not just for "banking" information, but for dismantling systems of oppression and training learners to become critical "masters of their thinking."

Similarly, HNS mentors seek to foster transformation from political-economic systems that view nonhumans as exploitable. Jon Young calls this "cultural repair." As extended family member Carol Laughing Waters asked, how to we go about, "getting the land away from being commodified and how do we give the land back to herself?" Extended family member Mary Jo Kage sees HNS as part of transformation towards an ecocentric culture. Mills explained she did not object to the Millers' use of forest products,

> … especially because they're not commodifying the things that they're utilizing and I think that one of the things that HNS really persuaded me of is that the experience of subsistence and survival in nature is a way better foundation for reciprocal and respectful relationships with it.

Their beliefs articulate with transitions from an instrumentalist view of nature to an interdependent perspective (O'Sullivan and Taylor 2004), what Hill et al. (2004:55) see as imagining "beyond the economic bottom line." Some of the tactics of the DNCM—putting adult students into "disorienting" situations, such as wilderness survival weekends; exposure to "other" worldviews of nonhumans; reflection upon ecological assumptions; social interaction—are all elements that, according to theory, can lead to perspectival transformation (D'Amato and Krasny 2011, Feinstein 2004, Mezirow, O'Sullivan). Instructor Chelsea Nester's struggle to find a word to call nonhumans besides "it" resonates with "recognition of and engagement with the more-than-human as agential and communicative beings…at the core of a transformative sustainability learning" (Barrett et al. 2017:132).

DNCM programs hold space for emancipatory relationships with and for nonhumans as well. HNS challenges the dominant ideology of natural resource exploitation in the same ways that radical learners are entreated to challenge oppressive hegemonic narratives (Brookfield and

Holst 2011, Freire 2009). Learning takes place within a diffuse social movement, as have other sites of emancipatory education (Meek, etc.). When child and adult students mimic the actions and language of birds through creative play—which Kriya Miller says can teach the powerful effects we have on nonhuman activities—I argue that the students are learning to attend to and live with profound material differences (Brookfield and Holst 2011).

Posthumanist educational stances hold that humans are already involved in intricate socio-ecological relationships with nonhumans that go largely unacknowledged within western mainstream education (Ceder 2019, Morris 2015, Pacini-Ketchabaw and Taylor 2016, Snaza 2017, Taylor 2017). Seeing nonhumans as agents can be a step towards relationality over an instrumental, extractive ethic (Haraway 2008, 2018, Lloro-Bidart 2016, Taylor et al. 2013, Taylor 2017). For example, Jake Moran explained his job was "to reinforce this idea that [the kids'] want…is not more important than the animal's life." Kriya Miller noted of a property HNS will be using for programs that, "You don't want to put ideas onto it too hard" or it won't be what the landscape wants. Their stances posit nonhumans as active partners whose needs and desires should also be met, rather than being captivated for human consumption.

Conclusion

In Tsing et al.'s (2017) *Arts of Living on a Damaged Planet* authors discuss the ghosts and monsters created by human activities. For all its reminders that "living arrangements that took millions of years to put into place are being undone in the blink of an eye," (Gan et al. 2017:G1), there are vestiges of hope that we will not erase vast multispecies assemblages. Swanson et al. (2017:M7) ask, "How can we repurpose the tools of modernity against the terrors of Progress to make visible the other worlds it has ignored or damaged? Living in a time of planetary

catastrophe thus begins with a practice at one humble and difficult: noticing the world around us."

Nature connection pedagogy is all about noticing the world around us. Though I do not wish to paint a picture of HNS students and staff standing heroic in a burnished sunset, I find their ability to ground posthuman and transformative theory remarkable. O'Sullivan and Taylor (2004:3) note that, "We must become aware of the ontology that underlies our current course and recognize our immersion in it." HNS participants use their attentive senses, along with a dose of creativity, to explore alternative forms of companionship with lively landscapes, whose assembled desires for continued existence could scarcely go unnoticed. And rather "being for others" (Freire 2009:75), DNCM pedagogy sees nonhumans as being for themselves. I find hope in their pedagogy as one way "…of nurturing, or inventing, or discovering, or somehow cobbling together ways for living and dying well with each other in the tissues of the earth whose very habitability is threatened" (Haraway 2016:132). After all, as Matt Miller noted, what nature connection pedagogy offers is "…a more hopeful narrative. Just a better story."

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CHAPTER 4

THE ARTS OF STORYTELLING[1]

[1] DeMoss, Jennifer A. To be submitted to *Cultural Anthropology*

Kriya Miller kneels next to her olive-green backpack on the Grand Traverse Commons lawn. It's a chilly spring day and the homeschool kids in the morning circle are wearing light jackets, sweaters, and hats. She addresses the kids and Human Nature School (HNS) staff in her usual jovial tone.

"This is an older story and it's about a character I've sure you've heard about before. Raise your hand if you've heard of Stalking Wolf, who's also called Grandfather." Most of the kids raise their hands. "Lots of what he did affects what we do here at nature school. When he was young he did a lot of what we do. Stalking Wolf was good at sneaking, tracking, finding wild edibles, he knew birds really well, he was able to do sit spots, and he journaled and brought back stories to share with people."

Kriya explains that Stalking Wolf was a masterful tracker even at a young age, trained by elders from his Apache community. One day while wandering and tracking animals, he found an enormous oak tree he had never seen before. "He was getting to that age where he wondered if he could do special powers, and he would talk to the tree like in his cultural stories. He started to try to communicate with this tree, and he would discuss things with the tree like it was a friend," she says. He started sleeping next to it. One dream he had beside the tree was a horrific vision. In the dream he became the oak, and experienced the anguish of people hacking him apart for wood and wasting most of his body on the ground.

"He could see that his favorite tree was dying and he felt horrible" says Kriya. "He saw images of plants and animals he'd gathered for eating. He woke up just as it was starting to get light. He felt horrible, like throwing up, but it was more like an emotional sickness. He didn't want to sleep by the tree anymore, and he thought to himself that maybe he was just a horrible

thing that was taking and killing. He looked at the sapling he had cut for a bow and he felt awful."

The kids are mostly quiet during the telling. A few chomp on apples or rustle potato chip bags, but Kriya holds their attention with this drama. She says that Stalking Wolf is so wrapped up in his anguish he fails to notice his grandfather, Coyote Thunder, has joined him.

"They were walking along a river, meandering, and Stalking Wolf noticed that on one side of the river the plants were thick and dark, and on the other side of they were unhealthy and didn't look very good," Kriya recounts. "Around that time Coyote Thunder said, 'This is one of the places I tend to.' And Grandfather said, 'Tend to?' Coyote Thunder said, 'Yes, this is one of the places that I give to and caretake. Grandson, I've had the same dream, and I know this: we can have all the food, medicine, and bow staves we need and survive in a way that that we are giving back to the land. Look for saplings that are crowded, and don't go for the biggest sapling. Look for the one that's not going to survive, and ask with your heart open if it will be best to take this for the next seven generations. If you ask with your heart open for the needs of the people in the spirit of giving back, the earth will provide.'"

Storytelling at HNS is purposeful, intended to deliver moral and informational lessons. In the story, Stalking Wolf is relieved to know that his presence on the earth isn't a destructive burden. He is a proxy for the nature school kids, who are being taught wilderness and caretaking skills. The story balances out the gloom and doom prophecies of ecological damage with a welcome dose of hope and agency.

"Material worlds and the stories we tell about them are bound up with each other," write Heather Swanson et al. (2017:M10). They argue that stories can inform ecologically ignorant humans about an increasingly beleaguered planet. They can also entangle us in the lives of the

nonhumans through spoken and written word, as Stalking Wolf so intimately experienced the life and fears of an oak tree. As fantasy author Ursula K. LeGuin (2017:M15) notes, "Skill in living, awareness of belonging to the world, delight in being part of the world, always tend to involve knowing our kinship as animals with animals." Stories can stem the shifting baseline syndrome in which humans are involved in acts of "forgetting" rapidly crumbling ecosystems, unable to grasp the extent to which the capacity for living and dying has changed for many beings (Baum and Meyers 2004, Papworth et al. 2009, Swanson et al. 2017, Tsing et al. 2017).

Stories are also projective and world-making; they provide a glimpse not only of the structures of minds and societies, but what people are willing the world to be. The terms "speculative fiction" and "science fiction" are used interchangeably to describe stories that imagine possible worlds, or "...modes of being that contrast with their audiences' understanding of ordinary reality" (Gill 2013:73). "Speculative fabulations" are similarly situated, used in social and literary studies to describe narratives for potential worlds to come, whether anticipating climate change in Antarctica (Salazar 2017), imagining a world where, after ecological collapse, humans merge with nonhumans symbionts to improve ecological health (Haraway 2016), or working through post-capitalist futures (Bahng 2018). Relatedly, climate change fiction, or "clifi," literature dedicated to imagining apocalyptic (or at times utopian) futures driven by climate change (Matz 2019, Siperstein et al. 2016) is a kind of speculative fiction (Streeby 2018) relevant to this discussion as well.

In this article, I explore the storytelling practices of the Human Nature School and the Deep Nature Connection Movement, arguing that their stories serve to introduce students to the practices and characteristics of the nature connected. Because stories are mean to laud indigenous communities, including Anishinaabek tribes that reside in northern Michigan, HNS

stories demonstrate a tension between honoring the skills of indigenous communities and knowledge, and reifying stereotypes of "ecological natives" (Hames 2007, Kent 1991, Krech III 1999, TallBear 2000). The Deep Nature Connection Movement's partnership with indigenous mentors, and the presence of numerous indigenous communities in Michigan, could instead lead to decolonizing narratives within Human Nature School.

The U.S. and the people without mythology

The Deep Nature Connection is, as the name implies, about reconnection. In a previous chapter, I examined what I called a "cultural critique" that "Americans are pathologically separated from nature." Young's (2019) nature connection pedagogy, which HNS uses for their programs, is predicated on the idea that white people in industrialized nations need nature connection. The idea that people of Western European origins are disconnected from nature emerges in other forms, such as Richard Louv's (2008:36) "Nature Deficit Disorder," the physical, mental, and emotional consequences of too little time spent, or too little access to, nonhumans. Then there are "rewilders," people who alternatively seek to reduce human management of landscapes, or who seek to return humans to a "wild" state through activities like eating insects, sleeping outside, visiting indigenous communities, and exposure to predators and other dangers that would have plagued more distant ancestors in order to awaken sleeping human faculties (Monbiot 2014).

A related impoverishment is a lack of good stories. "Civilization has its price, not the least of which is the extinction of memory and the impoverishment of wonder," according to Haskell Block (1952:52). He channeled Nietzsche's (2000:23) lamentation on the condition of "abstract," Western mythless man:

> "...let us imagine a culture which has no fixed and sacred primitive seat, but is doomed to exhaust all its possibilities, and has to nourish itself wretchedly from the other cultures...The stupendous historical exigency of the unsatisfied modern culture, the gathering around one of countless other cultures, the consuming desire for knowledge—what does it all point to, if not to the loss of myth, the loss of the mythical home, the mythical source?"

