A Generous and Troubled Chthulucene: Contemplating Indigenous and Tranimal Relations in (Un)settled Worldings

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ABSTRACT: This article is an analysis of key topics in Donna Haraway's *Staying with the Trouble: Making Kinship in the Chthulucene*. By following the game rules of the two string figures, cat's cradle (non-Indigenous) and na'atl'o' (Din'eh), the article weighs from Indigenous perspectives the political and ontological implications of such multispecies storytelling. Through its diffractive close reading, this paper puts in conversation Indigenous and non-Indigenous concepts and authors: Deleuzian rhizomatic deterritorialization and Indigenous self-determinacy, paradigmatic All My/Our Relations of Winona LaDuke, Leroy Little Bear, and Gregory Cajete, and the spider *pimoa cthulhu*. The aim is to recognize the multiplicity of forms of kinships or dependencies and to consider what kind of implications they have on marginalized assemblages.

While Haraway suggests to call our contemporary planetary condition the Chthulucene, an epoch that requires from us to rethink relationality and co-existence, this paper looks at how the animacy of the world and the relationality of nonhuman and human animals in it create circumstances for "tranimals to emerge." By giving ethical consideration to our material animacy, tranimacy will serve us as a tool to analyse the entanglement of nonhuman and human animals, trans materiality, and questions relating to agency.

KEYWORDS: Chthulucene, Indigeneity, Trans, tranimality, diffraction, animacy, relationality, assemblage.

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Graduate Journal of Social Science Sept. 2018, Vol. 14, Issue 2, pp. 83–106
 ISSN: 1572–3763

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The trouble with critiquing the ones you love is that unless they know your motives, there is a risk that the receivers of critique do not take the gesture as a form of intimacy. Does the critic aim to point out inherent problems in order to bring closer together those she/he/they/it is invested in by improving the quality of relations, or to create distance? A dear friend of mine once told me that intimacy is not how well we relate to one another through harmonious interaction, but how we deal with conflict together. I believe that this is what Donna Haraway is referring to when she urges us to "stay with the trouble." My investment in forming kinships with Donna Haraway and reading her work in relation to Indigenous philosophy began "diffractively[1]," in the metaphoric sense of the word, as Haraway would say. New materialism's turn to animacy left lingering a simple question that while seemingly obvious, ripples out like a processional wave. That is, is animate matter a new materialist concept or is this not the basis of Indigenous philosophy and science? As I dove into this question, I was lead to a lecture given by Leroy Little Bear in 2011 at Arizona State University entitled "Native Science and Western Science: Possibilities for Collaboration." My investment in supporting Little Bear's call for collaboration stems from my own politics as a queer feminist. Who are our potential co-conspirators? The diffractive work of Donna Haraway, Karen Barad, and Anna Tsing come to mind. In this article, I will discuss various topics in Donna Haraway's book, *Staying with the Trouble: Making Kinship in the Chthulucene*, the string games of cat's cradle with na'atl'o', kinship, sympoiesis and autopoiesis, animacy and imagining how trans materialities participate in her multispecies string theory.

The section *On Cat's Cradle* discusses one of Donna Haraway's string figuring metaphors (the string game of cat's cradle), breaking down the rules of the game in order to translate it into the philosophical traditions that the game implies. *On Na'atl'o'* traces the implications of another string figuring game, the Din'eh game

of na'atl'o' and how this relates to the Deleuzian flow, the rhizome, deterritorialization and Indigenous self-determination. *On Indigenous Relationality* covers the basics of the three tenets of Indigenous science by Leroy Little Bear, while *On Philosophical Kinship* addresses Leroy Little Bear and Winona LaDuke's perspectives on All My/Our Relations, and the beloved *pimoa cthulhu* spider who gave birth to the conceptualization of the Chthulucene. The section *On Cacophony and Polyphony* ties soundscapes of capitalism together with Anna Tsing's concept of polyphonic assemblage and Jodi Byrd's cacophony. *On Tranimacy* questions how trans materialities could be imagined in a Chthulucenian epoch and what are the implications of conceptualizing the becoming of tranimals while thinking through animacy. I conclude with *Looping Back* by revisiting the concepts of autopoiesis and sympoiesis and their relation to Indigenous self-determination.

On Cat's Cradle

I begin the analysis of Donna Haraway's *Staying with the Trouble: Making Kinship in the Chthulucene* by reviewing her concept of the cat's cradle. Donna Haraway's interest in string figuring games focuses primarily on two games*:* one non-Indigenous (cat's cradle) and the other an Indigenous game (na'atl'o'). The games are intra-actions of thinking, making, worlding and patterning.

Haraway explains: "The partners do not precede the knotting; species of all kinds are consequent upon worldly subject – and object – shaping entanglements" (Haraway, 2016, p. 13). These string figure patterns in their making are ways in which we can understand how certain connections, harmonies or entanglements emerge:

> It matters which ideas we think other ideas with; my thinking or making cat's cradle with na'atl'o' is not an innocent universal gesture, but a risky proposition in relentless historical relational contingency. And these contingencies include abundant histories of conquest, resistance, recuperation, and resurgence. (Haraway, 2016, pp. 14–15)

But does cat's cradle adequately serve Donna Haraway's multispecies companioning well enough to accommodate her proposal of living together? From my perspective, the act of cat's cradling seems to enact the opposite of what I believe

