Remixing Education in the Anthropocene: More-than-Human Process Inquiry with Place

by

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ABSTRACT

This dissertation deals with the confluence of neoliberal and dominant Western social pressures in tension with researchers and educators striving toward a more sustainable world in light of the Anthropocene. Although scientists see the Anthropocene as a problem of human activity and environmental degradation, many social scientists and humanities researchers also see it as a problem with entrenched ways of thought. Current ways of thought complicit in the making of the Anthropocene include centering all thought, control, and agency in the radically individual human, centering science as the only legitimate access to knowledge, and presenting that knowledge as apolitical absolute truth.

I engage in research creation activated by the minor gestures of human/nature entanglement in the Anthropocene and the promise of place in environmental and sustainability education. As such, I embark on the invention of a new ecology of practices that takes the process philosophy of Alfred North Whitehead as their guiding foundation. As part of this invention circumventing normative neoliberal and Western logics, I take Ajo, Arizona and the surrounding Sonoran Desert as a partner in more-than-human process inquiry. I live in Ajo and explore the Sonoran Desert for four months of data generation employing basic techniques of ethnography divorced from their neopositivist founding theories.

Bodies generated from my entanglement with Ajo and the desert participate in inventing Remixing Data Experiences (RDE), a novel data engagement technique. Through RDE, my more-than-human partners and I create ideas by engaging in arts-based techniques that form multimedia art-workings. The ideas generated include Oasis,

Decline, Celebrate, Precarity, and Directions. I respond to each idea through anarchival written texts in a variety of genres including ethnographic memoir, short fiction, essay, ballad, and talk poem. I put these ideas into conversation with current methodological and education literature to illustrate that aesthetic-based inquiry contributes new ways forward in the Anthropocene. These new ways include rhythms of certainty and uncertainty in knowledge creation, participating in reciprocal affective capabilities of bodies in joyful knowing, developing modest abstractions that frequently engage concrete experience, and inclusion of aesthetic experiences in learning and inquiry.

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I am humbled and honored by those who participated in shaping this project and my scholarship. My own commitments bring an understanding that no one student or dissertation forms in isolation. I believe that we bleed into one another to create ourselves and other bodies beyond the capability and imagination of one single individual. With that in mind, I would like to thank those that made this dissertation and my scholarly work possible.

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CHAPTER 1

INTRODUCTION AND OVERVIEW

This dissertation project takes shape within the concerns of the Anthropocene.

Generally, the Anthropocene has come to refer to our current epoch of interrelated global

crises including climate change with rising sea levels and ocean acidification and

widespread species extinction (IPCC, 2018). Further, the Anthropocene brings with it an

awareness that humans, or perhaps more precisely, a particular way of becoming human

participates in creating, exacerbating, accelerating, and sustaining these physical

conditions which endanger all life on Earth as we currently understand it (Crutzen &

Schwägerl, 2011).

The proposal of the Anthropocene as a new geological epoch by scientists has

raised the stakes around human impact on the environment. Every year scientists present

new and more dire predictions around human activity and the state of the biosphere

(IPCC, 2014; IPCC, 2018). What is at stake is collapse, biosphere collapse. Scientists

have studied ecosystem collapse long before Paul Crutzen (the progenitor of the term)

ever uttered the word Anthropocene (Crutzen, 2002). Human/ecosystem interactions

have led to collapse in the past. Jared Diamond (2005) details many factors around

ecosystem collapse and the death of civilizations as their ecosystems fail. In his book,

Collapse, he discusses ancient examples such as Easter Island, Mayan Civilization, and

Norse Greenland (Diamond, 2005). These civilizations vanished "leaving behind

monumental ruins" (Diamond, 2005, p. 3). In his book, he explains factors such as

climate changes, hostile neighbors, environmental degradation and over extraction,

fragile environments, and lack of alternative energy and material from either lack of trade or due to obstacles of distance for gathering (Diamond, 2005).

Analysis of past collapse makes the Anthropocene astoundingly alarming. Ancient civilizations and ecosystems collapse usually occurred due to and in isolation. Islands, for example, are exceptionally vulnerable (Diamond, 2005). Authors often write that the Anthropocene is an unprecedented time (Lövbrand et al., 2015; Simon, 2017; Zalasiewicz et al., 2010). One of the major factors to the urgency of the Anthropocene is that we are no longer isolated. We exist in a hyper-connected world where the exchange of energy, information, and material happens on a scale and pace never before seen in the history of the Earth. Writing now, during the COVID-19 pandemic, I cannot fathom that it would stretch the imagination of any Earth-bound creature that events in one part of the world can cascade affecting the entire globe. Basically, the entire Earth has become a massive island. Ecosystems collapse now could easily affect all nations as they are not truly separate anymore.

The current disturbing ecological trends of the Anthropocene mirror those of ancient but isolated civilizations. From a scientific perspective, if we cannot intervene in these trends the entire island Earth will collapse, and all that will be left of humankind will be ruins "such as those that Shelley imagined in his poem *Ozymandia*" (see below) (Diamond, 2005, p. 3).

I met a traveler from an antique land,

Who said– "Two vast and trunkless legs of stone

Stand in the desert…. Near them, on the sand,

Half sunk a shattered visage lies, whose frown,

And wrinkled lip, and sneer of cold command,

Tell that its sculptor well those passions read

Which yet survive, stamped on these lifeless things,

The hand that mocked them, and the heart that fed;

And on the pedestal, these words appear:

My name is Ozymandias, King of Kings;

Look on my Works, ye Mighty, and despair!

Nothing beside remains. Round the decay

Of that colossal Wreck, boundless and bare

The lone and level sands stretch far away."

Most researchers concerned with the Anthropocene take this warning well but controversy surrounds possible interventions.

Although the Anthropocene remains a highly contested term and its predictions remain dire, its arrival on the international stage of research, thought, and policy presents an opportunity to shift dominant ways of living, thinking, and learning from the destructive Western neoliberal tendencies that brought about the Anthropocene in the first place (Baskin, 2015; Lorimer, 2017; Lövbrand et al., 2015). Analysis of the debates and discourse around the mainstream science narrative of the Anthropocene illuminate cracks in what not long ago was considered the impenetrable structure of Cartesian dualism. Current science debates around the Anthropocene indicate a slight blurring of the human/nature divide, but novel ways of living, thinking, and learning remain hindered by old regimes of power/knowledge particularly our faith in human exceptionalism and techno-optimism (Baskin, 2015; Lövbrand et al., 2015).

Although scientists see the Anthropocene as a problem of human activity and environmental degradation, many social scientists and researchers in the humanities also see it as a problem with entrenched ways of thought (Baskin, 2015; Castree, 2014; Johnson et al., 2014; Lorimer, 2017; Lövbrand et al., 2015; Maggs & Robinson, 2016). Current ways of thought that many theorists identify as complicit in the making of the Anthropocene include centering all thought, control, and agency in the radically individual human, centering science as the only legitimate access to knowledge, and presenting that knowledge as apolitical absolute truth (Hamilton et al., 2015; Lövbrand et al., 2015; Maggs & Robinson, 2016). The Anthropocene's events themselves counter these dominant assumptions and have led to realizations around the entanglements of humans and non-humans, raised questions about politics and power, and indicate that a new more interdisciplinary and Earth-bound approach to science and thought is needed (Hamilton et al., 2015; Latour, 2018; Lövbrand et al., 2015; Maggs & Robinson, 2016). Momentum in many disciplines has built around the Anthropocene and it is important, particularly for those performing educational research, to participate in the opportunity that the Anthropocene presents (Castree, 2014; Gilbert, 2016; Lorimer, 2017; Plumwood, 2002; Reyes et al., 2019; Tsing, 2015). That is, now is the time to participate in the opportunity to explore tensions illuminated by the Anthropocene debates and forge new ways of living, thinking, and learning that might create, exacerbate, accelerate, and sustain conditions that will support all life on Earth.

This dissertation project takes that opportunity, exploring tensions and forging new ways of inquiring into education in the Anthropocene. With regard to traditional methods of education and inquiry, our current power/knowledge regime has dangerously

narrowed our spaces for negotiation, muting our ability to respond to the crises of the Anthropocene. This project embraces an ontological turn as overcoming entrenched ways of thought entails attuning towards a basis for alternative assumptions that enables divergent ways of living, thinking, and learning. I take the position that ways of living, thinking, and learning need to make possible more-than-human performances, permeate barriers of disciplinarity, and raise questions of politics and power. This project takes the process philosophy of Alfred North Whitehead (1926, 1929, 1938, 1967, 1978, 2004) as that basis of attunement as his philosophy resonates with the theoretical position that I assume. Although there exist multiple entry points, I engage in process inquiry with place as researchers in environmental and sustainability education (ESE) find that place-based inquiry and education hold the potential to resist and disrupt radical humanism, strict disciplinarity, and the presentation of knowledge as neutral (Gruenwald, 2003; Orr, 1992; Seawright, 2014; Somerville, 2017; Smith, 2007; Taylor, 2017; Tuck & McKenzie, 2014). Although educators and researchers recognize this potential in place, how place might work in this way remains underexplored and undertheorized as place/land/environment remains a backdrop of human activities due to mainstream modes of thought (Tuck & McKenzie, 2014).

Taking this turn with place as a partner in process inquiry is an experiment with new ways of living, thinking, and learning, and as I embark on this experiment, I ask:

1. What does process inquiry with place afford with regard to the Anthropocene and education?
    a. How does process and place make the more-than-human possible?
    b. How does process and place permeate disciplinary boundaries?

c. How does process and place center power and politics?

d. What methods emerge through process inquiry with place?

These questions act as an anchor of gravity around which this project forms. Inquiry based in process philosophy and place unfolds immanently through experiences oriented to the concerns expressed throughout this dissertation in detail.

Taking an ontological turn with process to perform inquiry little resembles traditional research projects. It creates inquiry through guiding principles (ways or manners) rather than pre-packaged method, and the philosophies that this project attunes to ask that little is presupposed before engaging in actual occasions of experience (Manning, 2007, 2016; Whitehead, 1967, 1978). In attempting to create inquiry from theory, this project hopes to open one possible escape hatch from dominant toxic logics of the Anthropocene and their institutionalized practices as seen in modern schooling. This project contributes one modest example of how process inquiry with place can further (im)possible more-than-human living, thinking, and learning in inquiry and education.

Specifically Situating Process Inquiry

This project deals with ways of living, thinking, and learning and means to generate new ideas rather than new facts. As such, this project does not assume an object of study as is typical of academic research. Rather, this project performs a process based on minor ideas and philosophies that differ from dominant ideas and philosophies that currently drive policy, academic research, and education.

The ideas and philosophies taken up in this project may be generally considered post-qualitative (Lather, 2013; St. Pierre, 2013), posthuman (Snaza & Weaver, 2014),

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non-representational (Vannini, 2015), and speculative (Shaviro, 2014), and although other researchers interested in these ideas may find value in my work, these umbrellas of theory cannot cover the specificity of the approaches that this project takes, and specificity remains quite important.

Difference exists in the details. For example, this project takes an intensely more-than-human approach, but it differs greatly from other posthuman approaches like multispecies ethnographies in the way, the manner, *how* it inquires. This is the paradox of those umbrellas; posthumanism, non-representational research, post-qualitative inquiry, and speculative approaches embrace heterogeneity and express an aversion to canonization although in engaging academically, in citation mechanics and in entering extant debates under word count constraints, they run the risk of homogenization and canonization. At best these categories should dredge up vague principles, but at worst, these categories represent specific methods despite the desire of many who participate. As such, the approach taken in this project does not fall precisely into those nascent fields although it does resonate with each of them. This approach is precisely process inquiry, based on the process philosophy of Whitehead (1926, 1929, 1938, 1967, 1978, 2004) and guided by other resonate theories incorporating Whitehead like the work of Erin Manning (2007, 2013, 2016, 2020), Barbara Muraca (2011, 2016), Mark Amerika (2011), and Steven Shaviro (2009, 2014).

What Can Whitehead Do?

Although Whitehead has not surfaced as a major alternative source for theory among educational and methodological inquiry as compared to philosophers like Deleuze and Foucault, Whitehead's philosophy has experienced a recent resurgence across a

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variety of disciplines after a time of relative obscurity. Gaskill and Nocek (2014) in their

book, *The Lure of Whitehead,* discuss this nascent resurgence of Whitehead suggesting

that Whitehead's philosophy has resurfaced due to its insight into modern problems of

research and knowledge. They write that "Whitehead's work should not be treated as a

'return' but as a way forward, a way through and around the impasses of contemporary

thought" (Gaskill & Nocek, 2014, p. 2). I found Whitehead's philosophy to be

particularly germane to the "impasses of contemporary thought" seen in the

Anthropocene debates and mainstream narratives. First, Whitehead (1929, 1967, 1978)

addresses the problem of applying only scientific approaches to issues that most certainly

exceed its methods, and second, he provides "a path beyond anthropocentrism and toward

a mode of thought sensitive to the wider environments in which humans are entwined"

(Gaskill & Nocek, 2014, p. 6). Both openings found through Whitehead allow for a

different basis for inquiring the Anthropocene, and I will discuss both below.

Clarifying Methodology and Science

One of the issues of the Anthropocene that Whitehead's philosophy clarifies is the

overextension of methods of science regarding complex problems. Whitehead (1929)

explains:

> As a question of scientific methodology there can be no doubt that scientists have
>
> been right. But we have to discriminate between the weight to be given to
>
> scientific opinion in the selection of its methods, and its trustworthiness in
>
> formulating judgements of understanding. The slightest scrutiny of the history of
>
> natural science shows that current scientific opinion is nearly infallible in the
>
> former case and is invariably wrong in the latter case. The man with a method

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good for purposes of his dominant interests, is a pathological case in respect to his wider judgement on the coordination of this method with a more complete experience…. Some of the major disasters of mankind have been produced by the narrowness of men with a good methodology. (p. 8)

Whitehead's (1929) proposition above mirrors one of the problems within dominant ways of living, thinking, and learning in the Anthropocene that I elaborate on in Chapter Two. Here, I will give an overview of those arguments. For example, scientists that study Earth systems have raised the alarm around ecological crises of the Anthropocene (IPCC, 2014; IPCC, 2018; Rockström et al., 2009; Zalasiewicz et al., 2010). Their scientific methodologies and measurements serve this purpose well, but their findings are merely a small part of what happens in actual occasions of experience. Whitehead (1967) calls these unguarded statements of partial truths. All methods reduce actual experience (Manning, 2016). All methods select among infinite occurrences within experience and exclude others selectively, or as Whitehead (1929) says, "our empiricism is confined within our immediate interests" (p. 8). As Whitehead (1926, 1929) points out, this does not mean that we should disregard all methods and the knowledge gleaned from them, but rather we should guard our claims and carefully evaluate the appropriateness of one methodology's application to any and all problems and solutions.

Whitehead (1929) asserts that the criticism of a method or theory "does not start from the question, True or False? It consists in noting its scope of useful application and its failure beyond that scope" (p. 42-43). The scientists working in the Anthropocene generate facts about the occurrences of the natural world. These facts remain true, but they cannot be substituted for a way of thought. Whitehead (1929) warns that "the basis

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of authority is the supremacy of fact over thought" (p. 80). In other words, the focus on facts from one methodology can bar thinking differently through alternative methodologies that may be more appropriate in different spacetimes. Particularly in the Anthropocene, applying these facts to narrowly design a future under the stringent and limited methodologies of science may be disastrous.

The coalition of scientists investigating the claim that the Anthropocene is a different geological epoch than the Holocene assert that the problems of the Anthropocene arose through the acceleration of human technology that has acted upon Earth systems pushing them past safe parameters for human life (Crutzen, 2006; Steffen et al., 2011; Zalasiewicz et al., 2010). Most of these scientists support a return to the safe operating space of the Holocene under the leadership of scientists applying scientific methods (Rockström et al., 2009). Paul Crutzen (2002), one of the members of this coalition says:

> A daunting task lies ahead for scientists and engineers to guide society towards environmentally sustainable management during the era of the Anthropocene. This will require appropriate human behavior at all scales, and may well involve internationally accepted, large-scales geo-engineering projects, for instance to 'optimize' climate. (p. 23)

The basic argument of this group is that humans and human technology have created these crises, and humans and human technology will alleviate these crises. They further claim that we should return to the safe parameters that we know worked in the Holocene by constantly monitoring those parameters and regulating human behavior to stay within those parameters (Rockström et al., 2009). It seems not to occur to the scientists making

these arguments that a way of living, thinking, and learning cannot be reduced to human behavior. Further, they seem to assume that we can return to a point in the past although there must be some ecology of practices that has pulled us past that point in the first place.

I believe they see the Anthropocene as a problem of controllable variables, a science problem, but Whitehead (1929) points out that "[y]ou cannot limit a problem by reason of a method" (p. 12). I and other theorists see the Anthropocene as evidence that we have reached a dangerous threshold of narrow thinking so much so that it has become difficult to imagine possibilities outside of scientific thought and method (Baskin, 2015; Castree, 2014; Lövbrand et al., 2015; Maggs & Robinson, 2016). Whitehead's philosophies challenge this "modern habit of thought of allowing certain knowledge-claims to step beyond their relevant domains and thereby eliminat[ing] the real values and achievements available in other modes of experience" (Gaskill & Nocek, 2014, p. 9). When knowledge-claims from one narrow domain dominate our ways of living, thinking, and learning, Whitehead (1967) suggests that we embark upon an adventure of ideas through engaging in actual occasions of experience under speculation to develop new ways of thought.

An adventure of ideas engages actual occasions of experience and attunes to and foregrounds ideas that may have been already-always present but have been excised, marginalized, or backgrounded through the process of perfecting and legitimizing only a narrow set of methods. These ideas can be furthered into propositions that act as lures. A proposition as a lure acts "not [as] a statement about the world to be judged true or false, not a tool for unveiling the truth behind appearances, but a possibility that draws

those who entertain it into a different way of feeling their world" (Whitehead, 1978, p. 85). This suggestion diverges wildly from our current modes of inquiry.

Whitehead (1929, 1967) not only offers a concise explanation as to how a method may generate true facts but be inappropriate for all problems or concerns, but he also suggests ways forward from facts and present knowledge towards generating new possibilities for the future through engaging in actual occasions of experience differently. The second aspect of Whitehead's philosophy mentioned above, that of providing paths beyond anthropocentrism, remains embedded deeply in his ontology. In the next section, I will provide a brief and selective overview of Whitehead's metaphysics. Of course, a brief and comprehensive overview of Whitehead remains impossible, but in the next section, I hope to highlight some concepts and arguments that illustrate how Whitehead's philosophy allows a more-than-human approach. Throughout the entire dissertation, I continue to introduce and reinforce Whiteheadian concepts and other theorists' concepts that resonate with Whitehead which should provide a broader and more comprehensive experience of Whitehead's philosophy for the reader as I apply that philosophy to inquiry.

Eroding Anthropocentrism Ontologically

Whitehead (2004) famously takes issue with what he terms the "bifurcation of nature" (p. 26) which founds centuries of thought and has culminated in our current privileging of scientific epistemology and the commonsense notion of rational humans thinking about dumb matter. The bifurcation introduces two separate realties that remain absolutely divided, "the nature apprehended in awareness and the nature which is the cause of awareness" (Whitehead, 2004, p. 31). Harman (2009) calls this "the bland

default metaphysics that reduces objects to our human access to them" (p. 25). Further, the bifurcation sets the problem that scientists currently struggle with in the Anthropocene on a metaphysical level. Scientists acknowledge that the Anthropocene indicates that 'nature' can be shaped by humans in ways beyond conscious, rational thought through complex relations, but they struggle to see that humans may be shaped by nature relationally and in ways other than thought.

Shaviro (2014) argues that this bifurcation that has been perpetuated by "[t]he Cartesian Cognito, the Kantian transcendental deduction, and the phenomenological epoch…all make the world dependent on our knowledge of it. They all subordinate *what is known* to our *way of knowing*" (p. 3) thus privileging the rational and objective epistemology of science. This elevates the human as the knower and places nature firmly into the known, and the mechanisms of knowing can only be observation of qualities of essentially static objects. These assumptions create a mechanical world with actions of atomistic objects set in an unchanging backdrop of space and time where those objects only change in locations, distances, masses, and volumes but never in substance or essence. This also creates a world where humans stand outside that mechanical world with God-like powers of thought and agency, a different reality, the reality of awareness of the mechanical reality.

Whitehead (1926, 1929, 1938, 1967, 1978, 2004), over several texts, argues against what he sees as the ridiculous notion of two separate realities where one would suffice. Additionally, the world wrought by the bifurcation of nature would quickly exhaust any novelty, and Whitehead (1967, 1978) maintains that the real world presents us with novelty at every turn. In other words, if the bifurcated version of nature were

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actual, the world could only be arranged and rearranged externally like making a complicated machine, but it would never be able to exhibit complexity where entities come together to create more than the sum of their parts. The bifurcated world would be absolutely knowable and finite while an unbifurcated world would experience novelty as well as complexity, uncertainty, and unpredictability. Whitehead (1978, 1967) and those that accept his arguments agree that the real world manifests more as the latter than the former, and this can certainly be seen in the events of the Anthropocene.

We can easily see how the bifurcation of nature sets humans above any other body, and we understand from our current experiences with science that human as a different ontological category persists. But how does Whitehead provide "a path beyond anthropocentrism and toward a mode of thought sensitive to the wider environments in which humans are entwined" (Gaskill & Nocek, 2014, p. 6)? Whitehead (2004) argues that the substance ontology that underlies the bifurcation locates essential qualities in matter and secondary qualities in the human mind, but he suggests that these qualities come about through a relational process and should be located in the event. He also locates thought there. Whitehead (1926) argues that,

> things experienced are to be distinguished from our knowledge of them. So far as there is dependence, the *things* pave the way for *cognition,* rather than *vice versa*… the actual things experienced enter into a common world which transcends knowledge, though it includes knowledge. (p. 88-89)

In other words, when we participate in any experience, thoughts (among many other things) arise in that experience with other bodies. Whitehead (1978) explains that "*how* an actual entity *becomes* constitutes *what* that actual entity *is*…Its 'being' is constituted

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by its becoming" (p. 23) in the event which is always more-than-one focal human body. Further, this relational processes of becoming occurs over and over again meaning that "there is never a subject that preexists an occasion of experience", but instead there exists a process of constant flux that means a body is "a subject-in-time, coming into itself *just this way* in *this* set of conditions only to change again with the force of a different set of conditions" (Manning, 2020, p. 2).

This both erodes the primacy of thought and the idea of substantial unchanging entities that interact superficially, externally, and mechanically. Whitehead gives us a world composed "of processes, not things" where "[n]othing is given in advance: everything must first become what it is" (Shaviro, 2014, p. 2). This gives all bodies direct access to bodies other than themselves and the ability to affect one another, or as Whitehead (1978) says "an actual entity is present in other actual entities" (p. 50). What this means is that other bodies (human and non-human alike) "are never passive or inert" (Shaviro, 2014, p. 9) as they have the ability to affect how other bodies undergo the process of becoming. Further this affective capability is not founded on conscious thought but rather on "how things actually are and what they do" (Shaviro, 2014, p. 3).

There are several implications of this process of which I will discuss two here. First, any entity in any experience has the ability to affect the becoming of other entities within that same experience; in fact, that is how any entity can be said to exist. Since this affective capacity does not rest with conscious thought but instead shapes conscious thought, then rational conscious thought loses its absolute power for agency and truth. The activity of experiencing produces all bodies through relation including their physical bodies as well as their feelings and thoughts. This means that humans are no more

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fundamentally capable in experience than any other body and means that thought does not precisely belong to humans but rather the event. In the welter of an event, all bodies are more-than-human even if those bodies that eventually crystalize at the perishing of the event as 'human'.

The second implication is that there is more to 'reality' than only conscious thought, and to understand the *how* of becoming, more than conscious thought from the focal point of one (human) body is necessary. This indicates that more-than-human inquiry originates in an aesthetic or perhaps axiological experience, and that modes of more-than-human inquiry need to invent ways to attune to more-than-knowing within events. This explains why Whitehead believes that epistemologically driven science is made up of unguarded statements of *partial* truths, and that an adventure of ideas, seeking alternative ways of living, thinking, and learning, must begin in experience where bodies grow together or concrease. I assert that Whitehead's philosophy provides a particularly fitting alternative for assumptions to create inquiry that addresses the problems of the Anthropocene; it is particularly appropriate because the tensions of thought in the Anthropocene (as seen in its name) come from scientific approaches based in human exceptionalism that bring about questions of human/nature entanglements.

The Ways of Process Inquiry

Working across the tensions presented in the Anthropocene narrative by assuming Whitehead's metaphysics requires that this project take an intensely methodological turn. I cannot employ the same ways of living, thinking, and learning that drive the Anthropocene. This project focuses on developing new *ways* by using alternative *ways* as guides to inquire; it is a process of experimenting with non-dominant *ways* of inquiry.

This project seeks to explore more-than-human inquiry which I explain above must include more of experience beyond-conscious thought. As such, the work done in this project focuses on aesthetics within experience not because conscious thought is absent or unimportant in experience but because this is where the work needs to be done at this time.

In some ways, following Whitehead (1926, 1929, 1938, 1967, 1978, 2004) by highlighting aesthetics within experience is easy as he claims that other-than-conscious thought affects the shape of events primarily and more intensely than does conscious thought. This means that we are already, no matter what we are doing, part of a process of becoming that works this way. On the other hand, Whitehead's (1967, 1978) notion of aesthetics and process has so little theoretical grounding in current research and dominant thought that there is little guidance to performing inquiry based in process meaning that every act performed in this project is performed tentatively, in-the-act of creating the process as inquiry occurs. This, of course, remains fitting as it is *process* inquiry.

I focus on *ways* in the sense that Manning (2016) speaks of artful practice and research creation. Research creation "brings making to thinking and thinking to making" (Manning, 2016, p. 13) as an ecology of practices activated by a minor gesture. In this project, two minor gestures activate the ecology of practices that form this project. The first, I discuss in some detail above and much more detail in Chapter Two– the minor gesture that traditional scientists in humanist traditions make when they admit to the entanglement of humans and nature. This gesture they make falls through the cracks of their own commitments, but they make it none-the-less. The second, I only briefly mention in the beginning of this chapter, but I detail it in Chapter Two. Some researchers

and educators in ESE see that place-based inquiry and education hold the potential to resist and disrupt radical humanism, strict disciplinarity, and the presentation of knowledge as neutral (Gruenwald, 2003; Orr, 1992; Seawright, 2014; Somerville, 2017; Smith, 2007; Taylor, 2017; Tuck & McKenzie, 2014). This is a minor gesture in that place-based education has been performed in schools, and schooling has failed to subsume it into current structures of standardization, student control, authoritative positivistic knowledge presentation, and strict academic disciplinarity (Smith, 2007). Although this failure means that place-based education is rarely welcome in schools, when it has been performed an opportunity for educating and learning differently appears (Gruenewald, 2003).

Minor gestures occur everywhere and all the time, but without artful practice and research-creation major gestures will subsume them. In this project, although I employ arts-based techniques and Chapter Four presents art-workings, I am not artful in that I am making art. I do not focus upon production of an art object as artful but rather art-workings emerge as part of a process of inquiry that sees art as Manning (2016) describes, "as a manner of practice and not an end result" (p. 46). The modes and manners that I participate in throughout this project include many concepts and techniques from Whitehead (1926, 1929, 1938, 1967, 1978, 2004), Manning (2007, 2013, 2016, 2020), Muraca (2011, 2016), Amerika (2011), and Shaviro (2009, 2014). As these concepts and techniques occur in the process of this inquiry project, I detail the theories that support them. I will not do those concepts and techniques the disservice of attempting to give shallow definitions of them here, but they include: Whitehead's (1967) Beauty as Intensity Proper, Manning's (2007, 2020) anarchive, agencement, and politics

of touch, Muraca's (2011, 2016) relational axiology, Amerika's (2011) remixology, and Shaviro's (2009, 2014) interpretation of Whitehead's concern and aesthetics. Of course, many other basic concepts that found process theories espoused by Whitehead (1926, 1929, 1938, 1967, 1978, 2004) and Manning (2007, 2013, 2016, 2020) also shape this dissertation and are detailed throughout. In focusing on aesthetics within experience as orienting the work done in this dissertation, I also hope to enable an aesthetic experience of process philosophy and other related theorists' concepts for the reader. Holding tight to definitions of concepts does not facilitate that process as only in the act of a close reading experience with hypothetical sympathy that strives to take in the concepts without first judging them can an aesthetic experience of what I am announcing be enacted.

What Chapters Can Do

With that said, I find it important to note that this project was performed over time and in somewhat blurry phases. I wrote this chapter, Chapter One, last, but all other chapters appear in the order that they occurred in the process of inquiry. What this means for the project and the reader is that within this sequence, thoughts, approaches, and *ways* arise, that, if they existed before their preceding chapter/phase, would have changed what came before. I believe this is an important artifact in attempting the kind of inquiry that this project undertakes. The project taken across all chapters shows its own becoming. The notion that I might return to initial chapters and 'smooth' them out tempted me greatly. By the end of the project, new thoughts, techniques, and *ways* became available, but I resisted the urge to rewrite the past as I feel that this project's slight disjointedness and sometimes divergent turns illustrates how inquiry happens when the inquirer refrains from seizing control and a project is bound through immanence rather than externally. It

also illuminates the organic imperfections and imprecision of this type of 'risky' inquiry. I never knew where the project would go until it arrived there. I believe that leaving this process transparent will allow readers to experience the messiness of inquiry and provide a stronger example of how process inquiry takes shape.

This project unfolds over five total chapters. This current chapter means to orient the reader and make clear that the philosophy driving this inquiry differs greatly from mainstream notions of subjects and objects, knowers and knowns, and academic research generally. This difference acts not just as a radical refusal, but also as a matter of necessity given the concerns driving this project. Throughout the project, I hope to provide enough conceptual detail that even those unfamiliar with process philosophy or other alternatives to traditional Western philosophy may participate in the thinking-making that occurs, but I must admit here that stringent attachments to traditional Western thought and research might make this project seem incomprehensible. Although this dissertation unfolds rather traditionally over five chapters, each chapter plays a role in the process of inventing and improvising process inquiry as it performs that inquiry. In the following section, I will explain what readers may find in each chapter as well as how each chapter participates in process inquiry.

Chapter Two could be considered a traditional literature review. Process philosophy does not require that past knowledge be disregarded even if that knowledge was generated under different guiding theories. Much of Chapter Two utilizes scholarly literature that engages in critique to expose tensions of thought in the Anthropocene and education. The chapter begins with tensions of thought in the mainstream scientific narrative of the Anthropocene and suggests that de-centering the human, de-centering

science, and re-centering power and politics are necessary in addressing the cracks and tensions of the Anthropocene as a "philosophical event" (Johnson et al., 2014, p. 447). It moves into acknowledging the role that neoliberalism plays in creating and perpetuating problematic ways of living, thinking, and learning in the Anthropocene. Narrowing concerns further but remaining connected to the basic problems of Anthropocene thought, Chapter Two then explains processes of neoliberalism in environmentalism and in schooling. Continuing this orienting process, Chapter Two goes on to discuss the problems and promises of environmental and sustainability education (ESE) while maintaining a connection to earlier propositions around problems in the Anthropocene and neoliberalism. Finally, the chapter concludes with an explanation of philosophy as method highlighting concepts that this project takes up.

Chapter Two serves to detail and explain the concerns around which this project takes shape. It works across several disciplines, and researchers interested in any one section could take concerns in those sections in different directions. The directions I take move through the Anthropocene generally to ESE specifically. Chapter Two shows the current scholarly forces shaping the project. I want to note that Chapter Two *could* precede an entirely different project meaning that it helps the current project take form, but it does not dictate the project.

Chapter Three begins to disengage with critique of mainstream thought by offering different concepts of research design, research questions, data collection, and data analysis. By participating in the traditional dissertation format of Chapter Three as the methods chapter, this chapter hopes to illuminate the way different assumptions change possibilities in of inquiry. Chapter Three begins with an alternative to traditional

research design through Manning's (2007) *Politics of Touch* and culminates in the data engagement improvisation, Remixing Data Experiences (RDE).

Chapter Three lays a foundation for inquiry that develops through ontological immanence and process. Through Manning's (2007) politics of touch, research design loses its rigidity and anthropocentricity. Although in this case the inquirer could be considered 'human', through the politics of touch, inquiry happens between what we normally consider the researcher and the object of inquiry. The inquirer reaches towards other bodies not to definitively know them but to create ideas, thoughts, and feelings by becoming a medium of expression with fundamentally unknowable others. A breadth of techniques of inquiry aid in this creation of research. Combining techniques as means without specific ends in response to multiple other bodies can create an empire of functions, a new ecology of practices.

Chapter Three narrates the coming together of a more-than-human ecology of practice and suggests that arts-based techniques (visual, musical, and literary) provide an experience where the non-human and the human categories blur in the process of thinking-feeling-making. This chapter wrestles with questions of the use of historical qualitative techniques' place and shaping power in this new ecology as well as discusses how beyond-conscious knowing allows bodies to participate in a more-than-human process inquiry. Beauty as Intensity proper makes Remixing Data Experiences (RDE) possible as it guides data engagement toward a pattern of contrasts rather than comparative or annihilating conflict.

Where Chapter Three eases into diverging concepts that provide a foundation for process inquiry, Chapter Four shoots off completely from mainstream dissertations.

Chapter Four presents the creations that emerge during RDE as more-than-human

compositions, art-workings, as well as additional experiments in thinking-making with

the art-workings through various genres of writing. Chapter Four acts as an experience

for the reader without excessive meaning-telling around the art-workings or the written

responses. I think of Chapter Four as a kind of pause where ideas that were generated

through RDE invite playful thought and even more divergent and generative directions.

At the end of Chapter Four, I pick up a more explanatory mode by discussing how this

play might be framed in methodology research through Law's (2004) call for less

restrictive processes based on new metaphysical assumptions.

Chapter Five acts as an extension of Chapter Four. It puts the ideas and the play

of ideas in Chapter Four into further conversation with methodology and education.

Chapter Five continues the feed forward of ideas rather than acts to conclude or reiterate.

Chapter Five presents propositions that come from the ideas and play as speculative or

imaginative generalizations. Chapter Five concludes with sections of possibilities for

employing new *ways* (Celebrate, Oasis, Precarity, Decline, and Directions) generated

through Chapter Four to inquiry and education as well as limitations/absences in the

project and continuation of inquiry.

Chapter Five discusses the contributions this dissertation makes to methodology

and education. Regarding methodology, this project provides a novel approach to theory

as method by performing the process philosophy of Whitehead. Additionally, RDE

provides new possibilities using arts-based approaches in more-than-human inquiry.

Further, Chapter Five elaborates on the connection between inquiry and learning

discussing their shared roots in knowledge creation and the barriers they face in the Anthropocene.

Regarding education, Chapter Five offers imaginative generalizations through putting the ideas of Chapter Four into conversation with areas of concern in critical and public pedagogy as well as environmental and sustainability education (ESS). My work joins that of several theorists and researchers in public pedagogy and ESE by exploring place as a more than human participant in creating knowledge, furthering thought, and allowing for an aesthetic experience of learning and inquiry. I offer several propositions around educating differently to include more-than-human dérives that may create rhythms of certainty and uncertainty in knowledge creation, participate in reciprocal affective capabilities of bodies in joyful knowing, develop modest abstractions that frequently engage concrete experience, and invite aesthetic experiences in learning and inquiry.

From Chapter Two onward, the project enacts the divergence that it took with Chapter Two able to be described as a traditional literature review even as it acts to further divergent thought and Chapter Four and Five having little resemblance to traditional dissertation chapters in content or process. The process illustrated in the written dissertation lends evidence itself that the new can arise from the old just as Whitehead (1967) claims. It also brings about an awareness that the project acts in and as process as it diverges from mainstream Western thought and research.

A Note About Education

Chapter Two elaborates the connection of education to the Anthropocene and includes discussion around education policy, science education, and environmental and

sustainability education (ESE) particularly. Through Chapter Three and Chapter Four, the work detailed there carries the concerns of education enacted in a post-disciplinary manner that eventually resolves in Chapter Five. In Chapter Five, this project revisits education explicitly to discuss how the enactment of process inquiry and the ways that emerge in the project bring forth questions of the division between inquiry as methodology and inquiry as learning. ESE conceptual binds this project, not in particular positivistic findings, but rather in tenor and approach. I take as a starting point a subset of ESE theorist (Gruenewald, 2003, 2004; Gruenewald & Manteaw, 2007; Jickling, 2017; Jickling & Spork, 1998; Martinez-Rodriguez & Fernandez-Herrera, 2016; Seawright, 2014; Sterling, 2017; Stevenson, 2008, 2007; Suavé, 2017; Wals & van der Leij, 1997) who suggest that the historic rejection or reduction of ESE in school points, not to the need for additional new curricular fields or specific school-based pedagogies, but rather as a sign that "something is missing– indeed fundamentally wrong– with education itself" (Jickling, 2017, p. 21). Chapter Two details the history and problems as well as promises experienced in ESE, and this project takes the minor gestures of ESE as a springboard that eventually opens immanently in Chapter Five to new suggestions, connections, and ways to educate and research education more broadly.

CHAPTER 2

LITERATURE REVIEW/DRIVING CONCERNS

The Anthropocene

Worlds of thought are colliding. Fissures are appearing. Categories long held separate are sliding toward one another, touching, mingling sometimes in contradictory and paradoxical ways. Science brought about the awareness of our current ecologically precarious state, but it remains doubtful that the rail of science can be traveled completely to a world of refuge. The Anthropocene has broken open the dams on streams of thought, and the multiplicity that flows from the cracks in the structures call for innovation and risk in research. These are uncertain times, and perhaps they always have been, but we seem to be more aware of that now in the Anthropocene.

It started rather mundanely — factually, with the mounting evidence of disastrous Earth systems derangement caused by human activity (IPCC, 2018; Rockström et al., 2009). Crutzen and Stoermer (2000) wanting to highlight the change, the shift in Earth systems caused by humans, suggested a new name for our current geological epoch, the Anthropocene. Nine years later, the term/concept boasted its own collation of scientists investigating its empirical soundness, the Anthropocene Working Group (AWG) (Lundershausen, 2018). This group serves under the International Commission on Stratigraphy (ICS). In 2019, the AWG voted on their complete proposal for the Anthropocene's legitimacy among the strata of the Earth, but it will not be until 2021 that the larger commission will make a ruling on the geological validity of the new epoch (Subramanian, 2019).

A story emerges from this seemingly innocuous timeline above. It is a story of tensions, contradictions, high stakes, and exciting possibilities. The AWG scientists, in their commitment to both science and society, have opened up an entirely new world of ideas although they themselves may not be aware of the extent of their brazenness. The findings of Earth systems scientist have laid a foundation for a new ontology, but paradoxically, it is not one they currently acknowledge. The suggestion and subsequent investigation of the Anthropocene has acted as a supercollider for the formerly separate spheres of humanities and the social with the natural sciences. Anthropocene scientists (part of the AWG), Zalasiewicz et al. (2010) claim that "the Anthropocene represents a new phase in the history of both humankind and the Earth, when natural forces and human forces become intertwined, so that the fate of one determines the fate of the other" (p. 2231). This recognition of the melding of humans and nature has led to some interesting tensions with foundational modern thought that normally acts in concert with science. The growing turmoil caused by the blurriness of the human/nature divide has been accompanied by a host of questions and contradiction. The AWG scientists themselves have melded natural science's empirical facts with human history, society, and politics in proposing the Anthropocene, but they have failed to notice the onto-epistemological implications of their own proposal. Lövbrand et al. (2015) explain that:

> The scientific narrative continues to portray nature as an object external to society with 'natural' limits and tipping points that can be discerned, quantified and managed with some degree of scientific objectivity. As a consequence, humankind is both inserted into nature and re-elevated above it. (p. 213)

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So, despite their claims of an intertwined human and nature, Anthropocene scientists continue to maintain humanistic and dualist tendencies, making their theory of the Anthropocene and their suggested actions a hybrid of new realizations still tied to old onto-epistemologies. This mis-matched between their conclusions and their deeply embedded modern epistemes can be seen in the mainstream narrative that emerges as action in the Anthropocene is debated. Further, the fissures opening in their thought leaves room for new onto-epistemologies to form around the very same evidence that they brought to light in the first place.

Although the term the Anthropocene continues in candidacy in geology and is highly contested in other spheres, it is already doing a great deal of work. Conferences and journals of that same name have proliferated, many popular magazines like *Discover* and *The Atlantic* have written about it for the general public, and it has catalyzed a great deal of scholarly articles across fields outside of the natural sciences (Lorimer, 2017; Taylor, 2017). International movements of scientists have coalesced not so much to debate the science but to endorse policy and action in the Anthropocene. Institutions like the International Geosphere-Biosphere Programme (IGBP), the International Human Dimensions Programme on Global Environmental Change (IHDP), the World Climate Research Programme (WCRP), the international biodiversity programme DIVERSITAS, and the International Council for Science (ICS) have meet in conferences rallying around the Anthropocene concept (Lövbrand et al., 2015). Elinor Ostrom, the Chief Scientific Advisor for Planet Under Pressure, summarized:

> The concept of the Anthropocene heralds a profound shift in perception of our
> place in the world. Given the mounting evidence of the sheer scale of global

changes we are witnessing, the scientific community has a responsibility to urge

public officials, citizens, and private firms in all countries to focus on the need for

major policy changes to avoid irreparable damage to our planet. (Brito &

Stafford-Smith, 2012, p. 1)

In short, the Anthropocene has vaulted global, human-driven climate change science

overtly into politics. The State of the Planet Declaration calls this a "defining moment in

history" (Brito & Stafford-Smith, 2012, p. 9) and claims that "we must develop a new

strategy for creating and rapidly transplanting knowledge into action, which will form

part of a new contract between science and society" (Brito & Stafford-Smith, 2012, p.

9).   A coalition, centered on many of the AWG scientist, has formed and is working to

'fix' the problem of the Anthropocene by calling for a more prominent place for science.

The Problem(s) of the Anthropocene

The basic problem of the Anthropocene lies with our current ecological state on

the planet. Although we did not come to this point in our collective history

spontaneously, we face issues of climate change and environmental degradation as well

as issues of poverty and displacement in a heightened and collective state. We have more

forest fires, stronger hurricanes, more extreme floods and droughts to look forward to

(Allen et al., 2018). We can expect to deal with water shortages, food supply disruptions,

and land destruction (Rogelj et al., 2018). The IPCC report is quite clear on predicting

what will happen and many scientists believe their predictions to be conservative (Butzer

& Endfield, 2012), it is just a matter of when. We may reach a threshold, a kind of

tipping point of no return by 2035 where Earth systems irreversibly shift towards being

less life-sustaining (Allen et al., 2018).

The above findings are not precisely the Anthropocene. The current state of the

planet leads to questions about what ushered in this state, and what we can do about it.

These questions stand at the center of the contested elements within the Anthropocene.

The AWG has proposed several start dates for the Anthropocene, and these start dates

have political and philosophical implications that extend past neutral science facts (Davis

& Todd, 2017; Lewis & Maslin, 2015; Steffen et al., 2011). Additionally, AWG

scientists and others rallying around their concept have moved from detailing the

Anthropocene to prescribing urgent action. Following, I will detail the mainstream

arguments made by the AWG scientists and their increasing large coalition.

