"Invest in the Millennium:"

Reimagining Partnerships with Nature in the Long Now

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Abstract

In this article, we consider how we might enter into Partnership with Nature in "The Long Now"[1]— as an ethical, relational and careful (Donald, 2016) response to the often fight/flight/freeze/finance-inducing narratives of our current times of ecological crisis (Latremouille, 2020; Macy, 2014) and profound change. With this in mind, we consider what it might mean to "think like an ecosystem" (Bringhurst, 2018, p. 31) in partnership with nature, in layered, recursive, complex, dialogical, spiralling, emergent and nourishing interdependent relationships.

We incorporate autobiographical life writing (Hasebe-Ludt et al., 2009) and dialogue woven with poetic interludes and interpretive asides, as we contemplate how "each generation bears responsibility for upholding principles of justice, fairness, openness and hope in its own time, not for the past, nor for the future but for today" (Smith, 2016, p. xviii). As two teachers living in Western Canada who recognize that this "responsibility may fall in unique ways on the shoulders of educators" (p. xviii), we seek to nurture holistic communities of hope around possibilities for partnering with the natural world, oriented around and towards a just society, "enlightenment of humankind, harmony with nature and sustainability for all life on earth" (Horton & Horton, 2019, p. 90). Through various creative and holistic educational projects—such as a youth beekeeping club, seed saving for a changing climate, guerrilla gardening, planting 1000 Bristlecone Pine trees that may live 1000 years, and a community-driven Master Gardener Course—we describe and reflect on some ways in which humans may partner with nature to "invest in the millennium" (Berry, 1991, p. 1). The design and vision for these initiatives incorporate pedagogical principles and processes that invite others to re-imagine holistic teaching as a partnership with Nature for "The Long Now."

Keywords: *ecopedagogy, holistic education, poetic inquiry, life writing, community*

[1] "The Long Now," defined as the last 10,000 years, and the next 10,000 years, is inspired by The Long Now Foundation (2019).

Introductions: An Invitation to Linger in the Long Now

> Ask the questions that have no answers. Invest in the millennium. Plant sequoias. Say that your main crop is the forest that you did not plant, that you will not live to harvest. Say that the leaves are harvested when they have rotted into the mold. Call that profit. Prophesy such returns. (Berry, 1991, p. 1)

I am Jodi Latremouille, and I grew up in Merritt BC, the Nicola Valley, on the traditional and unceded territories of the *Scw'exmx* Nation, who belong to the *Nlaka'pamux* peoples, as well as the *Sylix* (the Okanagan territories). I currently live on the territory of the Tsawwassen First Nation. My ancestors are settlers from France, England, Syria, and the United States. I come from a family of butchers, loggers, ranch hands, bakers, hunters, homemakers, poets, and writers. My conversation partner, Dustin Bajer, grew up outside a farming town, Barrhead, Alberta. He is the proprietor of Public Ecology[2], and is a guerrilla gardener, teacher, beekeeper, and planter of Bristlecone pines, a tree that can live up to 1000 years.

In what follows, we engage in a dialogue that considers how we might re-imagine educational partnerships with Nature in "The Long Now"[3]—as an ethical, relational and care (Donald, 2016) response to the often *fight/flight/freeze/fawn-finance*-inducing narratives of our current short-sighted and unsustainable, human-centred, dominant imagination (Latremouille, 2020; Macy, 2014). With this in mind, we seek to trouble the popular images and narratives of the dominant imagination to consider what it might mean to "think like an ecosystem" (Bringhurst, 2018, p. 31) in partnership with nature, in layered, recursive, complex, dialogical, spiralling, and nourishing interdependent relationships.

