

Speculating the Symbio: Possibilities for Multispecies and Multi-Entity World Making in Childhood

Shelley O'Brien

Volume 47, Number 1, March 2022

Speculative Worldings of Children, Childhoods, and Pedagogies

URI: <https://id.erudit.org/iderudit/1088663ar>

DOI: <https://doi.org/10.18357/jcs202219969>

[See table of contents](#)

Publisher(s)

Canadian Association for Young Children

ISSN

2371-4107 (print)

2371-4115 (digital)

[Explore this journal](#)

Cite this article

O'Brien, S. (2022). Speculating the Symbio: Possibilities for Multispecies and Multi-Entity World Making in Childhood. *Journal of Childhood Studies*, 47(1), 45–55. <https://doi.org/10.18357/jcs202219969>

Article abstract

In this paper, I attempt to interrupt conventional analyses of childhood and instead illustrate the importance of diverse stories around child-nature relations. Vital materialist perspectives dismantle and disrupt binaries, so by exploring these perspectives, I am decentering the (adult) human and thinking-with the possibilities for multispecies relations in precarious times. This paper finishes with a speculative story that proposes lively experiments in multispecies and multi-entity possibilities, in a near-future contaminated Toronto. Enabled by microbes that have flourished on a shipwreck of e-waste, children, birds, and a dog codiscover the Symbio.

Copyright © Shelley O'Brien, 2022



This document is protected by copyright law. Use of the services of Érudit (including reproduction) is subject to its terms and conditions, which can be viewed online.

<https://apropos.erudit.org/en/users/policy-on-use/>

érudit

This article is disseminated and preserved by Érudit.

Érudit is a non-profit inter-university consortium of the Université de Montréal, Université Laval, and the Université du Québec à Montréal. Its mission is to promote and disseminate research.

<https://www.erudit.org/en/>

Speculating the Symbio: Possibilities for Multispecies and Multi-Entity World Making in Childhood

Shelley O'Brien

Shelley O'Brien is a PhD candidate in York University's program for environmental and urban change. Her work is grounded in feminist vital materialism, with a focus on climate precarity. Her current research explores ways of knowing through intersections of age, entities, and species. She's a practicing Zen student, musician, and mother. Email: skobrien@yorku.ca

In this paper, I attempt to interrupt conventional analyses of childhood and instead illustrate the importance of diverse stories around child-nature relations. Vital materialist perspectives dismantle and disrupt binaries, so by exploring these perspectives, I am decentering the (adult) human and thinking-with the possibilities for multispecies relations in precarious times. This paper finishes with a speculative story that proposes lively experiments in multispecies and multi-entity possibilities, in a near-future contaminated Toronto. Enabled by microbes that have flourished on a shipwreck of e-waste, children, birds, and a dog codiscover the Symbio.

Key words: *speculative fiction; childhood; symbiosis; multispecies and multi-entity relations; vital materialism*

Peter Kraftl (2020) considers “alter-childhoods” as attempts to “imagine, construct, talk about, and put into practice childhoods that differ from perceived mainstreams” (p. 1). In this paper, I bring attention to assumptions about mainstream (Western) children/childhoods before creating an alter, speculative world for multispecies entanglements. Considering “alter-childhoods,” I explore a vital materialist perspective as a way to dismantle, rather than reiterate, binaries such as culture and nature, and think-with the possibilities for multispecies kin in ruined landscapes. In doing this, I attend to the complexity of children's relations with more-than-human others, while also decentering the (adult) human.

At the end of this paper, I call upon Donna Haraway's (2016) SF (speculative fabulation, sym fiction, so far, etc.) as a tool for “seeking of otherwise possibilities” (Nxumalo & Ross, 2019)

to entangle-with chiding and speculative futures. As such, the final portion of this paper is a creative work entitled *The Symbio* inspired by Anna Tsing's (2015) *The Mushroom at the End of the World*. This story explores bird-child-microbe-dog-e-waste relations as a playful and generative means of imagining robust survival for children on a contaminated planet. Throughout this paper and the story, when I speak about childhood, I am referring to a mainstream (Western) perception of childhood in colonial nations such as Canada, which is where I live.