For some secular society has relegated myth to entertainment, and "civilized" peoples hardly live in ways that make these guiding stories relevant or ritually practiced (Eliade 1957, Heller 2006). For others, science can replace mythology as a guiding force of wonder and ecological creativity (Sideris 2017). Nature connection proponents echo this human need for stories (not necessarily myths) to inspire people to go outside and get curious about the nonhumans who share their landscapes, and rediscover a sense of wonder in a world rendered mundane by "modern" civilizing forces (Mertins and Bauer 2019, Young et al. 2019). The 8 Shields Institute founded by Jon Young offers seminars and courses in storytelling to help boost creativity and nature connection (8 Shields 2019)

Science Fictions/Speculative Fabulations

What can stories offer us for worlds to come, particularly the realities of living on a gravely damaged planet (Tsing et al. 2017)? Science fiction has been an outlet for those wanting recourse to an alternative future (Atwood 2011, Bradbury 1991, Haraway 2016), although some post-apocalyptic authors paint scary futures too grim to bear (see Atwood 2004, Erdrich 2017, Jemisin 2015, King 2008, McCarthy 2007). What about stories to cancel the ecological apocalypse that humans seem to be careening towards (Haraway 2016, Raygorodetsky 2017, Tsing et al. 2017)?

What about speculation fabulations that deny colonial captivation of indigenous appropriation, or ones that point towards multispecies collaboration (Haraway 2016, Salazar 2017)?

Science fiction is a world building project, in which authors can create new creatures, languages, planets, historical timelines, or write new outcomes for Earth's current inhabitants by tweaking a few details (Atwood 2011, Dieker 2019, Vandermeer 2013). According to author Ray Bradbury, "Science fiction is the most important literature in the history of the world, because it's the history of ideas, the history of our civilization birthing itself. Science fiction is central to everything we've ever done, and people who make fun of science fiction writers don't know what they're talking about" (Ray Bradbury, quoted in Guaran 2017).

It is the power of imaginary worlds that brings scholars to various worlding projects. Haraway (2016) works with the SFs: science fiction, speculative fabulations on how to live in a rich, connected world in which all species have a chance at surviving into a diverse future. Speculative fabulation, which again I associate with academic writing more than the related terms science or speculative fiction, "queers" ways of looking at the world, in hopes of decentering heteronormative, anthropocentric, ableist, white, middle and upper class normative representations in literature (Truman 2019). Take, for example, Haraway's (2016) "Camille Stories." Camille is born in an unspecified future time when groups of a few hundred people move to damaged places on the planet, such as those marred by fossil fuel extraction, to heal them. Camille's community recognizes that the places they inhabit were never empty of people, and resists colonial narratives of discovery. Another scenario, a speculative film fabricated by anthropologist Juan Salazar (2017), deals with Antarctica in 2043, demonstrating how ice complicates human existence, while human activities create a tenuous future for those who dwell

on it. These speculative fabulations tend to possible futures in which societal norms that inhabit ecological changes are options, not inevitabilities.

Other species of speculative fictions inhabit futures modified even further by climate change (Trexler 2015). For example, Margaret Atwood's (2004) *MadAddam* series deals with the cataclysmic aftermath of both climatic and technological collapse. Other stories elide apocalypse altogether, or formulate it differently than interminable struggle. Jeff Vandermeer's (2014) *Southern Reach Trilogy* examines the impact of an unidentified object from outer space off the coast of North Florida that merges humans and nonhumans into interesting, unrecognizable forms. The apocalypse is less that of an untenable ecological future, and more of an eerie, consuming inability of humans to separate themselves, physically or conceptually, from their immediate environments. Vandermeer (2019) reported that his trilogy emerged from being "haunted" by the spectre of the Gulf oil spill when he conceived of the site of the alien occupation, Area X, "a strange place in which nature was always becoming more what it would have always been without human interference: less contaminated, less compromised. Safe."

Site description

I carried out research from August 2015 to August 2017 at the Human Nature School (HNS) in Traverse City, Michigan. HNS was founded by Kriya and Matt Miller, who grew up in the Traverse region. They opened their school after training at Wilderness Awareness School in Duvall, Washington, a school founded by nature connection educator Jon Young. Human Nature School is based on Young's program model—the 8 Shields Model—used by nature connection schools across North America and western Europe. Storytelling is a key method within the educational model, considered a fun, less pedantic way to impart lessons (Young 2019).

8 Shields is based on adventures Young had as a young boy with Tom Brown, Jr., an informal educator who runs the Tracker School in Waretown, NJ, as well as Young's (2019) relationships with indigenous communities in North America and Botswana. The Tracker School philosophy originates with Brown's (2001) stories of being taught naturalist and survival skills with a man named Stalking Wolf, also called Grandfather, who is described on the Tracker School website as "an Apache elder, shaman and scout..." (Tom Brown Jr.'s Tracker School 2019). Brown's story about Grandfather has been questioned by forum members on the "New Age Frauds and Plastic Shamans" website, and some accuse him of appropriating an indigenous lineage (Frauds 2005). Matt Miller attended Tracker School classes before training at Wilderness Awareness School.

Methods

These stories stem from participant observation and video and audio recordings of stories during homeschool, adult, and the few afterschool programs that featured stories. During *morning meetings*, instructors or volunteers would discuss the stories they were going to tell to the children's or adults' groups and how they related to the overall theme of the day (such as survival skills, wandering, community cohesion). The stories were told during *morning circles* to that days' students. I also recorded summer camp stories, though I acted as a participant observer/group leader rather than an assistant during those times, and had fewer opportunities to record stories coherently while also wrangling dozens of kids in the Traverse City Commons.

My most common method of recording stories was field notes. My methods also included video recording twice per semester starting in Feb. 2016, and I video recorded stories told by instructors during each morning circle. When I was alerted to particularly long stories, or one's

the instructors indicated of particular significance (such as the Haudenosaunee Peacemaker story, which I heard four times during my tenure at HNS), I audio recorded them. Audio recording was difficult for the simple reason that storytellers move around the circle and mimic their characters. After a recorder fell from a storyteller's pocket a few times as they were giving a convincing rendition of a black bear, I gave up on always using digital means and relied mostly on pen and paper. If I had significant duties as a participant observer/volunteer instructor, my renditions of stories could be brief. Of all the stories recorded during fieldwork, I chose 73 due to their coherence and fidelity to the original storytellers' words.

Analysis

To understand repeated themes throughout HNS stories, I used MaxQDA software to perform a qualitative text analysis. I used Miles et al.'s (2014) text for a pass through of First Cycle Coding. I focused on areas in the text related to the qualities of the people and other beings who were main characters; whether featured nonhumans were conscious characters or just backdrop or resources; the activities carried out by characters; the underlying moral lesson (often explained in morning meetings); and how people told stories, if their movement or demeanor was captured in notes. I used process coding, such as gerunds phrases that include, "being a terrible survivalist," or "communicating with a tree." I also used values coding denoting values held by characters or the storytellers, such as the code, "peace is a process of maturation," and "not bragging is a virtue." I included in vivo codes, such as Kriya Miller's admonition that with stories one should "act them out," or that one should have, "respect for the wild things." Other codes emerged as descriptive codes, such as settings of stories within European mythology or Native American origins.

For Second Cycle Coding (Miles et al. 2014), I used the Creative Coding function of MaxQDA, and placed the original 137 codes on a virtual whiteboard in order to condense them into determine larger themes. I ended up with 24 major themes. One example is a major theme, "Do nature connection exercises and have magical adventures," with sub-themes such as, touching wild animals as the epitome of nature connection, or animals being willing to hang out with humans. Another example is the theme that "kids have insights into nature that adults ignore," with subthemes of adults not believing kids about animal encounters.

Table 4.1: Key themes from Second Cycle coding of HNS stories

Theme	**Prevalence**
True stories	51/73 (70%)
Invented stories	22/73 (30%)
Indigenous main characters	20/73 (27%)
Character of European origin	8/73 (11%)
Nonhuman main character	26/73 (36%)
Survivalism	21/73 (29%)
Characters with special powers	14/73 (19%)

Results and Discussion

"The stories are a mark of what we want to convey."

Every morning of Human Nature School, without fail, began with a meeting. In fact, meetings bookended homeschool and preschool programs, summer camps, and adult apprenticeships: one morning meeting to hash out the day's flow, and an afternoon debrief to report on how the day went for each instructor and volunteer, and potential ideas for the next day of programming. At morning meetings, an instructor would draw a circular figure on a whiteboard mounted at one end of the cramped, cinderblock office representing a "map" or schedule for the day, and people would volunteer for various morning tasks such as signing in the kids or playing games. During morning meetings, instructors would also discuss the "theme of the day," which followed Young's 8 Shields Model for various themes that can play out over a semester of nature connection programming. For example, the theme for one January day in 2016 was "timeless wandering" (director Matt Miller's least favorite theme according to field notes), which instructors planned to include wandering off human trails, and doing tracking exercises to encourage kids to follow animal tracks through the snow. Included with a "wandering" day was time for quiet reflection, one of the hallmarks of the theme. The story of the day, told by volunteer Abby Chatfield, was about two dogs who, having explored their entire valley, became restless and followed a creek to see where it would lead. The dogs' wander, much like an 8 Shields wander is meant to accomplish, led to a grand adventure in which they met many strange and wondrous animals before safely arriving home.

During morning meetings, tellers explained the main gist of the story, with instructors sometimes asking for more details if the teller was a volunteer or someone not as familiar with

the 8 Shields Model, and chatted as a group about how that particular story fit in with the theme of the day. When students arrived, they or their parents would sign in, an instructor or two would lead games, everyone sang songs in the morning circle, and then it was time to settle in, grab a snack, and quietly listen to the morning story before heading out into the woods.

In morning meetings, stories were the most difficult category to assign, unless a storyteller had previously volunteered. Matt and Kriya Miller had told many stories over the years, and wanted to pass on the torch; volunteers and newer instructors were at times too shy or nervous to tell stories in front of others; I heard hesitant people reveal they just didn't know any stories to tell. Perhaps their hesitancy also belied nervousness at presenting such important, and potentially loaded, material. During one October training session for potential adult volunteers, Matt Miller instructed that stories and conversations could not proselytize personal spiritual beliefs, and recounted that one summer an instructor used morning story time to share teaching about Jesus. During a summer camp debrief, Kriya Miller cautioned teen volunteer Riley Dickey about telling a story about a bear that sounded a little scary. "We have to be careful about what we're teaching them," said Miller. "The stories are a mark of what we want to convey. It's a neat story and it's about bravery and knowing yourself, but it might be too much for the young ones."

Whether potential storytellers were shy of public speaking or not, it was apparent that storytelling was one preferred method of communicating with students. In the 8 Shields text *Coyote's Guide to Connecting with Nature*" (Young et al. 2010:106), storytelling is treated as an intrinsic aspect of human development: "For the vast majority of our histories, stories have been spoken or acted out, repeated, refined, and enriched with the changing colors of the seasons and the changing voices of generations of storytellers...It's built into our genes to respond unblinkingly to the power of live storytelling." Stories are so much a part of the 8 Shields

pedagogy, both within *Coyote's Guide* and HNS activities, that they are a through line of many daily activities. Morning circles with students, youth and adult, begin with stories; stories introduce games, like the sneaking game Firekeeper, or form part of instruction in hand crafts or tracking animals; and students at the afternoon closing circle for a program are invited to share their "story of the day" before leaving the Commons. Adults share stories in meetings and classes about grief over ecological destruction or the difficulties of raising kids. The stories are intended by Young to pass on ecological information in ways that human brains are "patterned" to pick up, and provide role models for students to look up to (Young et al. 2015, Young 2019). That way, students have the information needed to emulate the stories' characters. "Telling inspiring stories before an activity can make the difference between a "boring, stupid activity" and a legendary adventure they'll never forget" (Young et al. 2010:107). Students are encouraged to act out the events that happen in stories, such as when Kriya Miller included the kids in the prophecies that accompany the stories of the Haudenosaunee Peacemaker, and extended family member Tricia Mead said, "Look around, everyone's a part of it."