Sheridan, Roronhiakewen, and Longboat argue in their article, *The Haudenosaunee Imagination and the Ecology of the Sacred* (2006), that we are now suffering the consequences of a Western-linear-logical-rational-settler-dominated *aberrant* imagination, an "atemporal and, consequently, aberrantly educated imagination [which will] only multipl[y] industrialized humanity's largest ever ecological footprint… aberrant imagination is mostly invested in self-assuredly prophetic futures devoid of ancestral realities" (p. 373). They explain that this misunderstanding of our location in time is in direct relation to our misunderstanding of our location in place—a problem of an untethered, human-centred, alienated, mis-placed and short-sighted, imagination:

> Aberrant imagination imperiled Mother Earth and now seeks to replace her to perpetuate itself. As the project of ignoring the legitimacy of *what is* turned into the ambitions of *what next*, the ethics of what should be became so eroded old-growth forests were felled to print stimulants for the imagination. *Without everything to think with and through*, imagination thinks only of itself and neglects the salmon's mythological lesson of the journey to become Grizzly, mountain rain, and finally, Douglas Fir…When we succumb to a dysfunctional relationship with landscape, what follows is a dysfunctional relationship with time. Together the two establish a compression of the past and future in the present. The effect violates the carrying capacity of the present by overburdening it with what since the beginning have been

[2] Please visit https://dustinbajer.com/ and https://www.youtube.com/c/DustinBajer for updates on Dustin's current ecological projects.
[3] "The Long Now," defined as the last 10,000 years, and the next 10,000 years, is inspired by The Long Now Foundation. (2019). Please see http://longnow.org/

> the duties of the other tenses. Anthropocentrism further limits Creation's thinking ability while robbing time of its distant horizons. (p. 369-373, italics added)

This *mis-placed and short-sighted* imagination is in direct relationship with the dominant imagination of schooling, which, as Jardine (in press) explains:

> is fashioned after what turned out to be an ecologically disastrous form of fragmentation which despoils the living disciplines of knowledge with which schools have been entrusted. It also despoils the grace notes of teaching and learning itself by degrading the living fields in which teaching and learning might occur. Degrading the affection and deep pleasures of coming to know. (p. 1)

By contrast, an ecological imagination has a place, because *imagination is a place.* This imaginative place-grounding allows for a de-compression of time, a return to the properly placed concerns of the here, and now. We seek a simultaneously more expansive and recursive imagination of geologic timelines, cycles and places, along with a more contracted and focused attention to immediate sensuous and earthly experience. In what is shared, we hope to provide examples of an education of "interrelatedness, intergenerationally, sustainability, place, interrelatedness, aliveness" (Jardine, in press, p. 3). We hope to re-imagine how we as tiny, impermanent, newborn-dying humans at the centre of our own miniscule, yet infinite universes may better understand our place within them. This re-imagining may, perhaps, offer ways for us to better understand what may be, simply put, the "right thing to do" (Berry, 2013, n.p.) here, *now.* In the Long Now.

As two teachers and ecological activists living in Western Canada who recognize that this "responsibility may fall in unique ways on the shoulders of educators" (Smith, 2016, p. xviii), we seek to nurture communities of hope and reciprocal relationship around past-present-future possibilities for partnering with the natural world. Tait challenges educators to "[d]o what is right for those kids, in this time and this place. That should change every time" (Tait, personal communication, March 28, 2019). Thus, we do not propose universal solutions, quick fixes or final results for the challenges we face together. We endeavour only to "increase the possibility that [this work will] make a good example" (Berry, 2013, n.p.). Through various projects designed by Dustin Bajer—such as a youth beekeeping club, seed saving for a changing climate, guerrilla gardening, and the planting of 1000 Bristlecone Pine trees that may live 1000 years—we describe and reflect on the ways in which humans may *Partner with Nature* to invest in the millennium (Berry, 1991, p. 1). The design and vision for Dustin's myriad partnership initiatives incorporate pedagogical principles and processes that invite others to re-imagine teaching in community as an ecologically imaginative partnership with Nature for *The Long Now.*

The dialogue that follows is drawn largely from interviews with Dustin Bajer for Jodi's doctoral dissertation (2019), entitled "Teachers as Eco-Intellectuals: Cultivating *Miyo Pimatisiwin*" (Cree: the wisdom of living a good life). In this piece, autobiographical life writing (Hasebe-Ludt et al., 2009) and dialogue are woven with interpretive quotes and asides, as we contemplate how "each generation bears responsibility for upholding principles of justice, fairness, openness and hope in its own time, not for the past, nor for the future but for today" (Smith, 2016, p. xviii). We share Dustin's teaching-stories and Jodi's reflections, interrupted by quiet reminders from our curricular, critical, ecological, and Indigenous scholarly ancestors, which are placed down along the right margin of the pages. We deliberately use first and last names in citations, in an ecological

move to point to ancestral lines as well as individual roles within communities of relations, and to acknowledge our sense of obligation to past scholarly ancestors as well as future generations. We are inspired by Robin Wall Kimmerer (2013), to inquire into the reciprocal partnerships that may be possible between humans and plants and animals, when we learn to listen to the languages of other beings.