Tensions in Ontology, Axiology, and Epistemology

Some see the Anthropocene as a legacy of the Enlightenment in both the

accumulation of physical effects on the Earth and in the philosophy evident in the

framing of problems and solutions. Crutzen (2002) originally proposed an Anthropocene

start date that overlapped with the Age of Enlightenment, writing:

> The Anthropocene could be said to have started in the latter part of the eighteenth
>
> century, when analysis of air trapped in the polar ice showed the beginning of
>
> growing global concentrations of carbon dioxide and methane. This date also
>
> happens to coincide with James Watt's design of the steam engine in 1784. (p. 23)

As we know that increased use of fossil fuel by humans causes global warming, the

industrial period seemed a likely origin candidate as this time period began a shift from

agriculture to industry accompanied by large scale fossil fuel burning (Steffen et al.,

2011).

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But there is more to Crutzen's philosophy than just metrics about atmospheric carbon and the role of industry. He and other AWG scientists have taken up another Enlightenment-inspired theory called the noosphere. The noosphere name plays on such Earth systems as the lithosphere and the ionosphere enveloping the planet. The noosphere was coined by P. Teilhard de Chardin and E. Le Roy in 1924 in a long line of though reaching back to the 1864 publication of Marsh's *Man and Nature* (Crutzen, 2006; Steffen el al., 2011). Crutzen (2002, 2006) and others (Steffen el al., 2011) cite this as what we might recognize as a theoretical framework linked specifically to the human exceptionalism embedded in modernist thinking. The noosphere is not a material layer of the atmosphere but is instead "the world of thought, to mark the growing role played by mankind's brainpower and technological talents in shaping its own future environment" (Crutzen, 2006, p. 13). Further Crutzen and Schwägerl (2011) have espoused a new role for the human in the Anthropocene, they write that "the long-held barriers between nature and culture are breaking down. It's no longer us against 'Nature'. Instead, it's we who decide what nature is and what it will be" (Crutzen & Schwägerl, 2011, para. 5). These two positions combined illustrate a tension seen in Anthropocene thought. The venerable categories of human and nature blur which indicates a move toward a different ontology than traditionally seen in the Enlightenment, but the traditional axiology and epistemology does not budge. In fact, the traditional elements held seem to take on a hyper-realistic quality, become more fanatically traditional with regards to centering the human.

Although a new more recent time period has been settled upon by the AWG, the hybrid onto-axio-epistemology espoused by Crutzen and Schwägerl (2011) above

remains. In May 2019, the AWG finalized their proposal with a start date in 1945, the beginning of the Great Acceleration (Subramanian, 2019). Post World War II data clearly shows the metrics that define human-induced Earth system derangement accelerating, rising exponentially after WWII (Steffen et al., 2015). Although the official reports of the AWG cite this period as the best for geological data, some of the AWG scientists add a social dimension to their argument for this start dates. Steffen et al. (2011) write about the post WWII social climate, saying that:

> Partnerships among government, industry, and academia became common, further driving innovation and growth. More and more public goods were converted into commodities and placed into the market economy, and the growth imperative rapidly became a core societal value that drove both the socio-economic and political spheres. (p. 850)

Steffen et al. (2011) go on to elaborate that the period from 1945 to 2000 was focused more on economic growth than environmental problems. They paint a picture of human economic concerns in the form of open market forces blithely driving human societal and economic growth at the expense of environment degradation.

Steffen et al. (2011) espouse almost a naïve optimism in the realizations of the Anthropocene around the 1945 start date. They write that "we are the first generation with the knowledge of how our activities influence the Earth System, and thus the first generation with the power and responsibility to change our relationship with the planet" (Steffen et al., p. 757). Crutzen (2002) adds, somewhat less optimistically, that:

> A daunting task lies ahead for scientists and engineers to guide society towards environmentally sustainable management during the era of the Anthropocene.

This will require appropriate human behavior at all scales, and may well involve

internationally accepted, large-scales geo-engineering projects, for instance to

'optimize' climate. (p. 23)

Both Steffen and Crutzen rely on the idea of a safe operating space for humanity as

defined by the planetary boundaries set by the Holocene, the epoch preceding the

Anthropocene (Rockström et al., 2009). Their logic is that the last known safe operating

planetary levels for human civilization was during the Holocene, and that we should

carefully monitor known planetary boundaries so as not to exceed Holocene limits

(Rockström et al., 2009). Crutzen's (2002) statement explicitly proposes that this should

be what Baskin (2015) terms the "rule of experts" (p. 21), and Steffen et al. (2011) also

call for increased stewardship of the Earth led by our science knowledge and judiciously

applied technology.

Both seem to be relying on what is known as the information deficit model of

behavioral change. In the quote above, we can see that Steffen et al. (2011) clearly

believe that the reason we have come to the current Earth systems state is due to our lack

of knowledge, specifically science knowledge, and Crutzen (2002) believes that

behavioral change can be led by science knowledge. These positions show an

unwavering belief in human rational thought and the position of Science in leading that

thought. Maggs and Robinson (2016) point out that "unfortunately, decades of research

have illustrated the inadequacy of this approach. Behavior change, as abundant

scholarship in multiple fields has shown, is far more complicated than such linear

framing would suggest" (p. 177). In short, information does not change behaviors

(Burgess et al.,1998; Green & Kreuter 2005; Jackson, 2005; Kollmuss &Agyema 2002;

McKenzie-Mohr, 2013; Owens, 2000; Robinson, 1991; Shove, 2010; Steg & Vlek, 2009; Stern, 1986; Sturgis & Allum, 2004; Wilhite et al., 2000).

If want of information is not the cause of our predicament, then AWG scientists are basically saying that humans are the problem, and humans are the solution; an argument that exposes the tensions in their shifting ontology tethered to their traditional axio-epistemology. Their human, science-led solution predicates on the assumption that humans unwittingly created the Anthropocene and scientific thought just caught up with what is really happening on Earth. There are more problems with this position than just their reliance on the faulty information deficit model, and some have argued that being mired so strongly in modern framing, particularly the aspects of human exceptionalism and scientism, has constrained not only their analysis but also their imagination (Castree, 2014; Lövbrand et al., 2015). Interestingly, the Great Acceleration argument breaks with traditional lines of advocacy around neoliberal capitalist ideas as their proposed behavior changes include less production/consumption in the name of stewardship, but I will write more detail about that later.

Critique of the Mainstream Anthropocene Narrative

In additional to the post-natural ontology that Lövbrand et al. (2015) see as part of the mainstream Anthropocene narrative described above, they also see both a post-social and post-political ontology rising in concert. Davis and Todd (2017) take issue with the idea that "we are the first generation" (Steffen et al., 2011, p. 757) to recognize the dangers of growth and development, employing Indigenous philosophies as examples of different lines of thought that have been understood for thousands of years. Maggs and Robinson (2016) point to a lack of understanding of the interplay between human

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actions, facts, and values as a deficit in the mainstream Anthropocene narrative. These critiques and many others that I will detail following compels us to consider the Anthropocene not just as a physical, geological phenomena, but, more significantly, as a "philosophical event" (Johnson et al., 2014, p. 447).

Basically, many theorists in the social sciences and the humanities take issue with the rather shallow narrative of the Anthropocene (Barry & Maslin, 2016; Castree, 2014; Hamilton et al., 2015; Haraway, 2016; Maggs & Robinson, 2016; Mikhail, 2016; Taylor, 2017; Tsing, 2015). Although most of the theorist remain grateful to the AWG scientist for the science and the notoriety that brought us an awareness of the Anthropocene, some remain quite derisive of the same scientists' attempts at forays into history, human behavior, and philosophy (Hamilton et al., 2015; Latour, 2015). Many see the AWG scientists as limited in the scope of their prescriptions both by the rules attached to defining a new geological epoch and their own dominant, Western philosophies (Baskin, 2015; Davis & Todd, 2017; Maggs & Richardson, 2016). Following, I elaborate on the critiques of the mainstream Anthropocene narrative from the perspective of these theorists.

De-centering the Human. As the name, the Anthropocene, was proposed many theorists worried about the inherent arrogance of centering all on the human (apparently rightfully so), and many claimed that the evidence of the Anthropocene might instead be taken as a time to decenter the human (Bignall et al., 2016; Davis & Todd, 2017; Haraway, 2016; Latour, 2018; Lövbrand, et al., 2015; Malm & Hornborg, 2014; Moore, 2016; Romm, 2018; Tsing, 2015). Although AWG scientists claim that the evidence of human caused Earth system derangement supports a view of intertwined humanity and

Earth, their political claims and calls for action detailed above do not seem to incorporate this idea, instead making humans more prominent as the ultimate agent. Further, the mainstream discussion of humans centers on all of humankind, a kind of universal human, which is entwined with problems of globalizing and scale in the Anthropocene (Latour, 2018; Lövbrand et al., 2015).

Jason Moore (2016), a proponent for a more critical naming of the Anthropocene writes:

> The Anthropocene makes for an easy story. Easy, because it does not challenge the naturalized inequalities, alienation, and violence inscribed in modernity's strategic relations of power and production. It is an easy story to tell because it does not ask us to think about these relations at all. The mosaic of human activity in the web of life is reduced to an abstract humanity as homogenous acting unit. Inequality, commodification, imperialism, patriarchy, and much more. (p. 2)

Intentional or not, the mainstream Anthropocene narrative propagates a universal humankind that is responsible for our current situation and now must act to alleviate it. This universalist tendency eradicates differences in social relations that may be important parts of understanding and ameliorating the Anthropocene as espoused by Moore (2016) above, and this tendency is seen as a post-social ontology by Lövbrand et al. (2015).

To address this universalizing, human-centered approach, other alternative names for the epoch have been suggested, like the Capitalocene (Moore, 2016) and the Plantationocene (Haraway et al., 2015; Tsing, 2015). The impetus for alternatively naming the Anthropocene in most cases is an unmasking of the historical, social, and political forces that have brought about this unprecedented time. These names do not

seek to deny humans as a part of nature, but rather to more precisely articulate *how* humans have become planetary actors as the quality of our interactions is just as important as our scale. For example, The Plantationocene seeks to remind us that violent forces of colonization have unequally caused the anthropogenic devastation of both nature and culture while the Capitalocene seeks to alert us to the destructive power that capitalism has exerted on the same (Haraway, 2016; Moore, 2017; Tsing, 2015). These alternative names provide a more robust sense of the entanglements that brought us to this point in time. Another, interesting strategy, taken by Davis and Todd (2017) has been to suggest an alternative start date to the Anthropocene to better characterize its causes.

Davis and Todd (2017) link the Anthropocene to logics of colonialization by proposing an alternative start date, 1610. They argue that this time would better acknowledge colonialism's role in our environmental crisis. Although this resonates with some of the strategies of alternate naming above, Davis and Todd (2017), in seeking to engage the AWG scientist in their own frame, make a compelling argument based on Indigenous philosophies. Davis and Todd (2017) see the universal erasure of differences among human-dimensions that Lövbrand et al. (2015) calls post-social as "the extension and enactment of colonial logic" (Davis & Todd, 2017, p. 769). They wish to bring attention to the connection between colonial logics and the Anthropocene to expand the conversation beyond Western and European modes of thought to include "Indigenous knowledges from North America" (Davis & Todd, 2017, p. 764). They believe that this will allow a broader understanding of our current ecological crisis as "inherently invested

in a specific ideology defined by proto-capitalist logics based on extraction and

accumulation through dispossession" (Davis & Todd, 2017, p. 764).

This start date is not only proposed for its theoretical consideration, but there is

evidence of colonial violence in the Earth's strata. David and Todd (2017) cite

geological evidence proposed for the same start date by Lewis and Maslin (2015). The

first line of evidence is the relocation of plants and animals through the extensive trade

during that time, and the second, David and Todd (2017) write:

> which is a much more chilling indictment against the horrifying realities of
>
> colonialism, is the drop in carbon dioxide levels that can be found in the
>
> geological layer that correspond to the genocide of the peoples of the Americas
>
> and the subsequent re-growth of forests and plants. (p. 766)

This time of colonization saw the native populations of the Americas reduced from about

55 million to 6 million people (Davis & Todd, 2017). Davis and Todd (2017) as well as

Lewis and Maslin (2015) believe that this start date well encapsulates the destructive

application of settler modes of thought and unequal exercises of power that brought about

and maintain our current state of ecological degradation.

Davis and Todd (2017) further elaborate that even in using such evidence for a

start date, the constraints of the geological argument fail to incorporate the "fleshy

bodies" (p. 767) that are still at stake. They offer Indigenous alternatives to the

geological perspective that they engage with their proposed start date. Davis and Todd

(2017) seek to extend the conversation to a more entangled view of the Earth. They cite

Vanessa Watts (2013) who articulates an Indigenous point of view writing, "[o]ur truth,

not only Anishinaabe and Haudenosaunee people but in the majority of Indigenous

societies, conceives that we (humans) are made from land; our flesh is literally an extension of soil" (p. 27). Additionally, they point out that Indigenous philosophies have existed longer than those of modern Western humans and have not failed to acknowledge the importance of the interrelationship between humans and land, standing in direct rebuttal to the idea that modern Western thought with its disregard for the Earth and the future is 'human nature' or that "we are the first generation" (Steffen et al., 2011, p. 757) to realize that humans have impact on the Earth.

This brings us back to the deficiencies in traditional Western thought that must be circumvented to help make the Anthropocene as thin as possible. It is difficult to assume that the kind of thought that brought us the events that we call the Anthropocene will be able to ferry us to a 'safe operating' space. But is it necessary to turn our back on everything that Western thought has brought us? Is it even possible to turn completely away? Latour (2018) believes that we need science, but not in the form it is practiced currently and currently guides the Anthropocene narrative.

De-centering Science. Latour (2018) sees the science that is currently practiced in suggesting the Anthropocene as nature-as-universe. Nature-as-universe represents the objective science initiated by Galileo and propagated by Newton. This is a science in that it is concerned with objects that can be studied apart, from a far, by a subject. Taking nature-as-universe means that "to know is to know from the outside" (Latour, 2018, p. 68). This outside, that Haraway (2016) refers to as a "god-trick" (p. 40), came about naturally. Galileo was indeed viewing distant moving bodies from a perspective outside, that of the surface of the Earth, and eventually this propagated the Copernicus revolution that vaulted us into the Scientific Revolution of the Enlightenment. Latour (2018)

concedes that this type of science would not be a problem if it had remained "restricted to the science of the universe" (p. 69). The problem comes when nature-as-universe is misapplied and "scientists deliberately distanced themselves" (Latour, 2018, p. 69) from all movements, even those here on Earth, allowing only that which could be known when the object is viewed separately from the subject as true.

Latour (2018) contends that after Galileo's nature-as-universe took hold that "every movement had to conform to the model of falling bodies" (p. 70), and that all other movements, particularly those here on Earth that we cannot materially distance ourselves from, could not be considered scientific. Latour (2018) claims that this distancing maneuver of science with nature-as-universe made the Global possible during the Holocene. That the Global scopes out, away from the land and scales up away from the Local fits nicely with ideas of objective science. During the Holocene, Earth systems had not yet made themselves felt (to Western scientists), so ideals of interdependency had yet to interfere with a rather uncomplicated view that the Globe was a large space and the Global the sum total of human actions in that space.

Latour (2018) describes our own view of Global as the universal condition of humans on a static Earth which resonates with mainstream Anthropocene arguments. This is mirrored and supported by the nature-as-universe, universal laws of motion, but to be universal is to homogenize and risk overlooking important interactions that can only be seen up close and entangled as mentioned by so many other theorists about the Anthropocene (Baskin, 2015; Castree, 2014; Davis & Todd, 2017; Johnson et al., 2014; Lövbrand et al., 2015).

With nature-as-universe supporting the Global, our only recourse would be to the Local. Here Local is simply reactionary, not Global, not modern, not concerned with progress (Latour, 2018). The dichotomies continue in this system with the Global representing the future and the Local the past. The Global is considered rational and knowable and the Local containing no legitimate science, and this is one way to frame the Western dismissal of Indigenous science and other local knowledge. In the time of the Holocene, a time of passive nature, a time of objectivity, the Global rose as the only way forward within the confines of Western thought, so it is no wonder that AWG scientists support staying in the Holocene as their traditional Western thought *works* there. But the Anthropocene breaks with that comforting partnership of Holocene/Enlightenment thought as we collectively recognized that nature is not a passive space for our actions.

Now in the time of the Anthropocene, the Global and the Local are revealed to be equally inadequate as ways forward (Latour, 2018) as both are exposed as immaterial. Latour (2018) states that:

> We must face up to what is literally a problem of dimension, scale, and lodging; the planet is much to narrow and limited for the globe of globalization; at the same time, it is too big, infinitely too large, too active, too complex, to remain within the narrow and limited borders of any locality whatsoever. We are all overwhelmed twice over; by what is too big, and by what is too small. (p. 16)

With the dawn of a reactive Earth, the Global and Local are revealed to be untenable. Neither is up to the task of integrating an active planet into our world view. The immateriality of the Global can be seen when we fail to take into consideration the finite resources of our physical planet and call for progress and growth through our

technological ingenuity. The immateriality of the Local can be seen when we cling to an illusion that we can close down borders, protecting a static identity with physical walls even though heat, weather, and the very air we breathe cannot be divided in that way.

This idea of nature-as-universe and its inherent problems seems to resonate with the research on global environmental climate change (GEC). Luke (2009) sees the way in which social relations are aggregated into a post-social ontology as connected to the reductive methods that GEC scientists employ. The integrated assessments and modeling used to track global changes "foster an epistemology" that overgeneralizes "social drivers and human consequences" (O'Brien & Barnett, 2013, p. 381). Ironically the realization that humans are geologically agentic led GEC scientists to treat them with less precision, or perhaps as Latour (2018) might say as an object as a distance.

Latour (2018) contends that by moving to nature-as-process this universalizing view can be overcome. He maintains the sanctity of science as "cold-blooded fact" (Latour, 2018, p.69) and "positive knowledge" (Latour, 2018, p. 65) and calls for it to be used as a tool in dealing with the materiality and non-human agency of the Anthropocene as we move forward. He calls the non-human a new third-party actor, and, as much of his research has dealt with, insists on adding the agency of the non-human into our considerations of the world (Latour, 1993, 2018: Latour & Woolgar, 1986).

Latour's (2018) points around the immateriality of the Global and Local and his discussion of the course of science as nature-as-universe are helpful to understanding places within the Anthropocene narrative that could be the site of inquiry. Additionally, the acknowledgement of the agency of non-humans helps to unseat the hyper-humanism of the Anthropocene narrative somewhat, but Latour (2018) does not explicitly tackle the

problem with dichotomies that stem from objective science. He does say that objectivity came from nature-as-universe, but it is not entirely clear how adding non-humans as additional actors overcomes the subject/object divide so inherent in Western scientific thought that founds deep seated humanism. Davis and Todd (2017) extend our thinking to be more critical and de-center the human more fully. The question is how can we take advantage of the multiplicity of thought in response to the Anthropocene without erasure and replacement? I believe that this may be a problem that needs to be addressed at the ontological level and understood through inquiry, and I will detail this more after I introduce one last critique of the Anthropocene logic, its post-political nature.

Re-centering Power and Politics. Lövbrand et al. (2015) claim that the post-political ontology espoused in the mainstream Anthropocene narrative, like the post-social ontology, stems from a "lack of critical social and political analysis" (p. 214). Although Steffen et al. (2011) cite rampant economic development and free-market proliferation as one of the causes, they maintain that the same institutions that allowed for environmental exploitation and rampant economic development can serve to alleviate the problems of the Anthropocene. As discussed before, AWG scientists' adherence to the information deficit model of behavior change illustrates a poor understanding of not just human behavior but power and politics (Maggs & Robinson, 2016). Solutions from the AWG scientists rest with science knowledge added to policy in a particularly managerial style of "planetary stewardship" (Steffen et al., 2011, p. 749) led by a rule of expert scientists and engineers (Baskin, 2015). Swyngedouw (2013) defines this as post-politics and points out that debates and choices around action are steered toward choices of technology not discussions around the problem framing in the first place. Many see this

undemocratic move of 'choice' after the problem has already been framed to be a result of the urgency and crises of the Anthropocene (Brown, 2005; MacGregor, 2014; Read, 2009; Swyngedouw, 2010).

This managerial position is worrying enough, but it is even more dangerous than just being undemocratic. Baskin (2015) explains:

> Discourse of the Anthropocene certainly may have some ability to challenge the notion of human 'progress' and 'the belief systems and assumptions that underpin neo-classical economic thinking, which in turn has been a major driver of the Great Acceleration' (Steffen et al., 2011, pp. 861-2). But as a concept, it appears overall to legitimate the dominant order, even if unintentionally…. it is more obviously compatible with (rather than potentially disruptive of) the dominant political ideology and power structures of our time. (p. 23)

Steffen et al. (2011) discuss the complicated nature of economic growth in ecological degradation, but as they never take a critical stance, their own suggestions for interrupting the Anthropocene are easily coopted by the dominant mode of thought today, neoliberalism.

Although it is important to recognize how Western thought in general has given rise to the Anthropocene and has little chance of subverting it, it is equally important to recognize the current versions of this mode of thought that coopts the problems of the Anthropocene and leave us unable to take collective political action to find a better way forward. Steffen et al. (2011) claim that we were little concerned with environmental problems until 2000. This may be another example of their lack of precision outside of the field of physical sciences as there was much concern about the environment from the

1970's on (Rich, 2018). It is just that political action was never taken due to the rise of neoliberalism (Klein, 2018). This illustrates one blind spot of reductionism and universality that needs to be addressed so that inquiry may follow. If by 'we', Steffen et al. (2011) meant neoliberal administrations were little concerned with environmental problems, then I would agree, but if by 'we', they include everyone else, it is just not the case. With this in mind, it is important to review neoliberalism and its connection to the environment.

Neoliberalism: The Economic History and a Way of Life

Neoliberalism began its life as a pure economic theory birthed in 1947 by the Mount Pelerin Society, a group of academic economic and social theorists (Harvey, 2005; Peters, 2012). This theory rose against the backdrop of political and economic concerns around the spreading of totalitarian governments like those in the Soviet Union and China, Nazi Germany, and Mussolini's Italy (Peters, 2012). Briefly, totalitarianism subverts individual freedoms to the central collective authority of the state. The Mount Pelerin group took individual freedom and an unencumbered market as its central tenets (Harvey, 2005). They saw both state interventions and centralized state planning as politically biased by special interests like unions and espoused the free working of the markets as more equitable (Peters, 2012). They called for less state intervention in capital interests, and they garnered financial support from wealthy elites and corporations (Harvey, 2005).

Although people were concerned with totalitarian spread, the Great Depression loomed large in the collective social memory. Keynesian economics dominated from the Great Depression to about 1970 in the United States (Harvey, 2005). Keynesian

economics as opposed to neoliberal economics is considered a form of embedded liberalism. Here, markets are not unfettered as they were prior to the Great Depression. Keynesian economics sought, through market regulations, to balance social welfare and the interests of the middle and working classes with those of corporations and the interests of wealthy elites (Harvey, 2005).

Although Keynesian economics was considered more socially equitable as far as humans were concerned, with regards to environmental welfare, this form of economics was committed to overall economic growth and sought to increase production and consumption as noted by Steffen et al. (2011). Dean Acheson, U.S. Secretary of State in 1949, illustrates this in his comment that:

> Ways must be found… for basic development of land and water resources, power and transportation upon which comprehensively and balanced economic progress of an area depend. Wealth is created only by increasing production. (Robertson, 2012, p. 355)

The political stance above grew from the soil of economic theories voiced by economists John Maynard Keynes and Robert Nathan that claimed that increasing production and thus wealth is dependent on mass consumption (Robertson, 2012). These mainstream tenets gave rise to a new form of natural 'conservation', one that put faith into human development of technology to aid in the increased consumption of natural resources without repercussions (Robertson, 2012). This may seem like an aside, but I find it important to note that even economic theories that sought to distribute wealth more equitably still considered the Earth as a natural resource rightfully exploited in the service of human economic growth.

The stagnation of economic growth in the late 1960's eventually led to the rise of neoliberalism (Harvey, 2005; Peters, 2012). It did not go uncontested; during the time between 1967 and 1980, many other solutions were considered. Harvey (2005) writes that socialists and communist parties were gaining ground in Europe and that the U.S. considered moving to more government intervention and strengthening of social institutions. In fact, the early 1970's saw more regulatory reforms with legislation for environmental protection and formation of the EPA as one example (Rich, 2018). These reforms and this direction did not seem to be stimulating economic growth and the social democratic strategies began to lose support as an answer to economic stagnation.

Additionally, Harvey (2005) claims that the inherent threat to the wealthy elite of less economic growth and more government regulation spurred backing of neoliberal reforms. In the U.S. and Britain this came to a head with the election of Ronald Reagan and Margret Thatcher. Rich (2018) mentions Reagan's war on environmental reforms, but Reagan sought to dismantle *all* social welfare in a wholesale retraction of government regulation (Harvey, 2005). This dismantling occurred under the guidance of the theory of neoliberalism and fundamental market freedom, but what occurred was not exactly the pure neoliberalism of the Mont Pelerin group. Neoliberalism was set upon the world by a combination of Reagan's and Thatcher's deregulation politics and the enlistment of the World Bank and the International Monetary Fund (IMF) into the neoliberal projects allowing neoliberalism to globalize (Harvey, 2005). Neoliberalism became more than just an economic theory, it became and still is the "common-sense way many of us interpret, live in, and understand the world" (Harvey, 2005, p.3).

Neoliberalism sensibilities manifest in several ways. First, the social welfare system was seen as discouraging "effort and self-reliance…producing young illiterates, juvenile delinquents… 'dysfunctional families', and drug addicts" (Peters, 2012, p. 135). Here we can see that individual hard work, effort, and responsibility are hallmarks of neoliberalism. Thatcher famously summed up this cult of the individual when she said that,

> there is no such thing as society. There are individual men and women and there are families. And no government can do anything except through people, and people must look to themselves first. It is our duty to look after ourselves. (Margaret Thatcher, 2013, para. 7)

In addition to promoting rampant individualism, neoliberalism seeks to marketize and commodify everything. If the market was to work its unfettered magic of efficiency and growth, all previously public sectors should be privatized, new markets should be established, and free trade should be increased (Harvey, 2005; Peters, 2012). These can be seen in private rights to drilling on public land and the privatization of education and health care (Harvey, 2005). New markets in the form of newly developed technology play a keystone role in neoliberalism (Lave, 2012). With privatization based on the belief that markets should be the "organizing principle for all political, social and economic decisions" (Giroux, 2005, p. 2), tax cuts, particularly for the wealthy and the corporations, are seen as a way of removing capital from a prison of government social systems and freeing it to the market. In fact, during the 1980's and 90s, estate tax and tax on income from investment and capital gains were diminished while taxes on wages and salaries were maintained (Harvey, 2005).

As neoliberal politicians gutted the state in favor of market rule, money and power shifted toward a small elite, the top 0.1% internationally. Both Piketty (2014) and Harvey (2005) show that what neoliberalism accomplished was not overall economic growth or the proverbial tide that raises all boats. The economy did not grow at a rate beyond what was seen after World War II, what did grow was the wealth of the wealthy; in fact, wealth accumulation of the top 0.1% grew faster than the economy itself (Piketty, 2014). What neoliberal policies accomplished was a vast redistribution of wealth toward the wealthy elite (Harvey, 2005; Piketty, 2014). From 1945-1978 (the reign of Keynesian economics), income inequality was at the lowest in that century with the top 0.1% of the population having about a 35% share of the national income in the U.S, but by 2010, the top 0.1% of the populations had a 50% share of the national income in the U.S. (Piketty, 2014). This type of redistribution was seen in all countries implementing neoliberal policies (Harvey, 2005).

Many neoliberal policy shifts put into place a system of power and governmentality that works to protect and reproduce itself (Read, 2009). Freed from government interventions and powered with redistributed wealth, the elite and corporations are able to apply more force to the systems of society. They fund research, they own media outlets, and they fund politicians and create powerful lobbies (Neubauer, 2011). Another piece of control that has become commonsense in the neoliberal state is the idea of human capital.

Under the neoliberal system, a good citizen is an economically productive citizen. Giroux (2005) claims that neoliberalism has subverted the idea of citizenship and democracy with its view that "profit making is the essence of the democracy, and its

definition of citizenship as an energized plunge into consumerism…[it] celebrates

ruthless competitive individualism" (p. 8). Becker (n.d.) strengthens the importance of

the individual to the neoliberal state by claiming that "economic growth closely depends

on the synergies between new knowledge and human capital" (para. 18). Here new

knowledge comes often in the form of innovations in technology, and human capital can

be increased by investment in education to gain skills and knowledge that can drive those

innovations. Becker (n.d.) cites Japan and Taiwan as excellent examples of countries

lacking natural resources but accomplishing economic growth by "relying on a well-

trained, educated, hardworking and conscientious labor force" (para. 19) that employs

modern technological innovation for the good of their countries' economic world

position.

So, what might have seemed to start in the 1980s as a parallel stream of free

market and free individuals has morphed into the free market of individuals. Here is

where we can see neoliberalism taking on a life of its own. Read (2009) writes that "the

manner in which neoliberalism is not just a manner of governing states or economies but

is intimately tied to the government of the individual, to a particular manner of living" (p.

27). As seen from a Foucauldian standpoint, neoliberalism has become the current

regime of power/knowledge. The neoliberal regime produces individuals that are

governed by neoliberal principals; Foucault terms this individual as *homo economicus*

(Read, 2009). What this means is that neoliberalism is not just an economic theory or a

form of Washington politics. Rather, neoliberalism acts as a force that fundamentally

changes the values of a society as it fundamentally changes how individuals see

themselves. Read (2009) sums this up by stating that "neoliberalism is thus a 'restoration'

not only of class power, of capitalism as the only possible economic system, it is a restoration of capitalism as synonymous with rationality" (p. 32).

The way we make decisions, the way we view the world is governed not overtly through sovereign control or rule of law, but rather covertly through the values of neoliberalism playing out in our lives as the *raison d'être*. Competition, individual achievement, expertise, and independence have replaced collective social action, social welfare, and distributed knowledge as values that shape events. Wendy Brown (2005) elaborates, writing that "the model neoliberal citizen is one who strategizes for her or himself among various social, political, and economic options, not one who strives with others to alter or organize these options" (p. 43).

The key tenets of neoliberalism are deregulation, privatization, individual responsibility, technology and innovation, human capital increased by self-investment of education, and a framing of socio-political action of choice *within* the market barring collective action in finding new options *about* the market. In the next section, I will narrow the discussion of neoliberalism from overall societal influence to environmental concerns specifically.

Neoliberalism and the Environment

In this section, I discuss how neoliberalism connects with the environment. Recall Baskin's (2015) claim that although the AWG scientists see unchecked economic growth and materialism to be part of the behaviors that need to be changed as a solution to the Anthropocene, their apolitical and uncritical approach leaves their solutions open to the dominant discourse. Additionally, Braidotti (2011) warns that neoliberal capitalism has extraordinary adapting capabilities, coopting discourses that should, by their very

tenets, directly conflict. The point of this section is to illustrate the different tactics employed by neoliberal agencies and the neoliberal power/knowledge regime in either blocking or coopting environmental discourse.

Disinformation

One tack taken in the neoliberal regime is that of disinformation. In what seems like a dark and dystopic application of Foucault's power/knowledge theories and Machiavelli's approach to politics, corporations and the wealthy elite have invested in institutions that purposefully spread disinformation about environmental degradation and climate change in what has been termed as the Elite Policy and Information Infrastructure (EPII) (Neubauer, 2011). The EPII centers on conservative think tanks (CTT) that produce books, newspaper op-eds, and policy briefs based on neoliberal ideologies around many issues including climate change. A loose network of these CTTs, conservative media outlets, and neoliberal elements in universities like those found in elite business schools, collude to continually disseminate and recirculate neoliberal ideologies including climate change skepticism and technological optimism (Neubauer, 2011).

These CTTs were established prior to 1980, not to deny climate change specifically, but they were formed in the 1970's as a reaction to the economic crisis and rise of social democrats (Neubauer, 2011). As mentioned before, neoliberalism was not the only direction explored in the 1970's as a response to the economic downturn. Socialism, communism, and a stronger government seemed to gain some ground, and wealthy elites and corporations formed CTTs in reaction to such left-leaning directions, instead favoring the market fundamentalism of neoliberal capitalism (Fisher, 1991;

Harvey, 2005; Neubauer, 2011). Climate change skepticism extends naturally from their original neoliberal mission.

Interestingly, the EPII tactic for legitimacy lies in a confused public notion of expertise and of particular strategies of values and identity politics. The EPII strives to legitimize its experts by ensuring "that debates over climate 'science' largely occur outside of actual scientific institutions" (Neubauer, 2011, p. 75) with many of the EPII's self-proclaimed experts never having done work in the field of climate change. Over the last 40 years of the neoliberal project, being associated with a 'prestigious' think tank confers expertise regardless of any real involvement in the field in question. In fact, many researchers have found that the general public's opinion on socio-scientific issues like climate change has much less to do with scientific literacy than it does "value disposition, partisanship and ideology" (Neubauer, 2011, p. 77).

With this in mind, the strategies explicitly outlined by the GOP consultant, Frank Luntz, in a memorandum to the Bush White House in 2002 are still in use today to guide the neoliberal messaging about the environment. Luntz (2002) wrote a guideline for Republicans addressing the issue of the environment in starkly manipulative terms. He advises politicians and other neoliberal spokespersons to avoid appearing pro-business, to emphasize the inherent uncertainty of climate change science, to assure the audience of their commitment to environmental protection, but to qualify that commitment with cautions that the issues need more review (Luntz, 2002). He advocates steering the public away from government regulation by emphasizing the personal/economic cost of regulation on "moms and dads, grandmas and grandpas" (Luntz, 2002, p. 139). He advises driving the public conversation toward technological fixes over regulation by

appealing to "American creativity and American innovation" (Luntz, 2002, p. 140). Basically, Lutz's memorandum reads like a neoliberal play book for offensive and defensive measures to manipulate conversations around any environmental issues, and many of his sections on 'words that work' are heard from Republican politicians even today.

Within the EPII discourse including Lutz's memorandum, we can see the neoliberal ideologies of anti-regulation in protection of market forces and of the opening of new markets in the form of technologies to combat climate change. Technological development has long been an ally of neoliberal ideology in that there is a "close relationship between technological change and capitalist development" (Neubauer, 2011, p. 80), and neoliberal discourse strives to promote "technological fixes for every problem so long as the markets remain free" (Neubauer, 2011, p. 80). Recall that even Crutzen (2002) and Steffen et al. (2011), seeing unbridled economic growth as a problem, still claim that geo-engineering, a huge techno-fix, may be part of the solution to global warming.

The EPII employs these tactics regularly and to such an extent that many of these arguments are just 'common sense' particularly for the right-leaning populous. It remains unsurprising that blatant manipulation and consolidated power moves are employed by politicians, corporations, and the wealthy elite. In some ways, these tactics allow us to focus our frustration and anger on the EPII and the Republican party as well as their political constituents. While we should certainly be aware of this neoliberal tactic of manipulation, over the 40 years of neoliberalism's strangle-hold on our society, other, subtler and more concerning tactics have developed within our society.

Dispersion and Isolation: Neoliberal Green Governmentality

There is a new neoliberal discourse about the environment, and while skepticism and technological optimism remain strands and those tactics have worked well to consolidate power during the emergence of neoliberal regime, as Foucault (1997) reminds us, we must be ever vigilant in our analysis of the forces that move large blocks of individuals. Today, 40 years into the neoliberal project, neoliberalism has evolved and adapted employing different strategies that move past skepticism and technological optimism. This is not to say that denial/skepticism has vanished, but neoliberal strategies have diversified to continue to dominate as the cultural master narrative. These include subtler actions of individualization of responsibility and depoliticalization of climate change and other environmental issues (MacGregor, 2014; Read, 2009; Soneryd & Uggla, 2015). The next section will discuss green consumerism and individual responsibility

Neoliberalism has put us in a precarious position for environmental action. Foucault sees the main action of neoliberalism 'control' as governmentality through isolation and dispersion (Read, 2009). Neoliberalism's tenet espoused by Thatcher as "there is no such thing as society" (Margaret Thatcher, 2013) has left us in a desert of potential collective and societal action by atomizing society into just a collection of self-interested individuals. Our thoughtless acceptance of this message and the field of action that neoliberalism has limited us to precludes other forms of actions and works across large swaths of society effectively isolating and dispersing us into individual actors only. The power that neoliberalism wields cannot be described as blunt restrictions of rights by

laws, in fact, neoliberalism "paradoxically govern[s] without governing" (Read, 2009, p. 29).

Neoliberalism deregulation unmoors us from one another. Neoliberal privatization provides the only way forward in acting in the world. There no longer exist many institutions that act outside of neoliberal logic, including those that the AWG scientists put their faith in for policy changes. When there are problems to be solved, only those with capital have actions open to them, and those actions are private, unconsolidated, and often individual. Neoliberal capitalism weaves an illusion of personal choice and freedom while it restricts and limits the field of options to individualized and market-based solutions (Brown, 2006; Read, 2009).

Individualization of Responsibility. Green consumerism provides one salient example of individual action. Within the neoliberal capitalist structure, individuals can choose what to consume, but they cannot choose the systems under which their choices are limited which many authors see as a perversion of democracy or just plain un-democratic (Brown, 2006; Read, 2009). Soneryd and Uggla (2015) suggest that the movement for people to "change small things in their lives to benefit the environment" (p. 913) represents a form of privatization of the environmental problem that they term individualization of responsibility.

Individuals who have not bought into environmental skepticism, more than 70% of the American public according to latest polls (Kosnick & Macinnis, 2020), still operate in a neoliberal capitalist system. They crave action in response to "the frustrations at the sheer impotence before such a totalizing, coercive system" (Hoffman, 2017, p. 431). These individuals seek to resist but cannot completely overcome the neoliberal system

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that limits the direction and scope of their agency. The neoliberal system itself, using isolation and dispersion tactics, flexibly co-opts individual resistance "into the next trendy commodity or life-style" (Hoffman, 2017, p. 432).

New Green Markets. The new trendy life-style emerging is that of green consumerism. Informational campaigns, news outlets, and green technologies of responsibility including eco-labeled products and carbon-foot print calculators facilitate individuals' green choices. This facilitation accompanies a discourse that shifts the responsibility for 'saving the environment' from the state to the individual (Soneryd & Uggla, 2015). Based on simple assumptions of attitudes-behavior-choice (ABC) another version of the information deficit model of behavior change, green consumerism implies that if each individual would only take responsible action then we would not have an environmental problem (Soneryd & Uggla, 2015).

One such campaign advocating individual responsibility is the 10:10 campaign which asks individuals to pledge to cut their personal carbon emissions by ten percent each year (MacGregor, 2014). Their website argues that "politicians have so far failed to do what needs to be done, so it's time for ordinary people to step in and show that we're ready to defend our children's futures. It's now or never for the climate" (MacGregor, 2014, p. 618). Amid blinking graphics and neon pink font, the 10:10 website gives some guides about reducing your personal carbon footprint. Under eating, they suggest that if you are vegetarian, "try giving up cheese for a month" ("Eating", 2017). The website also advocates for well-known eco-friendly activities such as biking, using LED light bulbs, and planting trees.

It is not that any of these activities in themselves are misled or bad or that we should not make environmentally friendly choices if we can, but there are a number of problems with green consumerism. These problems include, green washing, seeing consumerism as a 'democratic' action, dispersion and isolation among different actions, and the potential for more embedded problems to be overlooked. In the following section, I will address each of these.

Green washing refers to the disinformation practice of many corporations as they label products as green (environmentally friendly) when they are not. Although eco-labels such as organic arise from stringent regulations, the label 'green' remains unregulated. Corporations liberally employ this label as a marketing maneuver to attract environmentally concerned consumers, but they bear no responsibility if those labels are false. Worse still, this label causes confusion among consumers and transfers the responsibility of trying to untangle claims of 'green' from the corporations to the consumers themselves. For example, Home Depot reclassified 60,000 products as green in 2007 (Littler, 2011). In this process "plastic-handled paintbrushes were called nature-friendly because they were not made of wood, wood-handled paintbrushes were promoted as better for the planet because they were not made of plastic. An electric chainsaw? Green, because it was not gas-powered" (Littler, 2011, p. 4). These claims confuse and confound consumers and tracing the environmental impact of even one product remains a Herculean task for even the most educated consumer.

The website for the organization Green America provides product score cards and toolkits to help consumers navigate potential green washing. Their call to action is "vote

with your dollar" (What does it mean to vote with your dollar?, 2017, para. 4). Their website describes their mission:

> Green America's mission of creating a green economy that works for all- one that preferences social justice, environmental preservation, and healthy communities has been under direct threat from Washington lately, but no matter whether it's election day or one of the hundreds of days between casting ballots, decisions we make every day cast votes for our values. When people support small businesses with forward-thinking practices, we call that #VoteWithYour Dollar. Vote With Your Dollar is a powerful way to build the green economy we need, without Washington. (What does it mean to vote with your dollar?, 2017, para. 4)

Green America equates the democratic action of voting with the un-democratic action of spending. They frankly state that individual consumers can create an environmentally friendly economy by specifically by-passing government (Washington). Unfortunately, consumer spending represents an unequal 'say' in the world as the vast redistribution of wealth stimulated by neoliberal ideologies allows little opportunity for the working class and poor to 'vote'. Additionally, these campaigns target the middle-class, who also has less 'votes' than the wealthy elite.

Littler (2011) points out that in addition to the faulty neoliberal logic behind green consumerism, "singling out the poorer end of the market as the place consumers should avoid in order to 'make a difference' undeniably discriminates against working-class people, who want access to goods just as much as middle-class people" (p. 6). This trend in green consumerism provides yet another example of the governmentality of isolation and dispersion that Foucault sees as the main mode of action employed under

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neoliberalism. The above example shows how disconnecting the individual from government and plugging them directly into the market (the creation of the neoliberal subject) divides our potential for solidarity and collective action. Green America's mission also includes elements of de-politicization which will be addressed shortly.

Amid environmental concerns, norms around consumerism and environmental actions have evolved, but they are not purely consistent. Skill and Gyberg (2010) claim that there are accepted norms of environmental activity that lie between,

'the irresponsible other', a person who behaves improperly by, for example, littering at the recycling station or not recycling properly, whereas 'the fanatic other' is a person who exaggerates her environmental concerns, for example, by never travelling by car or airplane, or by abstaining from material consumption. (Soneryd & Uggla, 2015, p. 922).

For example, a freegan, a person who opts out of consumerism by living off waste through dumpster diving, represents a radical and socially unacceptable choice, but a 'normal' person, a responsible consumer, would be shamed by not buying recycled products. As people struggle with their everyday lives and myriad of choices confused and confounded by green washing and the pressures of individual responsibility to the environment, they can become further isolated by judging themselves and one another by the norms above. Guilt and shame arise in response to individuals negotiating environmental actions and modern convenience, as many environmental tasks remain time consuming like meticulous composting (Soneryd & Uggla, 2015).