Origin stories

Although their stories are not centered on the creation or molding of the world as they know it, the focus of some origin stories (Boas 1914), the stories often focus on truthful narratives about the origins of HNS pedagogy, and the adventures of those who inspired it. As analysis revealed, 70 percent of stories were true stories, while 30 percent of stories were invented. (I coded indigenous stories as true to avoid judging the veracity of stories outside my own social contexts, particularly those of people whose ontologies have been long marginalized [Mailhot 2019].) Because stories were discussed during each morning meeting, and because instructors would tell

audiences when they were recounting lived experiences, this coding was straightforward. True stories included personal tales about Matt Miller's cross-country bicycle trip to attend Wilderness Awareness School and a few survival adventures; stories about animal and plant decomposition, told by instructor Chelsea Nester; stories about animals instructors have seen while doing "sit spots," the DNCM's version of outdoor meditations; instructor Jack Hannert's adventures doing wilderness survival skills in Detroit; teen volunteer instructor Riley Dickey's experiences hunting deer; and stories I told about my own tracking and bird encounters as a participant observer.

While many stories stem from instructors' own experiences, other true stories emerged from coding. These were stories pulled from indigenous cultures, including people who have collaborated with Young and other DNCM organizations. For example, Kriya Miller told two stories about Keewaydinoquay, an Anishinaabe woman who lived in Suttons Bay, Michigan, pulled from her book (Peschel 2007). Instructor Jake Moran told a story about indigenous Australian Dreaming landscapes, and Tricia Mead told a story about a woman who had a celebration for the gifts she brought to her community. During my time at HNS, Kriya Miller told a version of the Haudenosaunee Peacemaker story four times. One reason for the inclusion of indigenous stories may be Young et al.'s (2010) suggestion to find heroic figures from other cultures, to prevent extolling the virtues of familiar, living heroes whose feats might seem unattainable.

However, another reason for the inclusion of indigenous characters is the lineage of HNS, told in story form. This article began with the storied lineage of Stalking Wolf (Grandfather) an Apache man born in what is now the southwest United States in the late 19th or early 20th century. According to Tracker School founder Tom Brown, Jr., (2001), Stalking Wolf traveled to

New Jersey to visit his grandson Rick, and ended up teaching Rick and Brown all of his skills, including wilderness survival and powers of healing and prophecy. When Brown passed this legacy on to Jon Young, stories about Stalking Wolf became part of founding narratives about nature connection education, as evidenced at HNS (and other DNCM schools I visited in the course of data collection). Stalking Wolf tales inspired Matt Miller to continue with nature connection work during his first visit to Brown's Tracker School, before he attended Young's Wilderness Awareness School:

> "What was attractive? Man, I loved the stories. I like, I was always attracted to the skills, that was really interesting to me, but it was really the narrative. It was like, okay, people can live on other planet in this way and it makes the world better, makes it healthier if you do these things...Be it truth or a fiction of, you know, Grandfather, Stalking Wolf and all that, who knows what that really amounts to. But a story captured to me, and the philosophy fascinated me."

Stalking Wolf is a heroic figure at Human Nature School, an "ancient scout" who is "protector and provider" for his people, according to Miller. He even featured in one of instructor Nester's "Take Home Challenges," the closest thing HNS has to homework. At the end of an April day, before a class of homeschool kids were picked up by their parents, Nester asked them to think back on the Stalking Wolf story on caretaking they had heard, and find a special spot in their own neighborhood to take care of.

Stalking Wolf's story is that of an incredibly talented individual, who left his tribe at a young age and traveled alone, learning skills from indigenous people all over the world. He finally settled down in New Jersey as an older man to teach Tom Brown, Jr. (Brown 2001).

Although Brown did chronicle adventures with his best friend Rick, Matt Miller compared Brown's stories with lone survivalist tropes:

> "Tom Brown, Jr.'s kind of thing...you survive the natural world, you can do it in a good way but it's you, it's the individual and you're living in a bark hut...you're totally primitive and that's not too realistic for anybody except as like a hobby or a lifestyle choice. Totally awesome, but for a family, not for a healthy family, not for a healthy individual either unless you're someone that truly independent, which I don't know that I've ever met anybody that would seem like it would be a healthy prescription of a lifestyle for them to just live by themselves and survive."

The lone, male survivalist is a common trope within North American literature. Elizabeth Gilbert (2009) paints Eustace Conway, *The Last American Man*, as an anachronistic, lone wolf character who proves himself against the wilderness. Although Thoreau (1893) lived only a mile from town while writing *Walden*, he was lauded for an aspirational hermit lifestyle (Van Doren 1916). Katherine Sugg (2015) noted that apocalyptic fictions also provide a vehicle for nostalgia about white male authority figures, while Tiffany Christian (2016:49) argues that survivalist or doomsday "prepper" narratives perpetuate a masculine futuristic storyline: "widespread civil unrest and violence, competition for resources, and the need for self-reliance and/or a militaristic outlook on survival..." Even stories like *The Hunger Games* (Collins 2008), with a tough, bow-wielding female protagonist, follow the same narrative of competitive, extractive, violent societies and uprisings.

Prophecies of civil unrest, famine, disease, and cannibalism are similarly predicted within Brown's (1999) classes, passed down by Stalking Wolf. During a vision quest, a warrior spirit came to Stalking Wolf and showed him visions of a desolate future. In this vision, only the

“children of the earth,” those who practiced the skills passed down to Tom Brown, Jr., will manage to survive by hiding away from disease stricken civilization, avoiding the temptation to return to cities and mankind’s destructive ways. The prophecies figure into some of Brown’s Tracker School classes, and the skills he teaches are meant to help “children of the earth” face the uncertain future. However, humans are not doomed to Armageddon. According to Brown (1999), Stalking Wolf told him that, “One person, one idea, one thought can turn the flock of society away from the destructive path of modern times. It is not a question as to whether we make a difference, for we all make a difference, each of us in our own way.” Like other lone wolf survivalists, individuals can either turn the tide of human destruction, or secrete themselves away, and flee from the sickness and conflict inherent in the Stalking Wolf prophecies.

Tom Brown, Jr.’s stories figure into HNS’s origin and narratives. Matt Miller was inspired by the Tracker School before moving on to Jon Young and Wilderness Awareness School. Kriya Miller told a group of adult volunteers that if they ever needed a story to tell during morning circle to students, they could always use one of the office Tom Brown books, and Chelsea Nester described his tales to instructor Jack Hannert as “traditional ancestor stories.” Brown influenced HNS’s ideas of proper conduct during conflict. As Matt Miller told a group on the first day of a summer camp, “Like Tom Brown, Jr., says, the true warrior is the last to pick up the lance. The scout is a peacemaker, a master of awareness, concerned with the tribe’s safety, the protector. These lessons are important.” The Millers’ son Wilder would sometimes wear a fake mustache and tell people to call him Tom Brown, prompting one homeschooler, Juniper, to challenge Wilder, saying, “Tom Brown, Jr., close your eyes and point to the nearest squirrel” (a common kind of awareness challenge at HNS). I can recall a soggy February afternoon when, on a walk back with a group of homeschoolers to the Commons lawn to meet their parents, a student

named Shamus excitedly recounted a few stories of Rick and Tom Brown's scouting adventures, his eyes wide and voice rattling off their encounters with wild dogs and polluters at a rapid pace. Brown's tales permeated other areas of people's lives. The Millers had been listening to audio recordings of Brown's philosophies one winter during fieldwork, and Kriya Miller mentioned that since Stalking Wolf predicted water shortages and wars in the future, she doesn't want to leave the Great Lakes region.

At the same time that HNS uses Tom Brown, Jr.'s tales as founding narratives, in their pedagogy they deviate from his prophecies of lone survivalists in a broken world. While Brown (1997, 1999) focuses on skirting civilization to hide from the apocalypse, I argue that HNS narratives are meant to foil ecological Armageddon, and foster a sense of societal cohesiveness. One of the methods for doing so is by using tales of wilderness survivalists, which comprised 29 percent of the analyzed stories, that elide the solitary stereotype. First, 8 Shields founder Jon Young has a special name for lone wolf survivalists. "...I find that a lot of people who develop deep empathy for nature are jaded against humanity," Young said in an interview (Yaple 2011:22). "They become cynical about other human beings and often avoid human contact. I call that the sociopathic naturalist syndrome." Young and other mentors work on combatting symptoms of macho, loner, misanthropic survivalists. Successful survivalists in HNS stories work together to solve problems for the benefit of their communities, and they do so with the aid of nonhuman companions. For instance, in one story by Chelsea Nester, a little girl is led by a boy in her dreams, a squirrel, and a tree to rediscover how to make fire, years after her village has forgotten. She uses her knowledge to save her village from the hardship of toiling without fire to keep them warm or help them cook food. In another story, Matt Miller goes out with three of his best friends on a survival trip, where they pool their knowledge and resources and have a

fun, if uncomfortable time. In a popular childhood tale about Ingwe, the South African man who acted as Young's mentor when he started Wilderness Awareness School, Ingwe was mentored by a group of Akamba friends who adopted him as a family member, and even after his pivotal, solitary moment of gaining the spirit of a leopard, the first thing he did was to rush to Akamba friends to ask for guidance. Aside from adults talking about their fears of ecological crisis, at no time did HNS stories use an apocalyptic narrative like Brown to scare people into engaging with nonhumans or nature connection practices. Survivalist stories were about making smart choices, like filtering raw water and preventing hypothermia so that listeners can enjoy the outdoors and make good choices, not about running away from Armageddon.

The main characters of HNS stories may begin their tales alone, but they don't end them that way. One primary example is Matt Miller's (an HNS co-founder) journey to Wilderness Awareness School (WAS), told three times during my tenure there. Miller packed his survival gear onto a bike and rode over 2,000 miles from Traverse City to WAS. He contrasted his experiences with WAS and Tom Brown, Jr.'s Tracker School, which he also attended:

> "I guess the big thing was just like how good [WAS] was for people as far as their well-being to go through a program like that and just see what it did for our group of strangers...how we came together and how it was that narrative of people being in right relationship with the natural world, that big ecological picture. So, it seemed like there was hope, you know. Total contrast to Tom Brown Junior's kind of thing, his school is, you survive in the natural world, you can do it in a good way but it's you, the individual and you're living in a bark hut, you're totally primitive and that's not too realistic for anybody except as like a hobby."

Other stories indicated that a primary concern was developing community ties over surviving into the future as a loner. Community elder Tricia Meade told a story at a homeschool morning circle of indigenous Australians celebrating individuals' contributions to communities, with a "birthday" party for a woman who wanted recognition for being a good listener and excellent secret keeper. After the story, children raised their hands to share how they contribute to the HNS community as joke tellers, scouts, and minnow catchers. She told another story about elephants' social lives, ending with, "So let's pretend today that we are in an elephant tribe, and let's think about how our tribe is made up of way cool people who listen and keep their eyes out for each other and use their intuition. And let's have fun and learn and know it's better to be in a place of safety with a tribe who loves you."