A Conversation: Thursday February 21, 2019. 12:00 pm.

For our interview, Dustin invited me to meet him at a café named Zocalo, which is combined with a gift, flower, and plant gallery in Edmonton's Little Italy. Bursting with rainbow candles, exuberant clay pots from around the world, handcrafted garden décor, and thousands of plants on display, the whole place felt warm and moist like a tropical garden oasis in the middle of the winter. Dustin bounced in, a little late and a little frazzled, sporting a green pea coat, well-worn grey toque, and plaid jacket. We sat down with our coffees and sandwiches near one end of a long communal table right in the middle of the gallery greenhouse. By the end of the interview, we had squished ourselves down to the far end of the table to make room for a local church group who was having their weekly planning meeting. I opened with just one question, and Dustin went on to share practically his entire life's story in one hour. His passion for the ecological and educational work that he does drives his desire to create communities of hope around possibilities for partnering with the natural world. It would seem that his entire life has been directed towards avoiding a 9-5 life, which would interfere with grander projects, such as investing in the millennium.

Part I: Spiralling Upwards in Partnership with Nature

Jodi: *Good afternoon, Dustin. I would like to start by asking if you would like to share a little bit about your background.*

Dustin[4]: *My name is Dustin Bajer and what about my background? Let's go way back actually. I grew up on an acreage, outside a farming town, Barrhead, Alberta. My parents were really big into gardening, and that was I think fairly formative in my thinking, but I will admit when I was a kid, I hated gardening, because it was a job, it was a chore. You know, weeding or moving stuff around the yard wasn't my idea of fun. When I did have time, I would head across the road to the Crownland forest, and so when possible would spend most of my childhood running around the forest building forts, always building forts for some impending apocalypse or some kind of battle, I don't know. And then we would finish it, we would dismantle it and we'd move the whole thing, and we'd re-assemble it into something new.*

[4] For more information on Dustin's current ecological and educational eco-partnership projects in the Edmonton area, please visit https://www.youtube.com/c/DustinBajer

I think, if you look back at all the projects I've worked on or that I'm currently working on, they all stem from this idea of—I think that the world would be more interesting if we partnered with the natural world in conscious ways. And I actually think there's all kinds of reasons why we're better when we're in and around nature, but perhaps a little bit, to sound maybe a little bit provocative, the natural world can also benefit from us. Right?

If we're picking berries or gathering nuts,

taking only what is given makes a lot of sense.

They offer themselves and by taking them

we fulfill our reciprocal responsibility.

After all, the plants have made these fruits with the

express purpose of our taking them, to disperse and plant.

By use of their gifts, both species prosper and life is magnified.

(Kimmerer, 2013, p. 185)

Dustin: *Like it doesn't have to be a one-sided relationship. And so I think any opportunity to share that vision or connect with other people who are interested in similar things, I'm driven to do that when possible, so I think that's the main motivation.*

You know it wasn't until I completed high school, I didn't know exactly what it was I wanted to do, but I knew that I really liked the sciences, I liked Physics a lot, I had a really great Physics teacher in high school, and so I jumped into a Bachelor of Science in Physics and Mathematics. And while doing that, I also spent my spare time collecting house plants and wanting to go to the ravine and build a fort, and so that little bit of childhood and connection to nature really stuck with me.

To know deep time is also to understand sky, earth, water,

and spirit in their sacred interaction,

and to know this attains an equivalent

depth of human belonging to deep time's

continuity in the present.