Haraway intends. Let's begin by looking at this game (or metaphor) as a philosophical proposal in and of itself, it's material workings, it's rules. Games have rules and limitations. Limitations form stoppages in the flow of multiplicity. Limitations also create the potential to problem-solve beyond obstacles set in place by such limits; by imagining new ways of becoming that were previously unimaginable until encountering such barriers. A metaphor is both limiting and adrift. The openness of interpreting a metaphor gives it leeway to become multiple in meaning, yet its mercurial nature does not always account for the structures or systems it may encounter nor alternative ways of becoming and mattering. Returning to cat's cradle, we begin with the string, the materiality of the game. It is a loop, one string with no beginning or end. One cusps the space within this loop, while a thread runs ovicular around the parameters of this space. It is a space of potentiality. As a site of relationality, one loops this string around both wrists, pulling and weaving back on itself until the string forms a basic pattern resembling a rectangle with two X's inside. An intra-action[2] takes place between players, material, site of potentiality, pattern making and exchange. A second player pulls and changes the strings, forming a new pattern while taking its entirety in hand. The players go back and forth, exchanging the string loop, each time changing the pattern. The game is not necessarily played by two people alone, others can take over. There is no winner in cat's cradle, the aim is to play as long as you can without stopping. Wherein lies the difficulty of conceptualizing this game is in Haraway's desire to enact an entanglement. The aim of cat's cradle is not to create an entanglement, for a knot spells its end. Cat's cradle works upon principles of symmetry in order to manage flow. What is done by the left hand must be mirrored by the right in order to create a symmetrical pattern. From a philosophical perspective, if we discuss symmetry, we have to discuss Greek classics such as Plato's *Timaeus* (see: Lloyd, 2010) and with this I forfeit my turn. Flow, therefore in this proposal, is hindered not harnessed by an entanglement. If we are to imagine Haraway's multispecies string theory then this lack of ability to engage in the full sense of an entanglement will end far too quickly to be of any fun for Haraway and those of us who wish to play this game. I am with Haraway. I love a good entanglement. Let's stay with the trouble they are pointing out.

Does cat's cradle form a diffractive pattern? Another way of understanding diffraction is through physics, in the occurrence of wave patterns: "Water waves ex-

hibit wave patterns, as do sound waves, and light waves. Diffraction has to do with the way waves combine when they overlap and the apparent bending and spreading out of waves when they encounter an obstruction" (Barad, 2007, p. 28). One could say that the avoidance of an entanglement in cat's cradle, or the avoidance of obstruction emphasizes flow and an exchange in ethical responsibility (avoiding destruction), while the string-looped patterns pass from one set of hands to the next.

When we think about the string game of cat's cradle and its rules of flow and symmetry with entanglement as an end game, we can understand how difference works in the proposal. Difference without entanglement becomes homogenized, a sort of normalized difference that lacks in problem or tension regarding multiple-worldings. As María Lugones states

> It may be that in this 'world' in which I am so unplayful, I am a different person than in the 'world' in which I am playful. Or it may be that the 'world' in which I am unplayful is constructed in such a way that I could be playful in it. I could practice, even though that 'world' is constructed in such a way that my being playful in it is kind of hard. (1987, p. 13)

What Lugones is talking about is the difficulty in being perceived as playful or feeling at ease in certain "worlds" as a woman of color or a queer person of color. We, as Indigenous folk and people of color, diffract ourselves while moving through various spaces or encountering interference. We are not always afforded simple joy or playfulness in a white or settled "world." We are perceived as being too serious when we address racist humor, for example. We are conversely not taken seriously when being "too queer" or "too feminine" in a misogynist world. The irony of living in a settled world feels unsettling. It feels unsettling to nonhuman and human animals alike. Differences between the experiences of settlers and arrivants (Byrd, 2011) in settled spaces are diffractive. Differences between passing and non-passing in our worldings as trans and gender nonconforming people are also diffractive, as we move through/become fluid. Accessibility can paradoxically feel more fluid in an accommodating space that is the paved product of an otherwise able-bodied, settled society. Were it not for the conceptualization of more accessible spaces, would unsettled terrains remain inaccessible or of great obstacle to

diffract. In our own "private worlds" with like-minded kin, we have the freedom to express unfiltered joy, seriousness and play. It is through the navigation of these different "worlds" in which we simultaneously inhabit that we become diffractive.

On Na'atl'o'

Na'atl'o', the other string game Haraway proposes in her string-figure collaboration, may help in creating the diffraction pattern encountered in an entanglement. Na'atl'o' are Din'eh string games only played in the winter when the spider is asleep. They are single-person string patterns or figures connected to storytelling that are passed down by generations. Na'atl'o' helps remember how Coyote placed Dilyéhé (Pleiades), So'Bidee'é (Star with Horns) and other constellations in the sky. Some of the patterns resemble the stars or movements.

What matters through the collaborative knowledge production proposed by thinking about cat's cradle and na'atl'o' are how these relations are formed. For example, I may learn about na'atl'o' through academic means by researching existing documentation, such as in the way I have footnoted. [3] The other is to ask a Din'eh grandmother, cousin or other family member if she can teach na'atl'o'. Did you bring tobacco and a gift when asking to learn about Spider Woman? Who taught you Din'eh traditions? What is your relationship and investment to community? Another point of contention is that na'atl'o' and Din'eh storytelling (regarding astronomy) is not practiced outside of winter time. Out of respect for these traditions, this should also be practiced by settlers who are engaging with Indigenous knowledge and cultural references. Don't piss off Spider Woman.