Depoliticalization. Green governmentality through individualization of responsibility for the environment may also signal the "increasing evacuation of the

proper political from the public terrain" (Swyngedouw, 2010, p. 214). Framing the

solution for environmental degradation in terms of consumerism indicates the erosion of

real politics and democracy in addressing this important social issue. Through the

neoliberal governmentality evident in the individualization of responsibility, "we pledge

to change our behavior rather than question the global and local asymmetries and

inequities that create, sustain, and legalize institutional forms of environmental

exploitation" (MacGregor, 2014, p. 621). People, rightfully, realize that the state does

not help with environmental action, but they misplace their energy and attention *within*

the neoliberal structure instead of *outside* of the neoliberal structure. Perhaps the most

insidious feature of neoliberalism remains that it controls a discourse that makes

alternative ways of living, thinking, and learning unimaginable (Giroux, 2005;

MacGregor, 2014; Hoffman, 2017)

      The dominate, neoliberal, and hyper-rational narrative frames the environmental

problem in dystopic and apocalyptic terms. It pits us (humanity) against nature. Nature,

in the form of climate change, becomes a problem, something imposed upon us beyond

our control. The very urgency of the environmental crises coerces the public into a

consensual and homogenous front aimed at solving the environmental problem and its

dangers to humans. Many authors (MacGregor, 2014; Mouffe, 2005; Rancière, 2001;

Zizek, 2002) see this as depoliticalization where dominant discourses erase the political

space of debate and contention where citizens exercise their right to alternative

arguments, viewpoints, and visions. For example, "not only are issues constructed in a

way that demands techno-scientific solutions, from which there is money to be made, it is

also presented as a threat to national and international security, for which reinforcement

of militarism is the answer" (MacGregor, 2014, p. 626). This assumed problem of

environmental change against humanity's survival and the neoliberal solutions put forth

discourages alternative discourses aimed at fundamentally challenging "Western ways of

knowing, being, and doing" (Smith, 2007, p. 198). This framing rests on the proposition

that we are at the mercy of nature, and it is trying to harm us. In effect, current

environmental crisis framing only invites citizens to participate after the problem and

solutions have been decided by neoliberal politics and its experts. Green consumerism

discussed above provides an excellent example of this kind of participation.

Although one could interpret opposition to the dominant framing of

environmental crisis and urgent action as some sort of climate change denial, a more

political approach does not seek to deny environmental problems, but rather seeks to

reframe the debate by looking closely at the ideology behind proposed solutions. The

capitalist and neoliberal ideas that brought us to unsustainability in the first place may not

be the ideas we need to employ to reach towards a more sustainable future. Particularly

abhorrent is the division between humanity and nature, which many theorists cite as the

fundamental ideology that brought about environmental problems in the first place

(Haraway, 2016; Lövbrand et al., 2015; Plumwood, 2002; Tsing, 2015). In the dominant

neoliberal frame, "absent or hidden is an ethical stance *against* the exploitation of the

planet by humans and *for* its protection as indivisible from human life" (MacGregor,

2014, p. 628).

In the above section on neoliberalism and the environment, I have discussed its

history, and strategies employed by the neoliberal regime to address environmental

degradation. Neoliberalism valorizes individualism and responsibility, market solutions,

and techno-optimism, and effectively frames problems and debates only allowing individual citizens choice within that framing. In other words, participation remains pre-framed and pre-supposed among limited choices that are congruent with neoliberal ideas. The urgency of the environmental crisis and its framing propels us to act, not to re-frame the problem which may be more helpful to alleviating current problems and preventing new ones, but to act through individual, not political channels.

Challenging the Dominant Episteme

All the above sections around neoliberalism taken together are meant to illustrate how this dominant episteme enables and constrains specific courses of actions and modes of thought particularly with regard to the debate around the Anthropocene. Epistemes come to us courtesy of Foucault. In his archeological and genealogical work, he connects historical events to dominant modes of thought created, propagated, and maintained by a power/knowledge regime (Bevir, 1999). He shows that 'truth' and common sense depend upon what power/knowledge regime is working in a particular spacetime; Foucault (1994) calls this "the thought that bears the stamp of our age and our geography" (p. xv). He does this by showing that they change and are spacetime dependent. For example, Foucault (1994) writes about the taxonomy of animals from a Chinese encyclopedia with categories such as belonging to the Emperor, frenzied, and embalmed. These categories are common sensical for that spacetime. Foucault (1994) points out that acknowledging different systems of thinking and their truths can show us the limitations of our own or, at very least, leave us aware that we are operating under an episteme.

Epistemes are an undercurrent; often hidden in the assumptions we make and what we consider unthinkable. They are "a set of structural relations between concept…. a fundamental code governing the way in which people understand, and act in, the world" (Bevir, 1999, p. 347). Without careful attention to spacetime, epistemes remain invisible, and one may never know that the unimaginable stands just outside the closed 'reality' of the current episteme.

I see two epistemes at work above, the Holocene episteme and the Anthropocene episteme. The Holocene episteme can be recognized as our dominant and long-held episteme born out of the Scientific Revolution and the Enlightenment and bound tightly in the power propagating mechanisms of neoliberalism, a modern episteme. The Anthropocene episteme is merely a possibility, a break in the Holocene episteme that allows us to think the formerly unthinkable even as tries to revert to the Holocene. The cracks in the Holocene episteme widen with the ecological crises brought to our attention by scientists, and the widening of the cracks comes about as previously marginalized or fringe theories like those espoused by Latour (2018) and Davis and Todd (2017) 'fit' the Anthropocene where even the thought of the scientists that provided the initial evidence does not. The AWG scientists and their growing coalition asymmetrically straddle the two epistemes, and I believe that without more theorizing and research from the social sciences and the humanities that the cracks in the Holocene episteme will be sealed up along with our fate on an increasingly hostile planet.

I do not mean to give an archeological view of epistemes, where one episteme rules an epoch and history is a series of episteme replacements. Instead, I am prosing a genealogical view of epistemes, where within the dominant episteme are a diversity of

modes of thought, minor gestures, but unless some among that diversity of non-dominant, minor modes-of-thought coalesce to form an episteme that rivals the dominant episteme, no change will happen. New epistemes are not erasures and replacements, but instead can even incorporate aspects of the retired episteme. This is my point in citing both Latour (2018) and Davis and Todd (2017). Latour (2018) makes a case for science moving forward, and Davis and Todd (2017) remind us that Indigenous ways of thought have functioned over thousands of years. These modes of thought exist within the dominant episteme with a current all their own.

So, this dissertation proposes to widen the cracks in the Holocene episteme to answer Haraway's (2016) call to make the Anthropocene "as short/thin as possible" (p. 160). Eerily similar to the change of power/knowledge regimes that birthed the Enlightenment from the Renaissance, the material world seems to be an ally in widening the fissure of thought of the old dominant regime. It was the heavenly bodies of the scientific revolution that struck some of the first blows, and I agree with Latour's (2018) proposition that this age, that he calls the New Climate Regime, calls us to come back down to Earth in response to the materiality of a planet in crisis.

Latour (2018) suggests that we need to re-describe everything from a new viewpoint that takes non-humans as agents; he takes an anthropology of the modern world as his suggested approach (Latour, 1993, 2018). Although, I well take Latour's point, I believe that research that can help coalesce minor modes of thought within the dominant Holocene episteme must take an ontologically different starting point as the evidence of the Anthropocene, the intertwining of Earth and humans, calls for this. I and

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others believe that Latour has paved the way for this but does not step far enough towards ontology (Chen et al., 2013).

Taking a different ontological stance as the impetus for research in the Anthropocene also requires detailing related axiological and epistemological stances which naturally leads to breaks with old methodologies. Philip Payne (2018) calls this the quad of onto-axio-episte-methodology. The Anthropocene and the entanglement between the members of the quad call for (re)theorizing and (re)searching in ways that break with traditions of the dominant episteme if needed change is to be achieved.

The rest of this dissertation will detail my answer to the above call. As my own background and interest in this problem comes from problems with science education and environmental and sustainability education (ESE), part of this dissertation develops concerns around those fields. But, the nature of the problem outlined above, requires an expansive and almost non-disciplinary discussion. In general, I inquire under a non-dominant quad which I will detail further in following sections. I want to make the point here that the quad I will be proposing is not the only quad meant to resist a dominant framing of the world and aspire to social change. My hope is that the quad that I adhere to here can support, converse, and intermingle with other resistant framings as a shift in episteme requires resonance among many minor modes of thought. My work here is just a beginning and would never be strong enough on its own to 'change society', but this does not mean that I should not put forth the effort with that eventual aim. What this means is that while I am often coming from education and a particular tradition in philosophy that I am open to connection with other fields and ways of framing the world.

I believe that this approach, openness and connectedness, remains the best way through the Anthropocene.

The problem framed through a discussion of the Anthropocene includes dominant ways of knowing and action as seen in the momentum of the AWG argument around: How did we get here; and What should we do now? I have often relied on Lövbrand et al.'s (2015) framing of post- nature, social, and political to discuss the AWG argument. I have expanded and given more detail of those critiques through other theorist coming from philosophy, the social studies of science, Indigenous perspectives, and political science. In general, I see a way forward from these critiques in de-centering the human, de-centering science, and re-centering power and politics. I will now move the conversation toward education, and then I will detail some of the quad I will be working with.

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Neoliberal Politics and Policies in School

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Education is often concerned with formal schooling. Although learning is not necessarily considered confined to classroom walls, the captive audience of school children within the classrooms seems to be the focus of much research and policy. Derby (2015) argues that "we have come to experience 'school life' and learning as fundamentally prosaic; characterized by fragmentation, emotionlessness, and exacerbated by the privileging of epistemic foundations such as anthropocentrism, reduction, linear causality, and dualism" (p. 25). These privileged epistemic foundations mirror much of what was discussed in tensions within the Anthropocene debate.

School is one of the institutions that simultaneously is thought to have played a part in our current environmental crises and to be capable of bringing us out of the same

problem. Many international declarations have considered education to be the driver of change in the face of problems of sustainability and environmental degradation (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2005; United Nations Educational, Scientific, and Cultural Organization– United Nations Environmental Programme [UNESCO-UNEP], 1976). This reflects the same logic as humans are the problem, humans are the solution, in that school is a problem and school is a solution. This means that calls for school/education to alleviate our environmental crises assume that school as it stands is just missing something with 'something' being just the right content and pedagogy (educational method in this case). This idea remains rather uncritically naïve, and many theorists worry that the institution may not be compatible to needed changes (Jickling, 2017; Sterling, 2017; Stevenson, 2007). With this in mind, I review schooling's intimate connection with neoliberalism in the United States.

Many theorists see schooling as a socially stabilizing structure not a socially transforming structure (Apple, 1982; Ball, 1994; Sterling, 2017; Stevenson, 1993). These theorist claim, and I agree, that schools tend to reproduce the societal values in which they are embedded. In this case, schools serve to institutionalize neoliberalism within the Holocene episteme. Particularly in the U.S., the education policy documents, *A Nation at Risk* and *No Child Left Behind* (NCLB), instate a neoliberal agenda by framing education as a means to be more internationally competitive economically and installing a panopticon of control mechanisms to maintain that frame.

A Nation at Risk, a Reagan era proclamation, states in its second sentence that "[o]ur once unchallenged preeminence in commerce, industry, science, and technological

innovation is being overtaken by competitors throughout the world" (A Nation at Risk, 1983, para. 2). Recall from the previous discussion that the Reagan administration successfully installed neoliberalism into the U.S. political system as the dominant discourse. Not surprisingly, *A Nation at Risk*, framed the problem of education in market terms.

It was not until the George W. Bush administration that the control mechanisms of neoliberal education were developed and disseminated. I referred to this as the panopticon of neoliberal education. I borrow this term from Foucault who argues that the panopticon employs "norms, rules, and routines directed by external power" (Gruenewald, 2005, p. 82) that serve to assimilate the purpose and function of the regime of power so that the subject of the power practices self-discipline. The purpose and function of this particular panopticon ensures the neoliberal values of individual choice and competition that undergird a commitment to growth economics and privatization remain the focus of education.

No Child Left Behind (NCLB) accomplishes control with a series of moves from rhetoric of accountability to turning over accountability structures to curriculum and testing companies like Pearson and McGraw-Hill. NCLB states the aim that "each State accountability system shall...include sanctions and rewards...to hold local educational agencies and public elementary schools and secondary schools accountable for student achievement...." (No Child Left Behind [NCLB], 2001, Subpart 1, Part A, Sec. 1111, (b)(2), iii). This policy explicitly attempts this through mandating high stakes testing and the publishing of those results with penalties for low performance and rewards for high performance on standardized tests. NCLB says "each state accountability system

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shall…include sanctions and rewards…to hold local educational agencies and public elementary schools and secondary schools accountable for student achievement….” (NCLB, 2001, Subpart 1, Part A, Sec. 1111, (b)(2), iii). To receive federal money, states must assure that the mandates are followed including publicizing test scores and schools making annual yearly progress toward all students' required performance on tests.

NCLB, infused with the idea that 'there is no society', takes accountability to be the solution for educational inequity. The implication here remains that historically low performing schools are low performing due to a lack of being held individually responsible. NCLB makes no move to relieve societal and economic inequities on which educational inequities are founded. In fact, it explicitly states that "nothing in this title shall be construed to mandate equalized funding spending per pupil for a State, local educational agency, or school" (NCLB, 2001, Part I, sec. 1903 (a)(2); sec. 1906). So, with no other 'solution' than accountability, NCLB serves the neoliberal state as a system of surveillance and coercion, a panopticon.

Without additional funding, the downstream effects of NCLB on low performing schools typically serving lower socioeconomic neighborhoods manifests as a narrowing of curriculum and a strategy of teaching to the tests; on the other hand, traditionally high performing schools keep their more diverse (arts, music, social studies) curriculum intact and exercise creative pedagogies (Webb et al., 2009). Webb et al. (2009) point out that "this narrowing of curriculum to produce the appearance of equity (by making the test scores on a few subject areas equal) actually produces a further stratification of knowledge as other subject areas are sacrificed to dominant subject areas reified by test score requirements" (p. 8). Thus, the redistribution of access to knowledge mirrors the

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redistribution of wealth in the neoliberal regime; it continues upward, ensuring that those

benefitting from neoliberal ideologies remain in positions of power.

The testing (surveillance) and rewards and sanctions (coercion) represent the

neoliberal panopticon in schooling serving, strategically, the neoliberal regime. Although

rhetoric of freedom and democracy can be found in neoliberal discourse, NCLB remains

an example of undemocratic rule by coercion and terror. Lyotard (1984) explains:

> By terror I mean the efficiency gained by eliminating, or threatening to eliminate,
>
> a player from the language game one shares with him. He is silenced or consents,
>
> not because he has been refuted, but because his ability to participate has been
>
> threatened. The decision makers' arrogance consists in the exercise of terror. It
>
> says: 'Adapt your aspirations to our ends—or else.' (p. 63-64)

This reign of terror falls into the same pattern (although in education it is more directly

coercive) as the pattern of green consumerism. Neoliberalism defines the problem and

the solution in market terms (here competition, there consumerism) inviting participation

at the end which amounts to having the choice of participating or not participating as

neoliberal framing severely limits the possible direction and scope of action for

individuals.

So, the current culture of schooling includes student achievement as defined by

predominately standardized multiple choice tests, accountability for student performance

mostly resting on teachers, individual competition in rankings from students to schools,

and terror used to enforce these ideas (Webb et al., 2009). Ultimately, what schools teach

must fit into this culture, and it should not disrupt the neoliberal purpose. Current school

discourse allows any subject as long as it is tied to individual student achievement in

reading and math and/or can be defended as a needed 21st century skill in job markets. Thus, reading and math proper as well as science, technology, engineering, and mathematics (STEM) receive the most attention. In the following sections, I will discuss environmental and sustainability education (ESE) and its place in schools.

History of Environmental and Sustainability Education and Schooling

It remains difficult to discuss ESE in school mostly because it does not really exist there. To explain this, I will give a brief history of ESE followed by an explanation of where it stands now. ESE began, and is still adhered to by some, as environmental education (EE) so our history begins with EE.

Explaining EE in schools presents no lesser challenge than explaining ESE. Not only has EE morphed and evolved through its own internal struggles, but it has also been taken up in schooling in such a way that it alters, and some say incapacitates, its original aims and power (Jickling, 2017; Stevenson, 2007). The internal struggles within EE, seen mostly through EE researchers and theorists, resulted in fragmentation among the EE community. These internal struggles directly relate to EE and its relationship with neoliberal schooling and older roots in Western thought.

EE was birthed during the time of rising neoliberalism, around the 1970s. Within its DNA, it contains traces of its ancestors: late nineteen century nature and outdoor studies, early twentieth century nature conservation, and late twentieth century environmentalism (Jackman, 1891; Leopold, 1949; Stevenson, 2007; Robertson, 2012). As EE began to rise, so too did neoliberalism. In fact, some cite the force of EE as one of the aspects of social justice that conservative think tanks were developed to defend against (Neubauer, 2011).

With the creation of the Environmental Protection Agency (EPA) in the U.S. and the support of the international community as seen in the United Nations Educational, Scientific, and Cultural Organization's (UNESCO) Belgrade Charter (UNESCO-UNEP, 1975) and Tbilisi Declaration (UNESCO, 1977), EE looked to be coming into its own prior to 1980 (the rise of the Reagan administration and neoliberalism). The Belgrade Charter defined EE stating:

> The goal of environmental education: is to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and the preventions of new ones. (UNESCO-UNEP, 1975, p. 3)

This provided the first official EE definition, but EE is additionally enhanced by its historical commitments including a personal connection with nature (Jackman, 1981), an understanding of natural systems through ecology (Leopold, 1943), a critical social component, and a call to action on behalf of a devastated planet (Carson, 1962).

The decades between 1970 and 1990 saw the rise and consolidation of neoliberal power. With this rise, conversations around education in the U.S. were shaped by *A Nation at Risk*. Neoliberal education's aim was to produce an internationally competitive work force. But EE's asked that individuals "become thoughtful, skillful, active citizens in a democracy" (Simmons et al., 1993, p.3). I have previously discussed that although rhetoric around neoliberalism is infused with freedom and democracy, neoliberalism tends to invite 'choice' at the end of problem framing, and that choice has more to do with consumerism and competition than it does issue of social and environmental justice.

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So, as EE was shaping an agenda to integrate into schools in the form of the National Project for Excellence in Environmental Education (NPEEE), EE worked at cross purposes to dominant ideologies and policies set in place to enforce them. Martinez-Rodriguez and Fernandez-Herrera (2016) contend that one of the principle effects of neoliberal thought is to "deny the possibility of alternative ways of organizing both societies in general and education in particular" (p. 2), and this unfolds over the story of EE and ESE in schooling.

EE was not naturally compatible with neoliberal school in that it was highly transdisciplinary and contextual while neoliberal schooling is atomized in distinct and separate disciplines and universalized through standardization. Theoretical underpinnings of EE were outlined in the NPEEE. The NPEEE identified the theoretical elements of EE as (Simmons et al., 1993 p. 2-4):

1. Systems: The world is complex and can only be understood by the relationships' interactions among the parts.

2. Interdependence: We and the systems we create—our societies, political systems, economies, religions, cultures, technologies—impact the total environment.

3. The importance of where one lives: Beginning close to home develops skills needed for this local connection to provide a base for moving out into larger systems.

4. Integration and infusion: Disciplines from the natural sciences to the social sciences are connected through the medium of the environment and environmental issues.

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5. Roots in the real world: Learners develop knowledge and skills through direct experience with the environment, environmental issues, and society.

6. Lifelong learning: Critical and creative thinking, decision making, and communication, as well as collaborative learning, are emphasized.

In the above theoretical strands, we can see many elements that are at odds with individual competition such as "critical and creative thinking, decision making, and communication, as well as collaborative learning" (Simmons et al., 1993 p. 4). Additionally, we see the "importance of where one lives" (Simmons et al., 1993 p. 3) to be in conflict with national, universalist standards. Also, schools prior to and during neoliberalism were structured by siloed disciplines that conflict with ideas like "integration and infusion" (Simmons et al., 1993 p. 3) of a wide variety of traditional disciplines. Although the NPEE framework sought to package EE into a form suitable for integration into schools, we see that, at an ideological level, there were incompatibilities with EE's prioritized aims and long-standing structures of disciplines and aims of standardization in schools.

This incompatibility surfaced in a series of pressures on EE. First, in the 1990's, the American Association for the Advancement of Science (AAAS) and the Independent Commission on Environmental Education (ICEE) criticized EE for its lack of science content. They claimed that environmental literacy, the center of the agenda for EE, focused too much on issues and not enough on the science of ecology (McBride et al., 2013). Here we see the first fracture among the EE community.

Researchers affiliated with the Ecological Society of America (ESA) took up the call from the AAAS and the ICEE turning away from the focus on resolving

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environmental issues to knowing and understanding the basic scientific knowledge within the discipline of ecology as the main component of EE. This professional body of ecological scientists withdrew from the EE collective to eventually outline ecological literacy as the more scientific alternative to environmental literacy (Ecological Society of American [ESA], n.d.). Although some individual researchers saw ecological literacy working in conjunction with civic literacy in EE (Berkowitz et al., 2005), the socio-political aspects of environmental issues were dropped by the ESA as they formed their own set of standards in 2014 focusing on the science of the environment (Berkowitz et al., 2018).

Standardized Testing

The second pressure on EE came in the form of standardized testing. The North American Association for Environmental Education (NAAEE) responded to pressure from the Environmental Protection Agency (EPA) Office of Environmental Education, the National Environmental Education Advisory Council, and the National Council for Science and the Environment to develop a standardized assessment of environmental literacy. Over time this response took two forms. The first form came in the further disciplining EE into an assessable structure, meaning researchers and test makers attempted to make EE into its own distinct discipline. The second was the development of measures to assess the effectiveness of EE curricular programs.

One problem researchers and test makers identified in testing environmental literacy centered on its transdisciplinary nature, thus a first step in assessment design was to define and organize the domain of environmental literacy as a separate from traditional domains like biology or geology (Organization for Economic Co-operation and

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Development [OECD], 2009). As mentioned above, the NAAEE developed a framework of EE in response to international educational policy calls. That project, the NPEEE, tried to align EE with various existing standards in a transdisciplinary nature. Using NPEEE as a starting point, a team of EE researchers and Programme for International Student Assessment (PISA) representatives created a testable domain of environmental literacy. This framework focused on competencies including ecology and issue identification, but it stopped short, excluding the action component of EE.

With a cohesive framework, work remained to be done on developing assessments, the need for assessment was both to integrate and legitimatize EE in formal schooling and to inform "educational leaders, policy makers, researchers and educators … on the status of environmental literacy" (Hollweg, et al. 2011, p. 1-3). Knowing the status of environmental literacy through testing would allow for evidence-based curriculum to be developed and further tested. This goal resonates with accountability goals of neoliberalism as seen in NCLB.

The reduction of EE through these pressures signals a form of institutionalization subject to the neoliberal norms of general education (Gruenewald & Manteaw, 2007). Gruenewald (2004) argues that seeking to align with the dominant discourse of education through standardization and assessment (as seen above) and additional claims of enhanced standards-based achievement in traditional (non-EE specific) disciplines represent a form of panopticisim. Meaning that efforts to conform to the discourse of neoliberal schooling cause environmental educators themselves to excise non-neoliberal elements including social critique, activism, and overall aims at social and education transformation from EE. Thus EE, as originally conceived, lost its radical potential for

educational and social change when it lost its transdisciplinary, place-based, and socially critical facets due to "conflict with the dominant practices in schools, which emphasize the passive assimilation and reproduction of simplistic factual knowledge and unproblematic 'truth'" (Stevenson, 2007).

In concluding the brief history of EE, it is important to note the EE suffered further pressures from the international arena as it was trying to, in good faith, integrate into schooling. The World Conservation Strategy (WCS), the Brundtland report and other smaller investigations culminated in Agenda 21 of the United Nations Conference on Environmental Development (UNCED) in Rio de Janeiro in 1992 (Tilbury, 1995). A multinational body recognized that education was central to sustainable development and called for "the re-orientation of environmental education towards sustainability" (Tilbury, 1995, p198). At this point, UNESCO began to pursue the idea of education for sustainable development (ESD). This left NAAEE and many U.S. educational researchers still pursuing environmental literacy in EE with less enthusiastic support of the international community.

Eventually, the move to incorporate sustainability led to many referring to environmental and sustainability education (ESE) in place of EE although EE and education for sustainable development (ESD) are still used. There are fractures and debates around the naming, and adding sustainability adds a more human dimension to be considered in concert with the environment, but those remain outside of the scope of this dissertation. Generally, ESE is linked strongly to EE and has been subject to similar neoliberal pressures, and in ESE many of the same transdisciplinary and contextual elements seen in EE remain its theoretical base.

Above I have briefly illustrated neoliberalism's conforming force on EE, and earlier I mentioned that ESE really does not exist in school, at least not in the form originally espoused by the NPEEE. Currently, ESE in school is housed under science, technology, engineering, and mathematics (STEM) and is subject to control by standards, particularly seen in the Next Generation Science Standards (NGSS). With this in mind, I discuss NGSS and ESE.

The Next Generation Science Standards and ESE

As one last illustration of neoliberal forces in schooling and to further elaborate on the state of ESE in connection with science education, in the following section, I will discuss the newest set of standards guiding science education in the U.S., the Next Generation Science Standards (NGSS).

With the international and national focus on environmental degradation and EE/ESD, one might assume that current science reforms would incorporate EE or sustainability related topics and practices as a major component of the NGSS. One would be wrong. The NGSS shifted science education to science, technology, engineering, and math (STEM) education. Recent critiques of the NGSS explore its connection to neoliberalism and find the standards to be universalist, technocratic, utilitarian, and rooted in scientism excluding social critique and portraying science as an apolitical endeavor (Bencze, 2010; Carter, 2005; Feinstein & Kirchgasler, 2015; Gunckel & Tolbert, 2017; Hoeg & Bencze, 2017; Weinstein, 2017). To better understand these specific critiques, first I will explain the development and structure of NGSS.

History and Development of the NGSS. The genesis of the NGSS involved the work of 18 "practicing scientists, including two Nobel laureates, cognitive scientists,

science education researchers, and science education standards and policy experts" (Next Generation Science Standards [NGSS], n.d.a, para. 3) as well as the efforts of the organization Achieve. The process of standards development occurred in two steps. The first step saw a committee of experts mentioned above working with design teams in the distinct disciplines of physical science, life science, earth and space science, and engineering to create a framework to guide development of detailed practice-oriented standards (the framework step). The second step (the standards step), coordinated by Achieve, saw the practical standards "developed collaboratively with states and other stakeholders in science, science education, higher education, and industry" (NGSS, n.d.b, para. 3) culminating in implementable performance expectations (PEs) aimed at teachers and curriculum designers. Additionally, the NGSS documents claim that the standards are urgently needed as U.S. students' science and mathematics achievement lags behind international competitors causing grave concerns for our nation's ability to innovate for economic growth (National Research Council [NRC], 2012).

The second standards development step has clear neoliberal language of competition and commodification of students as human capital to be used by the nation state (Bencze, 2010; Carter, 2005; Weinstein, 2017). Additionally, the standards development step explicitly included industry partners as critical stakeholders. The justification for the urgency surrounding the NGSS development and implementation explained above is reminiscent of the *A Nation at Risk* (NAR). Recall we marked NAR as neoliberalizing U.S. schools, and No Child Left Behind (NCLB) as dictating that U.S. states adopt and be accountable for high stakes testing that performs the disciplining function often attached to standardization; many researchers see the NGSS as fitting into

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the neoliberal trajectories set out by NAR and NCLB (Bencze, 2010; Carter, 2005; Weinstein, 2017).

As discussed earlier, many theorists consider high stakes testing and standardized education as hallmarks of neoliberal influence on education. The PEs that make up the body of the practical NGSS standards appear written with control and testing in mind. Weinstein (2017), who attended many of the development open-forum meetings for the NGSS, asked why the PEs seemed so minute and narrow and was told, explicitly, that testing companies intervened in the language of the PEs so that concepts were rendered more testable. Additionally, a critical discourse analysis of the PEs performed by Hoeg and Bencze (2017) showed that the majority of the PEs were so constraining that teachers would have no creative agency in their implementation, forcing the NGSS interpretation of science across the body of school science in the U.S.

Adding Engineering to the NGSS. It is not only the discourse within the framework and the NGSS that signal neoliberal tendencies, but it also what was included and excluded as content of the standards. "Apple (1979) notes, curricula embody a selective tradition, certain versions of science are promoted and others rendered invisible" (Weinstein, 2017, p. 825). Previous iterations of science reforms had included social and cultural approaches to science (DeBoer, 2000), but the framework committee found previous school science to be fragmented, teaching only a collection of facts and loosely related social issues. They blamed the diffuse nature of the content for poor student performance on national and international tests, calling the previous, flawed science curriculum a mile wide and an inch deep (NRC, 2012). Ironically, the development committee's tack for improvement included adding an entirely new

discipline to the framework, engineering, but cutting down on the social dimensions of science (NRC, 2012).

The incorporation of engineering into science education particularly in the form of STEM has alarmed many critics of mainstream science education (Bencze, 2010; Carter, 2005; Feinstein & Kirchgasler, 2015; Gunckel & Tolbert, 2017; Hoeg & Bencze, 2017; Weinstein, 2017). The rise of STEM education originates with claims that we need more U.S. STEM professionals even though researchers and analysts hotly contest that claim (Gunckel & Tolbert, 2017). Those skeptical of the nation's reported STEM needs explain that U.S. companies outsourcing engineering and mathematical work to other countries such as China and India do so due to lower wages in those countries, not due to a shortage of qualified U.S. workers. The fact that more than 100,000 U.S. engineers remain unemployed adds weight to their claim (Teitelbaum, 2014). Some critics go as far as to insinuate that the perceived need for more STEM workers stems from a desire on the part of U.S. companies to flood the U.S. workforce with this type of human capital driving down wages at home (Gunckel & Tolbert, 2017).

Even more concerning is the idea that our reformation of school science in the U.S. toward STEM ideologically drives us toward a regressive, rationalist, curriculum characterized by scientism and away from the socio-political aspects of science, leaving school science incapable of supporting ethical citizenship with regards to science (Zouda, 2018). Although the NGSS includes "Links among Engineering, Technology, Science and Society" (ETS2) (NRC, 2012, p. 202) as a core disciplinary idea, no PEs exist related to this topic while PEs do exist for "Engineering Design" (ETS1) (Gunckel & Tolbert, 2017; NRC, 2012, p. 202). This exclusion resonates with the supposition that engineering

as put forth in the NGSS remains technocratic and utilitarian, driven by neoliberal

ideologies (Gunckel & Tolbert, 2017; Zouda, 2018).

Technocracy rests on the idea that technology can provide solutions apolitically.

For example, the U.S. reacted to the outbreak of the Zika virus, not by dealing with

underlying social and political causes like global warming and urban overcrowding, but

instead by pursuing the development of a vaccine and genetic modification of mosquitoes

(Weinstein, 2017). Additionally, technocracy relates to the technological optimism

around climate change in that many people see engineering and technology as the best

and only answer to issues of global warming in place of social and political responsibility

to our planet and one another (Orr, 1992). Essentially, technocratic approaches gloss

over underlying socio-political factors reducing social problems to technical problems

that can be solved by experts apolitically (Gunckel & Tolbert, 2017). This shifts our

view of socio-scientific problems to rational scientism and away from the social,

political, and ethical.

This shift occurs in subtle ways throughout the NGSS. The NGSS defines

engineering problems as "situations that people want to change" (NRC, 2012, p. 220).

Additionally, Achieve Inc. (2013) suggests that some science is worth knowing and some

not:

> Not all content is equally worth learning. Some science concepts deserve the
>
> lion's share of instruction because they have explanatory or predictive power or
>
> provide a framework that facilitates learning and applying new knowledge. (p. 3)

Regarding engineering, content worth learning is exemplified in the PE's. Not only do

engineering specific standards in the NGSS ask for technological fixes but so too do

standards throughout the non-engineering disciplines in the NGSS to include the standards that aim to focus students on human impact on earth systems (ESS3). Throughout the NGSS, technological fixes are highlighted at the expense of other kinds of science and social approaches including observation (Merritt & Bowers, 2019) and ethical action (Gunckel & Tolbert, 2017).

Throughout the NGSS, typical ESE concerns including sustainability and human impact on Earth systems remain subordinate to the technology and engineering practices. Researchers argue that "at each step, context, complexity, and conflict are minimized to produce certainty, calculation, and clear-cut comparison of design solutions" (Feinstein & Kirchgasler, 2015, p. 134) that treat ecological and sustainability concerns as "a set of neutral, quantitative problems, biophysical rather than sociopolitical" (Feinstein & Kirchgasler, 2015, p. 134). The 'neutrality' of technocratic, utilitarian, and scientism approaches are further enforced by a universalism that strips away the importance of place in learning about ESE.

The NGSS frames environmental and sustainability problems as global and encourages practices of modeling (universal) over observation (place based) (Feinstein & Kirchgasler, 2015; Gunckel & Tolbert, 2017; Merritt & Bowers, 2019). Topics in the NGSS around ESE (i.e., soil erosion and waste management) are decontextualized from place and presented as global problems. The NGSS makes no suggestion to include community or local sources of these phenomena (Feinstein & Kirchgasler, 2015). Additionally, the NGSS does not include observation, an important ecological place-based practice, in either ESSE-3, Earth and Human Activity or LS-2, Ecosystems: Interactions, Energy, and Dynamics, two core ideas that have the most alignment with

ESE (Merritt & Bowers, 2019). In fact, middle and high school students are not asked to observe at all (Merritt & Bowers, 2019). This lack of observation as a scientific practice not only shows that the NGSS does not promote place-based pedagogies, but it is also in line with the allegations that the NGSS favors quantitative measures over qualitative measures in keeping with the theme of scientism (Feinstein & Kirchgasler, 2015).

Many scholars see the exclusion of the socio-political from ESE and science topics in the NGSS as a neoliberal move (Bencze, 2010; Carter, 2005; Weinstein, 2017; Zouda, 2018). This exclusion accompanied by the techno-optimism and scientism is termed ecological modernization (Feinstein & Kirchgasler, 2015). Researchers feel that this view of ESE can lead students to believe that ESE issues like global warming and environmental degradation remain apolitical and solvable, not through social or political action, but instead through a technology and engineering (Feinstein & Kirchgasler, 2015). These moves mirror the depoliticization of the environment and the technological optimism discussed in the earlier sections of neoliberalism and neoliberalism and the environment.

At this point, it comes as no surprise that national standards convey the discourse of neoliberalism and hold no mention of ethical action toward or entanglement with the non-human. This above section means to illustrate the current state of science education and ESE in the U.S. The above sections look at ESE in schools. Additionally, we are aware that even with a socially critical component, ESE units may be missing activities that foster children's development of relationships with non-human others in a way that is neither resource manager nor protector. The direction that the NGSS takes seems to leave us with little hope that all the concerns of ESE can be addressed in school. Those

concerns include socio-political and science awareness of environmental issues, autonomous thinking around those issues, the development of ethics that includes consideration of the non-human other, and opportunities to act. I have shown that neoliberalism subverts these concerns and reframes them into a discourse of individual responsibility, development of technology for new markets, development of new human capital skill particularly in engineering and technology, and an apolitical, scientism view of environmental problems.

ESE researchers and educators have made good faith efforts to bring ESE to schooling but have been thwarted by several neoliberal mechanisms that do not bar ESE, but instead coopts its efforts until ESE no longer retains the capacity for social change. I believe that the problem with the neoliberal cooption of ESE and science lies in a conflation and often an omission of ontology, axiology, and epistemology on the part of researchers resonant with the same conflation and omission by AWG proponents of the Anthropocene. There is no hope for ESE if we take as our starting point neoliberal rationalities as demonstrated above by the continual cooption of ESE into neoliberal discourses. If the only world we can imagine is the 'real' world of standards, testing, and individual competition and responsibility, then ESE will most likely remain a sub-set of neoliberal science education. This is quite similar to Baskin's (2015) claim that although AWG Anthropocene debates seem to hold the possibility of disrupting the dominant narrative that caused the Anthropocene, it seems likely that its reliance on institutions for change is more likely to reinforce dominant neoliberal and humanist narratives. In other words, analogous to that claim, although ESE holds the possibility of disrupting the dominant narrative that caused the Anthropocene, it seems likely that relying on

schooling to implement changes through ESE is more likely to change ESE

fundamentally, not schooling or dominant narratives.

Challenging the Dominant Episteme with ESE.

I would like to recall here that the Holocene episteme has cracks illuminated by

the debates around the Anthropocene, and I would like to suggest that ESE could be part

of widening these cracks. Although some researchers and educators in ESE have

conformed to schooling's demands, many remain resistant. Some ESE researchers take

issue with standardization and assessment of ESE, calling it instrumental and behaviorist

and classifying it as outcomes-based EE (Jickling & Spork, 1998; Gruenewald, 2004;

Wals & van der Leij, 1997). Wals and van der Leij (1997) claim that "some have tried to

instrumentally structure environmental education content, and the way it is presented to

students, using hierarchical levels of universal goals and objectives" (p. 10). This group

of critics frames ESE as a "participatory *process* that can lead to educational change" and

frame those in favor conforming to standards-based initiative as holding a "behaviorist

view which basically holds that environmental education is an instrument that can modify

behavior" (Wals & van der Leij, 1997, p. 10). Additionally, critics of standardization

argue that ESE should seek to develop autonomous thinking about environmental issues,

and this cannot be achieved through "prescribed behavioral outcomes that a learning

activity, or sequence of activities, needs to foster" (Jickling & Spork, 1996, p. 19) as seen

through the efforts to test environmental literacy.

These same critics also take issue with the absence of critical pedagogies and

methods that question the relationship between unequal distribution of wealth, the

commonsense logic of striving for economic growth, and unequal access to education in

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connection with environmental problems (Gruenewald & Manteaw, 2007; Jickling & Wals, 2013; Jickling & Spork, 1996; Lotz-Sistka, 2017; Sauvé, 2017; Wals & van der Leij, 1997). They further claim that missing in the standardization of EE/ESE is the promotion of debate and reflection where "all participants feel free to discuss and make explicit their values" (Wals & van der Leij, 1997, p. 5) which they see as central to democratic education. Interestingly, many of these arguments predate the AWG Anthropocene debate, and I see that resistance in ESE to neoliberal schooling may be part of the minor-modes of thought that can coalesce into a new episteme.

Above, I have outlined debates within the Anthropocene and have suggested that they illuminate cracks in the dominant episteme. I discussed that shifting toward a new episteme may entail de-centering the human, de-centering science, and re-centering politics and power. I briefly discussed neoliberalism and detailed its manifestation in environmental issues and school. I then narrowed my discussion to neoliberal pressures in ESE. At the end of the ESE discussion, I suggest that ESE retains a resistant strand to neoliberal pressure which may be taken as the potential to de-center science through its transdisciplinary and re-center politics and power if approached critically.

Although ESE innately concerns the non-human, education research has yet to widely incorporate more-than-human theories and approaches (Tuck & McKenzie, 2015; Seawright, 2014). Alan Reid (2019), in discussing the collective research found in the *Journal of Environmental Education Research* and educational research in general, states that "a glaring blind spot to recognize within most education research is how deeply anthropocentric it is" (p. 159). Current research methodologies in education remain mired

in humanistic traditions that foreground humans in context, humans in environments, as well as human agency and identity as drivers of the world (Snaza & Weaver, 2014).

The effort to de-center the human, I believe, is wrapped up intimately in the philosophical/methodological quad, but I will suspend that discussion for one more section. At the end of the previous section, I suggest that ESE may be a site of resistance to dominant thought. I would like to continue this push away from detailing the action of dominant thought toward possibilities of resistances and shifts. In the next section, I will discuss place.

The Promise of Place

I believe place to be a productive topic because it automatically includes more-than-human entanglements, it has the potential to allow for exploration of spacetime in that may allow researchers to establish a materiality that is lacking in both the Global and Local, and place-based research in ESE has been thought to work against the constraints of school (Smith, 2007).

Place-Based Education

Smith and Sobel (2012) see place-based education as an antidote to standardized curriculum as it strives to include the local community and environment as a site of learning. Smith (2007) believes that place-based education where it is practiced well "exemplifies the vision of environmental and civic education articulated in environmental education's foundational documents" (p.190). In place-based education, students embark upon learning experiences shaped by their specific local community. In this way, place-based education is always unique from place to place and connects more authentically with students' lives (Orr, 1992; Semken & Freeman, 2008; Smith & Sobel, 2012). There

are numerous examples of students participating in place-based research that have led to river clean up (Bouillion & Gomez, 2001; Dimick, 2012; Smith, 2007; Wessells, 2010), conservation projects (Meadows, 2011; Powers, 2004) improved air quality (Smith, 2007), and wildlife protection (Smith, 2012; Tolbert & Theobald, 2006).

Critical Place-Based Education

Most place-based activities in school entail students learning about and often correcting environmental problems, but they rarely ask why there was a problem in the first place. This led Gruenewald (2003) to advocate for a critical pedagogy of place. Critical pedagogy of place combines the traditions of critical pedagogy and ecological place-based pedagogies (EPBP). Critical pedagogy can be described as:

> An effort to work within educational institutions and other media to raise
>
> questions about inequities of power, about the false myths of opportunity and
>
> merit for many students, and about the way belief systems become internalized to
>
> the point where individual groups abandon the very aspiration to question or
>
> change their lot in life. (Burbles & Berk, 1999, p 50).

In light of our above discussions about neoliberal forces in schooling, critical pedagogy seems particularly salient, but Gruenewald (2003) claims that by itself critical pedagogy tends to focus on human only affairs overlooking any inequalities having to do with the non-human. Gruenewald (2003) believes that adding the precepts of EPBP may widen the scope of critical pedagogies.

EPBP is part of the traditional place-based education described earlier. The power of the EPBP approach rests with its challenge to traditionally standardized experiences of education that remain the norm across the U.S. (Gruenewald, 2003).

EPBP at its best: a) arises from the specific characteristics of place; b) is inherently transdisciplinary; c) is always experiential; d) reflects and promotes an educational philosophy that has more breadth than 'learning to earn'; and e) connects place with individuals in their community (Woodhouse & Knapp, 2000). Although EPBP pushes at the bounds of traditional pedagogies, Gruenewald (2003) claims that "in its focus on local, ecological experience, place-based approaches are sometimes hesitant to link ecological themes with critical themes such as urbanization and the homogenization of culture under global capitalism." (p. 4). Gruenewald (2003) sees both critical and EPBP as reciprocally lacking what the other needs to challenge their mutual marginalization by the neoliberal discourse of accountability and economic competitiveness in current mainstream education.

Although place-based examples seem to point to the possibility of moving past the "constraining regularities of public school", they are actually quite rare (Smith, 2007, p. 189). Even engaging with the environment and community outside the classroom walls to support a unit of study that is normally completed on paper in the classroom remains rare (Smith & Sobel, 2014). Successful and robust place-based examples require connection with community members or non-school organizations, interdisciplinary knowledge, and time (Bouillon & Gomez, 2001; Smith & Sobel, 2014). Most exemplars of place-based learning come through collaboration and support of many people including researchers, teachers, administrators, and community members (Bouillion & Gomez, 2001; Dimick, 2012; Smith, 2002; Smith & Sobel, 2014; Wessells, 2010). Many adults may play a role in ushering place-based learning through successfully, and this is very different that one teacher working on standard curriculum with 30 students.

Although robust place-based education occurs, teachers often are working against conventional constraints, and sometimes place-based education is used only through the limited time it is supported by administration or through researcher/practitioner collaboration and then ends (Smith, 2007).