(Sheridan & Longboat,

2006, p. 372)

And as it turns out, I really like gardening when it wasn't something I was required to do, when it was something I really wanted to do. I wasn't really sure how that fit into my academic life, it was something I sort of did when I wasn't doing Physics and Mathematics. But fairly early on in that degree, I realized that all of my friends at university were in Education, and they kept saying, you should really join us! Come to Education, educate!

And so I ended up having to get special permission to take an Education class, so still in my Bachelor of Science in an Education class, and I loved it. And so I thought, "Ok well I'll do an after degree in Education." So I got my Bachelor of Education in secondary education, Physics and Mathematics still, and then I spent a few years trying to avoid teaching contracts.

It was great, I loved it. I ended up going to Mexico and teaching Math there for a year, in English to Mexican students in Monterrey—it's a big city, it's seven million people. And it was kind of interesting in that, even though I didn't really have access to a garden, I started thinking a lot about nature in the city, its place in the city, and there was a park that I would walk through on my way to school and it had this big beautiful tree, and sometimes I would climb up the tree and hang out in it, and sometimes

the only bits of nature were like little drainage ditches that had wild papaya growing in them. And at the end of that year one of my brothers came and joined me, and we spent some time travelling around Mexico and Belize and Guatemala, and I remember seeing these old Mayan and Aztec cities in the middle of the jungle totally covered in jungle. And I remember one of the guides saying that 5% of that ancient city has been revealed. All the hills that you see around us are buildings that haven't been uncovered yet. And I just remember having this moment of "Wow," like, if nature can do that, that means that it's almost like nature was waiting to take that city over.

Jodi: *Or take it back.*

Dustin: *And it sort of occurred to me that so much of what we do is kind of like beating back the forest, right? And even your lawn, your lawn doesn't want to be a monoculture. What it'll do is if you leave it, those fast-growing annuals will show up, and the fast-growing perennials like the dandelions are going to get in there, and then you're going to start getting little poplar, or in Edmonton little elm seedlings and the whole thing is going to sort of spiral, right, but not necessarily spiral downwards in the usual sense, but in terms of complexity and in terms of diversity and in terms of resilience, it actually spirals upwards.*

The upward spiral is, there's a really great book called Seeing Nature: Deliberate Encounters with the Visible World (1999), *by Paul Krafel, it's a weird little book, and he is amazing. He was a park ranger, and the book is like a series of journal articles, journal entries that he wrote over the years, but it's amazing, and he talks a lot about this upward spiral of nature. It's got this really great little chapter on how islands in rivers slowly move upstream over time.*

The sediment accumulates up front, and then you have succession, you have all the little plants and stuff, you have deciduous trees, and coniferous trees, and at the end, they're falling into the river at the back, so it's being deposited on the front and being eroded off the back, and so it's like this is young, this is old, here's all of succession, and they slowly move upstream over time, which is super cool to think about!

Jodi: *I love that!*

Dustin: *And I had this kind of moment where it's like, "Ok, well we seem to be spending a lot of time fighting it back. What if we embraced it, what if we maybe didn't build up a wall, but maybe directed it where we wanted it, but what if we could design with the natural world?" And to me, a city that did that just seemed like a far more interesting place to live. And I saw no reason why you just couldn't do that if you wanted to.*

Jodi: *Did the asparagus survive? I've tried so hard with asparagus!*

Dustin: *[Asparagus is] a little bit tricky. In that initial garden, no—but Apache Seeds, which is a really great business here in the city, they ended up one summer being like, "We've got all this asparagus, do you want it?" And we got this big Santa's sack of asparagus, there were probably 200 roots in there. And we ended up mulching them with a foot of leaves, and they did well in that. So, I'm still figuring it out but they really like being mulched.*

Jodi: *Over the winter, or all year?*

Dustin*: I think when you first plant them, you plant them twelve inches deep, and under a protective mulch, and I think if you can keep re-mulching it they really like that. I haven't quite cracked the asparagus. I planted some last fall, we'll see how it did... But every time I plant it, I go online and research it. They grow for a season and then they kind of fizzle out. My parents, growing up, there was this patch of asparagus on the north side of a little tree nursery that my dad had, like total shade*

but it came back every year. I am sure it's still there. So, I don't know what the deal is.