While HNS participants did not explicitly state they were making a break from Brown's apocalyptic narratives, the Millers and other instructors did mention during an afternoon debrief that messages of community and hope would be better for sparking nature connection than stories of imminent destruction. The stories they use to indicate their values—community and survival skills that benefit that community—echo their desires for a hopeful future. Reframing environmental narratives with messages of positive community action can counter feelings of anxiety and isolation prompted by catastrophic anthropogenic changes (Haraway 2016, Hornsey and Fielding 2019, Stevenson et al. 2018, Raygorodetsky 2017, Richards and Hoed 2018). And some believe that, even in the midst of the worse-case scenario climate apocalypse, community structure and support will continue to matter (Begley 2019). When Miller returned from WAS and settled with Kriya to create HNS in Traverse City, he also transformed from a solitary survivalist to a centerpiece in a growing community. In his words, in carrying the philosophy of

WAS back to Michigan, he changed from an apocalyptical thinker to “A more hopeful narrative. A better story.”

HNS has found ways to include Tom Brown, Jr. within their school’s lineage without relying upon the apocalyptic future he espouses in his classes and literature.
While the Deep Nature Connection Movement was founded in part on Brown’s apocalyptic prophecies (Visions & Prophecy 2019), it appears that Jon Young, and in turn the Human Nature School, deviated from Brown’s stories of ecological collapse. HNS is not motivated by the speculative fictions of desolate, burnt Cormac McCarthy (2006) future landscapes with cannibalistic characters, Atwood’s (2004) techno-apocalypse due to an engineered pandemic, or Vandermeer’s (2017) lyrical tribute to the destructive and redemptive powers of humans’ technological tampering. I argue that HNS uses stories of knowledgeable survivalist heroes, escape apocalyptic annihilation, but to prevent its occurrence. Rather than using fear of ecological degradation to spark environmental awareness in participants (Saylan and Blumstein 2011), they are projecting the kinds of heroes who will prevent catastrophe altogether: humans centered in communities who do not seek to ride the future out alone, and who have the kind of curiosity and skills that will help them spend even more time outdoors, enchanted by nature (Glowczewski et al. 2016, Haraway 2016, Houston et al. 2018 Vandermeer 2019).

Speculative fictions

What kind of relational worlds do storytellers at HNS create? In this section I focus on two intertwined themes within stories: multispecies relationships and magic. Within the selection of stories I analyzed, 36 percent introduced animals as main characters. When populating this code, I included only instances in which nonhumans interacted with other characters, and were not just

background or resources. In addition, I found that 19 percent of stories included an element that might be considered “magical” or supernatural, though for folks at HNS, the skills they speak of gaining within stories are just normal—though at times unused—potential attributes of all human beings. In this section, I argue that their speculative fictions encourage alternative social arrangements with nonhumans that, while typical of familiar fairy tales with talking animals and magical events and often used as parables to enforce moral conduct for human relationships with other humans (Bascom 1954, Cruikshank 1997), are more likely to be taken literally as acts of superior mastery of nature connection practice.

Stories have long been considered salient to cultural studies, providing, “the affective elements of culture, such as attitudes, values, and cultural goals and, moreover, may verbalize these in a form which needs only to be translated and quoted as evidence of a consensus of opinion” (Bascom 1954:337). Folklore depicts social context and validates cultural practices, while educating and disciplining children, and also allowing people space to dream about alternatives. Some familiar tropes arise within tales of European origins. Take, for instance, the Oedipal tension of Jack and the Beanstalk about a boy living alone with his mother, who climbs up a phallic stalk and is chased by a father figure (Desmonde 1951, Dundes 1980). “Wild man” myths of hairy, bestial forest dwellers symbolized the traits a medieval European might be loathe to display (but happy to colonize), while later generations would come to think of this figure as enlightened and untouched by the excesses of civilization (Bartra 1994, Husband and Gilmore-House 1980, White 1972). Stories of changelings and child abductions are thought to caution parents against leaving children without supervision, to urge a speedy baptism, or to explain birth defects or supernatural events (Conrad 2008). And Little Red Riding Hood’s path from innocence to sexual experience due to her encounters with a sexual predator in wolfish guise are

a warning about maintaining one's chasteness and repressing sexuality (da Silva 2017, Zipes 1993).

What about stories in which the lessons about talking animals and other nonhuman characters are taken more literally? Where meanings are less symbolic, and the wolf is not a stand in for sexual danger but instead, quite simply an intelligent being? Taking people and the stories they tell as their literal experiences is one of the challenges of multispecies ethnography (Bird-David 1999, Nadasdy 2007, Todd 2016, Whatmore 2002), and this section deals with some of the literal messages portrayed by nonhuman and human characters in HNS tales.

One story, told once by Kriya Miller and once by Chelsea Nester, exemplifies a central message contained within HNS stories: nonhumans are willing and able to engage with humans in social relationships. In the story, adapted from a book by Anishinaabe author Keewaydinoquay's (Peschel 2006) experience with an otter family who came for tea. In the story, Keewaydinoquay recounts an experience she had as a little girl when she met a family of otters in a stream near her house and, according to the tellers, she did her "sit spot," an outdoor meditation, to gain their trust. She began sliding down their otter slide with them. After a while, Keewaydinoquay invited the friendly otters to tea, making gestures to indicate her address, and to her mother's incredulity, the family came and was served fish and tea. Kriya Miller ended her story saying he had a magical experience with otters, "All because the little girl was good at doing her sit spot!" a key practice within nature connection pedagogy. In another story, Terrence the tree could talk, as could the rest of his tree family, and when he found out that loggers were approaching his grove with chainsaws, he taught his family to run on their thick roots and they escaped. This story accompanies a belief, at least within some members of the adult community close to HNS, that trees are wise beings who are able to understand what humans are doing and

grieve the losses that come with still prominent northern Michigan logging. And Tricia Mead's story about elephant families indicated that elephants, "have these cool, vast social networks, not only of elephants but also humans they know and meet as they wander with their families, and they know these familiar faces." HNS stories relay to listeners the idea that nonhumans are knowable, like humans in some ways, masterful, full of feeling, able to affect and feel the effects of human activities (Kirksey and Helmreich 2010, Lloro-Bidart 2016, Nadasdy 2007, Taylor 2017).

Nonhumans contribute to human lives with special powers as well. The Stalking Wolf story that introduced this article is one milder version of this familiar trope within DNCM stories. Though the wolf did not pass on any powers, he did contribute an experience and a name that contributes to an understanding of how long Stalking Wolf spent practicing fox walking and spending time with other nonhumans to achieve that feat. Other stories are more direct in the sharing of power. In Ingwe's story (told twice by Kriya Miller), which is again considered a foundational narrative for the Deep Nature Connection Movement, since Ingwe was Young's mentor, Ingwe receives the power of a leopard. One morning at dawn in South Africa, Ingwe woke before dawn and followed an elephant shrew to a ledge, and there he saw a leopard basking in the morning sun. In a subsequent dream the leopard told him to visit the ledge in three days' time and receive his spirit since he was about to die. On the third morning, "It got up and started to walk and then turned back to look at him, just like in his dreams. But he didn't get the feeling that the leopard wanted him to follow this time, and the leopard gave him this look that filled him with energy." Soon after, indigenous people all over Africa would call him "leopard" in their own languages because he had received that spirit.

Similarly, in a story told by Matt Miller to a group of homeschoolers, a little girl named Jillian was "a hero in her own neighborhood" because of her amazing outdoor feats. According to Miller,

> "When she was exploring in the woods she would find things like deer's hair, and she took it because it was special for her, she loved the deer so much she would put the hair in a special pouch she had, and during hide and seek she would use the deer hair to make her super fast, and she could jump over almost anything, and she was like the deer when she was hiding still and silent. And she had squirrel power too, she had a toenail from a squirrel that she found stuck in a tree that she found because she was following the claw marks in the tree. In games, she would use her squirrel power and bolt from the bottom of the tree to the top. The kids noticed that she had super powers, and that's why she was legendary."

Miller noted in a debrief later in the day that he felt the story had been a flop. "I was mixing together a Geronimo story about animal powers and I didn't want a battle scene, and I wanted a female hero and I wanted to retain certain elements." One of the main elements that Miller retained was the idea that animals are able to spiritually contribute to humans' lives, through simply gathering their body parts. This is the same sentiment echoed more bluntly by Kriya Miller during an adult apprentice weekend, when offered help making medicine pouches, in which we could put, "plant and animal medicines to bring out the qualities that we want to manifest or give attention to for our bodies."

While the story about Jillian paints her as legendary, adult members of this community appear to take communication and powers from animals as less of a symbolic gesture, and more as qualities to aspire to after a lot of practice. The concept of nonhumans offering their power to

humans echoes what scholars write about reciprocal relationships within hunting practices (which could be labeled animist), in which knowing animal subjects offer their lives for human beings in need, or at least are seduced into doing so (Brightman 1973, Brightman et al. 2012, Nadasdy 2007, Willerslev 2007). Or take for example, the Anishinaabek teaching that plants are kinds of people who need to be asked before harvests, and who requires offerings after they are gathered, but who are also happy to be of service, fulfilling their original purposes (Geniusz 2015). At HNS, storied animals (and sometimes plants) offer their physical and spiritual aid more or less willingly, charmed by a human's worthiness through diligent nature connection practice. Although spiritual connections with nonhumans are not overt topics of conversation with children, the stories are intentionally animistic, inasmuch as the term indicates personhood of nonhumans (Brightman et al. 2012), and intentionally relational, fixing nonhumans as social beings interacting with human societies (Cruikshank 2005, Haraway 2013, 2016, Tsing 2013, Whatmore 2002, 2006). Given that Jon Young (2019) reports that travels to visit indigenous communities, his undergraduate training as an anthropologist, and the mentoring of Tom Brown, Jr., shaped his educational methods, it makes sense that the storytelling lineage he encourages contains elements of nonhumans as knowing subjects in an animated world.

Nature connection practices, and the experiences that they garner, could be considered magical simply because of their rarity in the lives of people who don't spend much time outdoors. On one end of the spectrum, main characters have experiences with nonhuman animals getting closer to them than might be expected from beings who often run away from humans when disturbed. Matt Miller told participants stories about baby raccoons following him down a dirt road and climbing him like a jungle gym, a chickadee who landed on his pencil and drew a heart, a nuthatch who tried to crawl up his pants, a red fox sneaking up on him, a baby fawn

stumbling upon him, and a flying squirrel who pounced on him and played. These close encounters with wildlife he attributed to doing his sit spot. In a story Chelsea Nester modified from the book *The Education of Little Tree*, the titular character also does a sit spot and is able to observe coyotes without being seen. The same thing happened in real life to instructor Jack Hannert, who told a group of homeschool kids in morning circle about hiding in his sit spot and seeing a coyote pass by with a chicken in its mouth. Stalking Wolf is always depicted in stories as a master tracker and naturalist, able to sneak up on deer and touch them, much as Tom Brown, Jr. challenges his own students to do. The theme of sneaking and seeing animals is a common thread, from Brown's (2001, 1995) chronicled adventures to Young et al.'s (2010) explanation of the magic of finding a sit spot and encountering wildlife. My own experiences trying nature connection practices suggests that getting close to animals is less purely "magical" (though it is very thrilling) and more about patience and practice, which is a main lesson of animal encounter stories—that coveted experiences are entirely possible.