Place-based education seems to be a bright spot and a minor gesture particularly with regard to de-centering and integrating science through authentic contexts that require transdisciplinary knowledge and, at times, different ways of knowing (Semken & Freeman, 2008; Smith, 2007). With regard to re-centering questions of power and politics, place-based education exhibits that capacity, but it runs into more constraints within the school system than place-based education that does not critically engage (Gruenwald, 2003; Smith, 2007), and this does not seem to be espoused as an innate feature of place-based education. Questions of de-centering the human with place-based education are not as clearly answered through the examples above, and some theorists believe that the place-based education above remains tied to humanism and fails is radical potential to work in more-than-human ways (Fletcher, 2017; Taylor, 2017; Seawright, 2014).

Connection to Nature and Stewardship

Place-based education has been shown to be good for academic achievement, but many in ESE are just as concerned about its potential for developing a sense-of-place or a connection between individuals and place that fosters a sense of care or stewardship (Blanchard & Buchanan, 2011; Chawla & Rivkin, 2014; Cutter-Mackenzie et al., 2014; Davis & Elliot, 2014; Smith, 2007; Sobel, 1996). For Semken and Freeman (2008), "in place-based teaching, the most important senses of place to consider are personal

meaning and attachments that exist between each student and the place or places offered as the context of the curriculum" (p. 1045). Chawla (2009), one of the leading proponents of the connection-to-nature aspect of place-based education, contends that this type of education acts as a "socialization to value and care for nature" (p. 8). Generally, many researchers in this field argue that students' biophilia, their innate love of nature, can be nurtured predisposing them towards environmental stewardship (Chawla, 2009; Chawla & Riven, 2014; Lysack, 2010; White, 2004; Wilson, 2007). Although, Steffen et al. (2011) and Crutzen (2006) do not mention a sense of place, they do mention stewardship and human behavior change respectively. This seems to be a more detailed argument around the what and how of behavior change that moves beyond just more information will change behavior.

Critiques of Placed-Based Education

Taylor (2017), a critic of biophilia and connection-to-nature position, argues that normative place-based education approaches that hope to create stewards is far too human-centered to effect the kind of episteme shift that I discussed earlier. She writes:

> Although well-meaning, they do not lead us towards radically rethinking ourselves, our place and our agency in the world. Indeed, drawing directly upon a resolutely twentieth century humanist social change agenda, stewardship pedagogies inadvertently rehearse the entrenched sense of humans' exceptionalism (Taylor, 2017, p. 1453).

Taylor sees stewardship aims of place-based education as reinforcing the idea that nature is separate from humans advocating a position that only human volition and agency can solve our environmental crises. The stewardship aims as framed above also run perilously

close to what Jickling and Wals (2013) calls Big Brother ESE with educators and researchers defining 'right thinking' and school as an enculturation process of that 'good' thought and action. So even if place-based education can indoctrinate students into stewardship roles, we run the risk of enculturating students instead of educating them.

Seawright (2014) sees that place-based education in the humanist tradition falls prey to the "fetish of ownership perpetuated by dominant Western Thought" (Seawright, 2014, p. 559). Although stewardship is portrayed as a caring for the Earth or non-human other, it is still mired the human's exceptional ability to do so. Some Indigenous scholars advocate stewardship (Romm, 2018), but I believe the concept to be different as it is based in an entirely different system of thought (metaphysics) not mired in human exceptionalism. For example, Watts (2013) shares how the Haudenosaunee creation history of the Sky Woman's fall and Turtle's aid provides the basis for thinking and acting differently with regards to nature. Watts (2013) explains that the cosmological history gives rise to Place-Thought where all of nature is sentient and active and an understanding that creatures and land existed before humans. Watts (2013) further explains that many Indigenous societies understand that humans are extensions of land, and many Indigenous societies takes this understanding to mean that they have responsibilities to the land as part of who they are. Venne (1998) says that Indigenous people "understand the concept of sovereignty as woven through a fabric that encompasses our spirituality and responsibility…. There it differs greatly from the concept of western sovereignty which is based upon absolute power. For us absolute power is in the Creator and the natural order of all living things; not only in human beings" (p. 23). So, responsibility for the Earth is not just in 'fixing' our environmental

crises, for many Indigenous peoples it is part and parcel of our being on/with the Earth whether it is stressed or not. Indigenous approaches to stewardship seem to be more grounded in collective well-being through land and spirituality than in any form of human exceptionalism (Seawright, 2014; Watts, 2013; Wilson, 2008).

Although place-based education can be seen to disrupt normal schooling restraints, it seems that a certain vigilance may be necessary to realize the radical potential of place in education, a potential for shifting epistemes away from traditional Western thought. Critically engaging place, questioning entrenched colonial thought and human exceptionalism, and approaching place as more-than-humanly active may be ways of retaining this potential of place in disrupting the episteme that brought about environmental degradation and rampant inequalities.

It seems that place-based education leaves us with both promises and problems. The main promise centers around place-based education's ability to de-center and integrate science through context, and the main problem centers on its trouble in de-centering the human if performed under unacknowledged notions of human exceptionalism. I contend that place is what holds the promise and education (schooling) the problem. Humanism remains deeply entangled with education (Lloro-Bidart, 2015; Snaza, 2014). Education is for humans and often about humans. Although there have been inroads of posthuman research it is still rare in education (Snaza & Weaver, 2014). As I mentioned before, I believe the de-centering of the human to be a complex process that will entail more theory and practice, and I will continue to highlight and address this as I discuss more about place.

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Just Place

The Anthropocene debates detailed earlier indicate the salience of place. Although AWG scientists tend to globalize the physical environment, the human causes of environmental degradation happen in specific places. Latour (2018) points out that the science-as-universe approach leaves the Global and the Local as immaterial, and place-based education has shown that delving into place can de-center and integrate science, making place a site of materiality and politics (Gruenwald, 2003).

Somerville (2012) writes that place is capable of bridging "the local and global… the individual and the collective. It is also a powerful bridge between different forms of knowledge such as scientific knowledge, knowledge within different disciplines and between Indigenous and non-Indigenous knowledges" (p. 69). Somerville (2012), Gruenwald (2003), and Tuck and McKenzie (2015) find place to be fundamentally pedogeological. Unfortunately, in social science research, place has often been treated as the static background, a mechanism for simple location of objects of study, so its action, way of becoming has been ignored in favor of a focus on human activity. As Tuck and McKenzie (2015) observe that all research is done in some place, but it is often treated as" just the surface upon which life happens (and from which data are collected)" (p. 9). Interestingly, this treatment is mirrored in the AWG Anthropocene narrative as they started out with physical space and ended focusing on humans with 'place' as a series of metrics that indicate how humans are affecting the Earth.

Often place is disposed of as merely a specific space. Classical Newtonian physics sets up space as a non-interactive setting for objects to interact externally. When this traditional Western view is taken up by social sciences, this leaves space as static and

thus apolitical. Additionally, space taken this way is considered the opposite of time, and time remains what matters to politics (Laclau,1990). Time here is dynamic change and thus the political can happen as time acts on objects in static space (Massey, 1992).

Massey (1992), Whitehead (1967, 1978, 2004), and Manning (2007, 2013, 2016, 2020) all agree that a more thorough move is to conceive of spacetime as emerging from interactions of bodies. This move seems to focus more on the ecologies of practice and allows us to research not just actors and their seemingly external connections that enable and constrain other actors, but also the entanglement of bodies as they create spacetime, which could be considered place. Tuck and McKenzie (2015) sum up:

> Such a relational understanding of place to space, and of place to time, suggests
> the ways in which what we think of as particular 'places' can be understood as
> articulations of time-space, or of the interweaving of history and geography
> (Massey, 1994; L.T. Smith, 1999/2012; Byrd, 2011). This is an understanding of
> place as open, "as a particular constellation within the wider topographies of
> space, and as in process, an unfinished business" (Massey, 2005, p. 131). (p. 31)

This acknowledgement that place may be the dynamic eventing of spacetime is one step in the direction of more thoroughly theorizing place.

Recognizing the material, physical, and embodied nature of place is a second step. Places are "not simply cultural texts but … their materiality must be understood through the body as we encounter these environments through sights, sounds, smells, tastes, touch and other sensual experiences" (Nayak & Jeffry, 2011, p. 293). Tuck and McKenzie (2015) suggest that Land, as articulated by Indigenous writers might help to guide us in

further understanding that place or Land is more than physical and also contains "spiritual, emotional, and intellectual aspects" (Styres et al., 2013, p. 37).

If we can conceive of place as beyond just a space for the actions of the social human, place may allow us to inquire into non-linear spacetime and more-than-human relations. This remains an important path for inquiry in the Anthropocene if we are seeking to understand instances of non-dominant, more-than-human epistemes at work. Tuck and McKenzie (2015) observe that the new material and spatial turns in social science research have renewed an interest in the material and corporeal and have theorized place beyond a static background. Although they see potential for place in the new material turn, they contend that it has not been robustly theorized or empirically researched. They explain about the new materialist and spatial turns in social science research:

> Thus, it is our view that scholars influenced by these turns often do not go far
> enough to attend to place. Although there are rich theorizations of place that throb
> at the center of each of these turns in social science, in their wider adoption and
> redaction, place gets reduced and reified. There are important exceptions to each
> of these characterizations, of course, but ironically, works across social science
> that now are attending to issues of being and existence can rely upon
> conceptualizations of place that are markedly shallow or emptied. The challenge
> is to get rich theorizations (and methodologies and methods) of place to travel
> within and alongside the adoption and adaptation of these turns, and other turns
> now forming and emerging. (Tuck & McKenzie, 2015, p. 17)

Here Tuck and McKenzie (2015) argue that there remains a tendency to homogenize place, leaving out important details and nuances and sometimes working less critically for doing so. A more intimate involvement with place resonates with my mission to understand non-dominant epistemes at work. Foucault, in his genealogical work, sought not a top-down view, but a grounded approach looking at effects of the dominant episteme on bodies. As the Anthropocene indicates that bodies are always-already more-than-human, and, above, I point out that place is a spacetime body, place may act as the body of the Anthropocene.

Unfortunately, at this time, place remains under theorized or explored empirically with the exception of Indigenous work. I believe such an exploration necessary in the Anthropocene as it may provide work that pushes against the dominant episteme that brought us to crisis in the first place and provide one among a multiplicity of resistances to the dominant episteme.

As mentioned throughout the above discussion, I cannot base my inquiry on dominant Western thought or methodologies if I wish to ally my work with other resistant modes-of-thought. I have indicated that Indigenous approaches present a shining example of resistant modes-of-thoughts, not only as a living alternative to the dominant destructive Western episteme, but in their examples of cohesion through cosmology to daily practice. As a non-Indigenous scholar, I do not embody the generational histories that Indigenous scholarship derives such strength from, so while I am inspired and at times guided by Indigenous examples, I seek to come through minor-modes in Western thought as one in a number of possible meaningful resistances to the dominant episteme. Many Indigenous and Indigenous-cooperative scholars have cited a resonance with new

materialist and feminist researchers although sometimes theorists in those traditions have

failed to reciprocate (Bignall et al., 2016; Miller, 2017; Romm, 2017; Todd, 2016; Tuck

& McKenzie, 2015; Seawright, 2014). I take the Indigenous example of working

cohesively from cosmology to practice by taking an alternative metaphysics as the basis

for inquiry as well as committing to partner with place while inquiring. With this in mind,

I will turn toward a discussion of what I believe to be a fruitful quad of onto-axio-episte-

methodology that I believe might allow me to inquire into the possibilities of shift in the

dominant episteme.

Philosophy as Method (the Quad)

The ontology that I will be employing finds its roots in Whitehead (1926, 1929,

1938, 1967, 1978, 2004) and its movement in Manning (2007, 2013, 2016, 2020), process

ontology. The axiology that I am employing, also rooted in Whitehead, is generated by

Barbara Muraca (2011, 2016), relational axiology. The epistemology I am employing,

also set in motion by Manning (2016), comes from William James (1996), radical

empiricism. The methodology I will use is post-qualitative inquiry in the sense of

following theory to methodology. I use these categories for intelligibility not as a

proposal that any of these strands of thought can be wholly separate. What I am

employing has been called a quad of thought (Payne, 2018) and following, I am merely

using these categories as an explanatory mechanism. I believe that in practice these will

work emergently together to enable and constrain inquiry with place in the Anthropocene

that may enact shifts in the dominant episteme.

I wish to begin this discussion with axiology as it may be an unfamiliar concept,

and I believe that it may provide a better foundation for speaking about multiplicity and

ethics with regard to the Anthropocene. I understand that it is tempting to use axiology as a synonym for ethics, but I would like to caution the reader at this point. Axiology involves values (that which is precious to us, consciously known or not), ethics (some sort of plan for moral action or justification for such), and aesthetics (that which is beautiful and not). The ethics (the plan) emerges in concert with the values (preciousness) and aesthetic choices (what we find beautiful). This is more than *what* we decide to do, it is *how* we decide to do it. I see axiology as a particularly salient approach to inquiry in the Anthropocene as some have seen the debates around the Anthropocene as conflating facts and values, and axiology provides more dimensions of inquiry and upstream ways of knowing that may challenge dominant thought (Maggs & Robinson, 2016; Muraca, 2011).

Axiology

With this in mind, I would like to turn toward Barbara Muraca's (2011) new axiology for environmental ethics. She diverges from dominant Western thought by challenging traditionally framed ethics rooted in Kant. This traditional ethics has its roots in dualism and human exceptionalism; thus, I find Muraca's (2011) approach to be helpful in pushing against the dominant modes of thought in the Anthropocene. To understand her new approach, we must take a short tour of Kantian moral philosophy first.

Normative Ethics

For Kant, free agents hold a moral obligation to any other free agent (Rohlf, 2016). A free agent is free whenever the cause of its action is within itself. Kant calls these free, moral agents, ends-in-themselves. Any ends-in-themselves have an obligation

to treat other ends-in-themselves morally (Muraca, 2011). These reciprocally morally obligated free agents collectively comprise the moral community (MC). Members of the MC are intrinsically valuable (Muraca, 2011). For example, many people will profess that any human life is inherently valuable for belonging to the category human. Any entity outside of the MC can be used as a *mere* means for the end of any MC member (Muraca, 2011). Use as a *mere* means indicates that a MC member can subjugate a non-MC member towards their own goals without regard to the goals/aims or even continued existence of the non-MC member (Rohlf, 2016). This, mere means treatment, cannot morally be extended to other MC members.

Kant's moral philosophy does not imply that MC members hold no moral obligation to non-MC members, but it does prioritize obligations to MC members over those of non-MC members (Muraca, 2011). So, a person under this philosophy may see all humans as MC-members deserving of moral obligations, a common argument for universal human rights (Muraca, 2011), but that same person can see it as moral to destroy a wetlands habitat to put in a bypass as the entities of the habitat can used as a *mere* means for the goals of those who want the bypass (humans). We easily recognize this example as a commonsense way to reason and may even be able to pull on many like examples of our own.

Muraca (2011) points out that environmental ethicists applying Kant's moral philosophy try to extend the categories of entities worthy of the intrinsic value needed to become a member of the MC. Here ethicists try to expand dominant thought toward the non-human without retheorizing the foundations of this thought. This provides yet another example that mirrors the strategies of AWG scientists in seeking change through

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addition not reorganization. She observes that these theorists can be classified as "anthropocentrism (humans), pathocentrism (sentient beings), biocentrism (all living beings), ecocentrism (collectives like ecosystems and species), and holism (all entities and collectives)" (Muraca, 2011, p. 376). Muraca (2011) uses these categories to introduce the Demarcation Problem within Kantian environmental ethics. The Demarcation Problem is that a line must be drawn around the MC, including some and excluding others from moral obligation. Where to draw that line is subject to debate when you move away from Kant's originally structured argument (Muraca, 2011).

Kant's free moral agents are capable of traditional human-focused reasoning and this reasoning led to a deontological ethics (a moral code, rule based on what actions are right or wrong). Kant was specifically speaking of rational humans as the basis of the MC (Rohlf, 2016). This type of agent was necessary, because only a reasoning agent could follow the categorical imperatives (the universal deontological rules) Kant claimed to be universally derived from reason (Rohlf, 2016).

Only members of the MC have intrinsic value, and all others have only instrumental value. Muraca (2011) calls this a poor axiology. Kant's framework sets up a dichotomous value system, either you have intrinsic value and enjoy the moral treatment of others, or you don't and have only instrumental value to those in the MC (Muraca, 2011). Here we see one way to view the problem of instrumentalism that is rampant in the managerial style of governing proposed by the AWG scientists. If an entity is instrumental, another entity must be intrinsically privileged in relation to the instrumental entity. If something can be viewed in purely instrumental terms, then something else must have an inherent right to use the instrument. Muraca (2011) claims

that if left with only intrinsic and instrumental categories of value it is clear why many environmental ethicists want to include all of nature in the intrinsically valuable category. Unfortunately, Muraca (2011) points out, this move only serves to legitimize and substantiate the intrinsic/instrumental dichotomy and leaves a continued possible space for instrumentality.

Relational Axiology

Muraca (2011) suggests a more complex and robust axiology. She argues that despite efforts of other theorists to define collectives within the Kantian MC as being ends-in-themselves, the very nature of a collective opposes the individualistic and atomized end-in-itself theorized originally by Kant. Muraca (2011) notes that modern philosophy often has difficulty with collectives, either looking at the whole as the sum of all parts or turning them into abstract universals and symbols that lack materiality and agency. Of course, any environmental field concerns collectives, including ESE. Muraca (2011) suggests a less anorexic axiology as a better way of addressing this issue. Muraca's (2011) path leads to a different concept of relationship and thus to an axiology, "in which relational settings, processes and collectives have moral significance independently from the moral standing of the individual organisms embedded in them" (p. 380).

The claim Muraca (2011) makes about Kant's poor axiology rests on the dichotomous nature of the value system. Most people are familiar with Kant's ethical plan of categorical imperatives which is more robustly detailed than the values attached to it. I would also like to suggest that Kant's axiology includes an aesthetics; he finds human reason and rationality beautiful. Kant's axiology as discussed above works well

with neoliberalism in holding something intrinsically valuable (economic growth that benefits the elite), something instrumentally valuable (any entity to achieve that means), and market rationality (pure market reason) as beautiful. Prying on the knot that is normally considered mere ethics and illuminating axiology as Muraca (2011) does, allows us to better think through the implications of our positions. I argue that this unexplored knot of axiology may be one obstacle to theorizing place as ethics assumes universal values where axiology does not.

Muraca (2011) sees strength in the action part of Kant's system of ethics that is lacking in virtue and eudemonistic ethics. She proposes a 'map of moral significance' as a heuristic for speaking about moral significance. She takes three steps in creating this map. First, the axiological step, creates a continuum from intrinsic values (that are based in dichotomy) and relational values (which allow situated multiplicities that I will talk more about later) (Muraca, 2011). Second, the ontological step, suggests distributing entities and collectives along these values (Muraca, 2011). Third, she traces lines of moral significance (deontological step) (Muraca, 2011). These steps imply that our moral actions (deontological step usually just called 'ethics') emerge with our ontological and axiological commitments. Her heuristic is a tool for richer conversations around 'what we should do'.

Muraca (2011) reaches for Heidegger and Whitehead to develop a relational axiology to complete her first step. In place of judging subjects and objects with value based on substance theories of ontology, Muraca (2011) explains:

I maintain that the separation between a judging subject and an observed object is not original (i.e., primary). Rather, the most immediate way of relating to the

world for humans is that of *dwelling,* of 'being in the world'. Far from being a

neutral 'gawping' at the world as something present before us, this dwelling is

already value-laden or – as Heidegger puts it – care oriented. In other words, we

are not first out there and THEN step into a relation with other entities and judge

them according to our preferences, but our very *originating as subjects* of

judgment is rooted in a pre-thematic, precognitive and preconscious relation of

value. Similarly, for Whitehead a vague value-awareness is the very conditions

for the constitution of subjects of experience". (p. 382)

In other words, value cannot be bestowed, value acts in the emergence of experiencing

entities. Value remains part of the force of becoming, pre-individual and part of relations

that eventually create individuals. This type of process ontology view of values demands

that values be taken more seriously than deontological ethics as values here are

positioned as more fundamentally creative than the resultant individual (this is flipped in

normative non-process substance-based ontologies). This ontological positioning of

values as a force of immanence shows us why axiology should not be collapsed into

ethics, and it also indicates that axiology remains central to inquiring as it plays a part in

how any entity arises in the actual occasion.

Muraca (2011) submits that we can see a type of relational values in the "poor

ontology" (p. 383) of pre-existing, coherent entities of separate subjects and objects. She

terms these relations as functional whereas the relational values based on process

ontology are fundamental. Functional relations are "external links via reflection"

(Muraca, 2011, p. 383) while fundamental links are described as such in the above

paragraph. Here I would like to give an example so that we can see the importance of this discussion to the Anthropocene.

CNN reports that "photographer Larry Towell feels that what's happening at the Oceti Sakowin Camp in North Dakota is about more than just an oil pipeline" (Wehelie, n.d., para. 1), and I agree. The report goes on to claim that "debates over lands, the destruction of sacred sites and the disrespect for Native American traditions are now coupled with issues of climate change and heavy reliance on oil" (Wehelie, n.d., para. 14). I suggest that this coupling may be more an issue of axiology and ontology than of facts and truths usually only associated with epistemology. In a process ontology with relational axiology as suggested by Muraca (2011), the destruction of Native American Land does not just contaminate water (a functional relationship argument), it destroys a fundamental process that is part of the Standing Rock Sioux's' continual becoming. Muraca (2011) explains,

> the connection to 'Land' (especially for indigenous people) is not a functional relation to a single entity, which is valued for its supporting services by those who benefit from them. Rather, it represents the overall relational system that constitutes single entities and individuals and encompasses their ecological, cultural and social interdependence. (p. 383)

In destroying Native Land, we destroy both the entity (Land), and its excess that feeds the very process of the Standing Rock Sioux's' becoming. We destroy the becoming of an inherently collective entity organized immanently around Land.

This presents a very different conversation than one around functional relationships. If it is just a matter of contamination of water or land use, then those can

be refuted through information. As an example, Forbes sites the clean safety record of the pipeline as evidence that putting the pipeline in was the right decision (McCown, 2018). We cannot really 'refute' a people's basis of becoming, that is a serious moral issue not based in information; safety records have no bearing on a people's right to becoming in ways they value. Many non-native activists joined the Standing Rock Sioux in their protest, and I suggest that this indicates that their resonance was not in the functional relationships (possible contamination of water which is serious in its own right), but instead, in the fundamental relationship of Land connected to becoming. I am not arguing that attention to these nuances of axiology would have changed the outcome of the pipeline conflict at this point in time, but I am saying that people interested in social change should be aware that the conflict revolves around values and ultimately ontological commitments not just ethics and 'facts'. Changing conversations, particularly conversations steeped in neoliberal values and dominant Western thought, can help us pry apart the knots of problematic occurrences to better find ways forward. Here I stake a claim that any social research must be concerned with clarifying ontological and axiological commitments, and I see this as an issue of methodology which I will elaborate more on in coming sections. I agree with Muraca (2011) that "merely instrumental thinking cuts off the opportunity of understanding the complexity of those processes and systems that keeps the whole living planet and a meaningful human life going" (p. 383).

Muraca's (2011) heuristic can only be used if based on ontological commitments. In her paper, she elaborates on the different ontological basis for different maps of moral significance and explains that the map could be used as a tool to negotiate and think

through one's own commitments and values as to espouse a coherent deontology through clear axiology and ontology. I will not present the heuristic here as it is beyond the scope and the aims of this dissertation. Muraca's (2011) own illustrations of process ontology to relational axiology with fundamental values resonates with my own commitments and concerns and works for the purposes of this dissertation which is to link ontological commitments to actual occurrences and think through to future occurrences.

The important main point to take away from Muraca's (2011) new relational axiology is that value around collective entities is necessarily framed as fundamental not functional if we are to value the collective as more than the sum of its parts or as more than a dematerialized abstraction/symbol. An argument about the functional (instrumental value) value of a collective entities (which arguably everything is in process ontology) will only lead to an argument around facts and information that only have power in a functional framing. Reframing to fundamental relations allows us to bring in the more-than facts as *material* (mattering) into our debates and consideration, i.e., spiritual beliefs, beauty, feelings of connection. Muraca (2011) eloquently articulates that an example like the destruction of Native Land holds that Land,

> is neither an instrument for the life of the community living nearby nor an entity holding inherent moral value in the Kantian-based sense of the term. Rather, it is a basic condition for the people to define themselves, to develop a concept of a 'good life', to care for future generations, to give sense to their existence. This is a value *as such* even if the 'ecosystem services' of the forest were perfectly replaceable by technological innovations or compensation. I suggest that many people who intuitively claim for the intrinsic values of non-human beings

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implicitly have in mind this meaning rather than the deontological category of

inherent moral values linked to moral obligation". (p. 398)

By taking us through normative Kantian perspectives, Muraca (2011) brings us out on the

other side with relational axiology based in process ontology as a way forward in our

thinking about ethics, inquiry, and education.

Are relational axiology and process ontology the only way forward? No, I

imagine there are many ways forward, but I am proposing that the tensions that we see

with neoliberal cooption of ESE and general environmental concerns in practice may be

circumvented by an approach that diverts power towards more-than-rational-information

and allows space for other directions of exploration of the tensions that are cut off if we

start our exploration from typical neoliberal and Western ideologies. I have provided

examples along with Muraca (2011) of Native Land destruction. In those examples, we

can see that even if we do not hold the same spiritual beliefs as The Standing Rock Sioux,

we can, at least, see that those belief function materially to allow them (as a collective

that includes Land) to become and that is morally significant regardless of the specific

belief. Muraca (2011) argues that an approach from relational axiology provides a

chance that "overlapping consensus might be higher" (p. 390) even when specific

axiologies differing by aesthetics are in conversation. What this approach does is allow

for multiple situated values and knowledge to be theoretically supported by one another

so as to be in conversation and in this case supportive of the Earth together.

My point here is that relational axiology as a way forward points us toward the

necessity of explicating our ontologies and committing to ontologies that allow relational

axiology to flourish in a pluralistic society. Relational axiology also points to a need to

inquire beyond rational, information knowing. With that in mind, I turn toward ontology which is, inevitably, for the social researcher, wrapped up in methodology. I will discuss ontology in the context of methodology.

Promising Post Qualitative Inquiry

Post qualitative inquiry grew out of a deep questioning of the ethico-onto-epistemological foundations of humanist qualitative research. Axiology, to my knowledge, has not been formally employed in these questions, but the ethical dimensions usually discussed do arise with ontology. These types of questions resonate with the kinds of questions that concern the Anthropocene and the need to de-center the human.

I understand normative qualitative research as being housed in a humanist tradition. Lather and St. Pierre (2013) explain that:

> The categories we have invented to organize and structure humanist qualitative methodology (e.g., the chapter headings in introductory textbooks) – research problem, research questions, literature review, methods of data collection, data analysis, and representation – assume some *depth* in which the human is superior to and separate from the material – Self/Other, subject/object, and human/non-human. We surely bring Descartes' invention, the *cogito*, the knowing subject, with us, and that human is not only the center of but prior to all those categories of qualitative inquiry. The doer exists before the deed, so the researcher can (and must for IRBs) write a research proposal that outlines the doing before she begins. The assumption is that there is actually a *beginning*, an origin, that she is not always already becoming in entanglement. (p. 630)

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My current reader most likely already has an intuition that I plan to diverge from humanist research in remembering my arguments about relational axiology above and having understood my commitment to environmental tenants in ESE around honoring the non-human. I bring up humanist qualitative research as a point of departure necessary to address the concerns in this dissertation. Any research grounded in my own human superiority will not provide ways forward that can reach an escape velocity from the neoliberal atmosphere. I bring up traditional humanist qualitative research so my reader knows what I will not be doing. With that said, I still must address humanist qualitative research for two reasons. First, it provides the departure point from which most social researchers are familiar, and second, the research field of education is still quite normative and ignoring the traditions of the field may lead to a lack of engagement with other researchers.

Lather (2013) presents a brief tour of qualitative research development and conflicts among disciplining institutions, policies, and qualitative researchers that moves towards post qualitative research. I will not reproduce that history here, but I will share her conclusion:

> In short, the contest over the science that can provide the evidence for practice
> and policy pits the recharged positivism of neoliberalism against a qualitative
> "community" at risk of assimilation and the reduction of qualitative to
> instrumentalism that meets the demands of audit culture. To refuse this settlement
> is to push back in the name of an insistence on the importance of both
> epistemological and ontological wrestling in governmentality and calling out the

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unthought in how research-based knowledge is conceptualized and produced. (p. 636)

Notice the resistance to neoliberal assimilation that resonates with resisting the dominant episteme. Notice the damming of instrumentalism that Muraca (2011) also elaborated on. Notice the resonance with concerns of ontology and epistemology. In struggling with the tension of the Anthropocene, I have been seeking attunements. I find the concept of attunement helpful in finding a way forward in research during the Anthropocene. I have ranged far and wide in other fields of environmental humanities, environmental ethics, philosophy, critical education, ESE, economics, political theory, and many more to include here and now in qualitative inquiry. What Lather (2013) and others (Lenz Taguchi, 2013; MacLure, 2013; St. Pierre, 2013) are wrestling with are the same things anyone interested in social change are wrestling with. The point here is that I take post qualitative research as a point of attunement in moving forward.

So, What is Post Qualitative Inquiry?

Maybe a better question is what does post qualitative research do? In my reading of post qualitative research and theories, I believe it invites the researcher/research to inquire differently, not to be just plainly contrarian, but to refrain from assuming anything in the research process. To that end, it invites the researcher to research without a templated method. In a way, post qualitative research invites undomesticated methods, wild, uncontrolled, methods that only work *with* the researcher not *for* them. Often normative methods seek to be reproducible thus always falling within the dominant episteme. Post qualitative research does not recognize reproducibility. No two research studies could ever be the same due to the immanent becoming of the research process in

motion. Much normative research invites reduction. Post qualitative research invites expansion. Here post qualitative research infects material with thought, with movement, with imagination. Post qualitative research reaches epidemic proportions of connection among various bodies, none immune, no matter their scale. It invites discontinuity, fracturing, "zigzag associative thinking" (Braidotti, 2018, p. 183). In the above, I do not wish to set up a dichotomy between post qualitative inquiry and everything else. I recognize that 'everything else' is highly varied, but the point above is to give a familiar reference point from which to speak about post qualitative inquiry.

Post qualitative inquire creates with the entangled limbs of researcher, data, place, theory, and art. Post qualitative research does not start with 'data' it starts with thinking-with and becoming-with others (St. Pierre, 2018). St. Pierre (2018) suggests that "post qualitative inquiry is reading, thinking, writing, and living with theory" (p. 604) and experimenting during experience with the 'real'. The aim of post qualitative inquiry is new thought through creative becoming whereas a more traditional research study may aim to know through description and reductive analysis. St. Pierre (2018) explains:

> Those structures based on a version of the Enlightenment's scientific method and its promise that rigorous, systematic method can ensure true knowledge cannot accommodate that always already more than, too big of inquiry. They fail and fail and those who follow them prune and prune their studies, discarding what seems too strange to count as science. Too strange is, however, the provocation, the knot, the world kicking back, the too much that demands experimentation. Inquiry should *begin* with the too strange and the too much. The rest is what everyone knows, what everyone does…. Post qualitative inquiry asks that we

push toward the intensive, barely intelligible variation in living that shocks us and

asks us to be worthy of it. It asks us to trust that something unimaginable might

come out that might change the world bit by bit, word by word, sentence by

sentence. (p. 607)

Post qualitative research offers little in security but abounds with freedom and possibility.

It is researching without a net in that we must "trust that something unimaginable might

come out". In this way, it is highly experimental although not experimental in the natural

science, controlled experiment sense. It is experimental in its uncertainty of outcome. It

is precarious, just like living on a damaged Earth,

St. Pierre (2018) holds a view of connection between post qualitative research and

writing as a process of inquiry. Often, in traditional research, we are writing up our

findings, we are reporting in a staid representational way that she refers to as "linearity of

the conventional qualitative research report" (St. Pierre, 2018, p. 605). She relates an

instance where she did not intentionally write a sentence, but "it wrote itself" (St. Pierre,

2018, p. 605). I highlight this section of her text as it resonates with me; I have been

involved in composing in dance, painting, writing, and even teaching where something

occurs that I did not intend, but that I am not separate from either. This generative

process that is not centered on the conscious intention of the researcher is seen as part of

post qualitative work and may open inquiry to the more-than-human beyond conscious

thought.

Ontological Immanence. St. Pierre (2019) states that post qualitative inquiry

"uses an ontology of immanence from poststructuralism as well as transcendental

empiricism" (p. 24). She goes on to say that the very nature of these theories excludes

research methodologies practices from presupposed methods. Working through these theories requires rethinking and (un)doing research that is typically based in other onto-epistemological schemes, typically unvoiced dominant Western schemes. It is not exactly that post qualitative research is also post-methods in the sense that there is free-for-all, but it is post-methods in a sense that it directly confronts and questions traditional methods. The tension I have experienced in moving toward post qualitative research has come in the form of others trying to conceptualize post qualitative research with more traditional ontological theories that may be more or less consciously practiced. Just like a conversation about Native Land destruction requiring a different concept of good, right, and wrong as discussed by Muraca (2011), a conversation about post qualitative research requires a different concept of the nature of the world (ontology), the nature of empirical research, and all methodological concepts including rigor and value. If we take as our starting point the upstream philosophy and epistemology still embedded within Descartes' dualism, post qualitative research frankly does not look like research at all, just as The Standing Rock Sioux's objection to the Dakota pipeline seems to many people to be reactionary and obstructionist towards 'progress'.

So, I invite my reader to think differently with me. Descartes set up a dualism that haunts traditional research based on an ontology of fully formed, essential and pre-existing entities. Here there is a thinking subject and a thinkable object (out there waiting to be thought about). The experience of the object is separated from the subject by the subject's awareness of the experience. Whitehead (1967) explains:

> No topic has suffered more from the tendency of philosophers than their account of the object-subject experience. In the first place, this structure has been

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identified with the bare relation of knower to known. The subject is the knower,

the object is the known…. It then follows that the more clearly any instance of

this relation stands out for discrimination, the more safely we can utilize it for the

interpretation of the status of experience in the universe of things. Hence

Descartes' appeal to clarity and distinctness (p. 175)

Descartes' appeal is to objectivity, and the relationship described above of subject to

object presupposes a relation that is the "fundamental structural pattern of experience"

(Whitehead, 1967, p. 175). This is what Muraca (2011) refers to as a poor ontology. It

starts from the clearly reasonable existence (to be) of what seems to be the quite

obviously existing subjects and objects then moves straight to knowledge

(knower/known) which is epistemology. Many theorist (Whitehead, 1967, 1978;

Manning, 2013) ask us to pause, back up and not take the existence of object and subject

as our starting point. Whitehead (1938) asks us to reconsider what he calls the

"bifurcation of nature" which is the tendency of Cartesian thought to divide matter from

its perception and see as different "nature apprehended in awareness and the nature which

is the cause of the awareness" (p. 30) thus splintering experiences. This bifurcation

makes it difficult to understand experiences as an ecology of relationships or understand

collectives as more than the sum of individuals.

Consider that a pre-determined subject thinks about an object externally. Here we

can see that traditional methods implicitly believe this this objectivity is possible.

Consider the examples of a phenomenologist bracketing their subjectivity or qualitative

researchers subtracting out their subjectivity through triangulation and multiple

perspectives. Although those two examples admit a certain problem with subjectivity in

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the subject-object relationship, they believe that it can be overcome to be more or less objective. Non-troubled objectivist believe that a series of methods can take the subject wholly out and represent the object as it really *is*. Latour's (2018) science-as-universe does this. Many troubles arise with these approaches; essentialism, instrumentality, and non-experiential rationalizing being a few.

A more robust ontology concerns how those subjects and object became and are becoming. Manning (2013) and Whitehead (1967, 1978) do not deny that there may be subjects and objects or, maybe more precisely, definite bodies that some like to classify as subject and object, but they warn us that this Cartesian habit obscures important questions particularly when we get to relationality. Additionally, Muraca (2011) reminds us that traditional philosophy has trouble with the ideas of collectives and this too has to do with the Cartesian habit. This point about subjects and objects also has importance for researchers in the Anthropocene as subjects are usually human and objects are usually non-human. It becomes evident that this bifurcation causes problems and if continued cannot inquire into more-than-human entanglements and becoming that includes more-than-conscious thought.

Manning (2016) suggests that "neither the knower nor the known can be situated in advance of the occasion's coming to be—both are immanent to the fields composition" (p. 30). Ontologies of immanence have no outside. Haraway (2016) calls this outside a god-trick. This trick of stepping outside, being a subject to an object, is considered an illusion (St. Pierre, 2018). St. Pierre (2018) sets up this conflict as tension between the one-world (immanence) and the two-world (Descartes) ontologies.

That there are definite bodies, and that they are different shows us that the stasis of being is the not the driving force of the universe (Whitehead, 1967). Novelty can only arise without pre-supposed, essential bodies like those of subject and object, and when we only think with subjects and objects new thought becomes stifled. We can only reproduce the self-same (Manning, 2016). So instead of Descartes' subject thinking thoughts about objects, Whitehead (1967) and Manning (2013) contend that thoughts arise in forming bodies together- a growing together called concrescence within the event of experience (Whitehead, 1967, 1978). Let's consider a passage from Manning (2013):

> "Life means novelty," writes Whitehead (1978, p. 104) …. To restrict life to the physical plane… is to starkly underestimate the play of its capacity for invention. "Reason," for Whitehead, is another word for the force of thought that is immanent to the event. This force of thought is never thought as that which lands onto the event from outside its concrescence. It is the reason *of* nature, in nature, a concern with the very edges of the thinkable in its nonalignment to consciousness. For Whitehead, nature thinks. When Whitehead says that nature "is impenetrable by thought" (1929, p. 13), what he means is that thought does not enter into nature from the outside to orchestrate it from without. Nature is not a passive element to be mediated. Nor is thought a mediating activity. Nature *creates* thought -- a thinking *in* the event… The question is never, as Whitehead underscores, "what is in the mind and what is in nature" (1929, p, 30). (p. 214)

If something happens, thoughts arise in the experience not after and about the experience. Nothing thinks as a fundamental property, thoughts come into being through actual events which are relational both prior to and after their emergence. This is the one world,

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as opposed to the two world, philosophical orientation that sets the stage for the more expansive approaches in post qualitative inquiry.

At this point, we must turn toward the crux of immanence. Before we were skimming the surface, showing the difference between immanence (remaining within) and traditional transcendent (having externalities) philosophy. With immanence as an ontology, the really real includes not just actual entities but also the field of relations (Manning, 2013). This plane is pre-individual in that it exists and moves before definite bodies come into being. It is pre-personal in that there is not a single or personal identity. The plane includes both the actual and the virtual:

> It is an unlimited field of formless matter not yet individuated into subject or object, thought or practice. The plane of immanence encompasses everything because nothing can be outside it and so immanent to it. In this ontology, being is difference – everything is different, the plane of immanence is always becoming, never static. (St. Pierre, 2019, p. 5)

With regard to difference, this is how an actual entity comes to be, tensions/attraction between difference give rise to actual bodies thus all that *is* remains heterogeneous, never homogenous. This relates back to Whitehead's (1967) proposition about the new and novel.

Manning (2013) expands further by explaining:

> What is known as such, it bears repeating, is not the preindividual…but the forces of collusion that bring the multiphasing process of individuation to an individualization. But what is also known, albeit in a different register than conscious knowing, I want to argue here, is the excess, the more-than of this

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process. The in-act always involves a tensile weave of the actual and the virtual

or the preindividual and individuation…. This is why each actual occasion is

more-than what it seems. It is more-than because it carries in its dephasing a

quality of surplus that cannot be contained by the occasion. The occasion is

implicitly multiple – collective – in the sense that its emergence involves not only

its definiteness as this or that, but its complexity as a field of relation that co-

combines with the nexus of which it has been/will have been part…. Any

occasion is at once the absoluteness of it-self in the moment of its concrescence

and the will-have-become of its tendencies, attunements, appetitions, both past

and future. (p. 24)

For Manning (2013) and Whitehead (1967, 1978), definite bodies are ephemeral, phasing

into individual existence and dephasing out in a constant process of becoming

with/through a field of relation. This is not quite as esoteric as it seems. Many theorists

imagine that individual people carry with them their history and culture into ecologically

connected contexts which also contain history and culture. This is not exactly everything

Manning (2013) is saying, but it is included in what she is saying- the 'what is known as

such' through conscious thought. Now imagine that there are other forces at play or at

play differently as experience happens. In a very real sense, all that is in the field of

relations including history, culture, other full experiences, are available to be part of the

forming of a body in a particular instance. These other forces are known "at a different

register" that is not conscious thought. She collectively terms these forces as affect.

Affect as a force of becoming not recognized by conscious thought remains very important. Bodies are not eternal, when a body dephases back toward the field of relations and back into the actual and so on, Manning (2013) explains:

> What lives on, what is immanent to life as expressive potential, exceeds this or that body…. What lives on is never the subject, never the individual. What lives on is affective resonance. Affect is what returns. Affect returns as the force of becoming that incessantly creates collectives in the making…Affect promises nothing. It creates across and beyond good and evil. It activates…. It creates life, but not solely among the living. (p. 30)

Affect in this sense is not emotion or personal feeling, it is the force of creation and change that allows novelty to occur. Personal feelings and intuitions, all of the things that lure us toward action, may be one way we can 'know' affect in a different register.

Above, I described what immanence entails and how it is different and contests Cartesian dualism, and I will consider immanence as my grounding in post qualitative methodology. Immanence does not exclude all the physical trappings that we are familiar with in normative social research, but it does view them differently. Different aspects of experience become important, and immanence presents an ontology that is much friendlier and inclusive of collectives. In fact, it says that all bodies are collectives of not just other bodies, but also of affective resonances which combine well with the relational axiology discussed above. It expands how we can 'know' and certainly what we can do beyond just conscious knowing. It allows and even demands novelty in that it acknowledges the non-static, constant flux of the world and all that is and will be in it.

St. Pierre (2018) explains that the virtual forces of the plane of immanence allow researchers to move in many directions. In traditional research, where a body is definite and self-contained:

> the possible is generalized from experience… the possible begins with and is representative of the actual and so reflects a two-world ontology. For example, social science researchers are often interested in identifying the *conditions of possibility* that enable this or that to happen, assuming that something which exists could be replicated if the conditions that produce it could be reproduced. To that end, social scientists have developed research methods to identify those conditions. In that model, however, possible experience is always limited by what *is* so that, in effect, everything is already given, even the possible. An analysis of conditions of *possible* experience always "begin with states of affairs within the world" (Somers-Hall, 2012, p. 39), with the *is* rather than the not-yet, the *virtual*, and so cannot be truly different. (p. 5)

Grounded in bodies that have already become and stopping further becoming by representing those bodies as generalities only allows for reproducing that past (traditional methods). This may be something that a researcher wants to do at some point, but it certainly does not hold the possibility of challenging the dominant episteme. If the more-than Manning (2013) speaks about is not allowed in, no new ways can be activated.

Radical Empiricism. An ontology of immanence is usually combined with radical or transcendental empiricism. To encompass everything that can be known by any register, we must begin with refusing pre-supposed categories. To do this, Manning (2016) thinking with William James, suggests that we "find ways to account not only for

the terms of the analysis, but for all that transversally weaves between them" (p. 29).