Experiments are not about discovery but about listening

and translating the knowledge of other beings.

(Kimmerer, 2013, p. 158)

Part II: Building on Networks of Relations

***Dustin**: And there's asparagus all throughout the river valley in Edmonton. It grows wild, and it probably escaped from Chinese market gardens that used to be in the river valley. And so there was an estimated fifteen market gardens scattered throughout the city, and when those farmers pulled out, sometimes the perennial plants that they were farming stayed behind, and so there's lots of goji berry, and there's lots of asparagus. But people have their patches, they're very secretive, they do not share!*

***Jodi:** Oh, yes, somewhere down by the river…*

***Dustin:** But you know, they'll be holding these big massive spears. They do grow here and can be happy, I think it's just a matter of finding the right spot, and setting up the conditions.*

Education, ecology and even mathematics are all at their best

when organized around ideas of interrelatedness,

generativity, ancestry, kinship, humility, wonder.

(Derby, 2015, p. 3)

***Dustin**: I think a lot about systems thinking. So, what drew me to ecology, and what drew me to permaculture design, is this idea that nature—that ecology—is a network.*

It's not necessarily in balance.

It's always changing, it's always in flux, there's disruptions that come through, but when you have a network and you've got these nodes, you've got these plants and animals in a forest, or it could also be individuals in a community, then what you have is the sharing of nutrients, or the sharing of water, or the sharing of ideas, and I think network science has grown a lot in the last even ten years, and I think a lot of that stems, too, from the Internet. But when you're thinking about yourself in the context of being one part of a system, you can use that metaphor and be able to zoom in and out.

How might we re-language the world as

"a democracy of species,

not a tyranny of one"?

(Kimmerer, 2013, p. 58)

So, in the context of a classroom, the Alberta Program of Studies is a network of ideas, and they relate to each other in various ways. And even the way that we teach, you know, this network here, this is Math, and this network over here is Social Studies. Well, guess what? There's actually a lot of links between those, and so if we acknowledge that we can start thinking cross-curricularly, which I think makes for a better education network inside a student's mind, which is literally a network of neurons. And when you have a concept, that's also a network of neurons, and that grows as the concept grows, and it solidifies the more you use that concept, and when we're teaching, too, networks are kind of successional.

Holistic Science education… recognizes that

"We live a cycling world that is built upon a series of systems

(geospehere, hydrosphere, biosphere, and atmosphere)

which interact through an exchange of energy and materials; and…

people are a part of nature, and thus

must act in harmony with its 'laws' of cycling."

(Orion, 2007, p. 113)

Dustin*: If something new comes into the network, it's not necessarily attached to something at first, you've got to make those links. And when you learn a new idea, it's our job as educators to link that concept to existing ideas. Or to present ideas in an order that naturally allows for that linking. You can't just throw something out there that has no context to anything that students understand, and expect that students are... you can't teach calculus to fourth graders and expect that, it's nonsense.*

Jodi: *So you have to let it settle and layer like compost. So it settles and builds on itself.*

Dustin: *On itself. And so you kind of have networks upon networks upon networks. And you can go to your class as a social network. And each of those students are connected to their friends and their family, and the community is sort of a larger version of that, and then the city is a larger version of that. And the city is nestled in and around, it's in the context of those larger ecological networks, and how do they interact. So, if these are the elements of a city, and these are the elements of nature, I'm interested in, how do you link these natural elements together in meaningful ways, like you would link the Social Studies curriculum and the Math curriculum together in interesting ways, why can't we build something out of that?*

Part III: Scattering Seeds into the Future

Dustin: *What I love about trees is, you've got this thing that has the ability to live hundreds or possibly even thousands of years, and it's this little, you put it in the ground, and you send it into the future.*