However, there are experiences that could be considered within the realm of unexplainable, such as the passage of animal spirits to human beings; the Haudenosaunee Peacemaker story in which Peacemaker paddles a canoe made of heavy white stone, and falls to his death a few times only to be resurrected; or talking to otters and having them understand complicated directions to one's house. What is more striking is the kind of discourse around these stories during morning meetings before students arrive. Some stories, such as myths of goddess Ostara and the "Easter" bunny Lepis, or the story of how Norse god Loki manages to get beloved god Baldr killed, are introduced as fictional, historical tales. Even the Anishinaabe story of how sugar maple trees started to leak sweet sap instead of maple syrup was treated as a fable that introduced a trickster character. However, Stalking Wolf, Ingwe, Keewaydinoquay, Tom

Brown, Jr., and Peacemaker stories are not treated as fictional, although they depict events that might be considered fantastical by some. Instead, the main characters are at the height of their powers, able to communicate with and sneak up on animals, practiced, or, in the case of Keewaydinoquay, too young to realize that what she has accomplished is exceptional.

I argue here that the world they want to see, the speculative future they are willing into being with words, are worlds in which those lofty goals of nature connection—a kind of permeability and companionship between humans and nonhumans—is viewed as achievable, at least by some adult members of HNS. I relate this to Haraway's (2016) speculative fabulation, the Camille story, in which Haraway and colleagues developed a world in which humans moved to ecologically devastated places and, much like Stalking Wolf and Coyote Thunder in HNS stories, begin to take care of them, begin returning them to health. These are stories of longing to be in a different relationship with a vital, lively world. People in Camille's world are symbionts with various nonhumans, and Haraway (2016:136) writes that working towards a livable future requires imagining, "improbable collaborations without worrying overmuch about conventional ontological kinds." It doesn't matter that otters aren't supposed to talk, much less play with little girls who invite them to tea. It doesn't matter that receiving the spirit of an animal, or talking to a sentient tree, or receiving great advice from a bear or a wolf isn't a standard part of North American scholastic curriculum. Perhaps acceptance of spirited, nonhuman companionship is the sensible route for current living conditions on an imperiled planet (Bai 2015, Haraway 2016, 2017, Lien 2019, Sponsel 2012, Tsing et al. 2017). As instructor Scott Mills said, paying attention to animals in a way that acknowledges their desires and differences respects, "the spirit of the animal regardless of whether you believe in Creator giving it that spirit, or what that spirit

is, or what it means, or where it resides.” Storytelling acknowledgments of animal lives and talents can also display a measure of respect for those spirited lives.

It is also expected that stories will materialize in some way in the lives of the people who hear them. One salient code developed from an explanation from Kriya that storytellers should “act things out” for students in hopes that they will also act out the stories. For example, when Jack Hannert told a story for the homeschoolers about making his first fire with friction, Riley Dickey knelt in the middle of the morning circle and (with the help of Matt Miller) used a bow drill to demonstrate for the students and spark a coal. When Chelsea Nester told a story in which a character was trying to find an animal hair on the ground, she knelt in the middle of the circle and combed her fingers through the grass; acted out animals in her stories about decomposition; and pretended to be an elephant blatting out a call with her arm as a trunk in Tricia Mead’s elephant story. Riley Dickey acted out his hapless survival characters, freezing to death on Mount Everest or getting diarrhea from drinking raw water, or his own stories of hunting deer with Matt Miller. Kriya Miller is an animated storyteller, always acting out the characters of the Peacemaker or Stalking Wolf from her position on the ground, arms and legs waving and face contorting. The activities of HNS story characters are not just for entertainment—they are meant to be emulated, and to provide, as Young et al. (2010:107) explain, characters whose skills are right on the edge of the listeners’ own abilities, to, “raise the ceiling of possibility in their imaginations,” as well as stories of legendary heroes way beyond their edges. The stories provide a template for acting out the kinds of options a nature connected person might have, from skills with medicinal plants and animal tracking, to practicing gratitude and sharing space with animated beings who *matter*, in the sense that existence is a shared proposition among many

kinds of material (and sometimes immaterial) beings (Adamson 2012, Blaisie et al. 2017, Eder 2007, Russell 2019).

Students do act out different characters from the stories. Chelsea Nester reported in an afternoon debrief that, on a climb up Fire Hill in the Commons, some of the kids were saying, “We’re Kale and Keiffer!” as they pretended to be two dogs featured in a story invented by Abby Chatfield. After a few bird language skits, kids in both summer and homeschool programs pretended to be birds, calling to and predating each other. Nester told a homeschool group about decomposition in a story in which an animal rotted and became soil that fed flowers, and five kids immediately ran onto the lawn to pick dandelions to show her. When one homeschoolers’ clothes became tangled in a rosebush, she grumbled, “Ah, I’m stuck. This is exactly like the kid in the story,” referencing the story about children turned into otters told during morning circle. When I told a story about being lost in the woods on a survival trip, and using a noise that sounded like “meep” to call out to fellow campers, I noticed at the afternoon circle before parent pickup that some of the kids were using the call back and forth with each other. The students in youth program are picking up on the stories’ characters and, in some cases, acting out elements of the stories that appeal to them.

At the same time, not every encounter with storied nonhumans is fraught with heavy meaning or meant to be lived out in hopes of a radically different relational ethic. HNS does, after all, work mostly with children’s groups, who do not display the urgency to repopulate the human imagination with nonhuman agents (though kids’ conversations are not without discourse on environmental destruction, pollution, organic food, GMOs, endangered species, or caretaking). Most of the time, the kids appear to soak up friendship, the care and attention of instructors, and the information. Stories about nonhumans can quite simply be about imparting

that information. Three times during the course, Chelsea Nester told a story from the point of view of a series of decomposing beings, acting as a turtle that died and was eaten by beetles, who were eaten by a raccoon that was hit by a car in a long sequence of life and death. Even in the story where kids turn into otters, storyteller Nester continually asked them questions to help them think about otter tracks, scat piles, scent marking, and diets. I told a story in which I watched three crows and a Cooper's hawk dive bomb a barred owl hiding in a chimney as an introduction to a lesson on bird language. And volunteer Riley Dickey told a few stories about hunting deer with information about tracks and animal physiology sprinkled in as key details. Meetings, conversations with instructors, and observations of their programs indicate that including natural history is not accidental. It is intended to prevent the continued loss of ecological knowledge in industrialized societies bemoaned by scholars from multiple disciplines (Atran and Medin 2008, Miller 2005, Nabhan and St Antoine 1993).

The speculative futures of HNS practice hail from a bricolage of myth, indigenous experience, nature connection practice, and a dose of naturalist knowledge for accuracy. These stories are a deliberate act of enchantment, making apparent the entangled nature of nonhuman and human being on a finite planet. They communicate methods for life that can continue—perhaps not eternally, but flourishing still—even in damaged, desolate places, offering some hope of "collaborative survival" (Tsing 2015, 2017, Haraway 2016). "To think about the Anthropocene in positive terms—about our human systems, about our hauntings—is to reimagine them, to see in a different way. Imagine, for example, what could be accomplished in seeing the miraculous in the every-day if we could truly see the hidden underpinnings of the world" (Vandermeer 2019). To HNS storytellers, the hidden underpinnings are lively, animated

nonhuman companions who, through nature connection practice, can become friends and companions.

Admiring indigenous characters

Indigenous people, and those who trained with them such as Ingwe and Tom Brown, Jr., are also clearly heroes of HNS tales, and featured in 29 (40%) of the analyzed stories. As mentioned, HNS's origin story lies in the relationship between Tom Brown, Jr. and Stalking Wolf (Apache), and Brown's subsequent mentoring of Jon Young (2019). Young (2019) continued by recruiting Ingwe, a South American man raised with Akamba friends (Powell 2001), Oglala Lakota Tony Ten Fingers, Mohawk Jake Tekaronianeken Swamp, Odawa Paul Raphael, and other beloved indigenous mentors. His stories reflect time spent with indigenous communities around the world, especially with San families in Botswana (Young 2019). The lineage of the Nature Connection Movement was repeated throughout my tenure at Human Nature School.

The Peacemaker story exemplifies HNS's understanding of indigenous moral character, and aspirational behavior. The Peacemaker story is an origin story about the Haudenosaunee Confederacy, an indigenous alliance located in what are currently called New York state, Ontario, and Quebec. The Confederacy consists of Mohawk, Oneida, Seneca, Cayuga, and Onondaga nations, with Tuscarora joining in the 1700s ("Who We Are"). In the version told by Kriya Miller, the Peacemaker was born to a woman who wasn't married, sent by their Creator to do something truly great. After maturing into a young man, the Peacemaker told his family he had to fulfill his destiny: "I know there's a reason I'm here and I know I was sent by the creator to make peace in the world." The Peacemaker traveled to warring nations and, through a series of miracles, gained a following of people who agreed to live by his law of peace.

The story serves as a source of inspiration for HNS, and other nature connection organizations. Peacemaking is one of nine core values listed on the HNS website (Human Nature School 2018). After a talk about peacemaking and other core Odawa values with elder Paul Raphael from the Grand Traverse Band of Odawa and Chippewa Indians, HNS community members considered learning about or creating indigenous-based ceremonies of condolence for people stricken by grief. As HNS elder Jim Coats said, “I can do a lot of peace stuff better for me and others. I always liked indigenous models, but Paul’s workshop brought it into focus.”

Stories of indigenous people’s skills and abilities display admiration. Elder Tricia Mead and instructor Jake Moran each told separate stories about how Australian indigenous peoples navigate landscapes using what Jake called “Dreamtime” stories taught to children, and what Mead called “songlines,” a term used within the DNCM to typify songs and stories used to navigate without a compass. I categorized an Ingwe story (one of Young’s mentors) as an indigenous story because he is associated with Akamba communities in Kenya. Ingwe’s story, previously summarized in this article, indicates his superior abilities when he received the spirit of the leopard, as does Stalking Wolf’s encounter with the wolf. Tom Brown, Jr., by virtue of having those skills passed on to him by Stalking Wolf, now claims the title of master tracker, and claims to be able to do psychic battle with evil forces. However, there is a disconnect between the stories that HNS tells about indigenous people, and ways they are increasingly able to represent themselves, particularly the stories of urban indigenous people (see Orange 2018).

The desire to learn from indigenous mentors at HNS may stem from the perspective that white Europeans in North America “have no culture,” a thread that picks up on Nietzsche’s (2000) complaint of mythless white people. The Nature Connection Movement employs Young’s (2019) belief that Europeans and white Americans are the ones who need nature connection the

most, because indigenous people, "already have it." As elder Jim Coats said about Native Americans, "this previous culture that is just, I think, something that's corrective to environmental destruction." Particularly after each of Paul Raphael's two workshops with HNS during my tenure there, some attendees (consisting of adult staff, adult apprentice students, extended family members) grappled with how to integrate Raphael's teachings into their own lives without feeling like they were appropriating his Odawa culture. Others wanted wholeheartedly to be integrated into his way of life, saying things like, "I resonated with Paul's teaching because I feel like I was native in a former life," or, paraphrasing another extended family member, wanting Raphael to assign them tasks for becoming more native.

Within HNS storytelling practices, there is a tension between reifying indigenous stereotypes and seeking to honor what some adult members see as indigenous people's mastery of coveted skills. Some stereotypes of indigenous knowledge and people fall under the familiar trope of the "ecological Indian," which originated in the concept of *terra nullius*, the ideology that people indigenous to Americas were part "savage" or "unspoiled" nature and therefore incapable of properly managing lands that could then be colonized by invaders (Krech 1999, Gilio-Whitaker 2017, Nelson 2006). The stereotype was spurred on by ecological movements of the 1960s, with the Italian actor "Iron Eyes Cody" shedding a single tear over pollution in a well-known televised condemnation of pollution (Deffenbaugh 2000, Gilio-Whitaker 2017).

There are HNS stories that fall into this trope, such as Stalking Wolf and Coyote Thunder chatting after Stalking Wolf's dream of having his tree limbs cut off, and his subsequent realization that his grandfather is acting as a caretaker for a specific landscape. When introducing a story about Keewaydinoquay, Kriya Miller said that she was a native who knew so much about the place (the Leelanau Peninsula/Grand Traverse area), and that there is so much to know about

nature if one is going to become native to a place. Ingwe is another person considered as an indigenous person because of his training with Akamba friends and family, and his ecological knowledge is lauded as expert level. Even at a very young age, though his parents warned him to stay away from wildlife, "knew everything he needed to know to be safe outside." Rather than seeing indigenous ecological knowledge (and accompanying ethical and spiritual stances, such as the Haudenosaunee Peacemaker) as something that makes a person "savage," some adult members of HNS see indigenous cultures as superior to white North American cultures (often called "Western"). As an example, one story Riley Dickey told a story about Inuit hunters achieving masterful feats of hunting by Inuit youth that would be impossible for the homeschool kids to imagine, and that framed the community elders as experts. Other observations make it obvious that some indigenous communities are celebrated as being superior: Kriya Miller jokingly stating she wanted to ship their son Wilder off to Guatemala and, "have Wilder live with the village people there and have them teach him a new way to live." After participating in one of Paul Raphael's workshops, extended family member and volunteer Tricia Mead noted her feeling that white North American culture is lacking: "I think it's that white culture and crazy society really complicate things, and I think the beauty of the indigenous teachings are so simple and that's what nature is, it's so simple, it's not complicated." In a conversation about incorporating indigenous knowledge into Traverse City public schools, extended family member Jim Coats said, "That's what civilized [Western] cultures don't understand about uncivilized cultures, the wisdom, and we need to help them [the public school system] understand that we do it better here." Their discourse never indicated that they saw indigenous peoples as lesser than people from "Western" cultures, and they (particularly elders and extended family members)

often openly expressed a wish to be taught how to be better community members from Odawa Paul Raphael.

At the same time that HNS members seek to learn from and "honor" indigenous cultures, particularly from Anishinaabek in reservation areas like Peshawbestown near Traverse City, where Paul Raphael lives, there is the potential danger of treating indigenous community members as homogenous, with identical socio-ecological relationships (Nadasdy 2005, Velásquez-Runk et al. 2019). With the expectation of ecological natives within HNS can also emerge the danger of only choosing to recognize the needs or management strategies of people and communities who fit the stereotype. The ecological native concept also exalts (Nadasdy 2005, Redford 1991), and critiques (Krech 1999, Deloria, Jr. 1997) indigenous people's behavior without problematizing environmentalism, or the contexts and ideologies that have served to shape indigenous land management (Nadasdy 2005, Nelson 2006, Tallbear 2000). Nadasdy (2005) suggests that the standard set for ecological natives contains cultural rather than objective facts about ecology or species' population dynamics. "As a result, any attempt to use ''conservation'' as an objective measure of behavior necessarily privileges one particular set of cultural values while simultaneously obscuring the power relations that make that very privileging possible" (Nadasdy 2005:294).

Members of the HNS, and members of local indigenous communities such as the Grand Traverse and Little Traverse Bay Bands, also grapple with the tensions of settler colonialism. Settler-colonialism operates in North America through the almost entire appropriation of indigenous lands, and the intentional displacement and fracturing of indigenous communities through efforts such as forced displacement, boarding schools, and reservations (Tuck and Wang 2012). It can also be seen as a process of erasure, in which settlers displace and become the new

natives on previously occupied landscapes (Ostler and Shoemaker 2019, Wolfe 2006). This is one of the critiques of some outdoor education programs, such as the Scouting movement; tendencies to dress up as stereotypes of Native Americans and claim a false lineage through their activities has been seen as erasure and exploitation of indigenous territories (Deloria 1998, Hilleary 2019, Mullins et al. 2016, Schilling 2019). Indeed, Tom Brown, Jr. has been accused of making up his mentor Stalking Wolf in order to appropriate an indigenous lineage and therefore claim himself as a successor (Frauds 2005).

Members of HNS engage with the line between making meaningful connections with indigenous community members and displacement of settler colonialism through their storytelling and educational practices. On one hand, adult members of HNS seek friendships with indigenous individuals in the Grand Traverse region, and some clamor to invite Paul Raphael for more workshops so they can understand living traditions and ceremonies. Some stories were meant to remind the kids of the fact that indigenous people love and live in the Grand Traverse region as well. When telling the kids to "become native to this place," before telling the previously mentioned story about Keewaydinoquay, Miller added, "There are still native people here and they knew so much about the place." She did place ecological knowledge in the past tense, but she also makes clear what many indigenous writers and public figures proclaim on a regular basis: "We are still here" (Brown 2016, Hansen and Keeler 2018, LaDuke 1992, Seaman 2016). She also mentioned to the homeschool kids, "This story was written down by Granma Key, she was one of the Native Americans who live here in Leelanau County. Do you know what tribes are here in Leelanau County? Have you heard of any of them?" A homeschooler named Juniper answered, "There were people who came and took over native American lands and so they could be any ordinary person dressed like us, they don't dress like

they did because there's not enough stuff." Although Anishinaabek in Michigan regularly dress in regalia and don't lack for "stuff," Juniper recognized that indigenous people don't have to be attired in any special way to be indigenous. Miller also shared the Peacemaker story with homeschool children on Indigenous People's Day (replacing Columbus Day), and prefaced it with this:

> "A lot of Human Nature School comes from Native American traditions so we're going to join in celebrating IPD with the peacemaker story. You guys can celebrate whatever you want. I'm going to share an oral tradition from many indigenous people. This story is from hundreds of years before Columbus or anyone even knew about the Native Americans.

It appears improbable that HNS members are making intentional efforts to make erase indigenous communities, considering the fact that contemporary indigenous people—and issues like the Standing Rock protests, to which several adults contributed donations—are both invited to HNS events and figure into regular discourse.

At the same time, there is a tension with the use of North American landscapes. HNS programs take place on landscapes previously home to indigenous people who were forced to leave the area or confined to reservations (Fletcher 2012). Traverse City exists because indigenous people were pushed away from the area. Environmental educators can leave out the fact that connection to place is often taking place in unceded indigenous territories (McCoy 2016, Nelson et al. 2019, Nxumalo 2019), or in areas where government officials negotiated unfairly with indigenous peoples (Fletcher 2012, Kluger 2011). Some indigenous communities who live in northern Michigan are under the impression that, under the 1836 Treaty of Washington, fishing and subsistence rights had been preserved in perpetuity, a sentiment largely

ignored when industrialists transformed the Traverse Bay area (Fletcher 2012). While I am not aware of any discourse around using landscapes that indigenous people have not had culturally appropriate access to for nature connection at HNS, there is a recognition of settler colonialism within the Deep Nature Connection Movement. Young's 8 Shields Institute, in conjunction with other schools using his 8 Shields Model, is holding a Nature Connection Leadership Conference in January 2020, centered around justice and equity in nature connection programming. The conference offers "Reparations Awards:"

> "Recognizing that many of the systems within which nature connection work is nested are built on the stolen land and/or stolen labor of Black, Indigenous, Latinx, Asian and people of color, we are committed to the work of repair. We support equity and justice by making rights, resources, and representation accessible and honoring the ongoing labor of Black/Indigenous people of color {BIPOC} to bring leadership and skill to this work as we heal divides and restore balance to all people and the Earth" (Wild Earth 2019).

A similar workshop was advertised on Jon Young's Facebook page, entitled, "Integrity in Outdoor Education: A Dialogue for Decolonization."

Some members of Human Nature School reject the narrative of indigeneity through nature connection practice entirely. In talking of some participants' wishes to be or act as indigenous people, instructor Jack Hannert said they were, "missing the point...This is nature school, it's not Native American school. We're not teaching people to be Native Americans." In an interview, he mentioned about appropriation in general, "the fetishization in our culture of the First Nations peoples here that we've, not me specifically, but we've decimated the culture of and now there's a bunch of people who in their free time want to pretend they're a part of it. And that's really troubling to me. It's offensive." After a presentation by Odawa Paul Raphael about

proper human conduct, extended family member Stephanie Mills mentioned her difficulty in reconciling the "coherency" of using another person's culture: "You don't get to cherry pick the goodies from a culture...preserving a foraging culture in the face of, you know, the half millennium war on subsistence means some heavy dues that have been paid to keep that wisdom alive."

Conclusion

Though at times science and speculative fictions have not been taken seriously (Luckhurst 2017, McManus 2019), authors argue that the genre has the power to tackle current socio-ecological realities, such as racism and environmental destruction (Atwood 2011, Bahng 2018, Haraway 2016, Jemisin 2019, Streeby 2018, Womack 2013). Consider ways that legislation on abortion restriction is being compared to Margaret Atwood's dystopian patriarchy, The Republic of Gilead, from *A Handmaid's Tale* (Armstrong 2018). The stories people tell *matter.* Studying the work of science fiction authors LeGuin and Octavia Butler, Donna Haraway (2016:118) writes, "It matters what stories we tell to tell other stories with; it matters what concepts we think to think other concepts with." Haraway rejects "prick tales" of conquering heroes and resource extraction in favor of LeGuin's "carrier bag" style of fiction. These tales have room inside for the multispecies encounters that thread through HNS narratives, messy becomings, and "...staying with the trouble of inheriting the damages and achievements of colonial and postcolonial naturalcultural histories in telling the tale of still possible recuperation" (2016:125). This is along with indigenous authors who create their own postcolonial speculative fictions, some present tense socio-ecological dystopias, having survived hundreds of years of apocalypse already (Hoagland and Sarwal 2010, Whyte 2018), some dismantling colonialism and centering

indigenous characters empowered by their cultural teachings (James 2016, Higgins 2016, Roanhorse 2018, Whyte 2018), along with numerous other themes.

Human Nature School is also compostist (Haraway 2016), telling the real story of terran decomposition along with heroic narratives. During one homeschool morning circle, instructor Chelsea Nester crawled into the center of the circle and began a story as a dying turtle, encouraging the kids to follow along. “Imagine that your awareness shifts and now you’re above yourself, looking down at the turtle you once were, a shell so to say. After a couple of days there’s movement around the pile of turtle—what are those movements around what used to be your body?” A crayfish rips at the turtle’s flesh, flies and beetles join the feast. The kids joined in with a chorus of decomposers: maggots, seagulls, turkey vultures, hawks, raccoons. At the end of the story, Matt Miller finds the dead turtle’s shell and brings it back to Human Nature School to show the kids. All participants are implicated in acts of living, dying, and decomposing within faithful cycles on a ravaged planet. HNS does not slide into the apocalyptic narratives favored by environmental educators in the school I attended in the 1980s, or the Armageddon prophecies favored by Tom Brown, Jr. and other preppers, nor does it shy away from death or the complexity humans face in trying to honor nature while also being and consuming it.

HNS stories of folks on magical journeys to connect with humans and nonhumans alike are metanarratives, literal songlines to guide humans “back” to generative ways of becoming human with nonhuman companions, much like the songlines they teach kids to navigate through the woods. When communicating about the “uncertain future” brought about by anthropogenic changes (Castree 2014, Ginn 2015), HNS always guides their stories to agency and multispecies community connections, fostering stories of hope in which human activities work towards a generative future for more than just humans, crop plants, and livestock (Haraway 2016, Law

2019, Tsing et al. 2017, Tsing et al. 2019). Nature connection heroes are courteous, even deferential to nonhumans, finding ways to coexist and observe while making the smallest impact on their lives. Nature connection is in part deep study of beings who are not quite human, but definitely persons.

HNS's focus on stereotypical indigenous peoples is not irredeemable, considering that much of Euro-centric education fails to mention indigenous people in contemporary contexts at all, a lacuna which some think is purposeful (Calderon 2014, Tuck et al. 2014). However, there are many guidelines for storytellers to decolonize their practices in environmental education. Decolonizing education requires that non-native educators acknowledge the colonial roots of land-based approaches like HNS and other nature connection programs (Bang et al. 2014, Calderon 2014, McCoy et al. 2017, Root 2010). With that comes a refusal to use indigenous people's stories or stereotypes to prop up the narrative that (mostly) white students are the indigenous inheritors of local landscapes. One striking point is that HNS narratives deal with "big" issues like death and homelessness (there are homeless encampments all over the Grand Traverse Commons) with children's and adults' groups, but conversations about the ongoing consequences of settler colonialism are relegated to less formal conversations with adult discussants. To decolonize their storytelling practices, HNS could continue to build relationships with the numerous existent indigenous communities in Michigan, and resist, "powerful, destructive fictions of settler colonialism and religious revivalism," in favor of "relationships that enact strong lifelong commitments and obligations of diverse kinds" (Haraway 2016:138). That could include encouraging youth, who are the next generation of nature connected people, to emulate storied characters who are not only lovingly connected in reciprocal relationships with

nonhumans, but also respectfully engaged towards decolonizing material and narrative landscapes.

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CHAPTER 5

CONCLUSIONS

One March morning, Kriya led the morning group in animal forms, and we pretended to be the usual suspects—red tailed hawk, deer, coyote—before she asked the students to name an animal. One long time student, a Coyote group homeschooler named Zach, sarcastically called out, "Human!" and Kriya jumped to attention.

"All right!" she shouted. "What you need to do is close your ears, start thinking about all the stuff you need to do for the day, put on your blinders [she put a hand beside each eye to block out peripheral vision], and let's go walk through the woods." She began to stomp like a petite, jovial Frankenstein through the circle of kids. They immediately responded, plodding around the circle, some with eyes closed or fingers stuffed in their ears. The kids were laughing, screaming, singing at the top of their lungs, and parodying what it means to be the least nature connected human. They continued until one of the smaller Fox kids got stepped on and started to cry, ending the game.

It is not unusual for the instructors to gently rib what they think of as "disconnected" humans. One of the "cultural critiques" I identified through textual data analysis is the complaint that North American settlers are pathologically separated from nature. Matt Miller described his privileged life in the U.S. as a strange paradox, stating that most people are ecologically clueless about maintaining the basic necessities of life, like clean water: "It's like there's no responsibility or relationship to those things and we are so busy with all the other stuff of

life...it's the prescribed kind of American lifestyle that we all live, but it's just so detached it's dangerous."

This was one of the few times I had seen evidence, however, of the embodied stereotype of a "disconnected" person out in the woods: senses blunted to stimuli from nonhumans, mind rushing with thoughts, limbs uncontrolled, and no regard for the anxieties this bodily performance would cause in animals. I was used to complaints about what most of industrial society was getting "wrong" in terms of paving over beloved landscapes, the alienation of 9 to five or piecemeal work, and the isolation of nuclear households. However, so much time and conscientious attention was paid to modeling nature connection, I had been blind to the stereotypes the kids, and the instructors, might hold about a person not similarly concerned with the experiences of nonhumans, their reactions to a lack of civility and personal space around their burrows and nests. The effect, after being embedded with HNS for so long, was shocking. And it was effective: I learned exactly who they expected participants not to be.

In this dissertation, I analyzed how one particular nonformal educational program, working from a pedagogical model disseminated across North America and Western Europe, works to help participants slip into the bodily ease of nature connection with the help of human and nonhuman mentors. In the first chapter, I wrote about the educational methods commonly used by HNS to help students of all ages not only learn more about nonhumans, but also allow for a slippage, or porosity, of the human form to let nonhumans *into* their lives in a literal way. Indigenous communities (Bird-David 1999, Cruikshank 2010, Nadasdy 2007, Rival 2002, Rosiek 2019, Todd 2016) posthumanists (Haraway 2016, Lloro-Bidart 2018, Pacini-Ketchabaw et al. 2016, Snaza and Weaver 2015, Taylor et al. 2013), and multispecies ethnographers (Kirksey and Helmreich 2010, Lorimer 2010, Miller 2019, Ogden et al. 2013) have found ways

to advance the relatedness of humans and nonhumans as kinds of persons who mutually constitute societal functioning and the continuing conditions for life to flourish. Posthuman educators also champion the perspective of nonhumans as beings who contribute to and play enormous roles as subjects within human education, in contrast to nonhumans viewed as objects of discovery or resources to extract (Le Grange 2018, Lloro-Bidart and Banchbach 2019, Pacini-Ketchabaw et al. 2016, Pedersen 2010, Snaza and Weaver 2015, Taylor et al. 2013, Taylor 2017). Posthuman education is often studied in places where posthuman objectives are not an overt goal, with much research instead focusing on how nonhumans are already implicated in pedagogical processes or making suggestions for inclusive pedagogy (Nelson et al. 2018, Nxumalo and Rubin 2019, Snaza and Weaver 2015, Pacini-Ketchabaw and Nxumalo 2016, Taylor 2017, 2018, Taylor and Pacini-Kethchabew 2015, 2017). This chapter contributes to a rich body of literature by analyzing the educational methods of a nonformal school expressly concerned with nonhumans—from plants and other animals to beings one might consider elemental or inert—as skilled teachers in their own rights whose livelihoods matter immensely for social and ecological functioning.

HNS has multiple tactics, borne from their affiliation with Jon Young's (2019) Deep Nature Connection Movement pedagogy, used to put nonhumans in direct contact with nonhumans, or to create interior spaces so that nonhuman experiences can penetrate the boundaries conceived between discrete humans and their environments. One tactic, borrowed from Young et al.'s (2012) manual on nature connection practice is animal mimicry, a tactic used in many of HNS games and activities. While mimicry is functional in that it can help students understand and embody animal behavior even in the absence of the actual animal, like a robin being predated by a cat or a raccoon wandering the riverbank in search of crayfish, I argue that

mimicry is meant to allow the interpenetration of human and nonhuman subjects, so that humans can experience nonhumans' lives through the virtues of simply having a body (Abram 1996, 2010, Barrett 2011, Bird-David 1999, Foster 2016, Willerslev 2014) and the willingness to try. It is not simply empathy or imagination—if one takes the mandate to take interlocutors seriously (Bird-David 1999, Malone 2019, Nadasdy 2007, Todd 2016, Whatmore 2002), HNS instructors (and the Deep Nature Connection Movement in general) are teaching their students of all ages to become the beings they mimic. Thus, mimicry is a key pedagogical tool to dismantling, not just the view of nonhumans as educational objects (Snaza and Weaver 2015), but also physical barriers meant to keep "others" out.

Another tool for posthuman education is the willingness to be shaped by nonhuman teachers, along with directed sensory attention. Tracking is one example in which humans take on bodily movements necessary to get closer to animals they long to see. I compare this to research on nonhumans' abilities to shape human lives (Haraway 2013, Ingold 2011, Latimer and Miele 2013, Nelson 2019, Tsing et al. 2017, van Dooren and Rose 2016, Whatmore 2002), arguing that tracking teaches students to move and bend as nonhumans, and contort their bodies in ways that make nonhuman lives more legible. Students learn to attend to clues in landscapes, as well as nonhumans, in ways that are often unavailable in a public-school classroom. They modify sensory input, wearing bandanas or engaging in other forms of embodied play, to make legible the sensory abilities of other beings (Abram 2011, Foster 2016). Human attention can lead to changes in bodily comportment intended by HNS to help nonhumans feel less threatened in their home territories, and make entangled, multispecies worlds comfortable and inhabitable for more than just human beings (van Dooren et al. 2016, Warkentin 2010). Allowing one's movements and attention to be shaped, not just for mimicry, but also to retain awareness of the

needs of other beings on shared landscapes, is another central tool in creating a posthuman pedagogy.

Posthumanism involves, as Traci Warkentin (2010:102) explains, "...one's whole bodily comportment and a recognition that embodiment is always in relation to social others, both animal and human." HNS's relational pedagogical approach is the attention of humans *within* a world, not *towards* a separate world (Ingold 2011). Nonhumans are people; rocks and birds are teachers actively working to teach students; human movements can be coopted for the comfort of other species (and human enjoyment of observing them); and the boundaries between human and nonhumans can melt away with the employment of methods that resemble play much more than work. While adults, from instructors to extended family members believe in spiritual communication and interpenetration between nonhuman and human companions, this is presented to children as play, and from observations kids seemed to treat it as such.

Some have speculated that children are inherently animistic, believing in the personhood or souls of nonhumans until they are differently educated (Charleton 2007, Russell 1942), while others claim that animism is not an innate characteristic (Bullock 1985, Huang and Lee 1945, Mead 1932), and that children do not have an inborn affinity for nature that would make nature connection a natural given (Taylor 2017). (Note: researchers like Jahoda [1958] noted that animist sentiments revealed a child to be significantly mentally "behind" Western children who eschewed animism, and some studies were undertaken with the belief that animism has been scientifically "proven" as a false view.) This project was not undertaken to provide an answer to the question, "Does nature connection pedagogy 'work?'" though I have been asked that question many times. However, a lingering question associated with the research relates to how children employ the educational methods towards nonhuman personhood offered them.

There is no doubt in my mind that the students have been educated to attend to certain nonhumans, especially plants and fungi. The choruses of, "Look at that mullein!" "Kriya, can we eat this sorrel?" "I found a morel!" "Look, it's wild leeks!" "Is that hawthorn? Can we eat it?" have many times sounded across the Commons landscape. Because of bird language and a general attention towards birds, I have seen many small fingers pointed to the sky, and heard high, squeaky voices shout, "Look, a red-tailed hawk!" "Oh, that's a chickadee!" "A jay!" While it is difficult as best to get a group of ten Foxes to silently sneak for long distances, I have seen them, whether in organized or spontaneous play, assume the hunched, light-footed posture of a human trying to walk carefully in an animal's territory, with hopes of not scaring the deer or woodchuck. However, since I did not interview children, I have only my observations, not enough to determine how they feel about the *personhood* of those beings whose lives they encounter on a regular basis. Do they have the same ecstatic feelings about a tree communicating with them that elder Mary Jo Kage has expressed? Are they able to slip into the embodied habits of a turtle or a fox the way the instructor Chelsea Nester has embodied during multiple story circles? Whether they experience the lively, body sharing habits of their adult mentors remains to be explored, and is a potential future direction for this line of research.

The second data chapter concerns the conservation ethic of HNS participants, and how conservation intersects with a culture of multispecies kinship. It is evident from pedagogical methods, texts and other materials produced by Young's 8 Shields Institute (see Young et al. 2012, Young 2019), and interviews and observations with HNS instructors and extended family members that ecological health is a core value. However, the word "conservation" is very rarely used, and "stewardship" is considered a negative term by executive director Matt Miller. At the same time, the DNCM exists in part to get people into relationships of care with nonhumans,

with the assumption that emotional connections are key to building nature connection (Young 2019). Those relationships involve what Young (2019) and instructors at HNS call "caretaking," and acts as an emancipatory proposition in which humans are incited to work towards ecosystem health based on their own observations and nature connection experiences, and a relational proposition based on mutual care among humans and nonhumans. Again drawing from indigenous examples, Young (2019) likens caretaking to Kat Anderson's (2005) *Tending the Wild*, her assessment of intensive landscape modifications practiced by people indigenous to what is not California that encouraged the flourishing of multiple species.

Caretaking, based on the idea that European-Americans should seek to become indigenous to North America as quickly as possible to avert ecological disaster, is not like stewardship practices that assume the oversight of more central authorities, like governmental and nongovernmental agencies (Bennett et al. 2018, Worrell and Appleby 2010). Stewardship can take place with individual actors, but often takes place in "hybrid networks" that span from public and civil society organizations to NGOs and funding bodies (Bennett et al. 2018:597).

Caretaking for HNS takes on a different, relational meaning from stewardship. While it does focus on ecosystem health, stewardship is about building relationships with nonhuman allies who have agency within caretaking processes. Rather than focusing on dominion, which reflects stewardship's biblical origins (Attfield 2006, Berry 2006, Van Dyke et al. 1996, Taylor 2017), adult HNS participants assume that nonhumans can be responsive in their decisions to grow and flourish around human companions (Latimer and Miele 2013, Latour 2011, Haraway 2003, 2016, Singh 2003, 2005, Taylor 2017, van Dooren et al. 2016). Their positions on caretaking reflect emancipatory positions on nonhuman being, upsetting oppressive assumptions that nonhumans should be subservient to humans, serving as resources (Friere 2009, O'Sullivan

and Taylor 2014). Their caretaking ethic assumes that nonhumans, as other kinds of people, should experience relational, rather than extractive, ethics of care with human companions (Ceder 2019, Haraway 2008, 2018, Lloro-Bidart 2016, Taylor et al. 2013, Taylor 2017).

The Millers, HNS's founders and directors, recently received the gift of a property in Solon Township, about 10 miles away from the Grand Traverse Commons where they currently operate. During my time at HNS, they discussed the various caretaking projects they want to initiate on the property, such as using goats to control invasive spotted knapweed and planting American ginseng and other medicinal plants. One potential future investigation could involve determining, first, the direct inspirations from their caretaking projects (for instance, are they looking to texts on indigenous practices, drawing from permaculture gardening, or observations when choosing how to caretake?) ,and second, potential changes in plant composition due to their efforts. Over time, does a caretaking approach contribute to the healthy ecosystems that HNS promotes?

The third data chapter deals with HNS's storytelling arts. Storytelling is a projective, worldmaking process (Haraway 2016). So what are the purposes of HNS stories, which are featured most homeschool and summer camp days? Their stories, told by instructors, volunteers, and extended family members, feature talking animals, trees that send dreams to people, indigenous tales from North America, Europe, and Australia, and people who turn into animals, or are saved by nonhumans who teach them how to survive in the woods. The characters are cultural role models who are deeply nature connected, and act as lessons for the kids to live out during the day, which some do.

First, their stories eliminate a common trope of the lone human struggling against "Nature, red in tooth and claw" (Tennyson 1895), and instead offer hope of "collaborative

survival" (Tsing 2015, 2017, Haraway 2016). Characters rediscover the secret of fire and bring it back to their tribe, lighting the darkness after decades of lost knowledge. The Haudenosaunee Peacemaker brings peace to five indigenous communities, which lasts into present days, and encourages the kids and adults hearing the story to be a beacon of peace in their own communities. In the one recorded story in which one person acting alone brings ecological health to a region by planting trees, their work is protected and lauded by the French government. "The time of the lone wolf is over," reminds DNCM founder Jon Young (2019), and their stories suggest the theme of communities made of plants, animals, and people who are able to communicate with one another to deal with their differences.

The tales are also meant to stave the rapid loss of ecological knowledge in industrialized areas (Atran and Medin 2010, Papworth et al. 2009, Soga and Gaston 2016). Instructors pepper their students with questions throughout their stories, and indeed throughout entire program days. These questions are very often about natural history, meant to test students' knowledge, or at least get them thinking about how every aspect of the landscape one moves within can be observed and questioned.

Storied role models are often indigenous, in ways that both celebrate the continued existence of Michigan tribes, and indigenous communities around the world, and simultaneously seek to replace them upon colonized landscapes. First, indigenous teachings, passed down through Young's (2019) tutelage with indigenous community members, and Tom Brown, Jr.'s (2001) claimed Apache inheritance from his mentor Stalking Wolf, are the foundation for the 8 Shields Model used by HNS and other DNCM organizations across North America. This is part because of a common (though by no means homogeneous) belief that people of European ancestry in North America "have no culture," and therefore need to coopt other cultures in order

to act in ecologically and socially appropriate ways. While HNS stories portray indigenous peoples in a positive light, and point out that contemporary indigenous communities exist, some of their stories play up the "Ecological Indian" stereotype that can eliminate the agency of people who do not fit the stereotype from conservation issues (Nadasdy 2005, Redford 1991, Whyte 2018). Their stories of ecological relationships vary from the ways that some indigenous storytellers depict survival and heroism in the midst of ecologically uncertain times (see Demaline 2017, Erdrich 2017).

At the same time, HNS dodges apocalyptic narratives of ecological Armageddon, and foster stories of hope and a future in which diverse human and nonhuman communities can work towards a shared future (Haraway 2016, Law 2019, Tsing et al. 2017, Tsing et al. 2019). One question (among many) remains: what are the stories that students tell? After a morning of stories, how often do students live out the tales of heroism and multispecies engagement during the rest of a homeschool or adult program. I have heard a few students mention, while performing acts they consider brave, that they are the heroes of that day's story, jumping down otter slide hill or finding an interesting snake or plant. After bird language scenarios, they sometimes act out bird alarms in their own skits during free play time. Are students living in similar storied landscapes as depicted by storytelling adults?

I asked at the beginning of this dissertation, how does nonhuman social interaction within wilderness education affect pedagogical opportunities for teaching about conservation? With these three articles, I touched upon the relational philosophy that posits nonhumans as potential friends and allies for making the best of life on a damaged planet (Tsing et al. 2017), and analyzed what conservation, or "caretaking" means within this offshoot of an environmental education movement. I analyzed the methods for approaching nonhumans to create social

relationships and posthuman pedagogies (Malone 2019, Nelson et al. 2018, Taylor 2017), and how the porosity of human bodies both allows for humans to invite nonhumans into embodied relationship (Abram 2011, Foster 2016, Rosiek 2019, Todd 2016). I also investigated how the habits of approaching nonhumans with civility, on their own terms (Warkentin 2014), and tactics to bring nonhumans into human awareness, bend human bodies into mimetic correspondence (Ingold 2011, Lewis and Owen 2019, Taylor and Pacini-Ketchabaw 2017).

This dissertation only begins to scratch the surface of what is going on within a single nature connection school, much less what is happening within a diffuse educational movement with over 300 affiliate organizations. While I will never have an empirical answer to, "Does it work?" I know that the happiest I have ever been was being around nature connection people who are equally concerned with the well-being of nonhumans and humans alike, and who thrill to identify bird voices deep in a thicket, or animal tracks pressed deep in the mud. I learned to take their ideas seriously (Barrett 2011, Nadasdy 2007, Willerslev 2004), to leave doubt behind when they spoke of communicating with trees, feeling the death of a beaver, or allowing overlapping presences of human and plants, humans and animals, within their own bodies. I appreciate their creativity in bringing remarkable ideas, many borrowed, old, and effective, to audiences who may have known nonhumans beyond their pets only as objects, never subjects.

I love their stories, if that is not obvious from vignettes and long quotes heading and scattered through these chapters. I love the sound of their own words, their voices echoing through my head, and I love reliving crystalline moments when they answered questions I didn't realize I had, or perfectly soliloquized a core belief. It is fitting then to leave you with this small anecdote that encapsulates the care that some HNS participants take in their interactions with nonhumans. It is a contradictory existence—weeping over clear-cuts while driving a gas-

guzzling car; getting take out in plastic containers and adding wild greens on top—but some are trying to live out the instructions for living a nature connected life, following the heroes of stories into multispecies communities of care.

It was a biting cold February day in 2016, and the adult monthly group had met up to discuss an appropriate topic: survival skills. Kriya led the group, as usual asking questions to stimulate conversation: What would you do for food this time of year? Where would you get protein? “I love the skills, I started taking an interest in them about 10 years ago with the premise of surviving the apocalypse or getting away from society,” said Kriya. “The more I learn the more I feel confident in my own skin on the planet...I like looking at the landscape and feeling held, even if it’s only in my own mind. I think I would outlast most people by about two weeks in the apocalypse.” Kriya’s face cracked into her usual wide smile as she dipped forward, pleased at her own self-deprecating humor. The rest of the adults in the tiny HNS office laughed, though almost no one felt the same surety that they would last more than a few days.

Kriya laid out the basics of short-term, outdoor survival—assessing the context, figuring out the most urgent of one’s basic needs, be it fire, shelter, or water, and working like hell to make it happen—and then we headed outside. The snow was brilliant, blinding as we made our way through the Commons to Fire Hill, the only spot in the main Commons landscape where fire is permitted. As we plodded through the snow, Kriya quizzed us on tree identification, taught us about the differences between pines and spruces, and the survival value of pine needle tea. She referenced the Haudenosaunee Peacemaker story, and mentioned that the five nations buried their tools of war beneath a white pine tree. She sang a song that a Cree woman, Daisy Kostus, taught her at the Great Lakes Traditional Arts Gathering. After a fire challenge at the top of the

hill, in which groups split off to work bow drills, fire pumps, and flint and steel, we were released to "pursue our passions," which in my case happened to be trying out pine bark.

Despite living for years among towering white pines, I had not yet tasted "survival noodles," strips of the softer, wet inner bark. I walked with the group interested in outdoor winter edibles—Mary Jo Kage and Steven Holl from the extended family, and homeschooler Shamus—towards a small white pine grove about 30 feet away from the fire circle. The white pines in that area were about 15 years old, evidenced from their whorls of branches, and their outer bark was still smooth and thin. I was holding the saw, and explained to Shamus that his idea of ripping a strip off the tree would be more damaging than just taking a branch, leaving a smaller hole for potential infection.

I stood up straight and addressed the trees, saying that we would like to cut a limb to make food from it, and that we would be grateful for the sacrifice. Shamus, just on the cusp of his teenage years, asked what we were waiting for, since trees can't talk anyways.

"You need to be quiet and listen to what the tree is saying," replied Steven. "Listen with your heart." Mary Jo agreed with the sentiment, and we waited a moment in the cold and wind, listening to the survivalists behind us working with fire and boiling water in our safe survivalist scenario. Steven pointed out a limb on a tree inside the copse he said he felt was being offered by the tree, and Mary Jo agreed. Inwardly, I was shocked—it was the same branch I had been thinking about taking. I kept that thought to myself, wanting to retain some sense of privacy in this research moment, and set about sawing the limb off.

In the midst of sawing, I cut my index finger. I rubbed the blood on the wound I had created in the tree, thinking that it was only fair to trade sap for blood. I cut off the bloody end of the branch and explained to the group how to get at the soft inner bark to boil pine noodles. They

were delicious, soft yet woody, mild with a gentle pine flavor. I was the only one who ate them. Mary Jo saw my finger, and when I recounted what I had done, including rubbing my blood on the tree to trade for the branch, she stared at my hand approvingly, and nodded. “That was the right thing to do,” she said. “I like the way we did that. It felt right.”

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