I take a cue from Karen Malone, Iris Duhn, and Marek Tesar (2020) in this contribution of speculative fiction as an offering for their “greedy bag of possibilities,” which they call their assemblage of approaches to childhood-nature encounters (p. 19). This bag of perspectives—including new materialism, posthumanism, and place theory—aren't competitive, but can be enthusiastically approached and bounced off each other, as all have been productive in the field of childhood-nature. Perhaps this piece of speculative fiction can be a consequential entity with these other theories, and in the greedy bag, they “can produce sparks when knocked together” (p. 19).

Conventional approaches in Western childhood

Childhood is a governable domain, defined through (adult) Western ideas of chronological, linear development

(Burman, 2020). In large part, developmental psychology individualizes, universalizes, naturalizes, and privatizes the many ways in which the care and containment of the young are structured, and this is done according to (mostly Western) models of who (adults think) children should be. This age- and stage-based psychology has influenced and deepened the binaries between children and nature by powering the movement of reinserting and reconnecting the so-called nature-deficient child into nature (Dickenson, 2013; Malone, 2015, Taylor, 2013;). It assumes a reconnection is necessary when, in fact, in the words of David Clarke and Jamie Mcphie (2014), there was no possible way for a disconnect in the first place.

Because children tend to be locked into an ageist developmental trope about adult exceptionalism, children are often not taken seriously as knowers because of their *being as a child*. As Karen Malone (2019) expresses, considering Karin Murris's idea of epistemic injustices:

children are not listened to because of their very being (onto-): a child is unable to make claims to knowledge, because it is assumed that they are (still) developing, (still) innocent, (still) fragile, (still) immature, (still) irrational, (still) becoming, (still) monsters. (p. 160)

This forward-moving trajectory of development (along with an insistence of an otherness that is not adult) is both limited and limiting for children and childhood in a world that is “increasingly complex, mixed-up, boundary blurring, heterogeneous, interdependent and ethically confronting” (Taylor et al., 2012, p. 81). Indeed, as Tsing (2015) says, without “stories of progress, the world has become a terrifying place ... it's not easy to know how to make a life” (p. 283), but perhaps we can address precarity in a recuperative way and turn experiences of inexistence into “generative relational encounters” (Braidotti, 2019, p. 52).

The conventional narrative of child development is just one of many iterations of the fallacy of progress, a forward-moving march that drowns out many other, more indeterminate temporal patterns and ways of being. Buddhist and Indigenous worldviews are two such examples. Tsing (2015) suggests that precarity, rather than being an exception to the orderly workings of the world, is rather the characterizing condition of our time (p. 20), and that it is the unpredictable nature of the indeterminate that has the power to transform us. Donna Haraway (2016) conceptualizes play as “the most powerful and diverse activity for rearranging old things and proposing new things, new patterns of feeling and action, and for crafting safe enough ways to tangle with each other in conflict and collaboration” (p. 150). Play “plays” with precarity, and together, they can reveal very real possibilities of a multispecies world making that includes children. In staying with precarity and play, we can “stay with the trouble,” which Haraway (2016) encourages. She says that “we all live in disturbing times. The task is to become capable with each other in all of our bumptious kinds of response” (p. 1).

Peeking into the greedy bag: Sympoiesis and vital materialism

The theory of symbiogenesis (including *sym*, meaning together, and *bio*, meaning life) was advanced by biologist Lynn Margulis (as cited in Haraway, 2017). Symbiogenesis challenges individual units of natural selection in favour of their relationships. A complex of organisms and their symbionts that interact in symbiosis was termed by Margulis as the *holobiont*. In Donna Haraway's (2017) understanding, “critters do not precede their relatings; they make each other through their semiotic, material involution ... the core of Margulis's view on life was that new kinds of cells, tissues, organs and species evolve primarily through the long-lasting intimacy of strangers” (p. M26). This “making-with” is *sympoiesis*: Haraway (2017) explains: “Critters interpenetrate one another, loop around and through one another, eat each other, get indigestion, and partially digest and partially assimilate one another, and thereby establish sympoietic arrangements that are otherwise known as cells, organisms, and ecological assemblages” (p. M25). These assemblages, understood by Tsing (2015) as “polyphonic, open-ended gatherings”