In na'atl'o', relationality occurs through speaking-listening not through an exchange of passing the string from one person to another. Collectivity is embodied through the transmission of knowledge and tradition, while singularity is maintained. Entanglements are a regular occurrence. Sometimes, one pattern can easily be manipulated to flow into the next pattern without starting over. Other times, certain patterns do not easily flow into another seamlessly. The pattern is then undone and the player starts over, creating another constellation. Entanglements can occur but are not weighted in the game, they do possess a weight of being ruled upon, they simply are a part of the system. Flow moves through adaptability and contingencies in the game. This creates a possibility for diffraction to occur.

Flow and relationality occur through storytelling. Oral and physical storytelling with your hands. How these two string systems of theoretical worlding meet and the relationality between them are important.

Some of the risks that Haraway implies concern how to be in relation as settlers, how to be in relation as academics, how to be in relation as Indigenous scholars, activists, undocumented migrant settlers, and trans Indigenous or settler human animals in relation with nonhuman animals. "Telling stories together with historically situated critters is fraught with the risks and joys of composing a more livable cosmopolitics" (Haraway, 2016, p. 15). I have not come close to exhausting a list of identity intersections and their possible assemblages. The possibilities are contingent and in constant flux. What needs to be kept in mind are the singular and collective positionalities that are personally embodied. What is my position or relationship to power as both a singular subject and within a collective subjectivity? Are these forces rhizomatically deterritorialized (Deleuze and Guattari, 1987)? Deleuze and Guattari describe the rhizome and deterritorialization as such:

> Unlike a structure, which is defined by a set of points and positions, with binary relations between the points and biunivocal relationships between the positions, the rhizome is made only of lines: lines of segmentarity and stratification as its dimensions, and the line of flight or deterritorialization as the maximum dimension after which the multiplicity undergoes metamorphosis, changes in nature. (1987, p. 21)

Further, Deleuze and Guattari state, "Lines of flight or of deterritorialization, becoming-wolf, becoming inhuman, deterritorialized intensities: that is what multiplicity is. To become wolf or to become hole is to deterritorialize oneself following distinct but entangled lines" (1987, p. 32).

Jodi Byrd is critical of the concept of the rhizomatic deterritorialization in relation to the colonialization:

> The maps of settler colonialism were always already proliferative, the nation state's borders were always perforated, and the U.S. lines of flight across the treaties with Indigenous nations were always rhizomatic and fluid rather than hierarchical, linear, and coherent, located not just in the nation-state but within

> the individual settlers and arrivants who saw Indigenous lands as profit, fortune, and equality. In many ways, that is their point. Deleuze and Guattari re/deterritorialize America as the world, coming full circle to find its west in its east and its east in its west, a worlding anew, in Gayatri Spivak's terms, that decenters all static, grounded belongings and locates them instead in becomings: becoming-Indian, becoming-woman, becoming-America. (2011, p. 13)

A key aspect of Byrd's statement is focused on how rhizomatic proliferation in the Americas are entangled with property, material extraction, the labor bodies harnessed within systems of colonial capital, productivity, and profitability. While the rhizome may have theoretically been a more anarcho-philosophical strategy or speculated process that attempted to think or move outside of hierarchical systems of power, it cannot extricate itself from its relation to colonial capitalism and the real and material actions or consequences implicating settlers and arrivants in historical conditions of capital profit. One of the difficulties in using the term arrivant is that it needs to be qualified; to whom is one referring to as an arrivant? The term arrivant needs to be contextualized by being attentive to relations of power and various forms of precarity, specifically in relation to history of slavery, recognizing that not all arrivants profited from Indigenous land's being stolen and privatized.

The deterritorialization of colonial nation states (hegemonic systems) are lateralizing (or flattening) while simultaneously the rhizomatic proliferation of self-determined Indigenous nations and other forms of micropolitical collective assemblage are creating situations that work to decentralize power and propagate multiplicities of non-hierarchical power. Thus, deterritorialization is only partial and specifically targeted towards hegemonic systems, particularly within nation-statehood and coloniality.

Should the focus be aimed at deterritorializing or decentralizing Indigenous sovereignty and self-determination, the results would further contribute to the cultural assimilation and absorption of Indigenous communities and nations into colonial systems they actively work to resist. This is already the case throughout colonial history as Byrd has pointed out.

If we are to apply the concept of rhizomatic deterritorialization to the situation of Indigenous self-determination and sovereignty of nationhoods nested[4] within colonial nation states (such as Canada and the United States of America), sympoietic

deterritorialization must be qualified. Haraway looks to *sympoiesis*[5] for solutions to more intimate and long-term relations of worlding. "The earth of the ongoing Chthulucene is sympoietic, not autopoietic […]. Autopoietic systems are not closed, spherical, deterministic, or teleological; but they are not quite good enough models for the mortal SF world. Poiesis is symchthonic, sympoietic, always partnered all the way down, with no starting and subsequently interacting 'units'" (2016, p. 33).