Radical empiricism comes from James (1996) who writes:

> Nothing shall be admitted as fact…expect what can be experienced at some
> definite times by some experient; and for every feature of fact ever so
> experienced, a definite place must be found somewhere in the final system of
> reality. In other words: Everything real must be experienceable somewhere, and
> every kind of thing experienced must somewhere be real. (p. 160)

Here, James (1996) allows as evidence anything that is experienced. Subjectivity does not enter this type of epistemology. If experiences or events arise as described in the immanent process ontology above, the 'subject' and all that 'subject' experiences are included as empirical. For example, memories, dreams, and intuitions are also experiences, and do not hold the negative connotation of 'subjectivity' that they would if we were to adhere to the Cartesian systems of thought. All experience remains admissible as evidence, and furthermore, if it is experienced it must be accounted for. Additionally, these experiences can be considered just as material as a physical object in that they exert force on the happenings that do arise and can be considered physical. Experience, in-act, is the key to immanent research, but a radical type of experience is necessary that includes techniques for attending to the relational and affective resonances. Researchers do not so much write about an experience; they write with it and as it.

Manning (2016) and St. Pierre (2018) give us clues to some of the techniques used in radical empiricism. Manning suggests that one technique towards radical empiricism may be close reading. Manning (2016), thinking with Bertrand Russell, suggests that close reading holds that the "right attitude is neither reverence nor

contempt, but first a kind of hypothetical sympathy, until it is possible to know what it feels like to believe in [those] theories, and only then a revival of the critical attitude" (p. 38). Here reading may be more than literally reading text although that is included. Hypothetical sympathy functions also in listening, doing with, and making.

Manning (2016) also refers to a way of writing as a process of thinking-doing that encompasses the radically empirical. She writes that "at its best, writing is an act, alive with rhythms of uncertainty and openings of speculative pragmatism that engages with the force of the milieu where transversality is at its most acute" (Manning, 2016, p. 42). So, the reading, thinking, writing, and living that St. Pierre (2018) suggests is done with hypothetical sympathy and the Beauty of Intensity Proper as techniques for post-qualitative research. Chapter three elaborates on more techniques helpful for post qualitative inquiry.

Checking In and Re-grounding

At this point I would like to pause and regroup. I am still talking about neoliberalism and ESE. I want to remind you as we trek through methods that it is still connected; you are still reading the same dissertation with all its "zigzag associative thinking" (Braidotti, 2018, p. 183). There are two important points that I want to make about how post qualitative research resonates with debates and possible shifts in the Anthropocene. As post qualitative research does not follow disciplinary lines or is founded on dominant Western thought it supports conversations outside of traditional neoliberal systems of knowledge production; it provides a space for inquiring differently. First the turn toward immanence helps to move more unhindered by traditional research methodologies. Braidotti (2011) in her Nomadic Theory (involving immanence) reminds

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us that by rejecting traditional ontologies and epistemologies, our thinking is free to think outside of norms, in this case, neoliberalism and dominant Western thought:

> Nomadic thought consists in the rejection of the unitary vision of the subject as a self-regulating rationalist entity and of the traditional image of thought and of the scientific practices that rest upon it. This view has important implications for the production of scientific knowledge. The dominant vision of the scientific enterprise… is based on the institutional implementation of a number of laws that discipline the practice of scientific research and police the thematic and methodological borders of what counts as respectable, acceptable, and fundable science. In so doing, the laws of scientific practice regulate what a mind is allowed to do, and thus they control the structures of our thinking. (p. 211)

I have previously written about the pervasiveness of neoliberal discourse shooting through environmental discourses in both popular culture with green washing, individualization of social problems, and the testing movement in ESE. I have also argued that de-centering science will be necessary to engage the Anthropocene. Post qualitative research may be able to reorient conversations allowing us to move out of the control neoliberalism has on our thinking and doing and sitting at its very heart is an expansion of what research and inquiry can be.

The second point of connection that I would like to highlight is between the potential for transdisciplinary research through post qualitative inquiry. Thinking first with theory and being open to creative and generative research can transcend siloed disciplines which can further help in de-centering and reintegrating science. In pursuing this research, I have read across a variety of fields, and learning new skills has

accompanied my dissertation work. Starting with theory and eschewing traditional

methods that are often housed within disciplines opens up thought and research to be

transdisciplinary (Manning 2016). I applaud post qualitative approaches for that alone,

but ESE and research around place is necessarily transdisciplinary and may need post

qualitative research to explore its own transdisciplinarity. With that reorientation toward

our central interests in the Anthropocene, I want to return to radical empiricism and

techniques that support it.

Anarchival Writing as Inquiry

St. Pierre (2018) talks about writing that writes itself. This feeling of only being a

small part of the writing 'you' produce provides us with an entry point to talk about

research that may be anarchival, more-than-human, and radically empirical. It may imply

that this new body created, in the case of St. Pierre (2018), her writing, is now a more

active, living work like the anarchive (in place of the archive) described by Manning

(2018). Manning (2018) begins by presenting a conundrum:

> The thing is, all accounting of experience travels through simplification – every
>
> conscious thought, but all in a more minor sense, every tending toward capture of
>
> attention, every gesture subtracted from the infinity of potentions. And so, a
>
> double-bind presents itself for those of us moved by the force of potential, of
>
> processual, of the in-act. How to reconcile the freshness, as Whitehead might say,
>
> of process underway, with the weight of experience captured? (p. 1-2)

The question that Manning (2018) poses is that if we capture an event in, "the ubiquitous

model of description" how can we retain the activating potential that the event embodied

in real time (the in-act of experience)? That is, how can what activate the writing in the

first place be kept past the reduction necessary to write it? If we cannot retain this potential action then we are left with mere information to be transmitted and consumed, producing no further, and certainly, no new movement. This may not be a problem for researchers who intend to produce traditional research, but researchers who reach toward social change through fundamentally different thought must consider this question in their research. Manning (2018) suggests that "a practice of entering from the middle that allows us to generate an account of experience that is pulled in at least two directions at once" (p. 6) may enable us to 'grow together' (Whitehead's concrescence) with(in) the account imbuing it with the excess of creativity that accompanies the process of becoming.

Manning (2018) provides further guidance in the creation of 'texts' that might be anarchival. She says that "anarchiving needs documentation – the archive – from which to depart and through which to pass. It is an excess energy of the archive" (Manning, 2018, p. 21). Here the archive acts as a springboard. So, description that comes with traditionally recognized forms of research like ethnography may be one way of writing through/towards a more active creation as long as we go beyond just archiving and describing.

To get a better hold of what Manning (2018) calls for in anarchiving, lets imagine an event, something simple like me buying a cup of coffee at the Starbucks on the corner of the street. This event could be archived with video, photography, the actual artifacts of the cup and the receipt, or even a transcript of my order conversation with the cashier. This documenting may even pick up entire scenes that don't directly involve me buying coffee. A photograph of me buying coffee at the walk-up window on the Starbucks next

to my house would, most likely, include homeless people sitting at the concrete tables with plastic cups of water. This may offer a departure point for anarchiving. As fascinating as me buying coffee is, a point of departure might be the juxtaposition of very expensive coffee and the homeless. What is lost in the archived moment of the photo or the video is the smell of coffee and exhaust, the sound of cars passing, the chatter from the drive through intercom filtering into the outdoor seating, the feel of the conversation with the cashier, and all of those things matter in the becoming of all of the entities participating. But the hope of the anarchive is to take what the archive does offer as a new point of departure for new becoming's forward.

One last key to anarchiving needs to be explained, that of beauty. For Manning (2018) thinking with Whitehead (1967), the strong concept of beauty is not the harmonious symmetry of "external aesthetic judgment" (p. 24). Instead, Whitehead (1967) calls the strong concept of Beauty, Intensity Proper, filled with difference and conflict, discordant, creative tension that intensifies toward becoming. Manning (2018) explains that "it is operative and felt more than it is seen. The beauty works on us more than we possess it" (p. 24). Manning (2016, 2018) connects this to her proposed definition of art as *way*, stemming from its medieval definition. She combines intuition and sympathy with Beauty in a concept of "artful" (Manning, 2018, p. 24) calling artfulness "discordant beauty's motor" (Manning, 2018, p. 24). In accessing this beauty when it acts as a force and lure, a way of becoming, conscious intention may be a barrier. So, when St. Pierre (2018) claims that a sentence wrote itself, we might assume that she was part of a process that was not entirely conscious and subject to Beauty in the form of

Intensity Proper with differences and tensions within becoming that exceed her own body.

Manning (2018) argues that techniques must be invented that allow for anarchiving, and hints that artfulness, intuition, changes in direction, and attunement to the minor gesture may aid in the invention of those techniques. Richardson (2003) suggest that writing can be a process of more-than also, but it depends on the forms and styles and involves approaches to writing research differently than traditionally telling what you know. Manning herself engages in interactive art projects in a resonant way to that suggested by St. Pierre (2018) on writing as inquiry. More details about forms and styles and writing as inquiry will be addressed in Chapter Three.

One Last Detail of Ontology

The above discussion explains how the process ontology of Whitehead (1967, 1978) and Manning (2013, 2016, 2020), the relational axiology of Muraca (2011, 2016), the radical empiricism of James (1996), and post-qualitative inquiry can work together to overcome dominant Western modes of thought and methods. In doing so, I am proposing this quad as a possible way to shift the dominant Holocene episteme that brought us the very real destruction we see in the Anthropocene. I mention, and it can be seen through the above quad discussion, that more-than-human possibilities arise naturally from dissolving the bifurcation of nature. I also point out that post-qualitative inquiry and the quad can de-center science. Although implied in my discussion of axiology, I did not directly address re-centering questions of power and politics. Indeed, post-qualitative research can often fail to do this. Of course, the primary and fundamental function of

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values opens up my above quad to this ability, but a few more details are necessary to cement how that might be done.

This involves place as a spacetime event. I am taking place as an occurrence like those described by Whitehead (1967, 1978) and Manning (2013, 2016). If I left it at that, we would be left theorizing politics and power not from the primacy of becoming, but secondarily after bodies have arisen. This can and is done often, but it does not acknowledge the force of becoming that Foucault named the power/knowledge regime which I believe also acts immanently. So, it is necessary to open the inquiry of power and politics to questions of immanence.

Place may be able to show us the material effects of power and knowledge, but those forces are working in the emergence of place as an event. I will be employing Whitehead's (1967) concept of temporally varied immanence. I will more fully discuss this in chapter three, but I wanted to note here that re-centering power and politics requires more than just post-qualitative inquiry and immanence, and I believe that Muraca's (2011) axiology and Whiteheads (1967) temporally varied immanence provide a way forward.

In the next chapter, I will introduce the foundations of my research design based on Manning's (2007) *Politics of Touch*. I will discuss and retheorize the traditional methods sections of research questions, data collection including setting and participants, and data analysis. I will also detail the invention of the data engagement process, Remixing Data Experiences (RDE), and discuss how I applied that process to data bodies generated with Ajo, Az and the surrounding Sonoran Desert.

CHAPTER 3

REMIXING METHODOLOGY AND PHILOSOPHY

My dissertation deals with the confluence of neoliberal and dominant Western social pressures that are in tension with researchers striving toward a more sustainable world in light of the Anthropocene. As mentioned before there are several tensions at this point in time on Earth. Braidotti (2011) frames the problem of researching in our current times:

> If the only constant in the third millennium is change, then the challenge lies in how to think about processes rather than concepts. This is neither a simple nor particularly welcome task in the theoretical language and conventions that have become the norm in social and political theory as well as cultural critique. In spite of the sustained efforts of many radical critics, the mental habit of linearity and objectivity persists in its hegemonic hold over our thinking. (p. 15)

The antidote for this hegemonic hold remains constant, theoretically grounded vigilance. The ways forward must be thought out in constant conversation with the researcher's chosen theories. A fertile place to start may be where theories demand divergence from the norm.

As mentioned in Chapter One, this chapter begins to diverge from traditional dissertations. Although I will address the typical categories of a methods chapter to include research design, research questions, data collection, and data analysis, the way in which I will address them as well as the way that I performed them in this dissertation deviates from traditional approaches. I believe this departure to be necessary regarding the tensions presented in the Anthropocene and ESE. As suggested in Chapter One and

shown in Chapter Two, the Anthropocene requires a different approach to inquiry and learning– one that works in more-than-human and less disciplinarily distinct ways as well as not falling prey to the rampant scientism that undergirds traditional inquiry efforts.

Recall St. Pierre's (2013) claim that the "categories we have invented to organize and structure humanist qualitative methodology" (p. 630) bring with them the bifurcation of nature that Whitehead's philosophy denies. I will reiterate here that to move forward past the Anthropocene requires invention of new ways, particularly, invention of more-than-human inquiry, and I believe that it necessary to erode anthropocentrism ontologically. With that said, what this means for this chapter is that I must take radically different assumptions and directions with regard to techniques and methodology. Although these assumptions and directions will not cohere to traditional Western humanistic ideologies around methods and methodology, I do not perform inquiry in a vacuum but rather I perform inquiry in a world of process ontology. As we move through this chapter, I take the reader on a tour of this world by pointing out features that differ and providing details about what those differences do regarding inquiry.

This chapter begins with a discussion around research design and how this dissertation diverges from traditional ideas guided by Manning's (2007) *Politics of Touch.* I move on to discuss tensions with research questions in process inquiry while at the same time providing some specific questions. In the sections normally reserved for setting and participants, I work through theory to explain the necessary divergence from those categories in this dissertation, and I discuss data collection as data generation introducing questions around the use of historical techniques and technicity. I end with a

section on data entanglements in place of data analysis explaining and illustrating the invention and use of Remixing Data Experiences that emerged from this project.

Research ~~Design~~ Worlding

The word design means "to do or plan something with a specific purpose in mind" (Google, n.d.a). The dictionary defines research as "the systematic investigation into and study of material and sources in order to establish facts and reach new conclusions" (Google, n.d.b). Taken together, research design, in a traditional sense would be the planning of a systematic investigation to establish facts or reach a new conclusion about a specific problem or topic. Generally, social science research has already expanded this definition.

Creswell (2015) tells us that "research designs are types of inquiry within qualitative, quantitative, and mixed methods approaches that provide specific direction for procedures in research design" (p. 12). He even provides us with a clear chart of typical designs in quantitative, qualitative, and mixed methods research. For quantitative research he includes experimental designs and non-experimental designs such as survey research. For qualitative research he lists narrative, phenomenology, grounded theory, ethnographies, and case study. For mixed methods, he includes convergent, explanatory sequential, and transformative (embedded or multiphase) (Creswell, 2015).

I do not intend to establish new facts or reach new conclusions, not in the traditional, humanistic scientism manner. I do not want a template of procedures for doing just that. I may have new ideas, new thoughts, new directions, and new expressions, but I think that at this time, we do not need new facts or new conclusions; we need new *ways* of viewing/expressing old ones. To that end, I cannot properly say

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that this dissertation employs research design, but the decisions that I make in my

research will be guided by something else, or might be considered as done in a different

world– a one world of ontological process and immanence.

My research will be guided by Erin Manning's (2007) *Politics of Touch*. The

main ideas from the Politics of Touch that I will be working with are response-ability,

violence, and means without ends. In this section, I will explain Manning's (2007)

Politics of Touch in contrast to the normative politics of the nation state and disciplines

and what that might mean or inquiry.

Politics of Touch

Manning (2007) offers a politics of touch as an alternative to the politics of the

nation-state, which is in a way, a politics of unidirectional touching. Nation-state politics

concerns itself with security, certainty, predictability, stability, tact, and policing. The

nation-state itself is also a body comprised of other bodies and the organization of these

bodies within the nation-state is politics. Manning (2007) claims that "disciplinary

politics demands the apparent coherence of the structure" (p. 146). Within a nation-state

or within a discipline:

> The internal vocation of state politics is the unification of aims and the
>
> organization of these aspirations into a unique spatiotemporal whole. State
>
> politics does not happily suffer tears in its social fabric: politics must be common,
>
> and where commonality cannot be located, a line must be drawn to create a
>
> fissure between the inside and the outside, between the known and the unknown,
>
> the self and the other. This unification of forces for the "common good" condones
>
> domination in the name of re-balancing of social relations. Each body must be put

in its place. The placing of the body is necessary in order for the distribution of

power to adequately inscribe the social order within its own grids of intelligibility.

The body becomes intelligible insofar as it becomes common. Intelligibility as

commonality is the primary political articulation within the language of the

nation-state. (Manning, 2007, p. 62)

Within nation-states, there are norms and conformities on which the structure of the state

rests. The structure of the state is most definitely a 'real' thing that came about by the

relations of the bodies within it, but the politics of such a state acts to freeze-frame those

bodies into perpetual and self-same relations that reproduce the nation-state over and over

again so much so in repetition and reification that it appears/remains static and occupies a

linear and knowable space-time. Manning (2007) explains that a politics of the state often

sees the state as the active force where the other bodies within the state are passive,

receivers of state forces. She says that "this attitude posits as its point of departure a

stable body that exists in a pre-given spacetime which contains an active giver and a

passive receptor" (Manning, 2007, p. xiii). We can see here how traditional science,

views of non-humans (and some humans), and traditional academic research resonates

with nation-state politics.

In other words, the state defines the collective, the common sense of all within the

state and the bodies within receive that definition and are shaped by it. This could be

considered a unidirectional touch on a constrained body; we could even be perverse

enough to view it as a kind of molestation of a body. All bodies under these politics must

be identifiable as bodies that are included in and attached to the nation-state body in a

reproductive manner. One way that the nation politics does this is by striating spacetime,

meaning that it sets up a hierarchy of bodies in space and time and bodies are to fit in those stripes that are pre-defined by the needs/desire/politics of the state. This, in effect, objectifies/subjectifies bodies into structures that can be categorized, known, and best of all, predicted. In many ways, nation-state politics engage in "making up people" (Hacking, 1990, p. 3) so that it may define and know bodies to then include and exclude bodies.

Hacking (1990) describes how psychology has had a hand in producing nation-state ordained bodies with the help of statistics. He says that psychological laws,

> were to be a matter of probabilities, of chances. Statistical in nature, these laws were nonetheless inexorable; they could even be self-regulating. People are normal if they conform to the central tendencies of such laws, while those at the extremes are pathological. Few of us fancy being pathological, so 'most of us' try to make ourselves normal, which in turn affects what is normal. (Hacking, 1990, p. 2)

This type of policing in the politics of the nation state on bodies creates a feedback loop that serves to reinforce definitions of legitimate nation-state bodies, even enlisting the aid of the subjected bodies themselves to self-regulate in an effort to constrain and know the bodies within the state. I maintain that these types of techniques are, in fact, a worlding, a creation of a kind of world, and in this case, the nation-state politics highlighted here, make the world that have brought us the Anthropocene.

The nation-state creates a consensual politics by a variety of means like the example above, and it does so with the goal of maintaining the nation-state. To this end, the nation-state legitimizes conforming bodies and illegitimizes non-conforming bodies,

"that resist the national imaginary, bodies without citizenship, without passports, without legitimacy" (Manning, 2007, p.70). The state does so in a desperate attempt to "erase all forms of power/knowledge that might alert us to the porosity of its consensual apparatus" (Manning, 2007, p.70). These illegitimate bodies and their interactions threaten to complicate and problematize the "state's strict dichotomy between inside and outside" (Manning, 2007, p.70). These bodies, typically marginalized by the state, are seen as problems to be solved and the good and common sense of the nation-state says that we should fix or exclude these bodies. Good and common sense never directs us to question the state's role in producing these bodies in this light, instead we seek to intervene with evidence-based solutions on how to integrate these bodies within the nation state. For example, Nel Noddings (2005) points out that we are utterly preoccupied as to why there are not more women in science, engineering, and mathematic fields, but we have little concern for why there are not more men in fields of care like teaching, nursing, and home.

The above section deals with the security, certainty, predictability, stability, and policing that the nation-state politics use to maintain its self-sameness that would perpetuate the episteme that brought us the Anthropocene. It says to the possibly errant body: "Be secure! Conform! …. Confirm your conformation by organizing your excess: we may be able to protect you! But hide your differences at all costs!" (Manning, 2007, p. 140). The protection offered by the state to those who conform ask bodies to operate with tact (Manning, 2007). Bodies acclimated to nation-state politics know how to be tactful. Manning (2007) explains that "tact embodies this injunction that challenges me in advance to have known how and when I should or should not touch" (p. 134). Tact

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compels us to draw within the lines of the "almost-known, the anticipated-in-advance" (Manning, 2007, p. 135). The only thing we can anticipate in advance are bodies as the nation-state portrays them. Traditional research design employs this type of tact.

The above discusses how the nation-state embodies its politics, the means by which it orients all included bodies toward the end of maintaining the nation-state. That nation-state politics works in this manner is no surprise, and this working is clearly seen in the current neoliberal state and in the science and research of the Anthropocene. Manning (2007) just frames it through the ideas of touch, not touching, and how the nation-state views touch as a sense. But my point with the long description of nation-state politics is to draw parallels between nation-state machinations and those of academic disciplines and to set the stage for an explanation of a politics of touch.

Academic disciplines also contain recognizable bodies, policed practices of inclusion and exclusion, and tact. In traditional social science research, for my dissertation, I should choose from among many sanctioned research designs as described in the beginning by Creswell (2015). I am even allowed to, tactfully, be creative as long as I stay within the lines of the 'almost-known'. To accept the nation-state directives is to tacitly agree with its politics and engage in its world making to reify its existence.

What I am enacting in my research design is not tactful and not within the traditional lines. What I am enacting in the terms of nation-state politics is treason. I take a risk in veering away from the sanction-bodied politics. I understand that I will no longer be protected by the great, lumbering, bulky forms of recognizable research thus this chapter serves to elaborate on the forms I am trying to create and perform. In

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striking out across the bounds of the normative, this dissertation strives to put down as much ground as possible for others to follow.

One of the problems I see in my discipline (science and environment education) is the overuse of tact and conformity through the overabundance of studies founded in post positivist and constructivist frameworks which support normative methods and theories that serve to entrench the destructive thought that brought about the Anthropocene. These abundant studies, though well-meaning and utterly accepted, serve to reproduce current nation-state politics, and that they are abundant shows that they are sanctioned. They serve to reproduce the current state body, and although there is a time for such endeavors, the tensions discussed around the Anthropocene in Chapter Two, point to the need to diverge from these traditionally sanctioned frames.

Although Manning is describing any nation-state politics, the echoes of neoliberalism can easily be heard. If we believe that research in the Anthropocene needs to overcome neoliberal cooption and avoid dominant Western framing, then taking up nation-state politics through traditional research may not (and has not) accomplished that. A new way forward, outside of nation-state politics must be invented, performed, and explored.

It would be axiologically incongruent of me to choose tact and conformity over the risks that I might suggest as a way forward. Also, if I decide not to risk a new direction with a new politics, "I will continue to operate within a version of politics that has already been secured as a measure of the current political situation" (Manning, 2007, p. 135). Meaning that if I stay within the confines of the normal and sanctioned politics of my discipline, in this case choosing among sanctioned and known research design, I

can only produce 'research' that reifies the dominant logics that drive the Anthropocene.

I can only reinforce the politics that exist, never change/challenge/problematize them.

This is why I turn to a Politics of Touch in place of the politics that saturate the very air

of academic disciplines.

Nation-state politics "requires that we believe that bodies can remain in

equilibrium or that socially we will reach an equilibrium where bodies have no reason to

move or change" (Manning, 2007, p. xx). I do not agree. My ontological commitments

with regard to the Anthropocene, in line with those of Manning's (2007, 2013, 2016,

2020), will not allow me to research under those assumptions combined with the driving

concerns detailed in Chapter Two. Manning (2007) states that:

> We know that bodies move. Therefore, it is not conceivable that they are (always)
>
> in equilibrium. Bodies as machines are often far from equilibrium: changes in the
>
> surrounding environment cause changes in the system. Far-from-equilibrium
>
> systems are metastable, marked by an element of unpredictability, by a capacity
>
> for development, for individuation and mutation. (p. xx)

When we are committed to the dynamic nature of entanglement and flux of the process of

becoming, we become obliged to take a different approach to research. If we are

interested in new possibilities that circumvent the nation-state entity, a new politics must

be employed. My approach will be a Politics of Touch.

Manning (2007) reminds us that "to make a decision is a political event" (p. 49).

During research we make many decisions, we prioritize, we include, we exclude; in effect

we orient in a direction, and that orientation is political, and that politics creates a world

as a way of becoming. My refusal to pick a perfectly legitimate research design is

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political. What and how I chose to write, that too is political. But in a Politics of Touch, I will be working within means without ends. Although I am interested in possibilities and change, I do not pre-suppose what they are before I engage in my research, the means, but not the ends (Manning, 2007). I am not out to prove or to know only in the traditional, hyper-rational manner. I am out to do and create as well as know differently. The process of this dissertation's becoming depends on the other bodies that I touch and the invention of new spacetimed bodies that ensue from those actual occasions of experience. *I* will not be in control; my research is not really mine.

This is a difficult politics to imagine with regard to normative research. The above nation-state politics is much more familiar, as Manning (2007) explains:

> Politics of touch are not the exercise of hierarchal power, but an opening toward a production of power that incites us to act. Too often we conflate politics and a repressive understanding of power as a result of which we have a tendency to assume power as an heir to the sovereign, thereby confining politics to the states. Politics should not be defined on the basis of pre-existing subject. Politics must be thought in relation. (p. 14)

Manning (2007) sees touch as a reaching toward an-other body, but that other body is not a body statically pre-defined in spacetime. What I will be reaching toward is another body's potential, the potential of new inventions in the violent touch from one to another. Manning (2007) explains that "touch becomes political the instant I reach out toward you in an uncertain movement of unknowing, and unknowability" (p. 122). This uncertain, unpredictable movement toward the unknowable other is what I think of as a core movement of my research in this dissertation. It is how research is created and

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impossible worlds rendered possible. Clearly, this is not the only way to do research, but it is the research that I am drawn towards through my concerns. Instead of designing, engineering, and controlling research, I want to create research through touch.

At this point, I imagine those unfamiliar with Manning's (2007) philosophy are asking – touch? Touch is a bodily sense, but more importantly, to touch is to move toward another. When I read a new book, I am touching another. When I have a conversation, I am reaching toward another. The act of reaching out is not the only part of touch though. The second condition is that I am willing to respond and be touched, reinvented in turn. I touch in a way that allows me to be transformed, sensually, shaped by the other. Additionally, the touch between the other and I create new bodies, it invents new bodies that may in turn create new worlds. Those bodies, in a politics of touch, are not organized in space and time, they *are* spacetime. I must touch with response-ability to engage in a politics of touch:

> If I pretend to know the outcome of my reaching-toward, I am not really reaching toward. In other words, when space is preconstructed (when the space between is overdetermined by my certainty about you and your simple location in the world), there is no space to cross, there is no chronotrope to create, and ultimately, there is no potential for touch as reaching toward. (Manning, 2007, p. 122)

Above a chronotrope is Manning's term for spacetime. If I touch with determination, not potentiation, if my touch is not loaded with response-ability, then I am engaging in some nation-state-like politic that organizes bodies in hierarchies of time and space. Response-ability contains the double meaning of its form. First is the ability to respond, the openness to the other, the commitment to be affected throughout the process of

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becoming. There is a surrender of knowing and certainty, there is a surrender of the nation-state politics as there is a surrender of self and identity in a politics of touch. There is a risk. I cannot both traditionally design research and engage in a politics of touch.

The second meaning of response-ability is the traditional– responsibility. Manning (2007) warns that "there is no such thing as a touch without consequences" (p. 51). To engage in touch, the reaching toward another body, is to engage in an axio-political decision. No matter the touch, there is a violence done. Manning (2007) explains:

> In reaching out to you, I entice you to become a medium of expression. I ask you to participate. I invite you to experience. As my sensation translates itself to you, you immediately convey to me a response to this touch. The multidimensional movement of desire is violent, for it presupposes a certain demand, a decision, an instance of response-ability…. For in each of these con-tacts, a new body is born, an articulation is taken into consideration, a bite of experience is consumed and the risk of loss of footing is guaranteed. Touching—this articulation toward another—therefore occurs in a general economy of violence. (p. 51)

In inquiry, this means that as I proceed, reaching out in actual occasions of experience, that I must remain responsive to the directions and divergence that comes from becoming a medium of expression for others. Manning suggests that I must be prepared for new bodies to be born that create a loss of footing, or an entirely unexpected divergence, not wholly my own to be created. The above type of violence involves the ruptures of change that occurs when a body moves toward open relationality. In this case, it is not the

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touching that is violent, it is the initial decision to reach towards another as evidence in its movement. Done with response-ability, Manning (2007) considers this type of touch response-able in the axio-political sense. Violence is not marked on the other body as it is in nation-state politics as in the politics of touch both bodies are in motion. As touch in the politics of touch is a violent invitation to create new bodies, the other body must consent to respond. The body that reaches out must consider the other body unknowable in principle, not just unknown. The impetus for the reaching must not be to render the other previously unknown body knowable, but it must be a reaching toward experience to create with a body different than our own precisely because of differences and unknowability and the excited desire of what-may-come.

Manning (2007) contrasts this violence to nation-state violence that "seems to rely on the pretense that the unknowable could simply be the unknown and therefore potentially conquerable through comprehension and domination" (Manning, 2007, p. 53). I argue that much traditional research sees the bodies that it researches/reaches toward as simply the unknown, and researchers perform the machinations of research design and methods precisely to make a previously unknown body known. But Manning (2007, 2013) would argue, and I with her, that those bodies are in excess and flux in such a way that they can never be known to predictability. What I mean here is that bodies can only be 'defined' with the tools of knowledge/power within each nation-politics system and while most see this categorization and defining process as 'knowing' a body, there is no such thing, as bodies do not exist in such a way as to be known.

The argument that the nation-state 'knows' only part of a body due to the exclusionary practices of its politics is a familiar one. Many scholars try to expand the

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'known' of the body through a different political, often critical lens. What Manning (2007) suggests about the unknowability of bodies is not that of a critical argument but a primary principle. It reaches back to a different onto-epistemological foundation that is process philosophy (Manning 2007, 2013; Whitehead, 1967, 1978).

My audience may have noticed a theme of space and time throughout the above discussion. Spacetime is central to the difference between a politics of touch and one of critical theories. Manning (2007) explains:

> Bodies operate in the crease where past and future coexist. Bodies are in movement and to move they must fold-in, fold-out…. Bodies—especially the bodies constrained to the discourse of the national body-politic—have been sequestered in a discourse of the actual. Bodies cannot be strictly actual to their movements. They are virtual in a sense that they are always reaching toward…. But bodies are not only virtual. Virtuality must become empirical. This is the paradox of the senses: sensing renders the body virtual by exposing it to continual movement yet sensing and senses render the body's fleshiness actual. My experience of touch is empirical (I touch to "know" the sensation) but radically so: I touch what is always already not-yet there. Bodies as emergent vectors of experience shift between proportions composed of actuality and virtuality. Virtuality phases into actuality abstractly. This movement toward the actual is abstract because despite its actuality it is difficult to trace exactly its beginning and its end…. Sense-events are reminders that the virtual and the empirical pass into one-another, challenging body times and spaces, creating and modulating bodies. (p. 142-143)

Manning (2007, 2013) is not saying that actual bodies do not exist at some space and time, what she is saying is that actual bodies are indelibly ephemeral. In other words, the bodies that we describe in traditional research, the bodies that exist and can be physically touched, are only real in that moment of becoming with other bodies. Whitehead (1967) terms this the actual occasion of experience. After that occasion, that particular body ceases to exist in the actual and only through abstraction can that body be thought to be real at some future time past the occasion of experience. That body is done, but its potential which was/is always already there remains. Process philosophy does not see bodies as continuous; it sees bodies as erupting from a virtual plane into the actual plane (where we normally 'capture' them). The reality of process philosophy acknowledges that which is on the virtual to be significant as it is the driving force of becomings (Manning 2007, 2013; Whitehead, 1967, 1978).

Manning (2013) states this in another manner:

A body is black, gendered, sexed, you might say, adding that these are irrefutable givens that situate the body within the realm of fixed form. Irrefutable, yes, but only as the limit of a constellation of processes that collude to foreground one measure of how the body expresses. Identity is less a form than the pinnacle of a relational field tuning to a certain constellation. The question is not "how is the body not black or gendered or sexed?" but how is the body more-than the classification this singular constellation foregrounds?". The question here cannot be limited to the body "itself" as though the body weren't active in co-constituting the ecology at hand. If that ecology tunes to categories such as color or gender, these aspects of the field will continue to be foregrounded. The issue is not to

deny this but to ask how these ecologies continue to co-constitute a body in this or that way. The point is not that there is no form-taking, no identity. The point is that all form-takings are complexes of a process ecological in nature. A body is the how of its emergence, not the what of its form. (p. 17)

Here Manning (2013) acknowledges an ecology of entangled bodies, a weft and weave of innumerable bodies creating a constellation that embodies becoming. The specificity of a single moment at the pinnacle of an actual occasion does not express anything essential to a singular body, but rather expresses how an ecology of practices foregrounds particular features and categories in which that body can participate. Further, this means that those features and categories belong to the event, not the body, and that other events and processes can manifest that singular body differently. What we normally take as a given characteristic of a particular body is not static or eternally defined but rather the aspects that become highlighted in a constellation of other bodies.

In process, no body stands still in the actual long enough to be considered concretely 'real' across all potential spacetimes and ecologies of practice. The maddening, constant motion of bodies blurring in virtual and actual dimensions obliges us to "think not the order and causes (and effects) but the play of compositions and decompositions at work" (Manning, 2007, p. 143). Bodies are both virtual and actual, they "emerge not only as what they are but what they expressively can become (Manning, 2007, p. 143). My 'identity' tells me more about the ecology of forces that foreground those differences of becoming amidst a veritable infinite ocean of differences available at any moment in the process of becoming than anything continuous or definite

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about my body. Further, those glaring differences that 'identify' me are excessive

differences that are also backgrounded but still part of becoming in that instant.

Here in the occasion of a body becoming out of the different bodies moving

toward one another with intensity, other bodies, not seen in the actual dimension are

created, and these bodies move also, to generate more bodies in the (im)possible future.

The potential churning beneath the surface of the actual is never known consciously,

instead it is felt. Feeling or prehension as Whitehead (1967) terms it, is the only

sensation we have of the potential, and it occurs before the actual occasion concreases

into definite bodies of that moment.

When an entirely tentative 'me' emerges from a cacophony of moving bodies, I

emerge with thoughts and feelings that incite my body to move again, and again, and

again. Manning (2007) explains that "touch, when I reach you does not then transfer into

a knowable commodity, but into another possibility of reaching out… to touch is not to

know. What I do have when I reach out to touch you is an idea" (p. 123), a concept

accompanied by a feeling. If I combine what I do as a body as seen in glimpses of

eruptive actual occasions with how I feel/desire/orient, this combination tells me more

than what I became, it taps into the future-potential of becoming with others. This is the

non-linear fragmented spacetime of bodies in motion. In process inquiry, I expect to find

the vast differences of becoming by attuning to more-than-consciously thought aspects of

experience.

Our cultural obsession with the actual body (that became before and is now gone)

stops this action, this experimentation, this creation of new bodies. It only gives us

license to do the same thing again. In a way it is the death of novelty and explains *how* neoliberalism might coopt ideas that seem to oppose it. Manning (2007) explains:

> Most politics make a Descartes move, stopping at representation. For Descartes, it is the representative content of ideas that is at stake, as well as the form of the psychological consciousness that thinks these ideas. With only an extrinsic characterization of represented ideas, we get no further than the extrinsic characteristics of Being. Spinoza thinks politics otherwise, beginning not with representation but with the potential of affirmation. For Spinoza, what is at stake is the immanent content of ideas, not perfection, reality, or causality, but the surprise of not knowing what a body can do. Non causal correspondence is at the heart of a politics of touch. (p. 154)

Non causal correspondence is not a representation or a synthesis, it is not sense but sensing. Causality rests with the idea that one can be outside of other beings/becomings, it sees bodies in a sterile vacuum of nothing (no churning field of potential), it sees bodies just as Being. Manning (2013) cautions us that "there are few starting points as lethal [to new thought] as the totalitarianism of Being" (p. 46). Being implies a stasis, that frankly, I do not believe exists. To have mechanistic cause and effect, we must focus on bodies as Being, ignoring their movements, their dynamics, and just measure them again at different points without heed to the multiverse of bodies in the churn of the potential. Cause and effect ask what and then what. Non causal correspondence asks *how*.

Manning (2013) explains that "foregrounding the metaphysical surface as the *how* of experience in making opens the way for a different proposition." (p. 46). Instead of considering the metaphysical surface as a Being, a what, we can consider it to be a

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process of becoming, allowing us to think thoughts differently and create new ideas.

How returns us to the politics of touch, a "protopolitics and dark precursor" (Manning, 2013, p. 46) to the body that becomes actual. *How* allows us to engage in a politics that teeters at the edge of form and structured bodies, before nation-state politics can take hold, it offers us a chance to engage the potential, virtual part of the world and worlding. For this dissertation, this means that inquiry must proceed by creating a spacetime that is not overdetermined by research design as planning and presupposition. This normative planning and presupposition work externally to the actual process of inquiring and as such does not fit into a world of ontological process and immanence. This means that this dissertation aims to emerge immanently through driving concerns as well as specific philosophical principles taking turns and diverging in ways not possible under normative traditions like positivism and constructivism. To engage this elusive potential underbelly of worlding, I must reach out violently with response-ability disposed of the pre-suppositions that normally guide research. Touch asks me to tune toward experience in the raw without trying to know it only consciously. In electing research creation over research design, I take the first tentative step toward this other way of worlding research. I believe that this first tentative step may allow us to glimpse or perhaps create (im)possible worlds where the Anthropocene is no longer imaginable.

Research ~~Questions~~ Concerns

At this point, traditional dissertation formats ask for research questions. It is not that I do not have questions or will not indicate them here and use them in my research process but coming off the last section of research ~~design~~ worlding, stating research questions without qualification remains jarring, abrupt, almost cancerous. In drafting this

chapter, I wrote the questions and stuck them here as a reminder of how my questions were forming before the previous section was completed. They appeared to me as a tumor. I do not use the word cancerous above thoughtlessly. In the undrafted state, the questions, unintegrated into the body of this section, scared me. I saw the possibility that the tumorous form they took could metastasize throughout the dissertation unmaking it. It occurs to me that I may experience this again as I move through this dissertation, and vigilance does/will remain my constant state.

Many desires occupy me with concern for this dissertation. I have frequently mentioned 'new ways forward' with regards to the Anthropocene, ESE, neoliberalism, schooling, and methods throughout the previous sections. The social changeability of research is not something *I* can promise; it is one among many desires that reside with me, but the research/me remains a small part of that process. This work situates itself in the axio-socio-political tensions and cracks of the Anthropocene and minor gestures within education. But the social change desire remains too far forward of the research and dissertation/me's current state of becoming.

In Chapter Two, I discuss some of the ways theorist believe that we may be able to better overcome the Anthropocene including de-centering the human, re-centering politics and power, and de-centering science (Hamilton et al., 2015; Latour, 2018; Lövbrand et al., 2015; Maggs & Robinson, 2016). I have also discussed how other theorist see a potential in place research and education although place itself remains undertheorized (Gruenwald, 2003; Orr, 1992; Seawright, 2014; Somerville, 2012; Smith, 2007; Taylor, 2017; Tuck & McKenzie, 2015). Additionally, I am ontogenically

performing these tensions in the Anthropocene throughout this dissertation. So, I desire to understand:

1. What does process inquiry with place afford with regards to the Anthropocene and education?

    a. How does process and place make the more-than-human possible?

    b. How does process and place permeate disciplinary boundaries?

    c. How does process and place center power and politics?

    d. What methods emerge through process inquiry with place?

I do not think that this is the end of my curiosities, and perhaps therein lies my unease concerning a research question section. If I desire to create a live action anarchive as a dissertation, the tradition of research questions may stop that action, deadening my practice. Research questions, as normally conceived, serve to bind a study, not immanently, but from the outside. This seems at odds with my guiding theories. To leave my process more open-ended, I propose to ride the currents of the above curiosities towards the desire for shifts in dominant Western thought while performing a different ontology. Far from being directionless, I trust the process of following my curiosities and concerns to "bind" themselves immanently as I inquire. I acknowledge the inherent uncertainty in trusting in some form of cohesion from immanence, but my guiding theories propose that this is how the world already always works. In a sense, I have confidence that my ontogenic performance will move toward an anarchival dissertation due to a coherence of principles and guiding theories. I believe that thinking more about my ongoing entanglements and creations with curiosities and concerns rather than static

research questions will foster, not stop, the concrescence that will eventually produce a body considered a dissertation.

A politics of touch asks that questions are not necessarily answered (an end), but instead that I engage in a practice of answering the questions (a means)– inquiry itself. I expect this dissertation to be an example, an enactment that provides one possible consideration of the research questions rather than being able to answer the research questions as if they were lines on a test. This honors Manning's (2007) call to openness of being affected by other bodies than my own, working response-ably, in the process of inquiry.

Living Inquiry: Setting, Participants, and Data Generation

The next traditional sections of the dissertation concern setting, participants, data collection, and data analysis. These are typically written as separate sections with perhaps setting and participants introducing data collection. The first things that come to mind in thinking and writing this section with my guiding theories looks something like this:

1. Setting: The world as it worlds, or everyday living.

2. Participants: Anything in the process of worlding that I read/think/write/do with in the spacetime of this dissertation.

3. Data Collection: Living, reading, thinking, writing, doing.

4. Data Analysis: Interestingly similar to number three, living, reading, thinking, writing, doing.

Following, I will elaborate through each section by pointing out the divergence that process and immanence require. Just as I point out that implied in a research question

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section above is a two-world view of binding from the outside, the same holds true for traditional sections such as setting, participants, data collection, and data analysis. In the following sections, I work through immanence and process with my guiding theories to realign those sections to be more theoretically congruent with the assumptions of process philosophy.

There are no real boundaries between setting, participants, and the events of data generation. As Whitehead writes, "[n]o things are 'together' except in experience; and no things *are*, in any sense of 'are', except as components in experience, or as immediacies of process which are occasions in self-creation" (Whitehead, 1967, p. 236). In other words, inquiry manifests as an entire process that we have previously divided into sections called setting, participants, and data collection. With setting no longer its own category, it seems to collapse into participants. Further, when I approach participating bodies through a politics of touch, their involvement in data generations should rival my own which connects them tightly to data generation. Additionally, neither Whitehead (1926, 1929, 1938, 1967, 1978, 2004) nor Manning (2007, 2013, 2016, 2020) admit any difference of kind between human participants and non-human participants. All bodies are generated through experience, and any generated body in experience can be part of inquiry (data). As such, the traditional methodological categories and conceptions of place as setting and people as participants fail to fit the theories guiding this project. Additionally, I see eschewing setting as ontogenically addressing the issue brought to light by Tuck and McKenzie (2015) as they observe that traditional research often regards place as "just the surface upon which life happens (and from which data are collected)" (p.9).

In the next section, I will address what traditional research normally conceives of as setting, participants, and data collection by narrating my inquiry activities and weaving in the subtle shifts and the philosophical commitments to which they are tethered.

Living in Ajo- Setting or Participants?