(p. 23), are encounters of holobionts in indeterminate time. As we think-with sympoiesis, it is important to think beyond a dual, species-specific sympoietic relationship. Sympoiesis is more complex than that. The Hindu/Buddhist concept of Indra's net is helpful to think with here. A vast and intricate net, much like a spider web, is said to be stretched out infinitely in the realm of Indra. At each infinite node is a jewel, both linked to every other jewel and reflecting every other jewel. This is the concept of interpenetration, where each part reflects all, connects to all, and is whole in and of itself. The vast net and jewels are not limited to species but include all things, and all entities, as well as the links and spaces between them. Likewise, says Rosi Braidotti (2019), subjectivity is not restricted to bound individuals. In fact, it is "a co-operative trans-species effort that takes place transversally, in-between nature/technology; male/female; black/white; local/global; present/past—in assemblages that flow across and displace the binaries" (p. 33).

Much scholarship that is centered in the more-than-human is also termed "vital materialism" (Bennett, 2010). This scholarship disrupts Western dualistic notions and focuses on relationship and relationality:

[It] positions humans and nonhumans as interrelated and co-productive of the interactions which comprise vitality or life. The notion of distributed relationality is at the centre of vital materialism, a relational ontology which disrupts Western binaries and is valuable for thinking with the historical and cultural contingencies of more-than-human perspectives. (Lupton & Watson, 2020, p. 2)

No matter, no things are excluded from this framework, as Jane Bennett (2010) suggests in her book *Vital Matter*. Bennett reminds us that we can all remember a childhood populated by animate things rather than just merely passive objects. She uses the term *thing power* to express the idea that matter is "alive" because it has the capacity to animate and produce effects (p. xvi). A favourite stuffed toy, for example, can cheer or comfort a child in a mere moment.

In related work, Karen Barad (2007) explains: "Posthumanism doesn't presume the separateness of any-'thing', let alone the alleged spatial, ontological, and epistemological distinction that sets humans apart" (p. 136). Vital materialist thought focuses on the idea that everything intra-is in that "there is no longer a knowing (human) subject that acts upon a passive (non-human) object. Everything is 'entangled'" (Snaza et al., 2016, p. xvii). If this is the case, it opens up the whole world for/of childhood and childhood studies. It plays messy havoc on tried/tired concepts such as growth, development, and the binary of child/adult in favour of more-than-human and more-than-life entanglement in the here and now, and the kin that result from these infinite intra-actions. In making this mess, vital materialism also has the capacity to bring us (as scholars and practitioners) closer to the present, to what is happening right now, which is the time in which children already dwell.

In *The Companion Species Manifesto*, Haraway (2003) says: "I suspect that human genomes contain a considerable molecular record of the pathogens of their companion species, including dogs" (p. 31). We can consider intimate intra-action of multispecies and multi-entities as evidence of our relationship on a molecular level. To speculate on bird-child-microbe-e-waste-dog relations, as I do in my story, is to attend to the interfusion and interpenetration of all bodies and beings in community, without bindings or bounds. As Malone (2015) relays, "the phenomenological experience of being" is "a shared intersubjective being in the world, with and through children who are equally exposed to the genomes that have infiltrated all bodies/entities (dirt, air, beings) at a molecular level" (p. 10). Haraway calls earthlings "kin in the deepest sense" (2016), and tells us it is past time to practice taking better care of "kinds-as-assemblages (not species one at a time). Kin is an assembling sort of word" (p. 103). What does it mean then, to be part of an ever-shifting and uncanny assemblage with multispecies and multi-entity kin, like children, birds, microbes, e-waste, and dogs? Can we make these kinds of lively and troubled stories part of our knowledge practice in childhood studies?

Making sparks: Introducing The Symbio

In *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, Tsing (2015) traces shifting kin/assemblages around the matsutake mushroom. We travel with her through an ethnography of multispecies encounters amid human-created destruction. She illuminates indeterminacy and precarity as reality and pokes all manner of holes in narratives of progress. In doing so she muses about (resurgent) survival in contaminated, disturbed landscapes. Tsing's book—and work, along with other work in new materialism cited here—is a jumping off point for my project of speculative fiction, entitled *The Symbio*.