Beth Dempster coined the term sympoiesis which was taken from the Greek words for "collective" and "production." Dempster proposed an alternative model for ecosystems to autopoietic systems. Sympoietic systems are characterized as such:

> 1) autopoietic systems have self-defined boundaries, sympoietic systems do not; 2) autopoietic systems are self-produced, sympoietic systems are collectively produced; and, 3) autopoietic systems are organizationally closed, sympoietic systems are organizationally ajar. A range of other characteristics arise from these differences. Autopoietic systems are homeostatic, development oriented, centrally controlled, predictable and efficient. Sympoietic systems are homeorhetic, evolutionary, distributively controlled, unpredictable and adaptive. (Dempster, 2000, p. 1)

From an Indigenous standpoint, sympoiesis faces similar problems to the ones I mentioned above, concerning rhizomatic deterritorialization. How are Indigenous self-determination and sovereignty addressed in a sympoietic system? Agreeably, if sympoiesis implies dismantling nation statehoods in favor of a multiplicity of micropolitical collective assemblages, it is growing healthily. Where it gets into trouble is how it deals with self-defined boundaries. You can't just show up to a conversation that spans hundreds of years (as a settler or otherwise) on the reconciliation of historical colonial genocide and propose that everyone form a collective sympoietic system. There needs to be room for self-determination. Individual Indigenous communities decide what their/our own communities need in both the immediate and long-term. Some communities may even be autopoietic; some are autopoietically matriarchal for example. "In situations in which sovereignties are nested and embedded, one proliferates at the other's expense; the United States and Canada can only come into political being because of Indigenous dispossession. Under

these conditions there cannot be two perfectly equal, robust sovereignties" (Simpson, 2014, p. 12). Another example of the autopoietic is argued by Reese Simpkins (2017) who states that the embodiment of trans* materiality[6] is autopoietic. Reese states that, "[t]rans* temporalities emerge through the cellular processes of self-organising (autopoiesis)", and that these processes subvert chronological time and linearity through unique temporalities in the body (p. 126).

While thinking through these processes of agency and relation, it is helpful to return to Lugones' idea of worlding and differences, so that we may contextualize these variously scaled-examples of autopoietic self-determinacy:

> A "world" in my sense may be an actual society given its dominant culture's description and construction of life, including a construction of the relationships of production, of gender, race, etc. But a "world" can also be such a society given a non-dominant construction, or it can be such a society or a society given an idiosyncratic construction. As we will see it is problematic to say that these are all constructions of the same society. But they are different "worlds." (Lugones, 1987, p. 10)

How does Haraway differentiate "symchthonic" from sympoietic? I will return to the semiotics of "chthonic" shortly. If I were to deconstruct its meaning now, our conversation will diffract once again. For now, I think it is more fruitful to deepen the conversation on Indigenous self-determinacy while sitting with Reese's notion of the autopoiesis of trans* materialities, by understanding how quantum physics operates in Indigenous relationality. I invite Leroy Little Bear to sit with us at this moment, and teach us how Blackfoot quantum physics can help us understand worlding and relationality.

On Indigenous Relationality

In the Indigenous paradigm of All My/Our Relations, all matter and bodies are animate, everything is animate. Animacy can be visualized by what Leroy Little Bear refers to as constant flux. He describes constant flux as energy waves moving through everything. In his 2011 lecture on the three tenets of Indigenous science/philosophy, he stated:

> The first tenet of the native paradigm is what we refer to as constant flux. If you were to imagine this flux is animated, you would see a constant motion or energy waves, light and so on, going back and forth. Things are forever in motion, things are forever changing. There is nothing certain. The only thing that is certain is change. Things are forever moving, things are forever dissolving, reforming, transforming. A second part of the native tenet of flux is flux itself. Everything in existence, everything in creation, consists of energy waves. In classical physics, we talk in terms of matter, particles, subatomic particles. In the native way, we talk in terms of energy waves. Those energy waves are very special because it's those energy waves, not you, that know. All of us are simply combinations of energy waves. Spirit is energy waves. All it means when we die is that particular combination becomes dissipated. Energy waves are still there. A third part of the paradigm is that everything is animate. There is nothing in Blackfoot for instance, that is inanimate. Everything is animate. Everything, those rocks, those trees, those animals all have spirit just like we do as humans. If they all have spirit, that's what we refer to as all my relations. (2011, n.p.)[7]

In Indigenous relationality, everything is animate and therefore everything has the power (Spirit=energy waves) to relate subjectively as beings through Spirit. When we say All My Relations or All Our Relations, we recognize a kinship between all that is, all that was and all that has the potential to become. The notion of time is nonlinear. Everything is moving, changing and flowing through another and another. As Gregory Cajete explains,

> The idea of moving around to look from a different perspective, from the north, the south, the east, and the west, and sometimes from above, below, or from within, is contained in the creative process. Everything is like a hologram; you have to look from different vantage points to understand it. In the Indigenous causational paradigm, movement is relational, or back and forth in a field of relationships, in contrast to Western science's linearity […]. (2000, p. 210)

The wave patterns of diffraction are found in water, sound vibration and light. If we compare this to both Little Bear (Blackfoot) and Cajete's (Tewa) understanding of different Indigenous scientific paradigms of relating, moving through a hologram

of perspectives while in relation is connected to a prism of light or more specifically light waves (energy waves/Spirit) and constant flux.

The vantage of moving within can be related back to Haraway's metaphoric usage of the word diffraction. Diffraction, in Haraway's usage, serves as a replacement for reflection which is objective in its perspective through its mirroring. Diffraction (metaphorically) and diffraction waves (materially) are intra-active in Baradian terms. Karen Barad uses the physics of diffraction (wave patterning) to describe is an alternative method to reflection, such as in Haraway's metaphorical usage of the term, while also connecting the materiality of diffraction within quantum physics. Here entanglements and differences operate on both theoretical and material levels. From this basis, ethical considerations guide and ground theory through a direct relationship with nature. "[D]iffraction is not merely about differences, and certainly not differences in any absolute sense, but about the entangled nature of differences that matter. Significantly, difference is tied up with responsibility […]" (2007, p. 36). Responsibility involves ethics and structures of power dynamics.

If I were to relate this to my own families' traditions, I am reminded of Haudenosaunee wampum belts. Wampum belts are records of agreements made material, by way of relationships between Indigenous nations, settler colonial nation states, by witness and containment of water, and relatives of water. Wampum are beaded belts, strung together to form material records of particular agreements and relationships made and kept between nations. The beads themselves are made from quahog and whelk shells, traded to us by our coastal neighbors. The shell (as a container) becomes a cylindrical bead, that allows the passing of string which connects rows of beads. The water contained materially within these shell beads become agential witnesses to the treaties and agreements made between nation to nation. Shells also acts a microchips (the process of sand to silicon) that store memory. String theory, animacy, agency, diffraction, relationality, data processing, and ethical responsibility come together as wampum.

On Philosophical Kinship

Part of the work of decoloniality within the humanities and sciences is ceasing to rely upon Western philosophy and scientific knowledges as the basis of continual knowledge production within academia. Rather than attempting to replace, repair

or refute Cartesian decapitations of intellect and body, or by relegating Indigenous scholarship to footnotes, settler feminist scholarship needs to begin to actively promote Indigenous scholarship if it is to decolonize itself from its own regimes.

The Three Tenets of Native Science as articulated by Leroy Little Bear (2011), offer one such way of remembering and learning to think through animacy, mattering, relations, kinship, subjectivity, and quantum physics through Blackfoot new materialism. I choose this wording of Blackfoot new materialism, not as an actual suggestion that The Three Tenets of All My Relations are to be assimilated into the whiteness of new materialism, but rather as an example of how co-opting certain words such as "science" or other weighty, imperial words can prove subversive.

Our Indigenous sciences are imbedded within ceremonies, languages, songs, and creation stories. Science is not the exclusive domain of whiteness or heteronormativity, and yet, they are constantly implied as such. I imagine Indigenous feminist (present and future) academic emergences of Two-Spirit new materialist paradigms, Haudenosaunee affect theory, Anishinabek relationality, Din'eh astronomical string theories, and Blackfoot quantum physics, proliferating in academia. I am also mindful as Audra Simpson points out, that some stories are not meant to be told, collected, and distributed within academic contexts or outside of community. Therefore, a politics of refusal (Simpson 2007) – the refusal to have any more of our knowledges colonized – is also necessary at times.

Winona LaDuke, one of many Indigenous protectors of water ancestors of the Standing Rock Sioux Tribe, in writing about All My Relations, acknowledges that multispecies kinship and relations have long existed before settlement:

> Our relations to each other, our prayers whispered across generations to our relatives, are what bind our cultures together. The protection, teachings, and gifts of our relatives have for generations preserved our families. These relations are honored in ceremony, song, story, and life that keep relations close-to buffalo, sturgeon, salmon, turtles, bears, wolves, and panthers. These are our older relatives – the ones who came before and taught us how to live. Their obliteration by dams, guns, and bounties is an immense loss to Native families and cultures. Their absence may mean that a people sing to a barren river, a caged bear, or buffalo far away. It is the struggle to preserve that which remains and the struggle to recover that characterizes much of Native environmentalism. (LaDuke, 1999, p. 2)

These All My/Our Relations familial assemblages are lived, practiced, remembered, taught, fought for and respected. Imaginings of Indigenous-futurisms, and Afrofuturisms, are important when sharing stories of SF (science fiction) narratives[8].

What I am skeptical about is how deep this level of engagement and familial responsibility will become embodied when Western philosophical schisms of subject and object dominate settler hegemonies and govern nation states. What is it going to take for settlers to decolonize their own belief systems about kinship, property and ownership? If one cannot stop viewing the land that their home rests upon as material to be owned, will they be willing to protect its health with the same urgency as protecting one's own human grandmother or child? How is cultural appropriation considered in the relationality of kinship-forming when one is a settler on colonized land? Donna Haraway shares concern for these dilemmas: "What shape is this kinship and where do these lines connect and disconnect, and so what? What must be cut and what must be tied if multispecies flourishing on earth, including humans and other-than-human beings in kinship, are to have a chance?" (2016, p. 2). A further question she considers addresses Western affiliations to animism:

> [I] have not forgotten that spirit helpers favor their kin. Animism cannot be donned like a magic cape by visitors. Making kin in the ongoing Chthulucene will be more difficult than that, and even the unwilling heirs of colonizers are poorly qualified to set conditions for recognition of kinship. (2016, p. 89)

All cultures, including those coming from Europe have animate pasts. Westerners do not need to look to other cultures in order to find their own roots in animacy. Whether Westerners find it easier to reconcile schisms through science by animating materialist traditions in philosophy or looking to Celtic, Wiccan and other Pagan traditions, one need not look beyond one's own histories for kinship. Yet, there are other kinships we form as well, those of a chosen nature, the preferential familial assemblages.

We form bonds and networks as friends, colleagues, and (non)human animal companions of different sorts. These are the kind of kinships that Haraway is concerned with, kinships that are formed between Indigenous and non-Indigenous people, and between nonhuman and human animals. Settlers need to contempo-

rize their own views of Indigenous people, rather than trapping subjectivities in a colonial time capsule as cultural relics on the brink of extinction, with subjectivities in captivity. "[C]olonial categories and their spatialization entail the erasure of Indigenous subjectivities and territories, making it difficult for Indigenous people to be seen as anything other than colonial subjects within their subjectivity as 'Indians'" (Hunt, 2013, p. 58). Haraway's call to sympoiesis and kinship can be contextualized by a specific problem when questions of belonging and the right to call nonhuman animals kin (to settlers) in the Americas arise.

How can one claim kinship to the land and its inhabitants, in the Americas, when one is a settler? How can settlers embrace Indigenous beliefs without invitation from or membership in Indigenous communities? The answer to this last question is embedded within the question itself. Indigenous communities have our own systems of kinship and community acceptance comes by invitation from within, not from the outside. Haraway does not explicitly answer these questions, though she does acknowledge they are problems of concern to allied settlers with akin politics (how to be a good ally). Instead, Haraway chooses a pigeon for a spirit animal kin to the settler. Pigeons sailed to the Americas with their colonial compatriots from Europe, settling on the shores of Turtle Island and beyond. To Haraway, they embody:

> [T]reasured kin and despised pests, subjects of rescue and of invective, bearers of rights and components of the animal-machine, food and neighbor, targets of extermination and of biotechnological breeding and multiplication, companions in work and play and carriers of disease, contested subjects and objects of "modern progress" and "backward tradition. (2016, p. 15)

Embracing pigeons as kin and taking collective responsibility for such conflictive relationalities are important lessons and practices that Haraway shares with her beloveds. Where it becomes sticky while transiting upon this web of connections is in reference to power animals. While it has become quite commonplace within New Age circles to enact shamanistic practices from various non-western cultures, cultural appropriation needs to be considered. As it was pointed out earlier, Europeans have traditions of kinship with nonhuman animals and other elements of nature.

If we continue transiting along these sticky lines, we encounter Haraway's next beloved, a spider called *pimoa cthulhu*. The *pimoa cthulhu*'s name takes its inspiration from a Goshute word "pimoa" and the science fictional deity named "Cthulhu" conjured in a H. P. Lovecraft story. Cthulhu represents the power of chaos. It is also related to the word "chthonic," thus making Cthulhu an Underworld deity. Cthulhu is a tranimal deity that is said to resemble part octopus, dragon and human caricature who struck both fear and awe in his believers. He is a fictional, mythical creature conjured by artists and academics, both parties whom, in the imaginings of Lovecraft, are presumably white. Those mythologies that have been spun around his origins are written as having transnationally common threads. The cultures depicted by Lovecraft that share common myths of Cthulhu are both said to be queer and people of color. What happens to *pimoa* in the Chthulucene? Without a doubt, Pimoa-Chthulucene has a rather wordy ring to it and using a Goshute word without the permission of Goshute nations is not in alignment with decolonial practices. Haraway's proposal reflects a position that highlights her interest and knowledge of SF – of science fiction, string figuring, and speculative feminism as ways of imagining complex relationalities and worldings that include chaos, underground assemblages and hybridity. Her proposal is to call this epoch the Chthulucene in place of Anthropocene or Capitalocene.

The Anthropocene is a name describing the current epoch which has been significantly affected by human animals, impacting ecosystems and the geology of this planet. The name Anthropocene has been the focus of critique by various scholars who question its anthropocentric perspective, while suggesting that other particularities serve as the crux of these geo-eco-socio shifts, such as the advent of capitalist (Capitalocene) and plantation systems (Plantationocene). In Haraway's Chthulucene:

> To sympoietically renew the biodiverse powers of Terra – that is the sympoietic work and play of the Chthulucene. Specifically, unlike either the Anthropocene or the Capitalocene, the Chthulucene is made up of ongoing multispecies stories and practices of becoming-with in times that remain at stake, in precarious times, in which the world is not finished and the sky has not fallen – yet. We are at stake to each other. Unlike the dominant dramas of Anthropocene and Capitalocene discourse, human beings are not the only important actors in the

> Chthulucene, with all other beings able simply to react. The order is rather reversed: human beings are with and of the earth, and the other biotic and abiotic powers of this earth are the main story. (Haraway 2016, p. 59)

A significant problem with proposals of multispecies worldings are their historically anti-Black equations of speciesism/racism. Che Gossett stresses that,

> Black people have historically been portrayed through scientific racism as animal like and this anti-black discourse has overlapped with the ways that the animal has been depicted throughout the course of Western philosophy as the desolate ground upon and against which the human, as a colonial and racial construct, has been defined. (2015, n.p.)

To Gossett, multispecies worldings do not position "animal life against black life" rather they critique and question the perspectives of the authors we form kinships with, in our exercising of articulations in love or through rupturing these discourses and their consequences. Gossett is not pointing to a problem of relationality between nonhuman and human animals, but rather the historically colonial conflation of Black subjects as objects, material, and animals, entrenched in white settler colonialist pasts and presents. I am reminded of the implications discussed earlier on the tendency to focus on projects of rhizomatic deterritorialization as a means of resisting hierarchy, with the risk of this flattening of the plane, becoming an obstruction to the self-determination of Indigenous nations and people of color. I believe this to be one of the major oversights of Deleuzian deterritorialization, its lack of articulation in regards to how race is constructed, thought through, lived through and died through. Are there other ways of assembling that make space for the nuances of intersectional multiplicity?

On Tranimacy

Building on discussions of intersectionality, I can return to where trans* and/or trans become in discourses on animality and animacy. But even now, I feel hesitant to say that there is any one way of approaching what trans materiality means, within or beyond the proposal of a Chthulucene. While trans materialities are not

explicitly discussed in *Staying with the Trouble: Making Kin in the Chthulucene*, I will attempt to think through trans materialities within new materialist discourses beyond the Chthulucene alone. Trans materialities are supported through Deleuzian (2005) and Tsingian (2015) multiplicities, intersections of race, (dis)ability, class, sexuality, gender, animacy, affect, and mattering. The Cthulhu in *Staying with the Trouble: Making Kin in the Chthulucene* is a tranimal deity, therefore, it opens up discussions on "tranimalities." Tranimalities is a neologism stemming from the word tranimal (trans and animal). In trans studies, words such as "tranimal" and "tranimacy" have become ways to describe relationships between nonhuman and human animals, trans embodiment, and questions relating to agency. In the opening editorial remarks of *Angelaki*'s special edition on tranimalities, Steinbock et al. write, "The composite term of tranimacies enmeshes several everyday and scholarly concepts: transgender, animal, animacy, intimacies" (2017, p. 1).

Although the Cthulhu of Lovecraft is depicted in a malevolent form and distanced from Haraway in her coinage of the Chthulucene, it is nevertheless present in more than one critique of the Chthulucene and I will use it as a way to open up the discussion on how we can imagine where trans and tranimality dwell in these SF webs.

While Donna Haraway does not explore trans* and/or trans explicitly in *Staying with the Trouble*, the Chthulucene could benefit from the queer tranimalities problematized and questioned by Eva Hayward and Mel Y. Chen (2015). Animacy is passed from nonhuman animal material, molecular bodies to human animal bodies. One such example involves hormones that are manufactured using animal products. Hayward states, "[P]remarin (an industrially produced estrogen sourced from pregnant mares, hence the name) is biochemically involved in the transitioning of some trans*women. In a very material way, these trans*women are kinds of 'tranimalities'" (2015, p. 320).

If we follow this path of inquiry, the consumption of all animal products (in hormonal usage or meat consumption in general), the ethics that serve or are declined in protecting these nonhuman animals, and the becoming of tranimals form a sticky, tentacular web of relationality, kinship and sacrifice. Sacrifice happens through abstaining from or executing an animate body for the benefit of another. Something will be sacrificed. A vegan trans person may decide to abstain from this type of hormone treatment that involves animal products, seeking alternative

methods such as synthetic hormones, herbal alternatives, or by rejecting the use of hormones altogether. The use of synthetic hormonal treatment as well as meat consumption would result in becoming a tranimal. Abstinence of hormonal treatment is also a way of politically rejecting normativities – capitalist normativity or heteronormativity. Every moment that the human animal consumes food, they are becoming tranimals of various sort. This does not excuse the violence of industry. Rather it emphasizes the importance of empathy, of a reminder of life and death and how we are in a continual participation of its cycles and that we must weigh our choices in all matters of relationality, in this constant flux of tranimality. Philosophically, there are overlaps with Buddhism in this discussion on the sensitivity and respect of all living beings, but a constant flux of becoming tranimals through consumption and absorption of animacies may find more kinships with shamanic, pagan and other medicine traditions, although I also believe that it traverses elsewhere into spaces undefined as such. If, as Leroy Little Bear states, constant flux is animated in the form of energy waves, and all matter consists of energy waves, then that which separates one body from the next, one form from another, is as permeating and discriminant as the skin that both expels sweat and wicks the rain. Kinships are as permeating and discriminant as the membranes that regulate the flows that pass through them. Tranimating is the movement of animacy, of energy waves. Little Bear also states that all matter is in constant flux. Therefore, tranimacy is always occurring, constantly changing and passing through bodies. If the bodies of nonhuman and human animals are constantly becoming different tranimals through the relationality of each other's consumption and reproduction, then kinships need to be considered as processes that affect the wellbeing of many bodies in assemblage and a singular embodiment of a tranimal. If all bodies are tranimals, then there are no separations between subject and object. This may appear to be sympoietic and lacking in boundaries, however, is neither innocent nor disconnected from superimposed formations of necropolitical liquid control.

With tranimacy comes an inescapable consequence of being relationally tied to the death of one form or another. While it can be argued that energy waves continue to move through all matter in constant flux and that life force never actually dies but is transferred from body-to-body-to-body, it does not excuse us from our relationship to the death or evacuation of animacy in other bodies. As Preciado acknowledges in an auto-biographic account, "Each time I give myself a dose of

testosterone, I agree to this pact. I kill the blue whale; I cut the throat of the bull at the slaughterhouse; I take the testicles of the prisoner condemned to death. I become the blue whale, the bull, the prisoner. I draft a contract whereby my desire is fed by – and retroactively feeds – global channels that transform living cells into capital" (2013, p. 163).

Further, as Paul Preciado points out, the space inside the tranimate body becomes a site of micro-control:

> A common trait of the new soft technologies of micro-control is that they take the form of the body; they control by transforming into "body", until they become inseparable and indistinguishable from it. Soft technologies become the stuff of subjectivity. Here the body no longer inhabits disciplinary spaces, but is inhabited by them. The bio-molecular and organic structure of the body is a last resort for these control systems. This moment contains all the horror and exaltation of the body's political potential. (Preciado, 2008, p. 110)

This control is liquid:

> We live in an era of proliferating biomolecular, digital and high-speed technologies; of the soft, light, slimy and jelly technologies; of the injectable, inhalable, and incorporable technologies. Testosterone gel, the pill and psycho-tropics all belong to this set of soft technologies. We are heavily involved in something that can be called […] a sophisticated form of "liquid" control. (2008, p. 110)

How liquid control comes into play with the Chthulucene can be traced within the work of Brazilian artist Lygia Clark. Her 1973 work, *Baba antropofágica*[9] (anthropophagical dribble) is a performance related to the string figures and spidery tales that Haraway finds dear. The performance begins with a figure, a human-animal lying on the floor. The figure is surrounded by a group of people who, like spiders, begin to regurgitate spittled-strings from their mouths, laying a tangled, saliva-infused collective web upon the figure until it forms a cocoon enveloping the body.

As the collective attempts to regurgitate the lines of liquid control, evacuating their bodies of its presence, their internal space becomes attached to the body lay-

ing as a corpse, awaiting transformation. The relationalities of the group are linked both internally and externally. The group's actions transform the body's performativity of inaction, while the performance of the one lying on the floor is not without its own complicity to an enactment of death or passivity. By lying in wait, the body (either passive or performing death) chooses to perform. It awaits transformation into tranimal, while being tied to a collective process of liquid control. These are inseparable binds that both the Chthulucene and trans materialities must face. "Staying with the trouble" means more than attempting to take ethical responsibility. It requires coming to terms with our own complicity in an inescapable web of material cannibalism (anthropophagy) that is tied not only to Capitalism, but to the process of entropy that we are very much a part of whether we accept it or not. We can attempt to philosophize our way out of it through SF imaginary (subaltern-foregrounding, settler-Indigenous friendships), jovial spaces of love. As the words of María Lugones return to memory, I would be practicing in a world, in a Chthulucene, that is constructed in such a way that makes it hard to be playful without being simultaneously violent – violent to intersectional trans*/trans, cis-gendered female, disabled, queer, Indigenous, migrant, people of color, (non)human animal bodies.

Looping Back

It is one thing to think about lines of string figures, but another to read between metaphorical lines of speculative imagination in order to articulate their precise locations. While playing string games in the Chthulucene, I have come to understand what some of the troubles are that haunt Donna Haraway's thoughts and my own. The kinships are not all beloved and we ourselves are not always beloved towards our relations, yet we are continually interdependent upon each other, in the immediate present and down the line. Autopoiesis is still necessary for Indigenous self-determination. The processes of sympoiesis (making-with) and autopoiesis (self-determination) are therefore both necessary in order for multiple differences to emerge, cycle, regenerate, and move. The same can be said for tranimacies that are similarly sympoietic in their relations between nonhuman and human animals. Tranimacies are also precarious in their regard to agency; every decision we make is one that must weigh acts of death and vitality. Whether it is in

the Anthropocene, Capitalocene, Plantationocene or Chthulucene, our participation in systems of control and depletion cannot be fully deprogrammed in times of crisis or in imagining. The more we understand the complexity of relationality, the more we find ourselves ensnared in violence even through seemingly playful games of imaginative kinships.

By staying with Donna Haraway in following her string figure theories of relating, I am reminded of the quahog and whelk wampum beads that hold treaties and agreements together. These relations are remembered and materialized, bound together through the diffractive mediary of wampum belts. To the settler they appear decorative, but to us they are living records of our ties, our agencies, our treaties, our kinships, our alliances, and our promises. We always begin with the medicines before stories can be shared, and not all stories are medicine for everyone's consumption.

Endnotes

1 From Donna Haraway's "Modest_Witness@Second_Millenium.FemaleMan_Meets_OncoMouse." Diffraction is an attempt to make differences while being attentive to interactions, interference, and reinforcement.

2 "The neologism 'intra-action' signifies the mutual constitution of entangled agencies. That is, in contrast to the usual 'interaction,' which assumes that there are separate individual agencies that precede their interaction, the notion of intra-action recognizes that distinct agencies do not precede, but rather emerge through, their intra-action." (Barad, 2007, p. 33)

3 Video found online as part of the Endangered Language Project (2008) "Navajo String Games by Grandma Margaret." Retrieved Dec. 20, 2016 from http://www.endangeredlanguages.com/lang/6085/samples/4407.

4 Referring to "nested sovereignty" by Audra Simpson (2014, p. 116).

5 Sympoiesis refers to a system that is comprised of sym- (together) and poiesis (creation, production).

6 See: "Autopoiesis emerges as an affective realm, a dimension of trans*ed materiality and a process of trans* assemblages, all of which are integral in the production of space and time." (Simpkins, 2017, p. 124).

7 On March 24, 2011, Leroy Little Bear, founding Director of Harvard University's Native American Studies program, gave a lecture at Arizona State University entitled, "Native Science and Western Science: Possibilities for Collaboration." This is a transcription of part of his lecture written by me while watching and listening to it in an archived form, through video documentation. Recorded on March 24, 2011 at the Heard Museum, Phoenix, Ari-

zona. File retrieved June 20, 2017 from https://www.youtube.com/watch?v=ycQtQZ9y3lc

8 Haraway's term SF is used metaphorically to refer to different concepts i.e. string figuring, speculative feminism, and science fiction. They operate as ways of imagining the conviviality and understanding of multispecies relationality.

9 Suely Rolnik defines anthropophagical thinking as an 'active micropolitics' that is 'heterogenetic-relational-immanent-perspectivist' in its ethical compass. Anthropophalogocentric thinking is a 'reactive micropolitics' that is 'homogenetic-identitarian-colonial-capitalistic' in its moral compass. S. Rolnik, "Under the Same Sun: The Unknown Universe. Suely Rolnik Deconstructs the Colonial Unconscious." Retrieved on March 4, 2017 from https://www.youtube.com/watch?v=yASMCTAHiVM.

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