Jodi: *Right. Beyond yourself.*

Dustin: *Right! And I love that. I've been inspired by an organization in San Francisco called The Long Now Foundation*[5]*, and their whole thing is, this idea of the* now *is this moment we're in, and so some people exist temporally in, yesterday, tomorrow, that's where most of their thought is. And other people might be like last week, next week, last month, next month, maybe a lifetime. But the Long Now is defined as the last 10,000 years, and the next 10,000 years, and so when you take a look at a lot of problems or solutions in the context of a millennia, they look different. But I have been thinking about, I've kind of been wanting to do a project where, so in the city here grade one kids used to get spruce trees, and they'd bring them home, and so you'll look around the neighbourhood here and you'll see 80-year-old spruce trees in backyards, and that's probably somebody's grade one spruce tree. They don't do that anymore, but I found a local grower who is growing Bristlecone Pine, which does very well here, even though it's not native here, it's native to high alpine environments in Colorado. But it can live for thousands of years. And so I recently got a quote for a thousand Bristlecone Pine, and what I'd love to do is work with schools, and local leagues, and the City of Edmonton, and citizens to do a big thought experiment about, "Where do you plant a thousand 1000-year-old trees?*[6]*"*

[5] The Long Now Foundation. (2019). Please see http://longnow.org/

[6] Dustin and some like-minded conspirators recently founded the Secret LongTree Society, and participants can join the The LongTrees project by becoming a Shrubscriber to help them propagate bristlecone pines. They're trying to grow 1,000-thousand-year-old trees around Edmonton, Alberta.

To plant trees is an act of faith.

(Kimmerer, 2013, p. 289)

And so thinking about, if you're going to plant it in your backyard, thinking about, "Will this be a backyard in a thousand years?" If you're planting it in a park, will this park be a park in a thousand years, you don't want to be too close to the highway, because will the highway expand, or if you want to plant it in your yard, will you plant it in your front yard or your back yard, do you want to plant it close to the property line… but, even if these trees don't make it a thousand years, the act of thinking about the next thousand years and what it could look like, but also through the context of something living, like a tree, which instantly shifts your thinking a little bit away from dystopia into something a little bit more hopeful, like I'm sending this living thing [and] the future could be greener if only [for] these thousand extra trees.

Part IV: Nesting Ecotones

Dustin*: One thing I've become a little bit obsessed with is this idea of ecotones. Ecotones is where you have two systems coming together, and so Edmonton is in an ecotone, further north we have the boreal forest, and further south we have the Great Plains, and we're in aspen parkland which is a mishmash of those two things, plus lots of deciduous things that only exist in this area, and so you have all the diversity of one system and all the diversity of this other system, plus this flush of diversity that really survives and thrives best at the meeting of these intersections, because of the unique sort of interactions that happen there. And I think that's where a lot of interesting things—if you want to find where a lot of interesting stuff has happened, find those ecotones. So most of the work I do is at this ecotone of city and ecology, and me trying to stitch the two together.*

When I was teaching, doing this Biology 20 and Social Studies 20 thing, the most interesting stuff to me was in this weird space where we could make links between the sharing of resources in an ecosystem, and the sharing of ideas or resources in an economy. And you could talk about producers and consumers, and different trophic levels, you've got a direct link between those things. Nothing is in isolation, and that we're all existing in these nested systems. And sometimes we artificially silo those systems. It's easy if you can say, this is Math class, and then the bell goes, and we all go to Social Studies, or if we throw all the 12-year-olds together and throw all the 13-year-olds together, it makes things simple and compartmentalized.

Jodi*: Yeah, there's an order imposed on it, somehow, right.*

Dustin: *But it's fun and meaningful to actively try to blur those boundaries.*

Jodi: *It's a different kind of order, it's orderly in different ways.*

Dustin: *Right. Even just if you think about any kind of project or movement, and if you're here, and if your goal is there, we have a tendency to want to go straight there. [Drawing a straight line between opposite ends of a piece of paper] But if this is bare earth, and that's a mature forest, it doesn't go [in a linear, direct line]. You're going to get little cracks that form, and water that fills in those cracks, and you get a seed that drops in there, and it germinates, and insects visit that plant, and a bird visits those insects to eat one, and it drops some, I don't know, it poops, and you get freeze and thaw, you get this increase of complexity as you go, and hopefully it leads to where you're going [Sketching squiggly lines, spots, and plants on the paper].*

Jodi: *It's like your spiral, that nesting.*

Dustin: *And in Career and Technology Studies, there are modules in Alberta Education around plant propagation and around animal husbandry.*

There are fifteen credits that you can get for beekeeping in the Province of Alberta, through the Green Certificate Program, which was a curriculum written by Alberta Agriculture. But you can either try to integrate what you're doing into the regular courses that you're working on, and when you're doing gardens it becomes project-based, it becomes cross-curricular. And there's a lot of best practices that are hit upon when you're doing a project like that, but there's no question that it becomes challenging. Or, if you're lucky the school has the resources or the facility to offer a horticulture program like some schools, you've got a little bit of that infrastructure to build upon.

Part V: Re-Imagining Urban Ecosystems Rooted in Old-Growth Cultures

Dustin: *Part of it, too, is that once you see something, or once you imagine a future, and you are excited about it and you want to work towards it, and it may be the case that there are other people who have seen this vision of the future and really don't like it. But I imagine that a lot of people just haven't thought that, "Oh yeah, cities could be these amazingly biodiverse, beautiful, vibrant, interesting places to live," and that a lot of the problems that cities currently have around pollution or drought or flooding or waste management actually become at least partially solvable by integrating nature into the city. There's no reason why all the rain needs to land on a hardscape, head down the storm water, and back up into people's basements, or overflow with sewage into the North Saskatchewan River, when that same water could be directed to curb cut swales and be absorbed at least partially by ecology, which reduces the flooding downstream, but also reduces periods of drought because you've got that water stored high up in the watershed, and it's also then transpiring through the trees, which is increasing humidity, which is lowering the heat island effect, which is also providing food and forage for birds and insects, and potentially growing food.*

The temporal ecology of the Haudenosaunee
refutes empty time…

Their familial relationship to Creation is also

their immunity from ecological amnesia…

Mind connects to forces of the past and future

in the knowledge that the present is not the mirror

and final evidence of the real.

(Sheridan & Longboat, 2006, p. 373)

Dustin*: A lot of the problems that we face as a society, let alone a city, have solutions out in nature. And so our heat island effect is a fruit-growing solution. You can grow things in Edmonton that you can't grow just outside of Edmonton. Our excess water that we're worried about, and flooding, is an irrigation solution. I don't see why we couldn't and wouldn't want to integrate those two things together. And then you throw in—E.O. Wilson coined the term "biophilia" (1993), this love for nature— we co-evolved in these wild spaces and I think there's something to be said about quality of life and mental well-being when you integrate that into the built environment. So, I just don't understand why you wouldn't want to do that, I think that would be a great thing to do.*

Old-growth cultures, like old-growth forests,

have not been exterminated.

The land holds their memory

and the possibility of regeneration.

(Kimmerer, 2013, p. 291)

Jodi: *I think it's only through an extended state of denial of relationship (Donald, 2021, p. 55), is why we would not want to do that.*

Dustin: *Right. And I think, interestingly—take a look at Hollywood right now, you get a lot of superhero movies which are all about, "We're helpless, if only we had a superhero, one individual to come and save everything."*

Modernity's invention of imagination as an

anthropocentric quality dismisses those

who comprehend that their very being manifests

stories, ideas, and life forces…

As the experience of biodiversity wanes, so wanes the capacity

for thinking with nature and beyond species-specific consciousness.

And just as stories that want to be told find their tellers,

the expression across species diversifies itself

by thinking in the consciousness of all beings.

(Sheridan & Longboat, 2006, p. 371)

Dustin*: But it's not going to be one individual, it's going to be us collectively. And then the other genre tends to be post-apocalyptic, when people talk about the future, it tends to be about this degraded version of today, and we talk about humans as being a virus or a disease, and there tends to be this assumption that if we interact with nature, we automatically make it worse. And especially when you're talking to kids now, climate change has been a thing they have been hearing about since day one, and it's this big existential thing that I think a lot of people feel burned out, and what am I going to do about it? And so to have this narrative that humans are bad—it's so self-defeating.*

Dustin*: And so I love this idea, I love proposing projects or working on things that intentionally fly counter to that. There's nothing in our DNA that says if we touch nature, we make it worse. We are nature, and if we can embrace it, we can work with it, we have the ability to create a future that is more abundant, and more biodiverse and more interesting, and more rich and vibrant than the present. It doesn't automatically have to go in that downward spiral, it can go in that upward spiral, and so to be able to challenge that narrative at any point is important to do because, when I hear humans talk about humans as a disease, or we'll all be extinct in a few hundred or a thousand years, it doesn't give us permission, it discourages us from interacting with nature.*

This can't be hurried.

Learn all you can about where you are, make common cause with

that place, and then, resign yourself, become patient enough to work with it

over a long time.

This is the dreadful position that young people are in and I think of them…

the situation you're in now is going to call for a lot of patience, and

to be patient in an emergency is a terrible trial.

The important thing to do is to learn all you can about

where you are, to make common cause with that place,

and then, resigning yourself,

become patient enough to work with it over a long time.

And then, what you do is

increase the possibility that

you'll make a good example.

And what we're looking for in

this is good examples.

(Berry, 2013, n.p.)

Jodi: *And also, even if those things* were *true, that doesn't deny us the opportunity and the responsibility to try to listen carefully, to pay attention, to do the right thing.*

Dustin: *Right.*

Jodi: *Thank you for sharing your stories with me today, Dustin. It has been a privilege.*

Dustin*: Thank you.*

A Close-Up View: A Thousand Tiny Steps Planted for a Thousand Years

> Recent research has shown that the smell of humus exerts a physiological effect on humans. Breathing in the scent of Mother Earth stimulates the release of the hormone oxytocin, the same chemical that promotes bonding between mother and child, between lovers. (Kimmerer, 2013, p. 236)

Jodi: In May 2019, I attended a conference at the University of British Columbia, in Vancouver BC. As I walked through a manicured landscape on the UBC grounds, I was curious about the vines trained up the side of the buildings here. Would that be considered a partnership? A taking back, or a taking over? What would that look like in one thousand years? With or without human presence there? It is too late for there not to be human presence here, one way or the other. I look at these ants building a nest under the sidewalk, a nest that erupts, through the cracks. I kneel down low, lean in and breathe in the up-welling with the scent of earthy decomposing leaves and crumbly dirt, hear miniscule mandibles and purposeful tarsi going about their busyness. Their antennae rotate towards me in unison, and I imagine they are sniffing my secretions in return, sending miniature pheromone messages back to their nest. Is this sidewalk-bursting anthill a resistance? A reminder of someplace important that was paved over long ago?

And then I came across another place, a "wild space," and saw the "weedy" exuberance of the plants there, and I was curious about how they were also writing their very own stories in this space. I wondered, are these loving actions? Are they competition? Cooperation? What are the boundaries and borderlands and ecotones that pollinate our relationships, our responsibilities, and our ways of knowing?

In one short life, where does responsibility lie?

(Kimmerer, 2013, p. 95)

What happens when I allow time and space to slow, to expand, to broaden out into a multiplicity of webbed, earthly inter-actions? What happens when I allow my senses to interact with these places and beings?

The world seen through this animated consciousness

of *biophilia* is a very alive and enchanted place—

a place that we want to fall in love with, rejoice in,

celebrate, adore, hold sacred, and worship.

(Bai, 2009, p. 143)

I feel affinity to those ants scurrying along the sidewalk, burrowing between the cracks in the concrete, going about their tiny lives. I wonder about what kinds of loving, humble and heroic actions, or resistances, or cooperation and competition, are occurring beyond the what we interpret as the human field of sensual observation and consciousness. “Humans think at their best if they know they are the last beings created. Literally, after all, humans are totally dependent on everything else” (Sheridan & Longboat, 2006, p. 369). How can we become more aware, more careful, more participatory in good and respectful ways, to these goings-on swirling and scurrying, crawling, nesting, around, in, with and through us *Anthropos*? Sustaining us as they preoccupy themselves with their own well-being. Bringing us life through their very existence in their own self-centred universes.

Thousands of tiny humans,

planted for a thousand years.

Everything is planted for a thousand years.

Our feet are planted. Tiny steps planted in the soil.

The footprints we make endure,

one way or another…

Tiny humans.

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