Through imagining (re)configurations of microbe-bird-child-e-waste-dog becoming in the age of the holobiont, what emerges? In these events of so-called contaminated intimacy we find all manner of strangers in community. In *The Symbio*, the children hold e-waste and work with this thrown-away technology to build a nest (much like the liminal childhood pastime of fort building) for birds at the site of a toxic, abandoned urban shipwreck, and in so doing, intra-act as multispecies holobionts. The children are not separate from the microbes, from building, from other children, from toxins, from the landscape and its colonial history, from illumination. The microbial and e-waste “toxic contamination” disrupts, or renders obsolete, the language boundary between bird and child. In a post-contaminated landscape, through the world making (or play) of children, the assemblage of characters in *The Symbio* (the “open-ended gathering”) becomes a “happening” greater than the sum of its parts (Tsing, 2015, p. 23).

Cordoned off and deemed dangerous by officials, the shipwreck, e-waste, and toxic microbes are a blasted landscape in my story. As Tsing (2015) says, “everyone carries a history of contamination; purity is not an option” (p. 28), sometimes simply due to encountering others. In her book *Against Purity* (2016), Alexis Shotwell points out that “the discourse of toxicity attempts to secure a rhetorical space for individual purity” (p. 85). However, “corporeal exceptionalism cannot be sustained, because inter-absorption is the way things are” (p. 85). To be against purity in this sense does not mean that one is *for* contamination but rather that we resist the bifurcation into falsehoods like pure and contaminated and tell the stories of “intercommunalism” for all objects, “transgressing categorical understandings” (p. 15). In fact, it is just this encounter of children and birds with the “contamination” of microbes on e-waste that metamorphizes understanding, creating a lively encounter of multispecies possibility. The birds-children-e-waste-microbe-dog world making is a speculative future of pedagogical possibility. I imagine these futures in our present ruin as a practice of paying attention: to the precarity of living, the possibility of play, and the ways stories are told. In this way of attention, what arises? The realization that entanglements like child-contamination-birds, or any other number of assemblages, are right here in the present for us to see.

The Symbio

1. Kawatare

“Who are you?!” I said, perplexed at the word my mother was translating as we walked out of High Park at dusk.

“Yes! The word *kawatare* is made of the Japanese character for person and the character for who! This time of day and night in Japanese translates literally as “who are you” because it’s just dark enough to not recognize another person’s face.”

As we went on, purposefully, through the lush foliage of summer in High Park, the rains began, crescendoing from an ominous pitter patter to a low roar upon us. Zenji, our red heeler, gave a “woof!”, and as we quickened our pace in silence I glanced up into the trees. There, I saw a neat little nest in a young oak tree, illuminated in the half-light, glowing defiantly like a beacon in pinks, oranges, turquoises, purples, and greens. I closed my eyes,

wiped the raindrops from my face, and looked again. It was there, I hadn't been seeing things. The rain was getting cacophonous now, and we hurried on home. But I would never forget the first time I saw the Symbio.

2. *Genevieve's nest*

When we got back home and dried off, I glanced at the postcard above my mom's office desk. It was a simple postcard, but I loved it. A copy of an old print, Mom said from the 1800s, of a little nest filled with four blue eggs. Mom told me she kept the card there to remind herself of the power of small things to do great things. The artist's name was Genevieve Jones, and her nest drawings were a feisty response to this other guy, named Audubon, who drew (and killed and collected) thousands of birds. His birds, whether drawn or collected, were always floating around in nothingness, existing only for his eyes to see. Those poor birds! They had no homes or trees to fly back to, no eggs to hatch. When this guy captured them by pen or hand, they just lost their whole existence. They lost their futures.

I've been thinking about whether my future is lost. A lot of people here in Toronto seem to think so, because of the floods, the shipwreck, and the almost daily storms. But then I found that first nest, and everything changed.

3. *Bacterial brains*

"Yes, seriously, love! Did you know we humans came from and exist because of bacteria? Prokaryotes were the only living beings on earth for the first two billion years. They invented all life systems. Their technology led to photosynthesis, breathing, and even levels of conscious awareness. Bacterial collectives change the world, so I bet there is something intelligent about this slime. I mean, slime mould is eukaryotic, so the cells have nuclei, not like bacteria or archaeobacteria, but still, look at mycelia—fungal intelligence is well-known."

Yes, this is my mother. It was the afternoon after seeing that nest in High Park, and I was trying my hardest to make an excuse to go back there today, but she wasn't making it so easy. She'd just read an article about the shipwreck in Grenadier Bay at the south of High Park and how, from a recent flyover, government officials saw that there was a problematic slime mould growing on the pile of e-waste on the shores of the bay.

"Before Grenadier Bay was part of Lake Ontario, my parents used to skate on it, and it was called Grenadier Pond, and Toronto had its own island with an amusement park! Hard to believe how much more water there is these days." She didn't think this was depressing at all, but I sure had some questions about it. She has now started talking about a Japanese mushroom that only grows after a forest has been destroyed. My mom is a weirdo.

"K Mom, I'm gonna head out with Zenji before raintime, ok? We'll just be in the park."

"Okay, just keep your ear on, okay?" she said. I reached up to my ear to press my fingerprint to the reader. "Connected," replied a voice. "Good to go, Mom!"

She gave me a mildly distracted wave, reading an old textbook called *The Mushroom at the End of the World* with her glasses down her nose and a contented smile.

4. *Kawatare, illuminated*

Ahhh! I was free. High Park was such a place of solace for us. It was usually deserted. The combination of the shipwreck, people's fears about toxicity and pollution, and the mosquitos kept people away from the park. Mom was lucky enough to get us vaccinated against all the mosquito diseases when she was pregnant with me, so we didn't have to worry about that. The wild coyotes that plagued the park for years had also moved on, smart enough

to know that their dens were too prone to flooding. And Mom took regular air pollution readings. It was always a lot better in the park.

I knew exactly where to go. The nest was there, looking completely ordinary. I wouldn't have even seen it had I not seen it glowing last night. I had to crawl up a soggy log, wedged in the fork of the tree to get a closer look. Zenji whined and settled in the damp grass. Oh, it was a marvellous little thing! Probably a robin's nest, made of sticks and twigs, but what was so cool was that it contained what looked like little bits of machinery, metal, wires, all woven into something pretty wonderful.

So, maybe you've figured this out, but you should know: I love nests. Mom says from age 2 or so, I would crawl under the piano bench, in the space between the dresser and the old radiator, or put Zenji in little in-between spaces and pack them with sticks, empty sticker pages, receipts, leaves, pinecones, and any other little stuffable I could find. I also obsessively brought her back piles of sticks from school, which the teachers would pass to Mom with a knowing look.

Anyway, I put my face close to this wonderful thing and gave it a good sniff. Then I hopped back down and sat with Zenji and waited. It was humid and the afternoon seeped along my skin like slime, sliding along us stifflingly. I could hear the rumbles of thunder on the horizon, but I wasn't moving until I saw the nest glow. Dusk's little fingers started to tickle at our edges, and just as daylight leaked away, the little nest seemed to absorb and transmute it into a glow. There it was.

Then, without any warning, it made a sound. "BZZZT." My heart leapt into my throat and Zenji sat up and perked her ears. Just as suddenly a bird landed on it. It was a cedar waxwing! A beautiful little bandit who stared at me, bent over, and pecked at the nest, cocked her head to the side, and with a "chirp!" took to the sky, just like that.

I stood up, amazed, and brushed myself off. Just as the raintime had started, I heard that sound again, but farther away. Then again. If I hadn't been staring at the nest I would've just thought it was an insect, but nope, this sound was a nest on vibrate mode, like back when every human had a smartphone and they would buzz on a table.

Suddenly another sound entered my consciousness. "Mama here, coming home soon?"

"On my way, Mama," I said, with my finger on my ear.

The buzzes continued, and my curiosity got the better of me. Before turning for home, I climbed a hill nearby. When I turned to look over the ravine I just couldn't believe my eyes. There were dozens of nests, illuminating on and off, and faint buzzing noises that could only have been them. These nests seemed alive!

Then I saw a shift in the lower branches of the trees by one of the nests. The whites of two eyes caught mine. I gasped. "Who are you?!?" I said to myself.

5. The beautiful bandit

It turns out it wasn't just one kid. It was a band of kids, and they knew all about the buzzing, illuminated nests, and their fleet makers, the birds.

I started going to the park every day after that. My mom was working on a research project, and as long as Zenji was with me and my ear was on, she was okay with it.

The one I saw the first night was Quill. We met in person the next day when I waited in the woods by the waxwing's nest. Quill showed up, expecting me, and a crew of birds seemed to follow, alighting in the trees as I was given the

once over. After smiles, Quill asked if I was wearing an ear. I turned to one side, showing it. A gesture from him: I was supposed to remove it. Holding it tight in my hand, I followed as they turned, feeling like one of the birds that trailed along.

We cut through the park together, diving into trails I didn't remember, hearing birdsong I'd never heard, until we got to a fence with a large yellow hazard sign on it. Quill, Zenji, and I were just narrow enough to squeeze through an opening underneath, and we went down a hill until we were at a shoreline. I gasped. This was Grenadier Bay! Mom had told me all about this place, the site of the shipwreck, but it had been cordoned off for so long, and was thought to be contaminated, so Mom didn't ever bring me here. The sandy shore was deserted except for a smattering of kid's footprints, my first sign of what I was soon to encounter. I took in the sight of the container ship partially submerged in the bay. It lay breached on its side like a monstrous whale with grasses and bulrushes growing through the rust holes in the hull. All the containers had been removed, but not before a lot was scavenged and not before a container of broken up e-waste had spilled into the bay. The water was an eerie hue of orange, just like Mom said, but I was surprised at the life that teemed there: seagulls and shorebirds of all kinds gathered by the ship and in the water. Zenji was busy sniffing the air.

Quill made a crazy whistling sound that honestly sounded just like a robin, and slowly, four other kids, some younger than the kindergarteners at my school, emerged from the brush surrounding the shore.

"Hey," I said, holding up my closed hand, which was holding the ear piece.

They were just rambling park kids like me, but not really like kids I'd seen before. They were so sparkly compared to my friends at school, who seemed kind of dull, bored, and sick all the time. With their eyes shining, one by one Quill told me their names: Ora, Dea, Lore, and Red.

"Nice to meet you," I said.

At that moment, a cedar waxwing lifted off the brush and hovered over my closed hand. Surprised, I opened it up and she landed on it, looking sideways at me in her beautiful bandit mask. She gently tipped the earpiece until it was upside down.

"She's chosen you!" said Quill.

"What?" I said.

"You met her before, remember? She's chosen you." Quill made a sound, and a beautiful robin came to their shoulder. The two young ones, Dea and Lore, also chirped, and out of nowhere a chickadee and a sparrow appeared to them. Ora, who was a bit older and seemed more reserved, gave me a half smile and let out a "caw!" and an ink-black crow replied from the sky and circled until the two were united, claws resting on shoulders. Red snapped, and a beautiful flicker came in to land.

"Oh my god this is so cool what is going on here?" I said in a hushed voice.

Ora finally spoke. "Welcome to the Symbio. Your bird, the cedar waxwing. She says your name is Cee."

6. *Slimed*

Ora went on, with the crow tilting their head from time to time, to explain to me what was happening. The birds, being the curious type, had started using materials from the shipwreck for their nests shortly after the accident. The e-waste, which was full of rare earth minerals and the bacteria that grew on them, became coveted for both

its illumination and vibration. But the birds weren't alone in loving the e-waste. Turns out a certain type of mould favoured the microbes and minerals, and it was that orange slimy stuff that coloured the bay. The slime-microbe-e-waste, when played with by the birds, made them more discerning about who they were and were not afraid of. Ora was the first to discover this, and brought Lore to the park. The two of them quickly had a crow and a sparrow as their companions.

Quill and Dea followed, then Red. Birds "adopted" them too. A robin for Quill, a chickadee for Dea, and a flicker for Red. Soon after, they discovered the nest network, and got the idea to copy the birds.

"Copy them?" I asked.

Quill said "Yeah! Do you want to see our nest?"

"Yes!" I said. Zenji and I moved along with our new friends, excited.

We all travelled along the beach, turning up a trail to a small clearing where I saw the world's biggest nest. It was just like the illuminated nest, but people sized!

"It's still a work in progress, but it's our summer project. Want to help, Cee?"

I smiled. "Wow, yes, this is a dream come true!"

7. The Symbio

I told Mom about the kids I'd met in the park, omitting the obviously tricky details about the birds, the slime, and the giant nest.

"Huh, sounds like Alder and Tonah's kids. They've given themselves nicknames?"

"Yeah, and I'm Cee."

"Great, love! Be careful in there, okay?"

"Will do, Mom!"

As we worked on the nest the next day, the cedar waxwing I'd named Bibi was always nearby. She chattered away to me, and the other kids laughed.

"Okay, guys, how are you like somehow understanding what these birds are saying?!" I said.

"We can hear them!" cried Lore, who had found a shiny, orange-slime-covered square, possibly a battery along the shore. She carefully tucked it into a spot along the bottom, wiping the slime on her shirt.

Ora smiled at me. "Just keep working, you will get it soon."

By the end of the first week, the nest had filled out a lot. I'd found some interesting slimy pieces myself. Broken circuit pieces, triangles of screen, small wires. I was just focusing intensely while placing a little yellow wire in a perfect spot when Bibi let out a loud "Seeeee!" and suddenly all these images flashed before my eyes: My mom at her desk, smiling. Flying up in the air, above the shipwreck at dusk, seeing our nest illuminated. Bibi looking at me from her nest. The stars above a city with no lights on. The dense lush greenery of the park. Zenji, running and jumping on the beach with her tongue out. My new friends and me sitting in the nest. The network of nests, illuminated and buzzing out messages: We are here! Come see us! Let's sing! And, finally, this intense, loving hum

of togetherness.

After this eternal moment subsided, I shook my head. Ora was looking at me. “You okay?”

“I ... I don’t know. I don’t know what happened, I just kept seeing all these things, and they were so beautiful, so alive ... Wow, that was crazy.”

Ora smiled. “That’s the Symbio, Cee. I knew you’d see it soon.”

Just then, Bibi flew down and landed close by. She looked at me, head tilted, and said, “Welcome.”

8. Zenji makes a friend

The Symbio. Touching the slime. As it turns out, something in that slime, those microbes, that e-waste, makes us understand birds, but only if the birds want to be understood. Okay, this is so weird. Not only understand birds. Understand. The slime and microbes with these rare earth minerals allows us to somehow make a symbiotic leap of consciousness. But was the slime adding something to me or taking something away? Ora said for Lore and Dea, the younger ones, there was no “moment” like I had. They had just basically started chattering to and like the birds straight away. For us older kids, we needed to work harder to get lost in the making of the nest. To let the slime ... well, slime us. Gross! Hahaha.

“Who else knows about this?” I asked, thinking of how freaked out (okay, and excited) Mom would be by this.

“No one yet,” Ora said. “We are waiting for the birds’ and the Symbio’s counsel on whether to tell anyone. They brought you here, right? We think they know what they’re doing.”

Just then, a quirky blackbird descended on the field. “Hi!” she said, hopping over to the dog. “Wanna be my friend?” Zenji lifted her head and woofed.

Conclusion

In this piece, I experimented with the speculative as a process to disrupt and muddle with conventional arrangements and binaries we are used to in child-related disciplines, such as child/nature and child/adult. Speculative fiction can be a valuable practice of paying attention in order to see through assumptions and suggest possibilities. The mother in this piece “knows” things and the child hears this, yet the child subsequently *experiences* what the mother only understands in a more superficial way, turning the convention of adult-teaching-child on its head. The adult in this story remains on the sidelines while the children are in relation with the birds, microbes, e-waste, and dogs. They are “in nature,” but it isn’t a conventional wild landscape or a conventional urban park. They aren’t “reconnecting with nature” but are in the midst of a human-caused site of contamination, building a nest out of toxic garbage. Here is where I create possibilities for thinking-with childhood and precarity. I imagine a toxic future, but one where children play with contamination, garbage, and toxicity and become-with birds. These children don’t need to be assigned any gender in particular. Perhaps as the story evolves they will voice their genders. Through working together, birds-microbes-child-e-waste-dog both inter-are and intra-become. Children (still) play and (still) encounter multispecies nature/kin in all its precarity. They listen, they watch, they attend-to the more-than-human world, and in turn, they are listened to, even amidst the damaged landscape they engage with. While this piece of speculative fiction may seem far-fetched, for me it is a necessary creative entanglement, entangled as we already all are in precarity and the trouble of living in this world. As Narda Nelson (2020) states, we tend to multispecies relations, “including those considered uncomfortable, as deeply entangled and consequential to open up new possibilities for ethical responses to living and dying together in these troubling times” (p. 637).

These speculative child-figures both call into question and subvert conventional arrangements where “life” doesn’t necessarily extend to microbes, to minerals, and to slime. And yet, these children become-with the e-waste (in the process of building the nest) and become-with the contamination (in Cee’s illumination experience), and in fact, it is the “intelligent” interaction of the bacterial and slime microbes that leads to new opportunities for kin relations. In becoming-with the e-waste, they also become-with birds in new ways. Working with the speculative can conjure unconventional experiments and provocations by inviting us to the possibilities of world making that we haven’t considered before. Child-microbe relations, child-bird relations, and child-waste relations, for example, all add to a vital discourse that reveals the interdependent multispecies assemblages that are actually already at work and repositions the figure of the child right into the thick of things, where they most certainly already are.

References

- Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Duke University Press.
- Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Duke University Press.
- Braidotti, R. (2019). A theoretical framework for the critical posthumanities. *Theory, Culture, & Society*, 36(6), 31–61. <https://doi.org/10.1177/0263276418771486>
- Burman, E. (2020). *Developments: Child, image, nation* (2nd ed.). Routledge.
- Clarke, D., & Mcphie, J. (2014). Becoming animate in education: Immanent materiality and outdoor learning for sustainability. *Journal of Adventure Education and Outdoor Learning*, 14(3), 198–216. <https://doi.org/10.1080/14729679.2014.919866>
- Dickinson, E. (2013). The misdiagnosis: Rethinking “nature-deficit disorder.” *Environmental Communication*, 7(3), 315–414. <https://doi.org/10.1080/17524032.2013.802704>
- Haraway, D. (2003). *The companion species manifesto: Dogs, people and significant otherness*. Prickly Paradigm Press.
- Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.
- Haraway, D. J. (2017). Symbiogenesis, sympoiesis, and art science activisms for staying with the trouble. In A. L. Tsing, H. A. Swanson, E. Gan, & N. Bubandt (Eds.), *Arts of living on a damaged planet: Ghosts and monsters of the Anthropocene*. University of Minnesota Press.
- Kraftl, P. (2020). *After childhood: Re-thinking environment, materiality and media in children's lives*. Routledge.
- Lupton, D., & Watson, A. (2020). Towards more-than-human digital data studies: Developing research-creation methods. *Qualitative Research*, 21(4). <https://doi.org/10.1177/1468794120939235>
- Malone, K. (2015). Posthumanist approaches to theorizing children's human-nature relations. In T. Skelton, K. Nairn, & P. Kraftl (Eds.), *Space, place and environment* (pp. 185–206). SpringerLink.
- Malone, K. (2019). Walking-with children on blasted landscapes. *Journal of Public Pedagogies*, 4. <https://doi.org/10.15209/jpp.1184>
- Malone, K., Duhn, I., & Tesar, M. (2020). Greedy bags of childhoodnature theories. In A. Cutter-Mackenzie Knowles, K. Malone, & E. Barratt Hacking (Eds.), *Research handbook on childhoodnature: Assemblages of childhood and nature research* (pp. 19–29). SpringerLink.
- Nelson, N. (2020). Rats, death, and Anthropocene relations in urban Canadian childhoods. In A. Cutter-Mackenzie Knowles, K. Malone, & E. Barratt Hacking (Eds.), *Research handbook on childhoodnature: Assemblages of childhood and nature research* (pp. 637–659). SpringerLink.
- Nxumalo, F., & Ross, K. M. (2019). Envisioning Black space in environmental education for young children. *Race Ethnicity and Education*, 22(4), 502–524. <https://doi.org/10.1080/13613324.2019.1592837>
- Shotwell, A. (2016). *Against purity: Living ethically in compromised times*. University of Minnesota Press.
- Snaza, N., Sonu, D., Truman, S. E., & Zaliwska, Z. (2016). *Pedagogical matters: New materialisms and curriculum studies*. Peter Lang.
- Taylor, A. (2013). *Reconfiguring the natures of childhood*. Routledge.
- Taylor A, Pacini-Ketchabaw, V., & Blaise, M. (2012) Children's relations to the more-than-human world. *Contemporary Issues in Early Childhood*, 13(2), 81–85. <https://doi.org/10.2304/ciec.2012.13.2.81>
- Tsing, A. L. (2015). *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton University Press.