I lived in Ajo, AZ from September 9th, 2019 to December 22nd, 2019. During this spacetime, I participated in 37 unique community events as well as numerous mundane activities. I approached this spacetime eventing as everyday, residential living– meaning that I participated in any events open to a resident of Ajo who has no special standing as a researcher. I did not target specific events, and the more I participated with the community, the more I was invited to participate as a community member in other events. For example, I was invited to write a newspaper article about one event that I attended because the local journalist was unable to attend, and most people, by this time, knew that I was taking notes of event details. Although I always informed people of my dissertation work while participating, I was working under Manning's (2007) idea of means without ends responding to the intensities and rhythms of everyday, residential life in Ajo and the surrounding Sonoran Desert without presupposition. With that said, Ajo is a relatively small town meaning that it was easy to participate in most community events without choosing one over the other.

Several interwoven points of theory led me to this decision. First, experience is the empirical ground of this project, working through radical empiricism (James, 1996; Manning 2007, 2013, 2016; Whitehead, 1967, 1978). Second, foregrounding everyday residential living as means without ends creates space to be affected as much as to affect through the process of agencement (Manning, 2007, 2016), and third, techniques of both

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everyday residential living combined with inquiry techniques remain important to inquiry based in process. Finally, conscious thought remains only a small part of knowing within experience (Manning, 2016; Whitehead, 1967) particularly in more-than-human work that necessarily "trades in modes of perception that are not subject based" (Thrift, 2008, p. 7). Following, I will discuss these theoretical points in distinct sections although these ideas remain largely entangled.

Radical Empiricism and Experience. As mentioned previously, I employ the radical empiricism of James (1996) under the influence of Whitehead (1926, 1929, 1938, 1967, 1978, 2004). This means that bodily experience in contemporaneous spacetime becomings provide the foundation of knowing in both the traditional sense of *logos* and in the expanded sense that Manning (2013) refers to as different registers and Thrift (2008) refers to as a "full range of registers of thought" (p. 12). In other words, bodily entanglement within the spacetime nexus of Ajo provides a rich process that allows for experiences of more-than-conscious knowing with a multitude of bodies researchers usually consider 'setting' or 'participants'.

Recall that James (1996) claims that "[a]ll things experienced are real and all real things must somewhere at some time be experienced" (p. 160), meaning that if a thought, artifact, emotion, gesture, or word arises during the actual occasion of experience, it is 'real'. As Thrift (2008) points out, radical empiricism "differs–radically–from sense-perception or observation-based empiricism" (p. 5) that could be considered too restrictive and particularly humancentric (Law, 2004). Furthermore, taking a Whiteheadian stance, what arises as real does so due to the contrasting differences of lures, prehensions, and values coming together in a moment of unity, what Whitehead

(1967, 1978) terms concrescence. Whitehead (1967) explains that traditional research approaches usually only access the end body-product of experiences due to the privileging of *only* bodily senses as empirical, particularly sight. He writes that:

> The first error is the assumption of a few definite avenues of communication with the external world, the five sense-organs. This leads to the presupposition that the search for the data is to be narrowed to the question, what data are directly provided by the activity of the sense-organs–preferably the eyes. (Whitehead, 1967, p. 225)

Whitehead (1967) claims that this is basically the preferred empirical grounding of all 'exact science' like physics and seen in more observational modes of participant observation (Bernard, 2011). He goes on to say that while methods in science gain data by this privileged "communication", the "scientific categories of thought are obtained elsewhere" (Whitehead, 1967, p. 225). Whitehead contends that scientific methods work in a narrow groove of the empirical due to their foundation in the bifurcation of nature with humans only having access to reality through the physical senses; further, scientists overstep the capability of their narrow empiricism by making gross generalizations and universal claims that are, in fact, abstractions from the actual experiences based on only tiny slices of actual events.

At this point the reader can probably intuit that Whitehead does not find this narrow empiricism to be tenable in an adventure of ideas as it supports the knower/known and mind/body divide that he circumvents through process ontology. Although he does not deny that sense data is part of experience and thus empirical, Whitehead (1967) reframes this by writing:

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But the living organ of experience is the living body as a whole. Every instability of any part of it–be it chemical, physical, or molar– imposes an activity of readjustment throughout the whole organism…. Further, we cannot tell with what molecules the body ends and the external world begins. The truth is that the brain is continuous with the body, the body is continuous with the rest of the natural world. Human experience is an act of self-organization including the whole of nature, limited to the perspective of a focal region, located within the body, but not necessarily persisting in any fixed coordination within a definite part of the brain. (p. 225)

Whitehead (1967) does not take the categories of senses as primary or absolute in experience or empiricism. The whole living body under continual processual becoming is primary and categories may arise in the actual occasion as shaped by the overflowing potential of the more-than-appearance of all bodies together in experience. Whitehead (1967) acknowledges that this process of becoming has a focal point, and often humans consider themselves the subject (the 'real' focal point) and the other bodies becoming in concert with the actual occasion as objects. Although the human focal point seems to the human body to be comprehensive, it is important to remember that Whitehead (1967, 1978) would consider all bodies (books, rocks, crows) to be their own focal points capable of experiencing the actual occasion. As such, it might be more accurate to say that all bodies are 'subjects' from their own focal points as they actualize as distinct bodies during the occasion. What this means is that even bodily participation in experience leaves us with partial knowledge of what and how it happened, but everything felt, thought, done, said, and written within every experience is 'real'– empirical,

radically so. This body-as-a-whole, not divided up into distinct senses, allows us greater access to the processual becoming of these real bodies during experience.

Thus, everyday living provides an analogous 'whole' not divided up into distinct settings or participants pre-categorized in advance. "Everyday life is a mix of taken-for-granted realities, habit, and routine as well as impulse, novelty, and vivaciousness" (Vannini, 2015, p. 320), and it is here in that indefiniteness of everydayness that radical empiricism may be able to open to more-than-conscious processes of knowing without reduction as the first step of inquiry.

To Affect and Be Affected. The second point in foregrounding everyday living in a place over traditional categories of setting and participants has to do with opening space for affective forces. In the beginning of this chapter, I explain in detail Manning's (2007) Politics of Touch. As a reminder, Manning (2007) cautions against overdetermination prior to interaction. She advocates response-ability and indicates that working within means without ends helps to allow spontaneous, novel experiences to emerge between bodies as they come together in actual occasions of experience. In other words, refraining from presupposing categories and activities allows for more open affective forces in the reciprocal shaping of bodies in events. The way in which I approach other bodies will affect how those bodies (including my own) are eventually shaped. Recall she says:

If I pretend to know the outcome of my reaching-toward, I am not really reaching toward. In other words, when space is preconstructed (when the space between is overdetermined by my certainty about you and your simple location in the world),

there is no space to cross, there is no chronotrope to create, and ultimately, there

is no potential for touch as reaching toward. (Manning, 2007, p. 122)

Manning explains one of the fundamental problems within more-than-human inquiry;

presupposition does not allow other bodies to participate, to fully affect creation which

centers whatever comes out of inquiry or an event on a controlling human subject. I

found Manning's (2007) call for a politics of touch, a surrender of presupposition, echoed

strongly in non-representational research theories, and many of those working in non-

representational research focus on everyday life (Dewsbury, 2000; Latham, 2033;

Lorimer, 2005; Thrift, 2008; Vannini, 2015).

Lorimer (2005) explains non-representational research and its connection to the

everyday by writing:

The focus falls on how life takes shape and gains expressions in shared

experiences, everyday routines, fleeting encounters, embodied movements,

precognitive triggers, practical skills, affective intensities, enduring urges,

unexceptional interactions, and sensuous dispositions. Attention to these kinds of

expressions, it is contended, offers an escape from the established academic habit

of striving to uncover meanings and values that apparently await our discovery,

interpretation, judgement, and ultimate representation. In short, so much ordinary

action gives no advance notice of what it will become. Yet, it still makes critical

differences to our experiences of place and space. (p. 84)

Lorimer's (2005) "no advance notice" can be related to the above discussion of focal

points within concrescence, other bodies are unknowable in principle not only in practice

when working under process ontology, and events contain possibilities beyond erupted

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bodies and conscious knowing. Everyday life holds the possibility for encountering the more-than-appearance of bodies.

If we go into inquiry loaded with categories and assumptions, this shapes the inquiry product/body without creating space for other unknown/able bodies to participate. Manning (2007, 2016, 2020) and Whitehead (1967) would say that presupposition and reliance on complete knowability and predictability will mostly produce what was initially planned/framed in the first place. Additionally, politically, it will reflect and conform to whatever prevailing dominant episteme is at work that striates and organizes bodies, or as Whitehead (1967) writes "[t]o venture upon productive thought without … an explicit theory is to abandon oneself to the doctrines derived from one's grandfather" (p. 222).

Opening space to be affected and the commitment to the idea that other bodies are not passive objects, but their own focal points, allows for a more-than-human approach to inquiry, and a more-than-human approach to inquiry works in the cracks and fissures of the Anthropocene. Whitehead's (1926, 1929, 1938, 1967, 1978, 2004) philosophy contains a thread of post-humanism without explicitly declaring such. He does not consider human bodies and experiences as different in kind to that of any other bodies and experiences- animate or inanimate. All distinct bodies arise through experience, meaning all bodies, not just humans, experience and belong to the event. Additionally, the focal region of the human owes its existence to the processual force of all bodies coming together in experience. Human and non-human become recognizable only after and through the process of actualizing during experience. We erupt from the depths of the universe creating texture, scale, eddings of intensities, joined in rhythms both

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harmonious and disjointed thus creating the world from and for one another. This entangled view of existence combined with the constantly processual becoming of bodies growing together in spacetime creation allows a way forward for more-than-human inquiry and focus on everyday living allows for this in practice.

Regarding affect, I believe that it is a good time to note that I do not use the term agency. The idea of the ability to affect *seems* to be congruent with typical notions of agency. Additionally, granting the non-human agency has been a tactic in some post-human work (Haraway, 2016; Latour, 1993; Tsing, 2015), but Manning (2016) believes that agency, particularly in a triad with volition and intentionality, marks more the ability to 'not be affected' than it does 'to affect and be affected'. She writes:

> Agency begins in a category. It is used to place the action of volition in a subject or a group. That said, I recognize that agency is often used… to give voice to an underrepresented group. We talk about the agency of the disabled… autistic…women of color. We speak of the need for the disenfranchised to have agency. The last thing I want to do is deny the complexity of power and the ways in which it sidelines populations. Indeed, what is important here is precisely the question of how an emphasis on the in-act of event-time opens a way for rethinking of power and politics that accompanies it. In focusing on agencement instead of agency, I want to argue, allows us not only to value modes of experience backgrounded in the account of agency, it also shakes the powerful foundations of neurotypicality, a mode of existence that profoundly devalues accounts of experience that cannot be reduced to the volition-intentionality-agency triad. (Manning, 2016, p. 123)

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Here Manning (2016) prefers agencement to agency as recognizing that by the time full bodies and categories are formed in the apex of the event the ability to do things by volition and intention is already formed also. Agencement refers to "the interstitial arena of experience of the interval, an interval not of the category but in the pre of the categorization where the field is still in formation" (Manning, 2016, p.123). In this arena, differences can still push the event in new directions and agencement honors the generative force of all bodies in an ecology.

Although Manning (2016) comes to this theory in the course of work on neurotypicality and neurodiversity, she believes that all "sidelining of populations" (race, class, gender, non-human) resides in centering the agency-volition-intention triad in the individual, rather than in the ecology of practices that forms the individuals that are subject to agencement. Clearly, agencement is not a force of good (only), it is a part of the process of becoming that can also give rise to racism, sexism, speciesism, and neurotypicality. Her point of agencement remains that this kind of understanding of *how* bodies occur in experience gives us a chance to work them into different directions where granting agency to already formed bodies has not. Agencement also provides us with a way to conceptualize collective cultural (or sometimes termed systematic) problems of marginalization in that there is no essential substance that makes a body 'less' although an ecology of practices can lessen a body's capability to affect. Agencement allows us to understand that the categories like disabled cannot be reduced to the person as agency-volition-intentionality implies that it is.

What is important in this distinction to my current project is that agencement allows a way to think about how affective forces work processually, as bodies form

together in experience as they do in everyday life. Agencement as a pre-categorical, pre-individual process provides us a way to think reciprocally about affect (to affect and be affected) whereas the triad of agency-intention-volition focuses on the capability to affect only. The everyday provides a space that includes all kinds of bodies brought into relation "through a largely involuntary process of encounter" (Thrift, 2008, p. 8). The ample opportunity of agencement in the everyday is important in the development of more-than-human inquiry as this concept gives space to rethink the interactive ecology of becoming of bodies that equally participate in experience.

Agencement also becomes a departure point for response-ability. Recall that nation state and disciplinary politics maintain their integrity through compelling bodies not to touch one another. Manning (2007) sees touch within a politics of touch as a reaching toward asking another to be a medium of expression but also with a willingness to become a medium of expression for others. Within this experience all bodies risk novelty within their own self-creation in experience. She maintains that nation state and disciplinary politics issue an injunction against 'touching' in this way because they cannot maintain themselves if we realize and practice our own porosity. The risk of novelty in reciprocal affectiveness can alter the participating bodies in such a way that they can no longer participate in nation state ecologies, or, more radically, may mutate nation state ecologies some much so that the nation state no longer functions.

Manning (2007) suggests that means without ends can help to realize response-ability. I also believe that a commitment to ontological immanence and process works with these techniques. If we (humans) take seriously our own ephemeral, partial

participation in actual experience as well as acknowledge what we owe to all other bodies in our becoming, how can we not proceed responsibly with response-ability?

Within this project, I turn toward everyday living as a means without specific ends. I moved to Ajo trusting in the process of actual occasions of experience to allow the place to inhabit me as much as I inhabit it. Taking place as a nexus of actual occasions of experience, living in Ajo and participating in events open to any new resident allowed me to experience without the anticipated future pull of too many preconstructed notions. I will admit that some anticipated future or 'end' was always present- that of the dissertation, but during my stay there, I practiced techniques of being affected in the microspaces of the everyday. I did have the benefit that my topic, place, and the theories guiding me suggested that abandoning myself to the rhythms and intensities of other bodies overlapping in spacetime experience should affect my own becoming and other bodies would be created during the process (some of them data bodies) (Manning, 2007, 2016; Thrift, 2008; Whitehead, 1967).

Becoming an Everyday Inquirer. The third point in my approach with radical empiricism and everyday living involves the ways of inquiry that make the project more than a series of experiences documented in spacetime. In addition to going about everyday living, I went to Ajo with an inherited past, particularly a relationship with inquiry techniques, theories, and concerns. St. Pierre (2018) suggests that to allow theory to guide you in inquiry you must *become* "Foucauldian…Deleuzian… Derridean" (p. 604). In my case, I allowed Whitehead (1926, 1929, 1938, 1967, 1978, 2004) and Manning (2007, 2013, 2016, 2018) to seep into my bones. St. Pierre (2018) suggests that this transformation is made possible by reading, rereading, and reading more primary and

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secondary sources about theories. I would add, as she does later, writing with these theories helps as well as negotiating and navigating discussions with and about these theories. I would also like to note that according to Whitehead (1967) this entangled immersion that is both intense and massive (read, read, and reread) would always be somewhat different for each read-read-rereader as all of us approaching theories bring our excesses. This means that each experience and experiment with theory guided inquiry would be different though not unrecognizable.

I would also like to reiterate Manning's (2016) idea of close reading as a technique of inquiry for radical empiricism. Although I believe that reading with "hypothetical sympathy" (Manning, 2016, p. 38) works within St. Pierre's (2018) reading mandate, I also see it as a technique of inquiring in experience with bodies where reading and text is more broadly conceived to include any entangled experience among bodies, particular those encounters that occur in everyday life. Manning (2016) explains that we should undergo a thorough experience with the 'text' before "even beginning to explore the question of 'where I stand', which arguably, is the least interesting question of all" (p. 38). She argues that "'where I stand', similar to the ubiquitous 'objects of study', is too often the question that stops the process" and "aligns it to disciplinary method and, by extension, to institutional power" (Manning, 2016, p. 39). She sees this stopping of being affected as the muting of creative power in acts of reading, thinking, making, and living. She asks us instead to take "another kind of stand… one that erupts from the midst, one that engages sympathetically with the unknowable heart of difference, one that heeds uneasiness of an experience that cannot yet be categorized" (Manning, 2016, p. 39).

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This stand of refraining from deciding and categorizing prior to experience seems to be very different than that usually taken in the normative research. St. Pierre (2013, 2018) often says that traditional methodological training works against post-qualitative and theory driven approaches. Joining St. Pierre's (2013, 2018) observation with Manning's (2007) politics of touch and understanding of affect, I argue that traditional approaches often ask the researcher not to be affected by actual occasions of experience by framing knowledge as observation of objects in a substance-based ontology of knowers and knowns. I approached inquiry by trying to be affected in the process employing hypothetical sympathy while living in Ajo. I even took this stance in choosing Ajo as my partner place in this inquiry (see Appendix A).

Unease mildly describes the feeling of this experience. At times it was frightening. Research does not typically require this approach, and other approaches that prize knowing and predicting are much more comforting and far more efficient. Many moments during my time in Ajo, I worried that I would not have something recognizable as a dissertation at the end as I surrendered control of direction but not participation in its shape. Interestingly, about half-way through my stay, I had a conversation with a textile artist who described her approach to weaving as "trusting in the process". This helped to remind me to trust in my process, my means, my techniques, my entanglement with theory. This helped me move without knowing or predicting the outcome, and frankly, as you will see later, I was surprised by my own dissertation study. I am confident that I was able to allow myself to be affected, overcoming years of more normative methodological training that strives to keep researchers from just that. I will discuss

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more specific techniques of inquiry in coming sections, but next, I move on to elaborate knowledge within process ontology.

Beyond Conscious, Rational Knowledge. My final point of interwoven theory I would like to make clear involves knowledge. In the more-than-human inquiry that emerges from my guiding theories, traditional knowledge is not enough. The weighing and measuring, the observations and triangulation while certainly valid for capturing a static picture of bodies that have already become and perished, what Whitehead (1967) refers to as stubborn fact, cannot be the sole ground of an ontogenic performance of process. Whitehead (1967) explains that:

> We reduce this past to perspective, and yet retain it as the basis for our present
> moment of realization. We are different from it, and yet we retain our individual
> identity with it.… All of our science, all of our explanations require concepts
> originating in this experience of derivations. In respect to such intuitions,
> language is peculiarly inadequate. Our powers of analysis, and of expression,
> flicker with our consciousness. It is not true that there is a definite area of human
> consciousness, within which there is a clear discrimination and beyond which
> mere darkness. Nor is it true that elements of experience are important in
> proportion to their clarity in consciousness. (p. 163)

The problem for Whitehead lies in the absolute foregrounding of human conscious thought over other bodies that arise within experience. Whitehead (1967) allows that:

> There are other elements in our experience, on the fringe of consciousness, and
> yet massively qualifying our experience. In regard to these other facts it is our

consciousness that flickers not the facts themselves. They are always securely

there, barely discriminated, and yet inescapable. (p. 163)

Whitehead "insist[s] that our experience is in the first instance physical,

corporeal, and embodied" (Shaviro, 2014, p.21) although recall that he considers this

physicality as belonging to the whole body in experience not located in separate senses.

Although Whitehead (1938) agrees with James (1996) in that "thoughts in the concrete

are fully real. But thoughts in the concrete are made of the same stuff as things are" (p. 37

as cited in Shaviro, 2014, p. 78), he adds that conscious thoughts are a later derivative of

experience, farther downstream of the pre-individual forces of becoming than feelings or

intuitions. Access to a different register of knowing that expands our understanding of

events may be blocked by foregrounding conscious thought only. Whitehead (1967)

warns that "consciousness is a weapon which strengthens the artificiality of the occasion

of experience. It raises the importance of the final Appearance relatively to that of the

initial Reality" (p. 270). This is one way in which scientific generalizations and

universalities can overstep.

Whitehead (1938) also "insists that fact and value cannot cleanly be separated"

(Shaviro, 2014, p. 24). For Whitehead (1938, 1967, 1978), value remains a vector force

in agencement which is quite different than the value judgements of individuals. This

additionally has consequences for ethics as "ethics is not the ground or basis of value but

rather its consequence" (Shaviro, 2014, p. 38) that comes about in ecologies of practice.

Further, aesthetics, value, and ethics are all tied up in axiology and not reducible to

epistemology. Thus, beauty enters the conversation around knowledge. Whitehead

(1967) famously wrote that "Beauty is a wider, and more fundamental, notion than

Truth" (p. 265). Beauty contains Truth, but Truth does not necessarily contain Beauty (Whitehead, 1967).

Whitehead (1967) uses Beauty as a term but defines it differently than typical notions. Although he acknowledges harmonious symmetry as a type of shallow beauty, the Beauty he considers more fundamental than Truth, he terms Intensity Proper (Whitehead, 1967). Beauty as Intensity Proper consists of massive difference coming together in the unity of an actual occasion of experience, creating not conflict, but a pattern of contrasts that is felt as an intense experience (Whitehead, 1967). Shaviro (2014) explains, writing that "'Beauty for Whitehead is not an all-encompassing value but just a summation of the ways in which the multiple values of multiple entities strive to both maximize and intensify themselves to accommodate themselves to one another" (p. 28). In this version of Beauty, the more beautiful a body or event is, the more properly intense it is experienced as the most beautiful entities and events hold together the maximum amount of difference possible while still creating a singular body or event.

Previously, I wrote about Manning's (2016) view of agencement as an opening for response-ability and an underlying process of bodies becoming. Agencement acts in an ecology of practices outside of conscious thought but is also entangled with thought, and Manning (2016) believes that it is just here where we might be able to understand how bodies become disabled, abled, black, and gendered. She and Whitehead (1967) believe that it is just here that we may be able to make a difference as events can come about differently with more Beauty as we articulate action to the myriad of possibilities within events. Thus, I am trying to create inquiry that works more through axiological forces without reduction to traditional epistemological forces.

I must say that this seems an almost impossible task, yet it is the task that I have chosen to undertake as an obligation to making the Anthropocene as thin as possible. I was led here not by any initial desire or plan but through what has become an empire of concerns, theory, and techniques that forms a network of mutual reliance that differs greatly from the empire of traditional research (Thrift, 2008). Most research does not attempt, attend to, or even consider creating methods to include more-than-conscious knowing (Law, 2004), so I have little explicit guidance. It is the becoming Whitehead and becoming Manning that St. Pierre (2018) writes about that helped to lead me here, but the actual performance of this task comes in fits and starts based on hints and intuition which, of course, is entirely appropriate for my guiding principles.

One hint at accessing value, understanding Beauty, and knowing in different registers that cannot be reduced to epistemology proper comes through Sharivro's (2014) take on Whitehead's concept of concern. Whitehead (1938) writes "each occasion is an activity of concern, in the Quaker sense of the that term…. The occasion is concerned, in the way of feeling and aim, with things that in their own essences lie beyond it" (p. 167). Shaviro (2014) explains:

> Now, for Quakers, concern implies a weight on the spirit. When something concerns me, I cannot ignore it or walk away from it. It presses on my being and compels me to respond. Concern, therefore, is an involuntary experience of being affected by others. It opens me, in spite of myself, to the outside. It compromises my autonomy, leading me toward something beyond myself. Concern is relational, rather than absolute, and allo-affective, rather than auto-affective. (p. 15)

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I believe that concern may work in both long and short durations to immanently bind inquiry in a more-than-human manner indicated by the notions of "leading me toward something beyond myself". For example, I am concerned with the issues of the Anthropocene (long duration) as seen through this dissertation process as well as other personal processes that I engage with in my everyday life. Within an event, I may be concerned with what a person is saying or how shadows play on the ground and this concern may at once resonate with my concern for the Anthropocene while allowing more than that concern into play in inquiry. This shorter duration of concern, in-act, relates to what Manning (2013) terms a dance of attention. Manning (2013) writes that a dance of attention,

> moves in open circuits, looping across nonlocal tendencies, feeding-forward into the multiphasing surfaces of movement aligning. Dancing attentions is dancing-with the environment cueing. It is less being attentive-to than becoming in attention-with: the dance of attention is alive with the tendencies of a mobility that can only express itself through the future-forming interval of event-time. (p. 108)

When a dance of attention occurs within the event, I do not wholly, voluntarily turn my attention to some object; I and other bodies are formed through an improvisational openness within the actual occasion of experience including what comes into my awareness. A dance of attention may certainly be lured and prehended by a longer duration of concern as well as in-form that concern within process. Concern and a dance of attention differs from reification and reflection that we often associated with conscious thought and the mandate to know through cognition; Whitehead (1967) shifts the

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concepts of reflection or reification toward intensifying or creating greater mass within and among actual occasions of experience (Beauty as Intensity Proper) thus always honoring the feed-forward action of participating bodies in moments of agencement. Reflection and reification imply that through conscious thought and agency we can return to past captured bodies and see them as they really are. Of course, any absolute return to past experiences remains nonsensical in Whitehead's philosophy.

Concern and a dance of attention remain necessarily vague but still within the grasp of awareness and actions. They are felt more than captured, thus they remain connected to all bodies that arise withing the occasion as well as all bodies that will have formed. Tapping into concern and a dance of attentions as more-than-human processes requires the close reading that allows us to be affected through compromised autonomy and can be achieved through a commitment to means without ends and response-ability. Concern and a dance of attention guided my data generation activities throughout everyday living with the multitude of bodies that make up Ajo and the surrounding Sonoran Desert. Additionally, working through concern and a dance of attention allowed that multitude of bodies to shape this project in unexpected ways. These and all the concepts discussed in the above section on living inquiry feed into how I worked with this data later. In the following sections, I will detail my data generation activities then move on to the process of working with generated data developed through this dissertation.

Data Generation

Although the term data and its unproblematic use in traditional methodology has been contested withing qualitative inquiry (Benozzo et al., 2013; Koro-Ljungberg et al.,

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2015; Koro-Ljungberg & MacLure, 2013; Lather, 2016; Lenz-Taguchi, 2012; Masny, 2016; St. Pierre, 2013, 2021), Whitehead (1967, 1978) refers to basically everything that is not the focal region of a becoming body as datum, something given to that focal point body. He also includes any focal body and its excess as datum to all other focal bodies. For Whitehead (1967, 1978), everything acts as datum to something in experience. In many ways this takes care of some of the critique around data as an object, as Whitehead's (1926, 1929, 1938, 1967, 1978, 2004) philosophy does not load other bodies with passivity. I consider what is normally termed data collection as data generation with the idea that the new bodies formed in the actual occasion of experience (data) are just that- perfectly active bodies that are both novel and have the power to affect and be affected in a feed-forward movement of agencement into further actual occasions. Each new body contains an excess of the in-act of an ecology of practices intensified by the inquiry process.

Specific to my project, these bodies include photographs, video, audio, written notes, and artifacts. During my time living in Ajo and exploring the Sonoran Desert, the bodies that I encountered and I generated the data bodies in Table 1.

These generated bodies are typical of data collected in ethnographic studies. This decision was twofold. First, ethnographic approaches honor the type of everyday living and immersion that I believed fits with radical empiricism although ethnography is often done under post-positivism or at very least, not within process philosophy (Bernard, 2011). Secondly, there stills exists an open question about discarding historical techniques when creating research differently. The theories that found this dissertation process, particularly Manning's vision of the anarchive and Whitehead's process of

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novelty generation, suggests that historical techniques need not be entirely discarded although their ways and means may need to be reworked or pushed. In the following sections, I will first discuss ethnography generally and its attunements and tensions with my guiding theories then I will elaborate on my theoretical reluctance to wholly discard historical methods.

Table 1

Generated Data Bodies

Type of Body	Amount
Photos	1483
Video	9 hr. 9 min
Interviews	43 hr. 36 min (with 27 people)
Artifacts	128 items
Written Notes	108 instances

Experience and Ethnography. First, I want to note that I do not consider this dissertation to be an ethnography; I believe as I work through this section that this will become clear, but this dissertation is not about culture or even natureculture, and it most certainly does not end in an ethnographic report (representational or otherwise) (Wolcott, 1999). I hope to show how parts of this project are ethnographic in some ways and not others. As I mentioned in Chapter One, specificity matters, and difference can be found in the details. Thus, I hesitate to reduce my data generation process to ethnographic methodology. Let's start with a review of ethnography generally.

Like any well-known, general category, ethnography displays a heterogeneity and deep historical roots making ethnography difficult to define. Most ethnographies see a researcher enter the field, build relationships, participate in, and observe practices of mundane, daily life, then write a descriptive report about the experience (Bernard, 2011). Although ethnography began as anthropologists studying isolated tribes to understand their culture in the hopes of finding universal laws governing all humans (Bernard, 2011; Spradley, 1979; Wolcott, 1999), the practice has morphed to include the study of sub-cultures within the researcher's native culture as well as has expanded to fields such as psychology, sociology, education, and economics among others (LeCompte & Preissle, 1993).

Ethnography often starts with a curiosity around, "What is going on here?" (Wolcott, 1999, p. 69), and the ethnographer may begin their research with a general purpose then define more specific research questions in the process of inquiry as they learn more in the field (LeCompte & Preissle, 1993). Ethnography requires that a researcher come to a natural site and immerse themselves in everyday life and practice with most ethnographers knowing or learning the language of their participants, living on site, and spending time participating in daily practices (Bernard, 2011; LeCompte & Preissle, 1993; Spradley, 1979). Although, interviews, field notes, artifacts, and video and audio recordings often comprise the data collected in the field, most ethnographers would agree that no amount of data recorded could make up an ethnography without the researcher's experience as a rising community member (Bernard, 2011). Ethnographers must interact with people not just to collect data but also to arrive at an immersive understanding of cultural meaning (LeCompte & Preissle, 1993).

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This ability to engage people in a community makes the ethnographer an instrument of research (Bernard, 2011). The researcher builds relationships to learn about and from the people and activities that naturally occur (Spradley, 1979). Although the researcher enters a site to learn, she also brings with her the conversations within a larger field. She consciously brings the theories and frameworks of her field. Additionally, she brings her non-academic self to the field. Loaded with life experience and points of view, she enters the field. This part of the researcher may also have influenced the study, in what she chooses to focus on (LeCompte & Preissle, 1993). This dual nature of the researcher as nascent, learning community member and trained ethnographer is encapsulated in the method of participant-observer although ethnographies vary along the continuum of participating to observing.

The human-centeredness, commitment to positively knowing, and representing seen in the brief discussion above illustrate the common assumptions and modes of traditional qualitative research (Lather & St. Pierre, 2013). But looking more closely shows us that ethnography has long struggled to put a researcher and their scholarship in relation to others through experience. Although the above privileges conscious thought and is tuned toward human knowers and known, the idea of a researcher carrying something into the field could easily be recast as an excessive body of experience and actualization encountering new bodies (the field). Additionally, the requirement of open participation and relative flexibility in research design admits elements of response-ability. These nuances cause my hesitation in discounting everything about this methodology. Ethnographic techniques have evolved and mutated through a focus on everyday living and relationships that may still hold value under different metaphysical

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assumptions. In fact, I believe that although ethnography has long been codified within substance ontologies, that mandating interacting naturally in an ongoing 'setting' may have allowed some of the excess of agencement to bleed through no matter how much objectivity the ethnographer was striving to maintain. No matter the ontology, ethnography remains at its heart experiential in practice thus making its techniques appropriate for the purposes of process inquiry and radical empiricism.

This project diverges from traditions of ethnography by eschewing ideas of representation which attunes to this dissertation's foregrounding of the more-than-human and more-that-conscious knowing. As such, I do not consider one photo or frame of video to represent the experiences that I participated in while living in Ajo or to have the ability to represent Ajo in whole or part. All generated data do have a special and privileged past with those experiences, but they are not captured shadows of other bodies in-act; they are bodies that were/are/will be capable of acting. Whitehead insists that "[t]here is no substitution for the direct perception of the concrete achievement of a thing in its actuality" (Stenger, 2011, p. 140). In other words, nothing captures, represents, or reifies the in-act of experience. The benefit of data generation with ethnographic techniques is that both the data generated and I, participated in the "concrete achievement" of the bodies actualizing (this includes my own body). I expect that data generated within experience always carries the excesses of the experience itself, but they in no way allow access to that experience as it occurred no matter how thoroughly documented. Data bodies contain active, live potential and entanglements, but they can never allow an experience to be had again. As Whitehead says, "no thinker thinks twice; and, to put the matter more generally no subject experiences twice" (as cited in Shaviro,

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2014, p. 21). The actual occasion of a body's realization is gone forever, but the preindividual forces within that occasion are not.

This relates to the whole body as the organ of experience and the blurry lines of bodies within experience– recall Whitehead (1967) discusses the body as continuous with all of nature. It is not just a matter of our inability to recreate the experience including smell, temperature fluctuations, taste, and the feel of grit on the skin. Even should our data generation capabilities advance to such levels, we would never be in that same spacetime. We would always be undergoing a new experience with bodies that have undergone other processes in the intervals between the first experience and the second experience. For Whitehead (1967), this is just another new experience or how every experience manifests, this is at the heart of process ontology– this is how the universe works. We can never feel or think the same things twice in precisely the same way. What we can do is intensify experience with bodies by reaching out again, and again, and again, but representation is not what occurs, relating and spacetime creation does (Manning, 2007, 2013, 2016; Whitehead, 1967, 1978).

An example may clarify. One of the events that I participated in was a potluck on top of Child's Mountain near Ajo with a local natural history group. They timed the event so we could watch the sunset and the moonrise on the top of the mountain. As the sun was setting there were a series of moments when the entire space was bathed in a rose-gold light. I documented this process with photographs (see Figure 1), but nothing quite comes close to the wonder and awe of the softening glow or the almost imperceptible change of light over time. Although I have since experienced moments of

changing landscape in play with the newly angled light of the setting sun, the experience

of the rose-gold dusk on Child's Mountain remains uniquely its own.

Does the act of documenting the experience pull toward inappropriate

metaphysical assumptions or do new assumptions mutate the traditional technique? I

believe that the techniques take on a technicity within an ecology of practices (Manning,

2013, 2016). Thrift (2008) explains technicity as "an empire of functions encumbered by

a network of supportive elements, each of which relies on the other" (p. 9). Traditional

ethnography as described above illustrates just such an empire. What I am attempting to

perform amounts to an alternate technicity or building an alternate empire of inquiry.

Can ways and means, alternate guiding principles, allow techniques from one ecology of

practice (technicity) some amount of fecundity? Although I have theoretical lines of

thought and feeling that seem to answer yes to the previous question that I will present in

the next section, I don't know. This uncertainty may always remain, but I believe the

presence of this uncertainty in the form of an open question requires empirical work.   I

do discuss this in more detail in Chapter Five. In the next section, I lay out other reasons

for my hesitation in turning my back on historical techniques.

Figure 1

Change of light on Child's Mountain

  Pushing Data Habits. The second element within the decision to use

ethnographic techniques comes from Manning's (2018) work on the anarchive. Recall

that she insists that the anarchive needs the archive as a springboard. She sees working

through habit as productive as long as we continue to ask, "what else can habit do?"

(Manning, 2016, p. 87). Much of my training and experience prior to this project falls

withing ethnography and other naturalistic qualitative techniques– making those

techniques my habits. I also consider the process of data generation to be an archive of

my time living in Ajo– an archive, not as wholly representational, but as a collective of

generated bodies related to the events that I participated in while living in Ajo.

  I believe that this approach to immanent data generation departs from some other

theorists in post-qualitative research. Lather and St. Pierre (2013) as well as Springgay

and Truman (2018) seem to advocate and stress novel method invention, eschewing

traditional method techniques as appropriate for post-qualitative research. For example,

Springgay and Truman (2018) write that,

> In the same way that methods cannot be known in advance and used as
>
> reestablished procedures, thought must also arrive in the middle and be immanent
>
> to the event itself. In the example of collage, collage then would not happen after
>
> the event of research as a way to creatively entangle data, but rather collage must
>
> become a thinking-making-doing, where collaging and thought exist
>
> simultaneously. This means that a researcher can't extract data from a research
>
> site using phenomenological methods and then make a collage out of that data.
>
> The collage isn't the issue, it's the idea that there is inert data that can be mined.
>
> (p. 205)

Although I agree that data is not inert, nor can it be mined as it does not exist somewhere

outside of its actual occasion of generation, I do not agree that any technique must be

prescribed at any point in spacetime. Thought *always* occurs in-act with making, and I am

unsure if 'when' in the sense of a series of events set out linearly from the practice of

phenomenology to collaging matters. For example, it may be wonderful to collage during

data generation- though somewhat impractical or inappropriate to events not entirely of

our own making, but I do not agree that collage cannot happen after data is generated, no

matter how that data was generated. If we take process as fundamental, excess will

always be available and present in any body that arises within actual occasions of

experience, this includes the body of the researcher. I do not see that we could ever

separate thinking-making-doing according to Whitehead although traditional research

likes to pretend that it can. What we can and tend to do in traditional methods is treat

other bodies as passive and focus on our own agency (and glorious conscious thought) to an extent of not being affected- here I agree with Springgay and Truman (2018) that the issue is inert data.

I believe that it is *how* (the ways) techniques are performed and related, not *what* techniques occur *when* in the process. Springgay and Truman (2018) write that "the givenness of method is exactly what Manning (2016) confronts when she states that method 'is a static organization of preformed categories' (p.31) an 'apparatus of capture' (p.32)" that stops the freshness of the in act of experience. Manning (2018) in writing about the anarchive does not seem to consider this a confrontation framed as either you capture and stop the experience, or you employ novel techniques during data generation and do not, but she recognizes that in inquiry there is always a tension. About this she writes:

> "Every method is a happy simplification", writes Whitehead (1967, p. 221). The thing is, all accounting of experience travels through simplification– every conscious thought, but also, in a more minor sense, every tending toward a capture of attention, every gesture subtracted from the infinity of potential. And so, a double- bind presents itself for those of us moved by the force of potential, or the processual, of the in-act. How to reconcile the freshness, as Whitehead might say, of processes underway, with the weight of experience captured? How to reconcile force and form? (Manning, 2018, p. 1-2).

I read this as every method (even collaging amid data generation) is a simplification. Manning goes on to say that Whitehead's philosophy gives us access to displacing "unnecessary dyads of force/form, archive/anarchive" and helps us understand that "all

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experience is made of cracks and captures" (Manning, 2018, p. 3). I believe that this includes performing phenomenological research; it too is made of cracks and captures. She asks us to invent techniques of anarchiving that do not function with general categories "understood to be transportable across contexts" (Manning, 2018, p. 5). She writes:

> The question of method is allied to the archive. To what degree is the archive a method for accounting of process? To what degree does it generalize across instances of experience? …. Without a strong stance against the generalization of experience, and without a vocabulary for rethinking the tendency to perpetuate the form/process dyad, even the best experiments tend to fall prey to representation. (Manning, 2018, p. 6)

And there it is- representation. No technique of inquiry- making collages, interviewing, taking video- is inherently non-process oriented nor are they inherently process oriented. Each experience combined with inquiry can and will manifest differently even when you use the same technique.

Techniques can be more or less subtractive of experience, for example a survey often does not include the inquirer in the direct experience of data generation, but interviews do, even those that are fairly structured. Techniques based on representation and generalization tend to subtract more (reduce and abstract as a first step) than techniques based on agencement and response-ability, but I believe that ethnographic techniques although often traditionally aimed at representation and generalization, remain open to agencement and response-ability because they are experiential (including the body of the inquirer in direct experience). In other words, techniques done during direct

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experience are less subtractive, or more live and fresh with possible excesses, which I think may be what Springgay and Truman (2018) were alluding to in the above quote. But Springgay and Truman (2018) also seem to be saying that data generation like collage done at a later point with data bodies generated in one (original?) experience are of less worth. I do not agree. Engaging directly with any body can produce new thought in a new experience. The only reason I can think to be concerned with the temporal closeness of engagement would be some belief that representation can be preserved. Under Whitehead's philosophy, no generated data is truly and comprehensibly representative, but we may view some techniques of data generation as more or less subtractive of experience in act.

So, I started where I could, the immersed living with processes of 'documentation' traditional to ethnography preferring to work through the form to allow the force by acknowledging that it can never be fully representational or generalizable. Manning (2016) sees "movements of ideas within constraint to be a powerful tool for creation of novel ways of thinking" (Bowers, in press, p. 19). She sees habits, like that of methods in traditional qualitative research, as structuring "our thinking and doing, making our work predictable and comfortable" (Manning, 2016, p. 87). Although this seems to be directly opposite of what she advocates in anarchiving, she sees a path where habit is not discarded but pushed– asking "what else can habit do?" (Manning, 2016, p. 87). Manning writes:

> Habit…is a mutable force. Habit directs our movements, constraining other
> tendencies. These other tendencies, constrained as they are, can be said to still be
> operative…. The challenge is to make these minor tendencies operational, thereby

opening habit to its subtle multiplicity and exposing the fact that habit was never

quite as stable as it seemed. (Manning, 2016, p.87)

In employing traditional techniques, I do so response-ably to destabilize them from

within their own practice. This feels like walking in the dark, hands out, occasionally

stopping and stumbling as you negotiate the terrain directly in front of you with whatever

techniques you happen to possess. In inquiry, this required letting go of control and

presupposition rather than specific techniques, letting the other bodies in the experience

push and pull, lure and form around you as you form around them. This allows

techniques to open to different technicities. Following, I discuss each type of body

generated as seen in Table 1.

Interview Conversations. For this project, deciding to engage in interviews was

the most contentious. First, this is a more-than-human project. I wondered at the benefit

of interviewing when trying to engage in more-than-human processes, but eventually, I

came to the decision that this is not an anti-human project so including humans with this

traditional technique is not necessarily wholly problematic. Second, interviews are often

treated as building a saturated body of data across a phenomenon (deMarrais, 2004;

Guest et al., 2006), and I wondered what the role of interviews would be if I was not

looking for specific information or interpreting a single phenomenon. What would I do

with interviews? I was unsure when I performed them during data generation, but the

conversational experiences and the resulting generated audio files eventually came into

play during 'analysis' which I will discuss in a later section.

The institutional review board (IRB) process for this project contained consent

forms for multiple types of interviews (Appendix B); story telling interviews (Brannen,

2013; Perrino, 2011), walking interviews (Evans & Jones, 2011; Lynch & Mannion, 2016; Springgay & Truman, 2017), group interviews (Bernard, 2011), and shadowing, or go-along interviews (Kusenbach, 2003; McDonald, 2005). I had no idea what type of interview would be called for, so I applied for all and any I could imagine doing during the project.

I did not recruit any demographic or target individuals, in fact, I only interviewed people with whom I had interacted in the course of participating in activities, agreed to an interview, and could schedule their interview while I was living in Ajo. There was no selection process other than running into them as part of my everyday living and involvement in Ajo or the surrounding Sonoran Desert. This lack of selection comes theoretically with how I employ a politics of touch in this project. Targeted selection of 'types' presupposes a significance of an individual based on belonging to a category that I preferred not to predefine before ever meeting them.

The interviews varied widely. Only four people opted to take a me on a walking interview, two in the surrounding desert, one around the historic downtown, and another through a historic building. My shortest interview was twenty-four minutes, the interviewee could only schedule it during her lunch break, and the longest time I spent with an interviewee was about five hours although I stopped recording after three. I had several interviews that lasted more than two hours. I always let participants know they could stop at any time particularly reminding them of this when we were past what they had initially scheduled. In the case of longer interviews, the participants wanted to continue talking; most of these were more like conversations and involved a great deal of narration. Upon relistening to these longer interviews, I noticed that both of us spoke

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more naturally- not me asking questions and them answering, but tangents, me answering questions, and topic changes led by the interviewee (though at that point they were not really interviewees) (Bernard, 2011).

Some interviews, and these tended to be shorter dictated by the participants schedules, manifest typically– me asking questions, them answering, me following up, then them waiting for me to ask more questions (Bernard, 2011). These types of interviews tended to be less affective, more informational, and I could never tell in advance of the interview experience if it would emerge as a conversation or more like a traditional interview. By affective, here I mean that the interview experience manifests a reciprocity in questions, answers, and direction between both of us as talking partners, and the experience was imbued with more emotive language and narration. There were few patterns, so I could not say a walking interview was more affective than a storytelling interview in my experience of this project. I met participants where they wanted to meet, often at their homes, but several were conducted in cafes. The two walking interviews that I had in the desert were more conversational, but the other two walking interviews were more informative.

Additionally, I generated audio and video files of non-humans. One day I sat on my porch and recorded a crow cawing for twenty minutes, at another time, I spent fifteen minutes filming bees gathering nectar in the bush in my front yard– movement, buzzing, flowers bouncing with weight displacement and all. I often visited the cemetery near my house and took photos and video while walking among the graves. Are these interviews? For IRB purposes they are not, but they certainly felt like 'interviews' to me (particularly the conversational interviews from above) in their affective reciprocity. I feel that may

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be one of the reasons that I primarily used the audio (not the transcripts) of the human interviews for data engagement detailed later as they mirrored my non-human interviews.

Photographs and Video. It may seem incongruent that this project generated so many photos and many hours of video while playing with nonrepresentational inquiry. In methodology literature, visual methods have become quite the fashion (Pink, 2012; Rose, 2014). Researchers have conceived visual artifacts either collected or created as a type of text or language with rules for decoding and analysis (Bell, 2001; Jewitt & Oyama, 2001). Others employ visual methodologies as historical or comparative archives (Banks & Zeitlyn, 2015). Still others see the use of the visual as able to elicit voice and/or allow the researcher to peer into taken-for-granted everyday occurrences as well as being able to grant power to participants, particularly children (Darbyshire et al, 2005; Knowles & Sweetman, 2004).

Although much of the research in visual methods above shows how photos and videos can and have been employed, it is the fact that a wide range of processes can be activated through visual bodies that interests me. I believe that the diversity of action seen with visual methods points to the massiveness, the excess, and possibility carried within the visual body. I mean this more than the common thought that a picture is worth a thousand words. I see visual data bodies as being able to include more of an event, not as a representation, but as a body born in the immediacy of the occasion. I also gravitated toward the visual to include more-than-human bodies as much as possible in my work.

Although I would have preferred to take more video, I took more photographs during data generation. This decision had more to do with file storage and processing

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capabilities than it did with believing photographs better than video. Both techniques helped in creating bodies during the act– archiving experiences– rather than capturing bodies to be studied later; they do not act as proof, they act as thinking-doing-feeling with partners, actualized bodies that can be engaged again.

I rarely tried to document everything within an experience. I pointed the camera in accordance with the dance of attention. I often felt scenes and other bodies invite my attention– a particular cactus, the view of a palm tree through arches, the play of shadows. I feel that this is attuned to MacLure's (2010) experience of data that glows. She writes:

> Some detail – a field note fragment or video image – starts to glimmer, gathering our attention. Things both slow down and speed up at this point. On the one hand, the detail arrests the listless traverse of our attention across the surface of the screen or page that hold the data, intensifying our gaze and making us pause to burrow inside it…. On the other hand, connections start to fire up: conversation gets faster and more animated as we begin to recall other incidents and details in the project classroom, our own childhood experiences, films or artwork that we have seen, articles we have read. And it is worth noting in passing that there is an *affective* component (in the Deleuzian sense) to this emergence of the example. The shifting speeds and intensities of engagement with the example do not just prompt thought, but also generate sensations resonating in the body as well as the brain – fissions of excitement, energy, laughter, silliness. (MacLure, 2010, p. 282)

Although MacLure (2010) writes about data during data analysis here, many of the same feelings happen in experience that leads to generation of data bodies through a dance of

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attention. Other bodily becomings pull and push, and this prehension feels like a glimmer, a gathering of attention that reverberates through our own forming bodies in the process of experience. The pointing of the camera and the angling of the video lens participated in the process of glowing in the actual occasion of experience. In that process, data bodies erupted.

The difference between the choice to video or photograph came down to movement and timing and, occasionally, audio. For example, some movement is slow enough that pictures seemed appropriate, like the changing of light on Child's Mountain (Figure 1). Other movements were too fast for photographs, like hummingbirds in my back yard. In other words, photographs would be too subtractive of the in act of the experience when tempo was high, so video was preferable.

With that said, I realize that video is still subtractive. For example, I took a hike at Organ Pipe Nation Monument, and I videoed during the entire hike as the place was so expansive that I felt a series of photographs would be too narrow. Upon watching the video later, I was quite struck with how much was subtracted. During the hike I was immersed in a four-dimensional ecology of practice in that even what I could not 'see' was still lodged in my bodily awareness. Of course, video is not going to pick up on humidity, temperature, breezes felt on the skin, but considering just the audio and visual, the video manifests flatly when compared to the actual occasion. While hiking, I was still aware of the bodies all around me even when they fell from my vision. I was *in* the desert. That *in* feeling cannot be experienced with video and reminds me of Whitehead's claim about the whole body as the organ of experience being continuous with all of nature. No picture or video could represent again the experience. This is what makes

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experiential techniques of inquiry more intense and massive; I participated in the experience that birthed the data bodies. Although I could use a video created by someone else, the act of creating the video and picture, engaging the experiences with my own body creates a resonating link that Whitehead (1978) terms a society.

Written Notes. Most days that I stayed in Ajo, I wrote. Sometimes, I wrote during experiences, taking notes of observations coupled with thoughts and feelings and connections to theories and concerns. I wrote during experiences when it fit in, for example when I attended the town council meetings, or when I was having breakfast at a local café alone. Of course, many experiences do not allow for writing in the act as writing would take me out of participating in actual occasions fully. I would often write in response to those occasions the same day after the event. These would manifest differently depending on the event. Some become as narratives of the event (LeCompte & Preissle, 1993), some were philosophical field notes (Bridges-Rhoads, 2018), some were a combination of the two. I would consider all the written notes as a response to the event either in act or after no matter what form they took. Much like the photos and video this technique was more about archiving experiences through creative acts directed by a dance of attention, not as proof of some phenomena but as bodies formed while living in Ajo that can be engaged again.

Artifacts. Some of the artifacts in Table 1 are bodies that I created like drawings (which might be considered a type of field note), and others are bodies that I kept, acquired in the course of living there. Some of the artifacts that continue to live with me even now were gifted to me in some occasion. For example, one individual that I accompanied on a walking interview gave me a book, and at a Christmas celebration, I

was gifted a knitted stocking hat and a framed picture. Other artifacts were those I collected in the course of living in Ajo: a grocery receipt, a historic walking map, a welcome packet from the chamber of commerce, and a flyer for an upcoming event. The archive of artifacts is quite eclectic and there was no selection involved other than I either needed them (the map), they arose in the course of everyday life (the grocery receipt), or they happened to come into my possession (the gifts).

The gifted bodies seem particularly affective during reengagement. I can feel the in act more vibrantly when I engage with a gifted body; tendrils of potential and related experience radiate from these bodies expansively– connecting related events to the event in which I first encountered that body. For example, I am particularly fond of the knit stocking cap. I was gifted this cap at a Christmas celebration that was the culminating, year-end event of the Cultural Club in Ajo. I had participated in other events with the Cultural Club prior to receiving this hat, and when I wear or handle the hat, I have bodily access to the feelings of standing on a ladder in Memory Park hanging ornaments, the taste of the homemade tortillas served at one of the Cultural Club meetings, and the buzz of conversation and laughter at a dinner that I attended with some of the Cultural Club members as well as the Christmas party where I first met the cap. I have less access to the in-act bodily feelings with, say, the grocery receipt. I do not mention this difference to elevate one type of body over the other, one is not 'better' than the other, but each does something different when I engage with it. They carry different rhythms and intensities, and while one is not more valuable to this inquiry than the other, the fact that they are different in their action and intensity is.

Conclusion: Setting, Participants, and Data Collection?

In the above sections I work through yet combine traditional sections of setting, participants, and data collection. Although, I moved through the sections addressing each of these individual concerns, the philosophy that I work with sees setting and participants as other bodies, or a nexus of bodies and events. It seems impossible to separate setting and participants considering Whitehead's (1926, 1929, 1938, 1967, 1978, 2004) ontology and my concern with engaging place as more than the stage for the activities of human (Tuck & McKenzie, 2014). This blurring also honors a more-than-human approach that I argued earlier remains important in breaking open the fissures of the Anthropocene. Within my explanation of the blurring of these categories, I wove in the supporting aspects of Whitehead's (1967, 1978), Manning's (2007, 2016, 2018) and Shaviro's (2014) theories. I included details around non-representational inquiry, more-than-knowing through Beauty, how concern and a dance of attention work immanently, and how these work with the politics of touch and anarchiving.

I also consider generated data to be other body processes, other focal points emerging in the act of experience within inquiry. The lesser duration of these data bodies (as compared to the bodies that endure process again and again in Ajo- making Ajo as a spacetime) do not make them any less active and capable of agencement within experience. In fact, these novel bodies carry the processes and potential of Ajo and the surrounding desert as well as processes and potential related to this inquiry and its concerns, intensifying Ajo's tendencies toward this inquiry. It remains possible that these generated data bodies may be more active with the ability to affect and be affected than Ajo and the surrounding Sonoran Desert as they arose in an ecology of practices that

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includes more than Ajo. In other words, their birth came about due to Ajo, yes, but also due to concerns of the Anthropocene and education, philosophies of process, and my own lifetime of experiences. I could live and act in Ajo and the surrounding desert for years and not be able to interact as catalytically as I can with the data bodies which I show in the next section. They have less relations to Ajo and the Sonoran Desert, but they have more relations to my body and the inquiry, we are especially intertwined.

Above I detail the types of data that was generated and question those categories and cross overs particularly between interviews with humans and 'observation' of non-humans. All types of generated data bodies were creative endeavors that included my own body in experience, and all data bodies differed in intensity and relations. Data bodies are not simple body processes, and just as Whitehead's (1926, 1929, 1938,1967, 1978, 2004) philosophy does not elevate humans over non-humans in experience, I am not the subject to the data bodies as objects; we came out of the events together and we both belong to those events. The more-than-human action of Whitehead's and Manning's philosophy applies equally to data bodies generated through inquiring.

I also discuss my choice of seemingly traditional ethnographic data collection techniques and how I follow Manning's (2016) advice that it is the how, the stance that is taken or not taken in advance that makes the techniques more or less subtractive as long as they are performed in experience. Said a different way, I believe that techniques contribute to but do not define a technicity, and techniques, while far from neutral, have the capability to participate in different technicities. Additionally, I elaborate on Manning's (2016, 2018) work with anarchiving and her acknowledgement that the archive remains a necessary springboard. I also discuss how habit that constrains can be

turned to a powerful technique for accessing the more than in experience when a shift in meaning opens novel ecologies of practice. I describe ethnographic techniques as historical techniques that swell with potential due to their ties to experience. I use these techniques not to perform an ethnography but rather to move through form toward force of becoming to perform an alternate technicity, process inquiry. I consider the collected body of generated data as an archive with anarchiving potential.

Following, I will discuss the work of the generated data bodies and myself which elaborates more on the alternate technicity that I perform. We underwent a process of experimentation through experiences with a concern for producing work together that anarchives education within the Anthropocene. Like all 'methods' Manning's (2007) politics of touch (response-ability and means without end) guided decisions made during this work together. Earlier, I wrote:

3. Data Collection: Living, reading, thinking, writing, doing

4. Data Analysis: Interestingly similar to number 3, living, reading, thinking, writing, doing

I see the 'data analysis' phase as just more experiences in a feed-forward movement of the anarchive. In fact, they manifest as a rather intense experience that was equal in duration to that of the data generation period.

Data Experiences

It should come as no surprise that I did not plan detailed activities of data engagement prior to encountering generated data. I did, of course, adopt principles espoused by Whitehead (1926, 1929, 1938, 1967, 1978, 2004), Manning (2007, 2013, 2016, 2018), Muraca (2011, 2016), and Shaviro (2009, 2014). These principles mirror

those detailed above: experience is foundational in radical empiricism, conscious thought is not enough, openness to affective forces and the agencement of all bodies, and a politics of touch.

Engaging data in this way required the invention of techniques. I performed this engagement with hesitation, stops and starts, re-touches, and non-linear, non-conscious leaps. In the following sections, I describe a pilot experience that I undertook with some of the generated data bodies then move to how that pilot experience in-formed the rest the data experiences in this dissertation.

Traditionally this section would be considered the analysis section. If I had chosen a prêt-a-porter method and methodology, this section would read and feel familiar to a straightforward description of how I analyzed all of my data, citing other prominent methodologists with the motivation of being able to show that my analysis answers my research questions. This is not a traditional section, I did not seek analysis, data reduction, representation, or validated answers. I sought to engage data as an equal if not foreign entity in the processes of concrescences to create novel bodies that my readers could then further engage. I sought to engage data as a more-than-human partner. Thus, this section will read and feel differently, I hope to show *how* I worked from theory to invent a process of data engagement that I call Remixing Data Experiences (RDE).

I cannot pick up a past event as if it were an object and examine it intact at some future time; recall previously, Whitehead (1967) argues against past bodies taken as present and future truths. In other words, I cannot reflect upon the past and wring meaning out of it then tell meaning to my reader using data; I can only have a new experience, an actual occasion in the present, with bodies that arose in the past and have

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undergone processes of repeated becoming that only appear to be continuous uninterrupted duration in a normal sense. These materials, generated data bodies in this case, are no more stable than I am. As I arise, moment by moment in experience, I continually "awake to find [myself] engaged in process" (Whitehead, 1967, p. 46), and Whitehead (1967) (and I) would contend that data do also.

The data and I share a privileged past (the period of data generation) and an anticipated future (a dissertation) that many would frame in terms of researcher and researched, but I prefer to think of us as catalytic pre-individuals entwined in becoming that shape one another and catalyze new bodies capable of generating novel thoughts in new experiences (the dissertation). Due to the anticipated future of the dissertation, we have had many opportunities to do so. When I have a new experience with these bodies, that privileged past makes itself available to becoming nows in the form of intensity and massiveness felt. But in acknowledging each moment as a new experience, I cannot excise all the experiences that have come between the original experience of data generation (September 9th- December 22nd, 2019) and times of later engagement, as well as every moment that has been/is/might be. These experiences cannot be confined to a data set, a past bounded spacetime, or even this page. Nor can I take for granted the anticipated possible futures that explode out from each of these experiences as they proliferate the more that we do. This is what it means to be in process.

Embracing process ontologically requires that I acknowledge many things about the inquiry process, but for now, the fact that "[w]e cannot extract a representation of the world because we are slap-bang in the middle of it" (Thrift, 1999, pp. 296-297) seems the most salient. Again, this is what it means to be in process. Rather than reflecting and

analyzing, I prefer to consider my doings as intensifying, experiencing, and remixing. By

remixing, I mean the activity of taking samples from pre-existing material bodies to

combine them in new forms that exists as more than the sum of their parts but also

contain the spectral aura of the original bodies (Navas, 2012). I did not come to remixing

prior to engaging data bodies. Remixing Data Experiences came about through reading,

doing, making, thinking, feeling, and living with the generated data bodies, computer

software, printed paper, scissors, texts, past relations, and discussion. Following, I

narrate the process of piloting a tentative engagement with generated data bodies that

culminated in RDE. I choose to narrate this process to provide a transparency that other

researchers may find helpful when attempting a process of invention such as this.

Piloting Process

Sometime in late February 2020, I wrote a note (Figure 2) in my notebook after

reading Shaviro's (2014) *Universe of Things*.

Figure 2

Notebook Excerpt Pattern of Contrasts
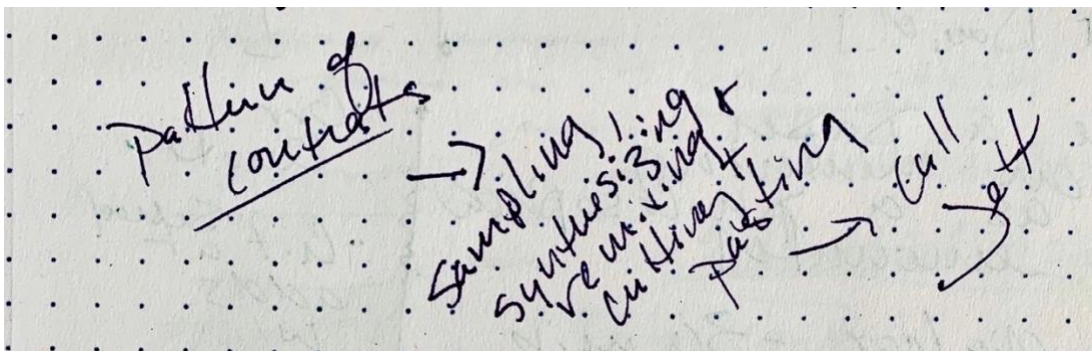
Note. This handwritten note says "patterns of contrast–sampling, synthesizing, remixing

& cutting and pasting–Call Jeff".

Directly before that on the same page, I had written the note in Figure 3.

Figure 3

Notebook Excerpt Diversity and the Creative Act
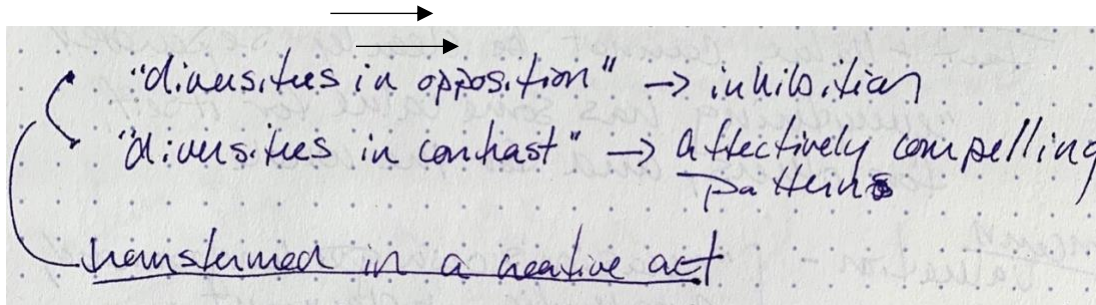
Note. The handwritten note says "'diversities in opposition'– inhibition; 'diversities in contrast'– affectively compelling patterns; transformed in a creative act".

From my notes around Figure 3, I distinctly remember that I had been inspired by Shaviro (2014) writing that:

> Whitehead insists that the "highest task of philosophy is to resolve antinomies nonreductively, without explaining anything away" (Whitehead, 1978, p. 17). Such is the "shift of meaning," which "converts the opposition into a contrast" (Whitehead, 1978, p. 348). (as cited in Shaviro, 2014, p. 34)

What I don't remember and is not evident in my notes is how I got to remix and sampling. In Figure 2, I seemed to suddenly and inexplicitly write, 'Call Jeff'. So, who is Jeff? Is he a Whiteheadian scholar? Did he write a book about remix theory? No, Jeff is my brother-in-law and former professional DJ.

What I enjoy most about the note in Figure 2 is that somewhere between reading Shaviro (2014) and writing thoughts and excerpts directly relating to his book, my brother-in-law, Jeff, makes an appearance. I have no conscious recollection of how that occurred. It just came to me, popped into my head, and I wrote it down. I believe that

this indicates that I was in the process of becoming with Shaviro (2014), with my project, and apparently with relation to my brother-in-law Jeff where I came into conscious thought in the midst of the experience. Whitehead (1967) believes that this kind of occurrence happens often in actual occasions of experience. He says that "[o]ur consciousness does not initiate our modes of functioning. We awake to find ourselves engaged in process" (Whitehead, 1967, p. 46).

Another interesting point to the history of the notes in Figures 2 and 3 is that I was not reading Shaviro (2014) for the purposes of my dissertation project. I was reading Shaviro (2014) for another, unrelated paper, on mentoring. In the act of exploring a text for a different project, Shaviro's (2014) text lured my own dissertation project toward consciousness. The mentor paper writing and my pilot process of data engagement for my dissertation occupied the same spacetime. This shows that in the practice of thinking-making that there exists no real divide between any activities particularly those that share spacetime (the same semester, on the same desk, and in the same person, me).

Taking process ontology seriously, may open up new ways of thinking/doing/becoming. It is not just conscious human thought that is questioned, but it is also the temporal force of values with relation to the appearance of actual entities (facts). For Whitehead (1967), values shape what finally becomes an actual entity, but those values are not the value judgement of an existing *cogito*. Rather, values are a driving force within an actual occasion of experience that move with the agencement of all forming bodies. In other words, values come before thought (epistemology) and

action (ethics) and are not located in any one individual. Values across different

occasions of experience propelled the occurrences of the notes above.

Many theorists argue against the bare subject thinking a distance object which

they consider to be fundamental to Western thought giving rise to a myriad of issues:

reductionism, dualism, and hyper-rationality (Plumwood, 2002; St. Pierre, 2019; Tuck &

Mackenzie, 2015; Tsing, 2015; Watts, 2013). Muraca (2016) contends that "[e]specially

in Western understanding of human/nature relations… values are framed in terms of

instrumental values precisely because our constituting relations are denied or ignored"

(pp. 31-32). If traditional Western research, with studies designed with pre-approved

methodologies, data collection, and data analytics, is based on ontologies of dualism and

objectivity leading to instrumental research that answers questions, research based on

process ontologies should become differently. Muraca (2011, 2016) and Whitehead

(1967) provide several clues, but no blueprints which I believe to be the entire point of

process inquiry. One of the main driving forces of this research is the realization spelled

out in Figure 4.

Figure 4

Knowing is not Enough

Muraca (2011, 2016) writes extensively about Whiteheadian relational axiology, and Whitehead (1967) points to aesthetic experience as the key to what Manning (2013) dubs a different register of knowing. Shaviro (2014) buttresses these by saying that: "[m]y own version of speculative realism therefore focusses not on epistemological questions at all but rather directly on aesthetics… the realm of immanent noncognitive contact" (p. 148). If we take process and immanence seriously, knowing, traditionally reduced to epistemology, is not enough for inquiry.

So, in the throes of process philosophy, immanence, and speculative realism I am left asking: What does a relational axiological rendering of generated data look like; How is it possible to inquire beyond knowing; and What can I do to engage with data that will allow me to go beyond epistemology?

Manning (2013, 2016) suggests that those of us interested in research creation must invent techniques. But it was not until I experienced Amerika (2011), did I find something I could do. Figure 5 shows a note that I wrote, a quote from Amerika (2011, p. 44) that particularly struck me. I stumbled upon Amerkia (2011) once my attention was drawn to the idea of remixing, and I found a great deal of resonance with him as he also makes and creates with Whitehead.

Figure 5

Notebook Excerpt Metamediummystically Stimulated Me
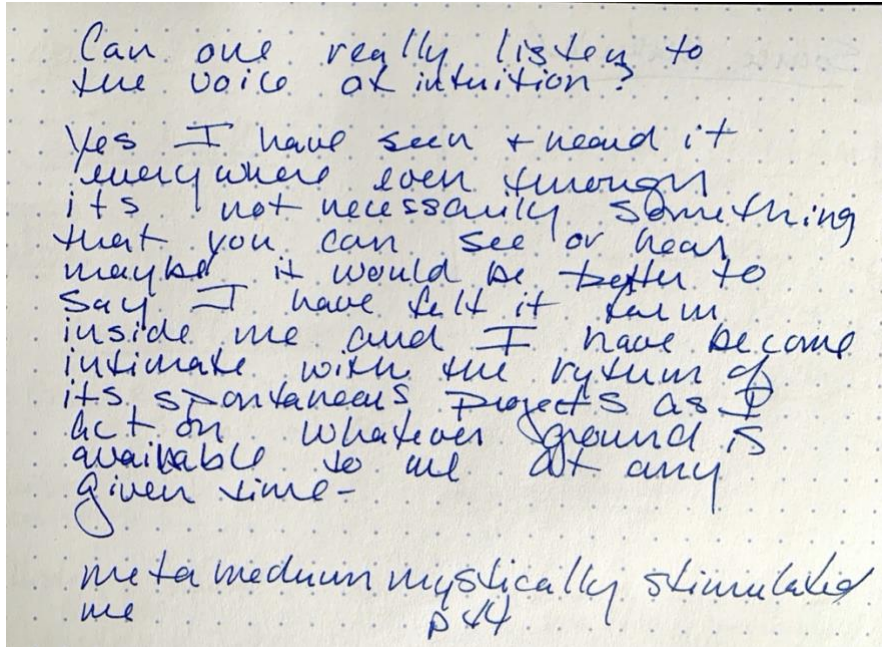
Note. This handwritten note is a direct quote from Amerika (2011, p. 44) and reads: "Can one really listen to the voice of intuition? Yes, I have seen and heard it everywhere even though it's not something that you can see or hear maybe it would be better to say I have felt it from inside me and I have become intimate with the rhythm of is spontaneous projects as I act on whatever ground is available to me at any given time– metamediummystically stimulated me p. 44".

It was my ringing resonance with the "metamediummystically stimulated me" that inspired a way forward in data engagement, and Amerika's (2011) text was full of helpful guidance on honoring process through creative immediacy saying:

> That by hacking into and/or remixologically inhabiting and/or intervening in the datum of our shared presentational immediacy- this actual entity that I refer to

(artist-medium) becomes a transformational object who unconsciously triggers their readymade potential to stimulate the "production of novel togetherness" (as Whitehead refers to it). (p. 15)

Here Amerika claims that during remixing encounters with other bodies, the bodies in the remix including the artist concrease in an act beyond conscious thought. One aspect of this process that I had not consciously embraced before is that data experiences remixed rely on both data and media. Muraca (2016) echoes this writing, "[i]t is neither the tool or the medium or something else– it IS the relation" (p. 31). This indicates that in technicity, that empire of functions, ways can be both conceptual and physical, and both can be seen in the medium of expression. Forms and structures (as media of expression) inhabiting Western traditions of research cannot be the sole basis for inventing techniques for process-based, extra-epistemological research creation. Although, I still have the lingering question: Can/should they be included?

In addition to Amerika's (2011) guidance, I also found purchase in Leavy's (2015) book *Art Meets Method*. Leavy (2015) explains that translation from one medium to another causes a fuzziness, an imprecision that opens to multiple experiences and interpretations; this movement between and with media can create what Law (2004) calls techniques of "deliberate imprecision" (p. 4). Movement between medium or employing multimedia can help us "really listen to the voice of intuition" (Amerika, 2011, p. 44), and I believe that the inclusion of multimedia may have an anarchival force.

These nascent ideas inspired me to use different media in this project, but music, particularly, enabled me to open data engagement past analytics and conscious thinking toward something more authentically affective and collective, a necessity for moving past

conscious knowing. Bresler (2005) believes that "the processes involved in making, listening and creating music can teach us about the processes of research." (p. 170) as qualitative research requires a sensitivity to the fluidity of experience that musicians understand well. Bresler (2005) contends that thinking-making with music can help researchers reach past object knowledge towards the aesthetics of experience. She suggests "learning to hear" (Bresler, 2005, p. 172) as the start to music-informed research.

As a starting point for musically informed listening to data bodies, I reached for Bresler's framework of musical elements. Bresler (2005) suggests the following elements as helpful in focusing inquiry past "contents, discourses, the visible, the 'countable'" (p. 172):

1. Form allows us to think the parts and the whole. With form we can look for variation, unity, and repetition.

2. Rhythm allows us to attend to the tempo and pace.

3. Dynamics opens our awareness to how sounds shape one another in relation.

4. Timbre directs us to the color and tone of experience and the shifts of color and tone.

5. Melody focuses our awareness on plotlines and drama within experience.

6. Polyphony asks us to be aware of the texture of multiplicity moving over time and the rise and fall of harmony and dissonance. (Bresler, 2005)

I will discuss the specifics of applying these techniques later in this section.

I was not able to jump directly into these music-informed techniques to kick myself loose of epistemology-first habits although they seemed to fit the shape of this

inquiry, but I still needed a way to begin. As I held them in my mind, I started with something much more familiar, I experienced my data through a remixed version of Clarke's (2005) situational mapping. I started here due to my data engagement paralysis as Clarke (2005) indicates that this is a good way to get *into* the data. Following, I write through my stuttering stops and starts in the invention process with one data set that I used as a pilot for inventing novel extra-epistemological techniques for data engagement. I began with all the data from one event that I attended while staying in Ajo, a protest about the border wall.

Figure 6

Date Engagement: The Beginning

The map in Figure 6 is somewhat paradoxical. It is both a reduction and an expansion. I reduced the physical data that I generated to 48 photos of protest signs and t-shirt slogans from two hours of video footage. I added more concepts through a kind of relational associated technique of responding to the photos by writing concepts that arose. These concepts stood out to me as I viewed and re-viewed the photos; they erupt from my experience with the data bodies located in my focal region of the experience, almost

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autoethnographic in a very abstract sense. They are my voice in the map, the parts that

Clark (2005) encouraged me to make transparent and explicit.

This map remained on my wall for two months, untouched but not unencountered.

Every day, I walked past this map several times. Sometimes I ignored it. Sometimes I

touched it. Sometimes a piece would have fallen on the floor and I stopped to reattach it.

Sometimes I just started at it; a few times I even sat down on the carpet in front of it,

staring for long periods of time. Those were my conscious interactions, but if Whitehead

(1967) is to be believed that I awake to find myself in the middle of process with that

awareness being consciousness, and if material matters, then what may seem like non-

interaction on my part may be data interacting with me.

I finally moved on from the map that sat on my wall for two months.

I decided to sample from the event map I made due to my brush with

remixology. I worked under the proposition that remixing would bring something new

that still contained the spectral aura of the original events (Navas, 2012). I believed that

this element of remix attuned to my guiding theories in anarchiving and Beauty. I did

not want to sample too consciously as I can so easily fall into cohesion, filling in jagged

gaps with excessive meaning telling. So, inspired by Linda Knight's (2021) thoughts

about Chaosgraphics, I sampled randomly.

Linda Knight (2021) argues that infographics are a selective and reductive

presentation of data, presenting ideas with a particular view of the world. What we

emphasize when we organize data is informed by our own inclinations of what is

important and can, in turn, create what is important to others. Unlike data architects, I

am aware that conscious selection indicates preconceived notions and ideologies and

would theoretically avoid presenting data and data manipulation as representative or generalizable, but I still needed a technique to curb my Western habits of justification and selective sense making to accomplish anarchiving. I tried removing conscious thought from this sampling step with data through randomness to interrupt the habit of extending previous experience to direct meaning telling too soon. In other words, I used randomness as a disruption to human consciousness, agency-intention-volition, and meaning telling; I hoped to make space for the data to affect me before I could weave too tight a narrative around data through conscious selection.

The first randomly selected set were four pictures of protest signs, three of which I would not have picked in a sample if I had done so consciously (Figure 7). Those three did not immediately connect to issues residing in the back of my mind in relation to Ajo and the concerns of the dissertation, and the four as a set did not seem to connect at all. In fact, I was horrified that this was my first set. I thought that maybe randomness was not such a good idea after all, but I was committed to trying out the process that I had set for myself based on the theories that resonated with process.

Why four pictures or post-its? Having done some digital visual layering/collaging in the past, I found that too many elements were difficult to work with visually. It seemed that somewhere between four to eight bodies might work, so I went small to leave room for things that might arise in the process as this was a pilot. First, I tried visually layering the photos, but was having a hard time composing a piece that 'worked' visually. I skipped over to experiencing each musically, paying particular attention to the timbre and melody of each photo/music and the polyphony, form, and dynamics of the collection.

For each picture, I wrote down what the affective tone the sign communicated to me, in other words how it made me feel- related to timbre and melody. Since I am not skilled at musical composition, I used a free music archive (FMA) to find sound works that resonated with the photos. The FMA is a database, so it required me to search for songs using key words. I typed in key words from the timbre, melody, and the subject matter stated on the signs. For example, a sign might convey frustration or mention water. Then I listened to several pieces, sometimes as many as 20 before I settle on a piece that sounded like the photo. This translating process did open each photo differently, less objected focused, more fluid, more imprecise.

After selecting a song for each photo, I tried mixing the songs digitally. In my first attempt at layering songs for polyphony, all I could achieve was cacophony. The songs were too discordant which accurately reflected the way I felt and thought about the randomly selected set upon first seeing them. The signs conveyed such different and specific concepts that I could not find any resonance or dynamics between them through the music that I choose when focusing on each photo separately.

I spent a great deal of time staring at the photos and listening to the selected music in different ways. I also went back to rereading theory and some of the documents and books around the border wall. Additionally, I wrote notes about each sign, what I consciously connected them to, how they made me feel, and what I thought they might be doing.

Figure 7

Randomly Selected Pilot Data Set

As I struggled with the lack of unity or Beauty among the elements in this set, I realized that the signs were tied by context. They were signs that all participated in a protest of the border wall. So, I decided to add the context materially in the form of a picture of the border wall and started again (Figure 8).

Figure 8

Border Wall Addition

I layered the photos visually, and the composition felt much better with the addition of the wall (Figure 9). The original layering and compositions that I tried with the four signs never felt right, and this 'not right feel' was only amplified when I layered the original music. When I say that it did not 'feel right' it means that all the remixing techniques I used never seem to make a new composition, a whole, that was expressive as a new body and enhanced by and enhancing of the singular bodies making it up. When a composition did not 'feel right', the visual or audio components were just bodies superimposed on one another with no connection, no threads of unity, and certainly no novel remix.

Figure 9

Visual Remix

The second visual composition (Figure 9) with the wall and signs was a new remix, and it spurred me in new directions. I believe that a novel body that 'works' catalyzes new directions through connections that activate a whole that is more than the sum of its parts. That feeling of possible new directions, openings, and responsiveness became a keystone for works doing work on their own, not wholly animated by my

meaning telling. As a note, my process includes thinking, but the thinking was performed alongside the arts-based practices to include more than my original thinking from my original experiences. I become concerned with the narrative I was assuming about the protest. A protest is easily framed in binary, and most of the signs in my randomly selected set fell readily into that idea of anti-.

So, using the composition that included the wall, I went back to philosophy. Muraca (2016) reminded me that "[t]hings embody complex concrete relations displayed across time and space inscribed in their very material structure" (p. 31). A more-than-human drama plays out in these materials– the steel wall, the history, the anticipated future. The wall is fortified with harmonious elements that resonate in a bland sort of beauty, a perfecting of one version of the new/old American ideal. The protest signs were not a bland sort of beauty, they were more heterogeneous, and it is unclear if they had relations- so maybe they were too distinct and individual to constitute Beauty? As Muraca (2016) says "without the privilege of relevance of the past and the continuous anticipation of future possibilities, the 'self' would spread and lose cohesion" (p. 28). That is the danger of multiplicity without privilege of relevance of the past and anticipated future. In my frustrations and process described above, I saw that I was relying too much on individual aspects when putting music to each photo separately and not including the privileged past and anticipated future shared between the protest signs materially.

I was also reminded to look at unity and conflict differently by recalling that Beauty occurs in "a shift in meaning which converts opposition to contrast" (Whitehead, as cited in Shaviro, 2014, p 19.) What happens when we first try to look at the wall and

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the protest signs together, what if they are not precisely a conflict- but a contrast? This happened when I layered the four signs over the wall, there was something about them that went together- their connection was more evidently felt. The added photo of the wall helped to bring this contrast over conflict into sharper focus. Bringing the different photos together allowed for a concreasance that was absent without the material photo of the wall.

What happens when we speculate on actual concrescence? Whitehead uses this term for the process of actualization to differentiate it from modern natural science's approach to the adventures of matter in space. When I add speculations to occasions then an idea, as Manning (2007) says, a concept combined with a feeling erupted in the experience into my focal region in the actual occasion as I played/worked with the images and audio. In that actual occasion, I understood that our feelings find a conscious place, and in the case of the pilot work above that feeling manifest as precarity.

The precarity running through the events and the actual photos finds a conscious home. That route then colors the continual renewal of the superject meaning that the forming bodies come to absorb some of that precarity. Conscious thought and awareness can manifest this joint value, and Whitehead (1967) tells us to capture the moment of feeling- not go too fast into conclusions. Working with the photos visually, physically, musically, and digitally allowed that delay.

The linear representation of the process above is only a courteously to reader and page as is the apparent cohesion although I tried to relay the simultaneity of thoughts and feelings during multiple engagements that shaped one another. No action precisely led directly to another, like falling dominoes, and there was copious spacetime between many

of the research notes and activities described above. When I finally wrote the line about precarity finding a conscious home, I had no idea where the word precarity came from other than the feeling that it was the culmination of viewing the layered photo's, working with music, considering theory, and reading about the history of the wall and the protest. Precarity came up, and I was so entranced by it that I wrote that again and again in my notebook. When I finally wrote the last handwritten line, a gasping sob exploded from deep in my chest, then I cried and cried for several minutes.

I am not sure if I would suggest emotion release to be an integral part of methodology, but considering the theories I was working with, it did make me feel as though I now had a remix– some new form with the spectral aura of the originals due to my affective response (Navas, 2012). As a note, subsequent data remixing engagements did have the feeling of satisfaction in a Whiteheadian sense which is like completion of a body in the moment of experience, fulfilling concern, and realizing a type of enjoyment in your own becoming body and with the other bodies that erupt during the actual occasion of experience.

From the point of culminating in satisfactory unity with the idea precarity, I resampled the music, not by assigning music to each discrete sign or the wall, but by listening to almost 100 works around the ideas of precarity (fear, uncertainty, anxiety) from FMA and more intuitively sampling ones that polyphonically joined but still conveyed the tense anxiety I felt around precarity when sampled and layered. I did not focus so much on putting sound to each photo (not this sound = this image/concept). I was caught up in the creative immediacy of exploring precarity in its many

manifestations and while the parts contributed to my music selection in how they insisted

that their own timbre of precarity be included, it was not a process of ratios.

The resulting multimedia product can be found in the supplementary material (Appendix

C).

Following the Pilot Process

Through the pilot process, the data, theories, and I developed a rhythm. Although the

dance was not linear, here I list the elements of the process in approximate order as an

anchor point for the reader. The elements to this choreography that guided engagement

with further data were:

1. Let the data come to me. This interval included randomly selecting data bodies.

2. Touching the data bodies. I took the data out of the confines of the digital archive

   and placed them somewhere I could physically engage with them daily.

3. Mediums of expression. This involves being affected by the collective data

   bodies– allowing myself to be a medium of expression. The data bodies and I

   spent time together engaged in a variety of activities including digital layering,

   physical movement, random encounters, listening to music, and spatial arranging.

4. Coming to satisfaction together. The data bodies and I generated an idea (concept

   with a feeling) of a working value through the composition of new bodies that

   worked in the sense of allowing a feed-forward to a new body that could be

   considered more than the sum of its parts.

5. Generating new bodies. The data bodies and I engaged in the creation of an art-

   working guided by our satisfaction with the activities above, and this manifest

   mostly as multimedia videos.

6. Touching again. I responded to both the data bodies and the newly created art

    workings through writing.

Following I will explain these decisions and processes of the data engagement.

Randomly Selecting. In the pilot, whose becoming body I do include in Chapter

Four, I started with a category– the event in which the data was generated. Although, I

believe that worked in that I was able to affectively engage with the data bodies. I began

by limiting the data that could participate, by selecting consciously. My experiences in

Ajo, while generated in events, are no longer located there. They exist in what can form

in the future and the excess of those events exist all together as preindividual forces. In

other words, under Whitehead's (1967, 1978) theories all the potential within the events

disperses and blurs to feed forward into new experiences. The boundaries of origination

no longer do anything in the process of further becoming. Whitehead (1967) makes clear

that the point of origin of a body and its original organization do not lay sole claim to its

future becomings (otherwise nothing new would ever come about). I experienced all the

events, but they are not housed in my body in sections called protest, farmers market, or

book talk; in fact, my body is constantly becoming, incorporating, and re-organizing.

As I am generally interested in what a place can do as a partner in more-than-

human, post-epistemological inquiry, I opened the random selection to all my generated

data bodies. As seen in Table 1, the collection of generated data has a great deal of mass,

and as a note, they also exhibit levels of varying intensity or beauty that cannot be seen in

Table 1. To accomplish random selection, I created a simple data base listing all the

individual generated data bodies and numbered them. I additionally gave audio and

video files a duration, and each duration was treated as one body designated by its own

number. The random selector weights those durations in ten second increments, meaning

in the algorithm of random selection one photo is not one video or interview audio but

depending on the length of the video or audio, they counted as more numerous for

selection purposes. Figure 10 shows a randomly selected data set.

Figure 10

Table of Randomly Selected Data

ID	Name	Type	Start (Seconds)	Start (Time)
923	IMG_0902	J	0.00	0:00:00
51	DR0000_0075	I	209.00	0:03:29
1067	IMG_1058	J	0.00	0:00:00
1757	Receipt 2	A	0.00	0:00:00
1832	Photocopy 2	A	0.00	0:00:00
418	IMG_0319	J	0.00	0:00:00
59	DJI_0085	V	201.00	0:03:21
29	DR0000_0070	I	2674.00	0:44:34
39	DR0000_0074	I	2015.00	0:33:35
81	DJI_0118	V	340.00	0:05:40

Note. The above is a screen shot of an Excel table generated from an algorithm to

randomly select data from a database the author compiled.

Although this process of organizing the archive of generated data allowed me to

perform a random selection, it provided the added benefit of additional engagement with

all the generated data. To assign a number, I engaged each generated data body again.

This process further convinced me that including all data across all experiences not

limited by event category would be a creative way forward in data engagement.

As mentioned before, Linda Knight's (2021) thoughts about Chaosgraphics

inspired my choice to engage random generated data bodies. The act of including and

excluding has a presupposing force that shapes the coming event. I was all too aware that

I had already developed straightforward narratives around Ajo and developed them

habitually as 'themes' as one would in coding. I worried that I would be holding the data

bodies hostage by attempting too much initial coherence through selection. One might argue that these narratives and themes arose in act, so are bodily becomings within experience as much as any further data engagement. This may be very true for another researcher, but my overwhelming tendency to rely on conscious thought and analytics made my categorical notions more epistemological based than axiological. I understood that I would have to put forth effort to move beyond epistemology (and that effort requires techniques). As Shaviro (2014) reminds us "[t]he world is indeed, at its base, aesthetic. And through aesthetics, we can act in the world and relate to other things in the world without reducing it and them to mere correlates of our own thought" (p. 155). The techniques I employed were meant to allow me to stay in aesthetics when I habitually wanted to reduce data engagement to epistemology.

So, I began as carefully as I could, taking my conscious thought out of organizing the data through categories choosing randomness instead. During data generation, I basically focused on raw experience and archiving; here in the spacetime of data engagement, I focused on aesthetics and including more-than-epistemology as the guiding light of inquiry. Additionally, my comfort and satisfaction with randomness was amplified by my understanding of evolution. Whitehead's main questions is not why is there something rather than nothing, he pursued the questions of why are things different (Shaviro, 2009). The history of evolution is filled with randomness as a fundamental process that does not work on the agency-volition-intentionality triad. New traits and species arise through random mutation and random combination of inherited genes in relation to ecology and even random changes of environment. If Beauty is the unity of

difference in becoming based on agencement, I believe that evolution is an excellent example of Beauty as Intensity Proper, and randomness drives the evolution process.

Additionally, my experience in the pilot engagement led me to believe that I might encounter more difference if my selection process did not start with my already present attempts at coherence and meaning telling. I was surprised by the pilot data engagement, and I would not have chosen those initial data bodies. In fact, I took being frustrated by the data bodies randomly selected to be a good sign that I was allowing data to affect me.

Physically Touching. After using the algorithm to randomly select a data bodies, I would collect all of them in a file. I found in the pilot that looking at the parts individually to experience the whole did not work although I should have been able to anticipate this with Whitehead's (1967) guidance. I needed to engage with the whole collective of data bodies together. Additionally, some sets included artifacts that were physical and that physicality, touchability was helpful in experiencing more than conscious thinking with the data bodies. So, I printed out all the pictures. For videos, I printed frames, but would sometimes play the video as I engaged with the other data bodies. For audio of interview conversations, I transcribed the section selected and printed that out. Again, I also played the audio while engaging the physical data. Figure 11 shows one data engagement board.

Figure 11

Data Engagement Board

Note. This data engagement board shows one of the randomly selected data sets that includes two artifacts, a map, and a grocery receipt. The multimedia composition resulting from this data experience, Directions, can be found in Chapter Four.

In addition to the physical interactivity of the board, the data was ever present for non-intentional encounters. I saw the board often as I went about performing everyday tasks not just 'research'. I believe that this allowed the data to have affective access to me, to work with me even when I was not aware that we were becoming with one another. This was only one small part of opening myself to being affected, but it honors the more-than-human direction of this project.

Mediums of Expression. In working under Manning's (2007) politics of touch, I reached out to the other bodies without presupposing their form, asking them to be a medium of expression in my becoming and offering my body as a medium of expression for theirs (to affect and be affected). I did this through various playful techniques. For most sets, I would write in response, detailing thoughts and feelings that arose,

connections to theories and other works as well as other events and experiences in Ajo and beyond, but I found in the pilot that I needed more than language as a medium of expression to move past conscious thought. I reached for music, searching the FMA database using impressions of timbre and melody. Using photo and video editing software, I played with layering and melding images, video, and music.

As I played with the bodies in different media new ideas would form, and I would try different editing and composing techniques. I would draw in other bodies that might work well in the media of choice. For example, in one set I had a picture, but I felt that a video might work better with the other videos for the composition. In my archive, I had a video taken during the same event, so I used the video in composing instead.

Coming to Satisfaction and Generating New Bodies. Whitehead's (1967) principle of Beauty guided my final compositional decision. Recall Shaviro (2014) writes that Whitehead insists that the "highest task of philosophy is to resolve antinomies nonreductively, without explaining anything away" (Whitehead, 1978, p. 17). Such is the "shift of meaning," which "converts the opposition into a contrast" (Whitehead as cited in Shaviro, 2014, p. 34). In composing with the data bodies, I tried to experience points of unity of difference through contrast not opposition. For example, in the board in Figure 11, one of my first thoughts was around the differences between the built environment and the natural environment. I did not want to compare and contrast them as if they were categorically different (usually my first instinct based on training). I wanted to honor the value of their coming together by asking how can these bodies come together in unity that encompasses the contrast without setting up a dichotomy of opposition? I asked this

of each set. The data body set in Figure 11 composed the video Directions in Chapter 4 where you can see what concepts finally erupted through this process guided by Beauty.

Within all the sets of randomly selected data, I went through a process of multiple compositions to find one that worked. This was not like flipping through a selection of records and picking the one you want to hear. That feed-forward feeling a working composition projects does not exist as an all or nothing proposition. It may be more accurate to say that early compositions created with the data sets partially worked. They did feed-forward to new compositions and eventual participated in the creation of the final composition for that set that felt overwhelmingly catalytic. I understand this is a vague description, but the feeling of completion and concern in the final compositions was more intense than in the earlier compositions although they remained related.

Touching Again. Finally, after a data set and I created a new anarchival body to our satisfaction, we engaged again through touch, but I limited our media to writing. Following my earlier readings of Richardson and St. Pierre (2005), I wondered how language might be used in a blurring of disciplinary genres in a creative, compositional process becoming a "metamediummystically stimulated me" (Amerika, 2011, p. 44).

I found the process of multimedia composition to be one of freedom from conscious thought. I wondered if having gone through that multimedia composing process, I might be able to create similarly in text which remains academically traditional. Additionally, I wanted to experiment with the feed-forward nature of the multimedia compositions through reaching out again in a politics of touch with a different medium. Meaning that I assumed that the multimedia compositions would be extremely generative, but I wanted to see how that might manifest in experience. So, I responded in writing to the new

multimedia compositions employing a variety of genres including, personal ethnographic memoir, flash fiction, talk poem, ballad, and essay.

Conclusion: Remixing Data Experiences

In the above section of data experiences, I detail a pilot engagement with data bodies and the invention of Remixing Data Experiences (RDE) based in the theories of Whitehead (1926, 1929, 1938, 1967, 1978, 2004), Manning (2007, 2013, 2016, 2018), Shaviro (2009, 2014), Muraca (2011, 2016), and Amerika (2011). I then discuss how the pilot process in-formed the remaining data experiences for the rest of the dissertation. These theories and the pilot process allowed me to move beyond conscious thought and inquiry housed solely in epistemology ending in the creation of what Shaviro (2014) calls aesthetic facts and Whitehead (1967) calls fact/values, manifest as multimedia compositions and written texts of various genres. This move responded to the necessity of creating more-than-human inquiry in response to the tensions of the Anthropocene. In the beginning of data engagement, I relied heavily on randomly selected data bodies and arts-based techniques to override habits of training that foreground conscious thought. I found music and visual arts-based techniques to be exceptionally helpful in this regard.

Chapter Four presents the multimedia compositions (art-workings) and written texts as a collection for the experience of the reader. Within this experience, I hope the reader gains a sense of what Ajo and the surrounding Sonoran Desert can do as a partner in inquiry rather than as a subject of research. This experience will not represent Ajo and its surrounds, but instead I hope for it to present a fragmented, non-linear, catalytic process of engagement that contains the spectral aura of Ajo, the surrounding Sonoran Desert, and the concerns driving this dissertation. Additionally, I hope that the lack of

meaning telling and the gaps and jagged edges opens space for the reader to generate for themselves in the feed forward movement of the anarchive.

CHAPTER 4

THE ~~FINDINGS~~ CREATIONS

Through the first three chapters I argued that the issues of the Anthropocene call for new ontogenic practices. I introduce and elaborate on the process philosophy of Whitehead (1926, 1929, 1938, 1967, 1978, 2004) as well as how that philosophy moves into practice through the work of Manning (2007, 2013,2016, 2018), Shaviro (2009, 2014), Muraca (2011, 2016) and Amerika (2011). In chapter three, I explain how I put these theories to work and the underlying principles that drove this work in the development of Remixing Data Experiences (RDE).

To sum up some of the conclusions thus far, we saw in Chapter Two that issues of the Anthropocene run on the motor of traditional Western thought. Although there are multitude of framings to these issues, I focus on tensions of human separation as an exceptional category of body elevated over others (human exceptionalism) and of science and technofixes conceived as value-neutral with little regard for social science and the humanities (scientism and techno-optimism). These tensions lead me to questions of decentering the human, transdisciplinarity, and understanding power and politics within the Anthropocene. Specifically, I ask these questions to guide this project:

1. What does process inquiry with place afford with regards to the Anthropocene and education?

    a. How does process and place make the more-than-human possible?

    b. How does process and place permeate disciplinary boundaries?

    c. How does process and place center power and politics?

    d. What methods emerge through process inquiry with place?

Further in Chapter Two, I discuss how neoliberal forces work within traditional Western thought to propagate the Anthropocene's lethal and destructive tendencies. I focus on environmental issues as well as the struggles of ESE in schooling. I identify place-based education as a bright spot even within the confines of traditional Western schooling and suggest that place may hold affective capability under new ontologies. I take up this challenge through taking place as a partner in more-than-human inquiry under an alternate ontology. I lived in Ajo, Arizona generating data then moved to remixing data experiences. The bodies housed within Chapter Four act as an anarchive that does not represent Ajo or my experiences in Ajo. They erupted as bodies through a process of intensification, or as Whitehead (1967) might say, Intensity Proper which he sees as the strong form of Beauty.

Under Whitehead (1967), representation and generalization through objectivity is not precisely possible. Manning (2007) takes this even further in her work elaborating that it can have the undesirable side effect of sidelining so many populations. Both admit that work done through additional concatenated experiences with generated data can shimmer with past bodies and occasions of experience but taking them as absolute and definite can lead to marginalization, stultified thought, and reproduction of dominant epistemes or as Whitehead (1967) says the "thought of our grandfathers" (p. 4).

Whitehead (1925, 1929, 1938, 1967, 1978, 2004) never argues that fully formed bodies do not matter, but he reminds us that our capture of those bodies occur in an actual occasion of the past which is unique in that body's process of forming and never replicable; he refers to these bodies as stubborn fact (Whitehead, 1967). Another key point in his philosophy remains that conscious thought, yet another body erupting within

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the occasion of experience, predominately focuses on those fully formed bodies in the moment of their finiteness which is fleeting and not completely continuous to the body's next moment of eruption. Focusing solely on captured, past bodies as essential, substantial, and true for the future excludes other experiences within those moments that affect us none-the-less (Whitehead, 1967). This action of subtracting all but conscious thought from experience is typically in modern research.

This project attempts to be less subtractive as all methods remain incapable of encompassing the whole of experience. It attempts to work across what some conceive as dichotomies: fact/values, reason/feeling, science/art, human/non-human. Ontogenically following Whitehead (1925, 1929, 1938, 1967, 1978, 2004) and Manning (2007, 2013,2016, 2018) these dichotomies lose power to shape experiences and inquiry, and that is one reason that I see Whitehead's and Manning's philosophy as important for moving past the Anthropocene.

Overcoming the process of Cartesian and Kantian thought and action manifest in typical research and in everyday, common sense has been difficult. Manning (2020) eloquently expresses this by writing, that none of this is comfortable, "[t]o move in the register of *a* life, to move in the rhythm of the more-than, is an unsettling operation. Very little in our contemporary worlds supports such risk" (p. 99). As I follow ontology all the way to performance (often called following theory to method), I focus on key principles, ways, that help me break loose of the status quo. One such principle embedded through problems in the Anthropocene to methodological reduction and representation is the separation of facts and values.

Western disciplinary practices take facts to be primary and values to be secondary as well as taking both to be categorically separate in what Law (2004) refers to as the "modern division of labor" (p. 152). They also typically elevate the status of facts over values. Whitehead (1925, 1929, 1938, 1967, 1978, 2004) flips this, he takes values as primary and facts as secondary within the occasion of experience. Values move first, then bodies (facts) form, but he does not separate them except to address their normally conceived separation, as they are both necessary components of the process of reality. Manning (2016) conceives this as force and form. Forces in process manifest in form as the becoming, pre-individual bodies (loosely connected forces) shape one another. A body becoming shimmers iridescent with force/form (value/fact).

I find this to be a key point of departure for work in "making the Anthropocene as thin as possible" (Haraway, 2016, p. 160) as many of the problems of research and problem solving within the Anthropocene revolve around holding facts and values as separate categories (Maggs & Robinson, 2016). What this means is that we cannot just think, we cannot just feel. The whole process of becoming involves think/feel in the action of doing (experiencing). Further, this is not a solitary body's experience, it is an ecology of practices with other bodies within experience that give rise to unique occasions with infinite possible variations up until the final manifestation of distinct bodies.

With regard to inquiry, Shaviro (2014) explains that:

The crucial point is that since "existence" in its numerous instances involves "the upholding of value intensity", there can be no Humeian separation of facts from values. And without the fact-value dichotomy, there is no need for the Kantian

and Wittgensteinian resolution of the dichotomy by placing valuation "outside the

world" or relegating it to the noumenal subject of practical reason. (p. 78)

In Chapter Three, I detail how I worked through the above, but here in Chapter Four I

would like to suggest what this means for my reader.

Following, I present a collection, an anarchive, related to but not representative of

my experiences in Ajo and concerns for the Anthropocene and education. It is

necessarily fragmented as any body or nexus of occasions like place (or me for that

matter) do not manifest as one coherent body with one coherent narrative; bodies are

eruptions of ecologies of practice that are continual but not wholly continuous

(Whitehead, 1967). Moving through Chapter Four may feel like walking along a beach

collecting shells and noting vegetation washed up on shore to ignite your imagination of

what might be under the water's surface. Additionally, I hope that in intimacy with each

work the reader will be able to not only make connections about where the work 'came

from' but also connect to where the work might go– generate new ideas due to new

experiences with new readers. In other words, I hope that the reader can experience the

force/form and fact/value nature of the creations such that new ideas and connections

form.

The bodies that comprise the anarchic element of Chapter Four arose through a

variety of techniques of data engagement. There are two visual compositions, and five

multimedia compositions. Additionally, in an effort to experience the feed-forward,

catalytic action of the anarchive, I entangled myself with these compositions again in

experience and perform that experience through writing text. The writing encompasses

different genres to include flash fiction, a talk poem, a ballad, a formal essay, and an ethnographic memoir.

I present these here as an experience for my audience. In choosing to engage response-ably with the data bodies, I hope that these new bodies make space for the reader's force/form to generate beyond what I present in this chapter. I refrain in this chapter from too much meaning telling as a whole, though all the bodies hold and should convey meaning without my words to deaden possibilities of connection for the reader.

I do not intend this to be a free fall experience, and the rather bulky explanations that precede this chapter provide some direction. Nebulously, the reader may like to consider the points from Chapter Two, such as moving toward the more-than-human, questions of emplaced politics and power, and transdisciplinarity.

I encourage readers to read closely with hypothetical sympathy as described by Manning (2016) earlier. I encourage readers to take whatever route through Chapter Four they like, order does not necessarily matter but may provide various experiences. I encourage the reader to treat the bodies as a collection, like one might listen to an entire album as being more than its separate songs.

In the following sections I provide sub-chapter designations to guide the reader. A section like 4.1 (chapter 4 section 1), indicates that the written text within the section was my response feeding forward from the art-working at the beginning of the section. Thee viewing of the multimedia works are meant to be paired in experience with the written work of each section. Multimedia art-workings that are videos seen in sections 4.2, 4.3, 4.4, 4.5, and in the Unfinished section can be accessed in the supplemental material accompanying this dissertation. A list of all videos is provided in Appendix C.

Section 4.1 Oasis

Figure 12

Oasis

Following is a non-fiction, personal narrative, memoir as my response to the

visual composition in Figure 12.

Water Drop

I don't think I have been so dirty for a long time. It made me think, when I finally

arrived home at 6:10 pm, that showering when you are really dirty is a pleasure– oddly

we shower all the time when we are not really dirty. When I returned home, I stank. The

dusky smell of collected desert on my skin was perhaps the most pleasant of my

odors. The stale sweat smell from rounds of perspiration and drying was not something I

am really accustomed to and was happy to wash down my drain. It was not just the

smell, but the sticky feel of sweat mixed with dust, semi-dried on my skin in an invisible mud that drove me to a long hot shower.

I met the humanitarian aid workers at 8:00 am at the office on the "far" south end of town. It was slightly overcast and cool enough for me to wear a thick hoodie, although I had placed a lighter shirt in my backpack in anticipation of the rising temperature and the physical effort that would be required of me on this trip.

Figure 13

Supplies

There were five of us standing outside the aid office, Alice and I loaded the back of the aged, mechanically finicky pick-up truck with water and beans. The water and beans were stored in a carport-like structure attached to the office along with what appeared to be a massage table and a medical chaise that had articulating sections to set

the patient flush or bent- presumably in response to whatever injuries they sported. The water was contained in gallon jugs sitting neatly in green milk-crates, six to a crate. The milk crates were the kind many creative college students have used for bookshelves or low-cost seating. They were from Shamrock and had printed on the side that there was a $1500 fine for inappropriate possession. I wondered if this was inappropriate possession. Alice and I loaded five crates of water into the bed and one crate partially filled with cans of beans. The water crates are fairly heavy- Google tells me that a gallon of water weighs 8.34 pounds. This means that the crates weigh about 50 pounds excluding the negligible weight of the rather light crates. The conversion of the volume to pounds most likely shows my inexperience with carting gallons of water. I bet water drop volunteers can estimate solid weight by - *I think that this weighs about 3 gallons of water*. It is a point of reference that they have intimate and continual experience with, that I do not- thus I think in pounds.

Dan, the unofficial head of this water expedition in the desert, referred to a tattered, soiled binder filled with loose leaf paper to decide where we should drop today. On the hood of the jeep-like vehicle the other two volunteers drove, he peered at the handwritten notes that included dates, locations, and numbers of gallons dropped, beans dropped, and notes like "moderate use". He was directing both teams - the two volunteers in the small jeep-like vehicle and his own team that included Alice and myself.

Dan never declared himself leader, but he had a key to the office, the tattered binder, and knowledge built of years of dropping water in the desert for migrants and refugees. The other two volunteers, brought out a tattered, worn map of the desert around

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Ajo, and conferred closely with Dan about drop sites for today. Alice and I mostly ignored this process as Dan was on our team and he would navigate us to the drop sites. Eventually, Dan retrieved two GPS locators, keeping one for himself and giving the other to the second team. The two other volunteers had already loaded water and grabbed some blankets and pillows from atop one of the medial tables and headed off.

At the last moment, Dan decided that we should take socks, running back into the office while Alice and I sat in the beat-up, dirty, pick-up truck. He also said we really should take a bucket, but there were none available in the carport or office. There was only a lid. Alice said that she remembered that Barbara had one, and we set off to Barbara's house for a bucket.

I was the youngest person there, Alice is a 69-year-old nun, and Dan is a 65-year-old, long-time activist. The other two volunteers, I don't know their exact ages, but going from looks- appeared to be over 50, one with stark white hair– he was wiry and tall with a sun-darkened creased face and the other, somewhat younger sported salt and pepper hair and a beard, he was equally sun dark but not nearly as creased. Barbara was most likely the oldest person I encountered, again not knowing her age, she walked slightly hunched with a limp and her hair was close-cropped and pure white.

Barbara had recently lost her grandson of 14 in an accident, and Dan spoke with her privately for about 5 minutes. Alice held me back at the gate, telling me about the sad tragedy in very little detail. Barbara did indeed have a bucket. We had driven to her back yard via the alley way, and she was outside when we arrived, folding clothes that were heaped unceremoniously on a table under an outdoor roof. If I did not know she

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was a humanitarian aid worker, I may have thought her a hoarder by the number of clothes and brick-a-brak scattered around her yard, including the bucket.

The conversation with Barbara, Alice, and Dan was far from perfunctory, they chatted about a gathering they had attended the evening before in celebration of Jason's acquittal, and they talked about the Green Bay Packers game scheduled for this evening. Apparently, Barbara is a big fan. She finally asked- does it have to be waterproof- referring to the bucket. Dan said that would be nice, as I now know that is the point of the buckets at the water drop sites. She said she had several that were cracked but only one intact, but it had no lid. We took the functioning bucket, and I mentioned that there was a lid at the office- so we swung by on our way out to complete the bucket-assembly.

As we drove, Dan and Alice spoke about changes in policy around the public lands and water drop sites. There are three 'public' lands and two not-so-public lands around Ajo. When Dan invited me on this drop, he informed me we would be dropping on Bureau of Land Management (BLM) lands and added that they have never had trouble there before. The Cabeza Prieta Wildlife preserve is well known for enforcing 'litter' fines for those dropping water and food on their lands. In fact, you must register for a permit to go on those lands, and you must sign a statement that you will not leave anything there. "Leave no trace" is a common public land mantra and is used to keep humanitarian aid workers from leaving food and water in the desert. What had Dan and Alice so worked up though was that Organ Pipe National Park was now enforcing this same strategy- not the permits, but either fining those who left water or taking down the water/food sites - as Dan and Alice put it- cleaning out the humanitarian sites. This was new, and they speculated on what might have caused the change, mentioning that the

park rangers were also enlisted in border patrol service through Trump administration policies. They said that the manager of the park had previously been very amicable with the humanitarian aid groups, and they wondered what had changed as the Trump administration had been anti-humanitarian aid the entire time and the park manager had presumably been ignoring that.

This was my first water drop. I really did not know what to expect, but I suppose that was the point. A few days before, Dan sent me an email with helpful packing and clothing advice. I really did not need that so much as I hike, infrequently, but I have done it long enough to have good hiking boots, socks, various layers of clothing and of course, for the desert, a great hat. What I could have used in preparation was more about the how of carrying gallons of water a mile or so.

We went down a 'road' on BLM property. In the beginning, there was a pipe off to our left parallel to us like a guiding line. This pipe was large, maybe a foot and a half in diameter, but it was rusted with sporadic holes and occasional graffiti. I asked- this is not the pipeline they use, right? Of course, it was the old natural gas pipeline, later the new pipeline was visible in places. It was the bright white of PVC and much smaller in diameter- about half the size of the old one. It was only visible where it stretched over arroyos, the rest was underground.

Little did I know that the one-lane pipe-line road was the least challenging 'road' we would drive on. As we headed further into the desert, the roads became much more treacherous. We were headed for a gap. The desert around pipe-line road was scrubby with many small bushes, finely ground rock that many may call 'sand', and few

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cacti. Alice told me where we were going was spectacularly beautiful, I thought even the scrubby desert was beautiful, but Alice said, just wait.

Figure 14

Sentinels

She was correct, the valley past the gap was spectacular, Saguaro and ocotillo filled much of the available space. Row after row of saguaro gave the feel that you were entering a city of saguaro sentinels that had protected this valley for centuries. As we entered the valley the road became more rock than dirt, and we had to navigate steep arroyos, and super-sandy, wide washes where wheels had little traction. Dan navigated this expertly, expertise born of a long-time explorer of the desert. The beat-up pick-up truck was a champ, bouncy and bumping along without complaint or failure. Often the road was crowded by Palo Verde trees and thorn bushes that made their presence

additionally known by the high-pitched scraping on the metal sides of our pick-up truck. Now I understood the use of the beat-up pick-up truck– any vehicle would come out of that area scarred by the touch of so many tree branches and bushes.

Many parts of the road were so rocky, paved by nature with rocks the size of my head jaggedly pointed in various directions, that the truck bounced and vibrated for sometimes more than 15 minutes making me brace myself with my legs and hold on to the bar above my door.

As we drove, Dan pointed out the direction to the Nation. He said that the fence would come into sight, soon. The fence of the Nation is a modest three strands of barbed wire strung along metal posts. In my experience, barbed wire fences are used to contain and direct livestock. Dan said that cattle are sometimes grazed on BLM land, and we did, in fact, find piles of cattle manure on our trek, but it was so old and dusty that if you picked it up it would not even cling to your hands, and the strong manure smell had long dissipated. Dan also mentioned that he had sighted wild burrow in the past, and often seen burrow dung– though he was not entirely sure how to distinguish that reliably from cow manure.

We finally stopped our rocky road expedition at a game water site. I am not entirely clear about the function of this as it is a fenced polygon, equipped with cameras presumably to film and count wildlife, but it is enclosed and gated so larger wildlife would probably not have access, but maybe there is something I don't understand. Dan also mentioned that it was a site for hunters to set up and ambush wildlife as it came to the water area. When we went to look inside the gates, we found old orange peels, and stagnant water, abuzz with bees.

Dan, Alice, and I loaded ourselves with water to go to two usual drops. I had thought that they would have some water carrying system- straps through the handles, something- but instead, as Alice loaded gallon jugs into her backpack. She explained that she preferred these Osprey backpacks because you can fit 4 gallons in it. As she packed jugs into her pack, I evaluated mine, a bright, burnt orange REI pack with a hydration system integrated. I bought this pack specifically for this project, and it holds about a gallon of water in its camel-back style pouch. My pouch was full of water for my own survival, and I changed out of my thick hoodie and slipped on a long sleeve linen shirt I brought for sun protection. I was able to fit two gallons in my pack. Dan said there were two sites we would be taking water to- one about 0.3 miles and the second about 1 mile from where we parked. I decided I could carry two more bottles of water in my hands to the first site, then leave them and continue the hike with just the two gallons in my pack. We set off, we each had four gallons of water, Judy with all in her pack, and John with two in his pack and carrying two bottles in each hand attached to carabiners with neoprene wraps, me with two gallons in my pack and two bottles clutched in each hand simply by the jug handles.

Full disclosure- I was not sure how I would hold up. I have often camped and hiked. In my late twenties and early to mid-thirties, I was an avid hiker, and I was also in the military. When I began camping, I used to do backcountry camping, often hiking with a 60-80 pound pack 16-20 miles to a remote site to set up camp, and then day hike 5-10 miles a day back and forth from the camp. In the army, we went on several, long ruck marches- 16 mile carrying 50 pounds, marching in formation on hard-packed roads and overland a little to a campsite. Once my son was born (I was 37), I did not camp as

much, but when he turned four, I started again, but this time we did lots of car camping in designated campsites with small day trails that were no more than a mile- with only the weight of the water and bars you needed for such a short trip.

So, here I am, not practiced in hiking with weight for almost ten years. Hiking, sure, but weight is very different. Additionally, the hiking I do with my son is on easy trails, some up and down, but the trails are hard packed dirt with a few rocky areas at most challenging. Further, I have suffered some injuries that have affected my mobility, and while I am healing, I usually don't add weight to myself when I walk. I have a herniated disc and a year and a half ago I tore my hip- they are both 'healed' but I am not the same in agility or strength. My torn hip, left side, loses strength quickly. To understand what I mean I have stairs in my townhouse that are not particularly friendly to my mobility. In the morning and afternoon, I can walk up and down the stairs in a left right motion equally relying on strength in both legs. In the evening, I can only take one step at a time up or down because, going up, my right leg must take the step as it can bear my weight flexing and straightening to take to me to the next step, dragging my left leg, then resetting, putting my right up again, one step at a time. The same for down, but opposite, the left leg comes straight down, right leg flexing and supporting the transfer, to reset and the left leg leads on the next step down. Basically, the left leg tires quickly. As I walk, the small muscles in my thighs and hips wear out, and need rest, and of course, pain is the indicator for rest. I am in constant pain even when not moving, but as I walk, I experience increasing levels of pain until I rest. Fortunately, once I rest, I reset to normal pain levels and can go again just a bit weaker on my left side.

So, maybe hiking in the desert with gallons of water weighing me down was not the best idea, but I knew our distances would not be more than a mile each way, and I really felt like I needed to go. I am glad that I did, but it was not easy.

We began our hike, and it was pretty good for about 0.1 miles. We encountered a rather steep arroyo with lots of head sized rocks that required foot placement vigilance. Really, most of the trip required this but the arroyos were challenging due to their steep sides and the unpredictably stability of the rocks you had to step on. I was competent at this, but slow. I knew that if I slid and twisted my left hip that all the rest of the day would be misery. I never did, but it made me lag behind the two 60 + people in my party. Additionally, the added weight was tough. I knew I could probably walk for a long time with two gallons in my pack, and an ever-reducing gallon in my hydra sleeve, but I also knew that four gallons would be a real challenge past 0.3 miles of the first drop. I knew that before I took a step toward the drop and figured that the 0.3 mile drop would be doable with the four gallons as long as I could leave two gallons before trekking the mile to the next drop. I only partially mentioned this to my hiking companions. When I decided to carry the two bottles in hand, I mentioned that I felt good about carrying those to the first drop.

I did not elaborate on my injuries or lack of capacity. I am strong above my hips. They seemed concerned that my hands, arms, and shoulders would fatigue from holding the bottles- that was not a problem at all- I could have done that part for miles. As I started hiking, I swung my arms with the bottles as extensions of my hands and that seemed to balance me and help me propel forward with the extra sloshy weight. The water in my pack felt good, grounding me, stabilizing each step as long as I

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did not step atop a pointed rock. We weaved around cacti and thorn bushes, taking what

I consider a game trail to the drop site. This trail was clear, there were rocks, but much of

it was hard packed dirt and flattened grass.

Figure 15

Hopeful Footprint

As we walked, Dan pointed out footprints heading in the opposite direction on the

trail as evidence of trail use. He said that, of course, since it was hunting season there

would be trail use, but the footprint he focused on was a small sized footprint (seen above

in Figure 15) that he considered a tennis shoe- and probably not a hunter due to size and

shoe type. We saw those tracks all along the trail. Also, it had been rainy the last week,

so these prints looked fresh in their stability, made after the rains on Friday (we were

there on Sunday). He was hopeful about what we would find at the sites.

Figure 16

Cleaned Out

We finally arrived at the first 'site'. At this point, I did not know what a site would be, but after now having seen four, they are small clearings by a Palo Verde tree, sometimes ringed with rocks. The first site was 'cleaned out' (Figure 16). This, at first, seemed to me to be a good sign, but Alice and Dan were quite concerned. There were a few blue gallon jug tops, some other plastic debris, but nothing else. Alice and Dan took this as a sign that someone, not migrants or refugees, dismantled the site. They speculated on it being hunters or BLM personnel that cleared the sites that the volunteers of the Samaritans so arduously assembled. Dan made a call- we would not put much of anything at this site until we evaluated the next site.

Great- I had counted on unloading two gallons at this site as I was pretty sure that I would not do well in the next mile with the added weight. Dan decided to leave one of his gallons he was carrying by hand, and I left one of mine. I was worried about the unevenness, so I took his other gallon with the carabiner on the handle to start off from that site. So, I still had four gallons, but I was worried that three gallons with uneven weight on one side would be worse than four, and I was not given the option of dropping two of my gallons.

We started off again. After probably about 0.2 more miles, I was really lagging behind and huffing and puffing. Our trail had taken an incline, and the added weight was hard on me. Dan asked if I was alright- I said that I was not used to all this weight, so he took his carabiner water jug back, and I went on with 3 gallons. To be honest, the carabiner was terrible for balancing the weight on both my sides, it swung and sloshed so much more than the other jug that I was glad to be rid of it.

So, there I was stuck with three gallons of water and my hydra pack which was still quite full- more than I knew I was going to do easily. My world narrowed to the trail right in front of me. My hat has a rather wide brim for maximum sun protection, so with my head slightly down, leaning forward on the incline with the weight of my pack pulling me back, I could see maybe three feet in front of me, placing my feet vigilantly my only thinking dedicated to my next step, then the next. It was an eternity of small ground rocks, skirting thorn bushes, and navigating the occasional rock laden arroyo. I was sweating, under my hat band, all over my body, and I was wearing black jeans that amplified the heat of the direct sunlight. In reflection it was miserable, but in the moment, it was utterly focusing- the everything of my becoming was the next step- the

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pack-person on the trail, a shift of weight, stable or unstable footing. The only time I

caught up to Dan and Alice was when we traversed the steep arroyos, oddly I was pretty

fast at that. I had little time to look around at the views, my world was focused on what

was right in front of me and anything I might see in the periphery. My right leg strength

was holding up pretty well, meaning I could step or lever myself up with either leg,

though I favored my left.

Figure 17

Cheat Sheet

Finally, we made it to the second site. Another clearing with a Palo Verde tree,

but it was also 'cleaned out'. We dropped our packs and unloaded all the water. We all

sat in the dirt, and Dan got out a bag of different colored sharpies. He said that we would

write on the plastic gallon jugs of water. He also brought out a brightly colored blue and

white rosary and hung it on the Palo Verde tree. Alice, fluent in Spanish, began to write

messages on her bottles. I don't really have any Spanish- I certainly cannot spell, so I

asked what I should write. Dan produced a cheat sheet for me (Figure 17). On all my

bottles I wrote all three phrases: No estan solos, Peurdo Hacelero, and Aqua Pura. I also

decorated each cap with a heart emulating Alice and drew trees and crosses as well as

water lines on the bottles. Dan found another, longer cheat sheet and handed it to

me. He laughed saying that this must have been written last Christmas as it had several

holiday tidings as well as other messages. I only used one phrase from this sheet which

translates to 'do not give up hope for a better life'- it was the only one, other than the

Christmas messages, that I could read completely. Again, I have never studied Spanish, I

can only read/understand works in Spanish that are close enough to the Italian and French

that I have studied. It is funny that I could read every word of the hope for a better life

message, but I cannot spell it here. In fact, I am unsure I spelled it correctly on the bottle

as the handwriting for the second cheat sheet was very hard to read- after having trouble

with it I stuck with the three phrases on the first cheat sheet for the rest of the bottles

throughout the day.

Figure 18

Small Oasis

Dan and Alice explained to me that the rosary and the messages are to assure

travelers that the water is unharmed and uncontaminated. If the seals are unbroken a

migrant can feel safe drinking the water. Rosaries are at all the sites in the trees as a

marker for the travelers and the droppers. Both sites that were 'cleaned out' did not have

rosaries, or anything but a few scattered bottle tops at them. Again, I could not really

understand why this indicated to Dan and Alice that it was not migrants who took them-

that understanding came later.

We all sat in the dirt, writing on bottles and chatting. We shared trail mix and fig

bars that Alice and Dan brought, and I passed around my Kind Bar. I was not in the

shade- there was scant shade to be had for a creature of my size- so I sat in the dirt,

relieved for the break, with my legs sprawled in front of me, and enjoyed the Spanish lesson and the company. I had made it to the site, and I was relieved that I could walk back unencumbered. It probably took about 15 minutes to set up the site, but it was not the most efficient time use, much was chatting or Dan looking for bags, sharpies, cheat sheets, and a rosary. We pushed the gallons of water as far under the tiny Palo Verde as we could without becoming entangled in the thorn bushes and cholla parts (Figure 18). Dan handed me a bag to put the socks in, and I tied it tight at the top- a ubiquitous plastic grocery bag to make it as waterproof as possible. I hung it on a low branch next to the water.

We threw on our packs and headed back. I was able to look around this time and take pictures. The picture taking made me lag behind the others, who, having been here so many times really seemed more interested in their constant conversation than the desert around them. Alice often acknowledged the beauty of the desert, but she never stopped moving or talking to take it in. It is impossible (for me) to hear the desert when you are talking and moving. Occasionally the sounds of bees would come into focus when I paused to take pictures, lagging behind the other two, but faded away as soon as I started moving or got within earshot of their conversation. There were no birds at this site. I thought this was weird- my house in town is a bird haven. This morning there were some ten doves pecking the gravelly ground in my back yard with another five or so flitting about. Apparently, crows do not like the wet as I did not see one crow in the desert (it had recently rained), and I have not seen my neighbor crow in days.

Dan decided that we would walk back to the truck then reload to take some water and crates to the first site. I am unsure about how this decision was made. It seemed like

he was conducting an experiment. At both sites, he wrote notes in a small field book- how many gallons were gone, what was still there, and what we left along with a date. His hypothesis was that the sites were being 'cleaned out' by non-migrants, and I think that he was setting up the first, closer site again to see if it was again cleaned out the next time they came. It was not a big deal as we brought supplies for the four sites we planned to visit and that one was one of them. He mentioned that the No More Deaths volunteers were coming soon for a few days with a greater labor force, younger, more numerous volunteers, and they could check these sites.

Dan offered me a rest– he said that he could run back to the first site and set it up- suggesting that I might like to stay at the truck. I did. By the time we got back to the truck, I had reached my limit of small muscle control, and nervous system functioning– my hands were shaking, and a fiery pain was spreading across my groin with the small muscles of my thighs and hips signally that I needed to reset. Alice decided to go with him– and since I would be alone, Dan produced a bright orange whistle that he assured me he would hear it and come running if I ran into any 'trouble'. I don't really know what trouble he was anticipating– most likely a run in with law enforcement. This guess was amplified by the fact that Dan was wearing a bright orange prison issued t-shirt from Las Vegas Prison, printed in large block letters. He was also wearing jeans that were made in what looked like the 70's light blue denim, frayed completely on the cuffs. He had a bandana tied around his stark white hair. The description 'desert rat' comes to mind. I read this in the earlier histories of Ajo, referencing men that lived out in and on the desert, surviving without modern conveniences in the 1910's and 20's. Dan is a short wiry man who looks suited to desert survival.

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Alice on the other hand, looked nothing like a nun as they do not wear habits anymore and even if she occasionally sported a habit, the desert hike was not really the place for one. She was wearing a thick red hoody that said 'Samaritans' with a white cross on the front– a cross, not like the religious cross, but the humanitarian cross with extensions equidistant from the center. She was wearing modern hiking pants of a space-aged nylon made for wicking moisture. She forgot her hat, and Dan loaned her his only hat– thus his bandana. Neither put on sunscreen- there was some discussion about that. Dan indicated that he had sunscreen in the truck but never wore it- Alice declined the offer of use. They both looked to me, and I told them I was well slathered in sunscreen already and had my hat and linen shirt for further sun protection. I occasionally offered Alice one of my shirts as sometimes she mentioned how hot her sweatshirt was in the direct sun. On the second offer, she explained she would wear the sweatshirt as a matter of disciplining herself to the heat. Really it was a cool day, but the sun was as relentless as ever, and the physical exertion warmed the body further. Their nonchalant attitude about the sun and sunscreen and the forgetting of the hat made me think about how differently they and I think about the desert. I would just as soon forget my water as not have every available sun protection with me. I am not a desert rat– wiry, and sun dark– and I probably never will be.

Alice and Dan headed back out, and I rested. It was easy to track them until they went over the ridge, Dan in his bright orange and Alice in red. Before Alice went, she brought out her cooler and set it in the only available shade, a sliver directly next to the wheel of the truck. She encouraged me to eat saying she had boiled eggs and cheese. Alice brought a great deal of food for this trip, probably ten fig bars, nine boiled

eggs, and three packages of cheese. Dan had given her a loaf of freshly baked bread at the office that also accompanied us on the trip. She mentioned more than once that she liked to be prepared in case we got stuck overnight out there. She relayed a story about getting stuck on the other side of an arroyo once as rain rushed in, apparently unexpectedly, and the group thought they could outrun the rain, but failed. Apparently, they stayed out all night.

I was tired. The heat was a lulling heat, not so hot as to distract from a nap, and the physical exertion had left me with little energy. I would have napped if I could have stretched my leg out in the truck seat, but the pinching pain in my hip prevented that. I was groggy and lethargic. I decided to lunch on cheese and boiled eggs supplied by Alice. It was quite good.

After that, I stopped sitting in the truck and made myself comfortable in the truck bed, with my legs straight and feeling better. I heard Alice and Dan before I saw them, the babbling of their constant conversation reached me before they crested the ridge. I waited and watched and then they came into view.

When they got back, we loaded up with an efficiency that had not, until then, been exhibited and headed out. As we were leaving, they pointed out a cross that had been left by a humanitarian aid worker in honor of all the lives lost in this area. The cross was plain, cream brown, hard to pick out among the desert landscape and placed far upon the ridge looming in front of where we parked the truck in the opposite direction of where the game water sites sat. Dan explained that it was so hard to see and that they placed a little stone cairn at the base of the ridge in line with it to mark where to look, and still often had trouble seeing it, thinking someone removed it, but it was still there.

The way to the next site was even more challenging than the way through the gap. I don't know what the next site was called, but the road was incredibly rocky with little respite. At one point, we traversed an arroyo that was almost completely V shaped. The steep sides were perhaps five feet angled sharply, and Dan commented that this was always a tricky spot. It appeared that someone had piled rocks at the bottom to help with the crossing, so instead of the natural V shape the rocks provided about a foot of flat at the bottom of the normally sharp V. We had no trouble getting across particularly on the way in. What struck me as we drove to this site was how much the desert had changed from the other site. We say 'the desert' but there is a variety of landscapes if you look past the ubiquitous brush and cacti. At the second parking site, we traveled through fields of rust colored ground covering. It was so different from the colors of the last place which were mostly brown ground covering and green saguaro. The second parking site was also a game water site, fenced, with stagnant water, although not quite as stagnant as the water at the first site, and cameras.

Alice and Dan were curious to see if this next site had been cleaned out. Before we loaded up to go out again, we explored the game water area, stepping over the twisted barbed wire gate that lay in odd angles along the ground. There toward the entrance, I found a bullet casing– .38 special on the ground and picked it up to put in our trash. I asked Alice if they often found casings. She said the ones they normally found were small and gold- I believe she was describing .22 casings- I asked her if that she meant .22 casing, and she shook her head confused. She did not know anything about guns or bullets she said. I explained that .22 was usually used for target practice because of the small, cheap ammunition, and if someone was hunting with it they were hunting

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something the size of a squirrel. I also explained that I believed the casing that had 38 special imprinted on the bottom was a handgun, and people don't hunt with handguns. Again- it could be target practice- I imagine law enforcement here carries 9 mm.

Figure 19

Tough Terrain

We loaded up again. This time, we each took 2 gallons of water and two cans of beans. Dan brought a black trash bag, and Alice carried the empty bucket. The site here was about a mile out, but there really was no trail. The ground here was quite different. It was so rocky and studded with cacti that the ground would not imprint a trail (Figure 19). The other site had dirt on the ground, enough to be packed down with foot traffic, but there was little dirt here. Instead, the ground was littered with pebbles of

black, white, brown, and red as well as larger rocks from hand to head sized, many of those were black. The ground covering was wiry and vine-like, spindly, not grass with roots. There were fewer rocky arroyos, just one, but there were some sandy washes. Maybe it was because there was no trail, we often walked closely by saguaro. On the way in, I experienced the narrowing of my world to the mosaic of pebbly ground in front of me only for a short stint when our walk got steep. I had to be extra careful about foot placement even on flat ground as the rocks were everywhere; it was literally a field of rocks, but I did not experience the narrowed determination of having to carry all that water from the first time. By this time, my own water sleeve was a little less than half full and two gallons of water and two cans of beans in a pack felt pretty good. I was also reset and recovered from the first expedition. When we were loading up, I explained to Dan that I walk slowly but I am okay; I torn my hip a while ago which restricts my gait and agility, but I can walk for a while. He was kind about it even though I really felt as though I was slowing them down.

Figure 20

Intact Infrastructure

When we finally reached the site at this second parking stop, I understood why the other sites had dismayed Alice and Dan. This site was again under Palo Verde, but this time, the drop site sat between two convergent Palo Verde that met and provided a shady copse, a much 'better' site than the last two. At this site were three overturned crates, two with large rocks anchoring them, one with water jugs still underneath and a bucket with a lid (Figure 20). Scattered around the site were empty jugs and opened, empty cans of beans. This is what a site should look like if migrants availed themselves to the resources here. First the infrastructure was still intact, the crates and the bucket. Second, the empties were left on site by people who were not participating in 'leaving no trace' in favor of sheer survival and had no interest in carting off debris to god knows where they could dispose of it.

Dan and Alice examined the empty jugs, some were 'animalized' with holes pecked/torn in the sides but the seals on the lids were still intact. I finally understood the function of the crates. Dan and Alice expected to find crates at the other two sites. The mile distant site at the first parking area was too far to take crates back, so we left the water jugs exposed, and I did not go with Dan and Alice on the second trip to the first site at the first parking area where they took crates back. The crates hold six jugs, so at the sites, they place the jugs in two, three-jug lines on the ground and put the crates upside down on top of the jugs, protecting the jugs from animals, crows were mentioned.   The buckets hold socks and other cloth, like blankets or clothes protecting them from rain. