Keepers of the Night Stories

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This paper, which I presented at the Responding to Ecological Challenges with/in Contemporary Childhoods Colloquium in January 2020, is an extension of my dissertation research with children and the more-than-human world in Brazil. Drawing on Donna Haraway's work and inspired by Karen Barad's framing of diffraction, I take an ecofeminist, common worlds approach to my study of how children learn through becoming-with more-than-human worlds. You are invited to join in our stories and become-with us as, together, we follow provocations in different directions across time and space and speculate "and ifs."

Key words: *becoming-with; worlding; speculative fabulation; stories*

The Responding to Ecological Challenges with/in Contemporary Childhoods Interdisciplinary Colloquium on Climate Pedagogies launched with a call to unsettle taken-for-granted assumptions about human-Earth relations and to focus on ways that children, educators, and researchers are responding to the urgency of our current, human-induced climate crisis. One such assumption about the human relationship to environmental breakdown, which is referenced in the 2018 Intergovernmental Panel on Climate Change (IPCC) report, posits that if humans are able to create technological fixes to sustain net-zero carbon dioxide emissions, these creative, human-generated solutions have the potential to resolve the climate catastrophe (Conty, 2018; IPCC, 2018). The success of the human race at generating such techno-fixes is premised on the myth that humans are separate from and in control over the environment. Humans are both the cause of the problem, as the perpetrators of environmental demise, and the solution to the problem, as the saviours who will generate the necessary techno-fixes to prevent Earth's complete destruction (Braidotti, 2013, Haraway, 2016b). In this era, as we stand on the precipice of ruin, we can no longer deny that the fates of the human and more-than-human worlds are inextricably linked (Taylor, 2017; Taylor & Pacini-Ketchabaw, 2015). The resulting not-so-simple reality is that humans must urgently question our most basic narratives and dangerous illusions about human exceptionalism in order to fundamentally shift the way we understand our, and Earth's, interrelated mortal fate (Plumwood, 2010).

Education, which is positioned as a tool for addressing climate catastrophe, is a key puzzle piece within this narrative of uncertainty and precarity. The IPCC report (2018) alludes to the importance of educating the next generation of scientists and innovators who will work toward human-generated technological solutions to lower carbon dioxide emissions. Furthermore, education contributes to reducing the global social inequalities that cause people to experience the effects of climate change disproportionately (see Cho, 2020). Education even has the potential to teach ways to improve the health and well-being of human and more-than-human species alike that suffer due to rising global temperatures. However, education also furthers economic growth that is partially responsible for causing the current climate predicament. We are careening down a path toward irreparable harm.

The urgent need for a paradigm shift from humancentric education to generative learning-with more-than-human worlds is clear. This paper responds to the need to transform relationships between humans and Earth. Specifically, through stories and speculation, this paper provokes reflection on children's relationships with/in more-than-human worlds and inquires: (1) What are some multispecies, multimattered interactions (Haraway, 2016b) that characterize child-Earth stories? and (2) Who are the foci (or keepers) of these stories?

Becoming-(with) the world

The hyperseparation between humans and Earth creates a hyperbolized notion of a nature/culture divide on which human exceptionalism is predicated. This division is based on the idea of nature as given and culture as constructed (Braidotti, 2013; Plumwood, 2010). Such a division creates a fallacious choice between self and other in an us-versus-them mentality (Plumwood, 2010). Posthumanist scholars have responded to the hegemonic nature/culture divide by framing the relationship between nature and culture as a continuum (Braidotti, 2013) or an inseparable natureculture (Haraway, 2003). These concepts disintegrate the boundary between the given nature and constructed culture. A focus on naturecultures opens the door to research that goes beyond humancentric relationships (Pacini-Ketchabaw & Nxumalo, 2014).

Children's natureculture encounters are multimattered and multispecies as they become-with (Haraway, 2016a, 2016b) the books that children read and the trees they climb. The world is emerging through ongoing interaction (Chandler, 2013; Haraway, 2015). The understanding that we are *of* the world causes us to reconsider the durable and hegemonic assumption of human exceptionalism that places the human species in power *over* Earth. One way this human-Earth ontological shift is reflected in education is through a common worlds pedagogy. This approach focuses on a more-than-human relational ontology that emerges from interspecies encounters within multispecies landscapes and offers a way to engage in education that is focused on co-inhabiting and coshaping worlds with living and nonliving matter (Taylor, 2017; Taylor & Pacini-Ketchabaw, 2015; Tsing, 2012). It builds on Donna Haraway's (2008) concept of contact zones to problematize the way that "education has traditionally located the developing child within an exclusively human sociocultural context" (Taylor et al., 2013, p. 54). Moving beyond humancentric sociocultural contexts into focused contact zones illustrates how children animate more-than-human worlds through mixed-up, mutual entanglement as a part of common worlding (Merewether, 2019; Taylor & Giugni, 2012). This paper takes a common worlds approach to study how children become-with multispecies, multimattered relations, thus making stories, which make worlds.

Story generation

We generated our stories in a landscape of biodiverse ecosystems: lush Atlantic rainforest and rolling hills of sun-soaked coffee plants in southeastern Brazil. *We generated our stories* in a one-room, mixed-grade schoolhouse that was nested in this landscape. The school itself was a small building with a classroom, an eating area, two washroom stalls, and a small kitchen meant for only one chef at a time. There were no fixed or physical barriers that completely separated the inside of the school from the outside of the school. The lack of barriers meant that the indoor/outdoor binary of schooling was dissolved and exchanged for a holistic understanding of how children's learning spaces are embodied and embedded within the indoors and outdoors (Merewether, 2015). The front door was a metal gate that allowed for the butterflies, dust, smoke, noise, and bats to enter and exit unobstructed. The window to the classroom had a broken glass pane through which we could peer out at the plantation across the street. There was a chalkboard at the front of the room, rows of eight desks total for the elementary school students, and a low, colourful table with small chairs in the back for the three preschool students.

School participation

I participated[1] in schooling activities with the teacher and the 11 children who attended a multigrade elementary school in a one-room schoolhouse. While in school, I held multiple roles. Sometimes I joined the older students in their activities. Most often I helped the teacher by assisting the preschool children with their tasks, playing with blocks and reading books. I spent most of my time at the small table in the back of the school sharpening pencil crayons for the preschool children. We drew together on our own papers or on the same paper all at once. These cocreated drawings now live in a large scrapbook that stayed at the school to keep our stories. And thus our stories continue across time and space.

Walking conversations

Walking interviews, or walking conversations, are a way to explore children's ecological learning and relations between themselves and other species through a focus on children's entanglements with the more-than-human world within and beyond school walls (Somerville, 2007; Somerville & Green, 2011; Somerville & Powell, 2019; Taylor & Pacini-Ketchabaw, 2017). This method allows for researchers to "follow and document the key relations that emerge over time between children and other species within their imperfect, everyday, local 'common world' environments" (Taylor & Pacini-Ketchabaw, 2017, p. 133). Walking conversations offer flexibility to "see what happens" without any assumptions about how the research should go (Somerville & Powell, 2019, p. 20). In these stories, I followed where the multispecies participants led and went where I was invited. Sometimes this meant that I did not make it to the schoolhouse for "formal" school participation. I followed the youngest (human) participant, an 18-month-old toddler, as she said "*vem cá*" (come here), and we roamed the coffee plantation to check the chicken coops. I paused on my walk to school to observe the ants and the butterflies along the road. I walked the children home from school and heard stories about the spirit of a body that was buried on our path. I kept memories of these experiences in reflections, musings, and notes. I never recorded audio of these conversations.

Audio/visual recordings

A digital camera and audio recorder that I brought to Brazil kept parts of our stories. When I was alone in my room, I noticed that the dogs would typically bark at 11:30 at night. It fascinated me, and I recorded these sounds. The preschool children recorded themselves inventing stories for the pictures in the books they were not yet able to read. The camera became central to our stories. For the purposes of this paper, I will focus on some of the visual storylines that emerged from the more than 1,000 photos and videos we generated together.

Reflections and musings

We wrote handwritten and typed reflections and musings. These musings and reflections form part of the narrative as well and are woven into the vignettes in this paper. The notes have their own voice as they continue to speak beyond the time that they were "recorded" through a diffractive analysis.

Diffractive analysis

Karen Barad's (2007) concept of diffraction as a methodological tool for analysis offered a way to stay with the stories. The multiple readings and rereadings of our musings, notes, drawings, videos, and photos that are part of a diffractive analysis allowed for new connections and narrations (Magnusson, 2018). Focusing on child-Earth multispecies relations through a common worlds approach, rather than centering children, illustrates how inquiry can see beyond the human without erasing the human. Lisa Mazzei (2014) describes the process of diffractive analysis as reading the data "through multiple theoretical insights [moving] qualitative analysis away from habitual

normative readings (e.g., coding) toward a diffractive reading that spreads thought and meaning in unpredictable and productive emergences" (p. 742). Just as light diffracts as it moves through a prism, this diffractive analysis travelled in many directions and continues to travel across time and space. The stories did not begin upon my arrival to Brazil nor did they end upon my departure.

Children were not lying in wait for my arrival for their more-than-human relationships to take shape as "my research" shed light on them. Similarly, *these* stories, *our* stories, did not begin as you started reading them. Instead, as you read, now, *we* story anew. With each reading emerge new stories. With each time and place emerge new worlds. I sat in the kennels with the dogs at an animal shelter where I volunteered and revisited our stories from a place of discomfort and multispecies connection. I kept paper next to my bed at night and wrote musings that were inspired by our stories without looking at the paper and in the pitch dark when I abruptly awoke from a dream. I painted watercolour paintings of nothing in particular. I walked along the local golf courses and ponds while listening to songs that were part of our stories or the children's voice recordings. I spent months intermittently immersed in these relations until new stories and vignettes emerged. In this paper, I share a sample of the vignettes as well as some provocations and a speculative reimagining of our stories with an invitation for you, now, reader, to join, diffract, and story with us.

Toucan introduction

A toucan is the entry point for the visual storytelling vignettes in this paper. This is not to say that the image of a toucan (Figure 1) was the first image generated in this study. It was far from the last. However, this toucan was an invitation to us all to use our shared digital camera. Early into my second visit to this community in southeastern Brazil, I was getting reacquainted with one of the families that had looked out for me the year prior. As we discussed the many changes that had taken place in the region in the year that had passed, a toucan landed on a palm tree in their yard. I removed the digital camera from my backpack, zoomed in, and captured a photo of the bird.

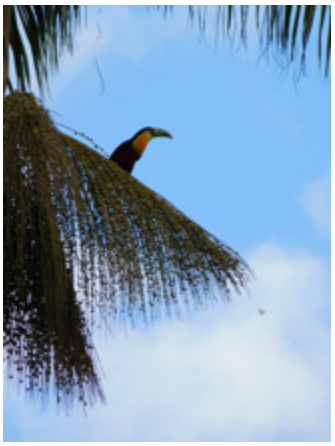

Figure 1. A toucan perched in a palm tree.

The children were instantly curious to know more about the camera and see the photo. They asked if they could use the camera. Their grandparents discouraged this because the camera appeared to be expensive and fragile. As four of the children gathered around, I explained the features of the camera, how to zoom and focus, and how to make sure the camera was supported at all times both by hanging it from the neck strap and by holding it in their hands. This camera was not a child-friendly device, nor was it light and easy to navigate. Despite these barriers, the children adapted to using the camera with ease, the grandparents were reassured that there would be no problem

if the camera broke, and everyone adjusted to the camera's presence.

The mess of plastic, metal, glass, and batteries that we call a camera became part of our stories. It accompanied us on our walks and in our conversations. We took photos during the day and at night. The children shared the camera and took turns running around what they called "their worlds" capturing images. They took pictures of the cats and chickens. They documented the plants and trees that they themselves had planted. We photographed the sunsets, the school bus driving by, coffee growing on the plants and drying on the ground, the pigs, and a Spiderman sticker on a bike. There was little structure or design to the endeavour. The camera was there for us all. We experimented with the zoom and the flash. We discovered how to record videos. The children took photos that were blurry, and they became part of our stories. They took photos of the flowers, and they were part of our stories in both their physical and photographic presence. One evening, as the moon rose over the hills of coffee plants, one of the teenagers grabbed the camera and photographed it. We passed the camera around and each took a turn trying to photograph the moon, an elusive ball of light in the night sky (Figure 2).

Figure 2. A moonrise over a hill of coffee plants.

The camera was a part of our stories in the children's homes and in their school. When we were at school together, the children photographed items and objects around and outside of the building. When I first arrived to the school, I found it interesting the way that objects were recycled. I photographed an old tire that had been turned into a planter and the plastic-bottle vertical garden that was hanging on an outside wall of the school. As I was looking through the photographs, I noticed that one of the children had also chosen to photograph the soda bottle garden. In a series of four photos, the child played with the camera zoom so that the entire bottle was in the frame, then only part of the bottle, then a leaf inside the bottle was the focus, and, finally, the bottle was removed from the frame.

Figure 3. Composite of images taken of a plastic-bottle garden outside the school.

In this composite of photos (Figure 3), as the photographer changes the composition, the plastic is decentered and the focus shifts to the plants. Margaret Somerville (2017), in encounters with children, stones, and water, observed that the children remained silent as they recorded videos of themselves throwing stones into the water. They also framed the video in such a way that only the stones and water were visible, actively decentering themselves (Somerville, 2017). In the case of this story, the plastic bottles in these photographs were not just plastic bottles. They were a vertical garden. They were erased from view.

Conversing with plastic

A plastic bottle that became a central part of our stories was my reusable blue water bottle with a filter straw. To reduce my need for bottled water, I carried this filter bottle with me everywhere I went. The children loved playing with the bottle. One of the girls in particular would tell everyone around that the straw was a filter, and she would open and close the mouthpiece over and over. A few of the children chose to take pictures of the water bottle and a sticker on it that said "Keep Nature Wild" (Figure 4).

Figure 4. Images of my water bottle, a part of our stories.

On one of my outings, I forgot to bring my reusable water bottle and was forced to order bottled water at a restaurant. The bottle that was delivered was aesthetically pleasing. It was made of a thick red plastic and had a long, narrow neck. My friends at the table gave me a hard time about needing to buy a single-use plastic bottle. They recommended I bring it to school to see if the children might want to somehow incorporate it into one of their art projects. I obliged.

The children were curious about why I had brought the bottle to school. I explained that I just could not bring myself to throw it away and wondered if we could use it somehow in the school. They passed the bottle around, and one of the preschool children had the idea to remove the cap, press the mouth of the bottle to his cheek, and then switch it to his ear. To his delight, he could hear something when he did. He ran around the classroom inviting the other children to listen to the bottle. They experimented with placing the side of the bottle on their cheeks and then switching the mouth of the bottle to their ears to listen. This carried on for a while. The children connected with the bottle. The bottle reciprocated with its sound waves. The children named the sounds the bottle made and settled on describing it as the noise the waves make on the beach where they go on holiday. We carried on the conversation with plastic until interest faded and the bottle returned to being discarded plastic somewhere on the crowded bookshelf.

Becoming-with garbage

The vignettes thus far have painted an idyllic picture of children's artistic storytelling of their relational childhoods in this region. Taylor (2014) argues that one of the downfalls of a view of children as entangled within Earth-other-assemblages is that it may romanticize childhoods, running the risk of painting a utopian picture of children's connections to Earth. Instead, reconceptualizing childhood as nature/culture assemblages is a closer approximation of childhoods as they are: situated and entangled (Taylor, 2011, 2014). The relationship between children and plastic is much more nuanced than their gardens made of plastic and their conversations with plastic. A common practice in this rural area is to burn garbage. The restaurant next door to the school sits inside the home of one of the local families and is known for its use of a traditional woodfire stove. Patrons sit in an extension of the family's kitchen as the food stays warm on the stove. When guests finish their meals, the restaurant owners collect their plates and dispose of their garbage in the fire. Thin, flimsy, single-use plastic cups shrivel and disappear into the flames. Waste that is too large to quickly dispose of in the stove is burned in piles outside. The variable and complex human-plastic-Earth relationship takes many forms in their inextricable links to one another. Humans and more-than-humans alike become-with (Haraway, 2016a, 2016b) plastic as they breathe it in through their lungs and their leaves.

In the early days after the camera became central to our stories, one of the 10-year-old boys was taking pictures of the area around him. As he prepared to capture a photo of garbage burning in a pile outside of the restaurant, he casually said, "I'll take a picture of the destruction of the environment," and then he carried on photographing the world around him. The smell of smoke was ever present. Due to the use of fire to dispose of waste or clear the land by burning trees, the smell of smoke lingered in the air and permeated the boundaries of the local homes and the school. Because the schoolhouse itself did not have any physical barrier to completely seal the inside from the outside, breathing the ashes of burning garbage was unavoidable.

Seen worlds, dream worlds, whole worlds

Over the course of our time together in the school, I was with the children on a day when, in connection with a lesson about the environment, their teacher asked them to draw the world that they see and the world that they

dream for the future.

Figure 5. A child's drawing of the world that he sees (right) and the world that he dreams (left).

The children's drawings followed from a conversation they had about pollution in their community river and the act of burning trees to clear land. In Figure 5, a 10-year-old boy drew that *agora* (now) he sees a school bus spewing exhaust, a person cutting trees, garbage fires, the sewer leading into the pond, and garbage outside the garbage can. In the world that he dreams (*sonho*), on the left side, he drew a pond full of fish, a bicycle, rain, a person planting trees, and garbage in the garbage can. While there is a performative nature to these drawings and they are in direct response to the teacher's prompt, it does not negate the realities of the relationships that the drawings depict. The drawing in Figure 5 was created by the same child who had, prior to this activity, asked to use the camera to take a picture of the destruction of the environment. The other students' drawings were similar in that they mirrored the discussion about pollution and fire. These drawings keep our stories. They are part of the story of Earth's demise. They depict human destruction and a shared hope to live in better harmony with the planet.

Outside of the school activity to draw the world that they see, an 8-year-old girl used the camera to take pictures of everything she saw around her grandmother's home, which is the restaurant next door to the school with the woodfire stove.

Figure 6. A photograph a child took of her grandmother's home/restaurant, the church, and the school.

The image in Figure 6 shows the school as a narrow grey sliver on the left, the church, which is adjoined to the school, and the grandmother's home/restaurant, which is the purple building on the right. Alongside the wall between the church and the home is a row of wispy plants and succulents. Immediately after taking the photo above, the girl spun around and declared, "Now I will take a picture of the rest of the world," and she photographed the other side of the street (Figure 7).

Figure 7. The rest of the world.

As I revisited the photographs thinking *with* (Jackson & Mazzei, 2011) our stories, I mused and wondered, was the child bringing into focus a part of an existing world? Was the child-camera-cloud-plant-sunlight-street assemblage emerging as a story through which a new, parallel world would come into existence? How many such worlds can exist in parallel pluriversality (Stengers, 2011)? Who are the keepers of these stories, and, by extension, these worlds?

Speculative fabulation: Provocations

The vignettes in this paper have something in common: They center what we—the intergenerational human participants—chose to photograph and draw. We are the focus of these Earth stories. Our camera and our relationships are the keepers of these stories. Yet we, alone, cannot claim sole creation of these stories nor can we bear the weight of keeping these worlds. Sharing our stories here and in this way thus far illustrates, through a humancentric lens, some of the species with whom, and matter with which, we are in relation. In their multimattered ethnography, Taylor and Pacini-Ketchabaw (2015) also use vignettes to draw together the various data sources, such as photos, fieldnotes, reflections, and ponderings. They discuss their challenge to constantly work against the desire to position children as central actors in the analysis process (Taylor & Pacini-Ketchabaw, 2015). By visiting and revisiting the data as they crafted the vignettes, they were able to move away from understanding the data through a child-centered lens. The diffractive analysis used here is one step toward decentering children. A reading of the vignettes through this lens will bring into focus the ways that children are inextricably linked with the more-than-human world through their multispecies, multimattered interactions (Haraway, 2015) with a camera, a toucan, trees, drawings, the moon, garbage, and plastic. However, the analysis and vignettes fall short in imagining what these relationships mean to the creation (read: keeping) of other worlds, stories, and possibilities in an era of ecological precarity.

As a response to climate catastrophe, education must undergo a radical reimagining. Iveta Silova (2020) responds to Isabelle Stengers' (1997) call to begin by asking *and if?* Among a list of provocations, Silova (2020) asks:

> *And if* learning was about attuning to and engaging with these interconnected different worlds, rather

> than differentiating, ranking, and hierarchizing them? [...] *And if* these imaginings, learnings, and pedagogies facilitated the metamorphosis of our selves, helping us move beyond an autonomous, rational selfhood, while animating "self-in-relation" to a more-than-human world? (p. 143)

Drawing inspiration from Stengers (1997), Silova (2020), and Haraway (2013), this paper provokes *and if?* by shifting the narrative to reimagine the vignettes shared here using SF. Haraway (2013, 2016b) uses SF to refer to speculative fabulation, speculative feminism, science fiction, speculative fiction, science fact, science fantasy, and string figures. She elaborates that SF also means "so far," to open up a model for worlding what is yet to come (Haraway, 2013). The current, time-bound ecological catastrophe calls on research and practice in education to reconfigure what it means to live differently with the planet and live and die well with Earth's mortal critters (Haraway, 2016b; Malone & Truong, 2017). Speculative fabulation, and SF in its many forms, disrupts our taken-for-granted assumptions—including those about what research, data, and pedagogy can do and be—by eliminating hierarchical relations and revealing an alternative imaginary beyond. In the short fable that follows, *Keepers of the Night Stories*, I invite you, the reader, to story-with the vignettes to speculate about what might come into focus if we were to decenter the humans from the story and instead foreground the damage that humans collectively cause. In doing so, consider how to position humans "with and of the earth, and the biotic and abiotic powers of this earth [as] the main story" (Haraway, 2016b, p. 55).

And if the toucan were monitoring the well-being of the canyon from atop its perch on the palm tree?

And if the trees were absorbing the plastic chemicals that were released from the fires?

And if the trees were gradually becoming plastic as they absorbed these toxins?

And if the moon shone down on the tree's flowers, which had absorbed so much plastic they had turned into synthetic candles?

And if…

Keepers of the Night Stories

The tree did not know it would become a candle. For nearly 140 years it had been a tree and done tree things. When the toucan needed to see what was happening in the canyon, the tree lent its branches as a perch. When the garbage fires burned just up the road, the tree's leaves purified the air. As the plastic bottles discarded at its feet slowly leeched their chemicals into the earth, the tree gathered these toxins into its trunk and kept the ants safe. The tree did not notice that its oldest branches had become rigid, but the moth had noticed. On this night, after the rain had cleared the smoke from the air and washed it into the river, the moth, as one of the keepers of night stories, fluttered its wings and signalled to the moon that the time had come. The rays of the moon shone down onto the tree's white flowers that were now round candles which were years in the making, and tonight, brand new.

Acknowledgements

Since writing this article, I have learned that storytelling about keepers of the night is an Indigenous practice that helps children understand the nocturnal world (see, for example Keepers of the Night: Native American Stories and Nocturnal Activities for Children by Michael J. Caduto and Joseph Bruchac). The synergies between the stories generated in this article and Indigenous traditions of storytelling compel me to continue learning about how to respectfully engage with such stories and practices.

1 This research was reviewed and approved by the author's institutional review board (IRB) prior to implementing the study, including recruitment and screening activities. All participants received and signed consent/assent forms for themselves and/or their children. Some children and/or their parents chose to opt out of the study prior to its implementation.

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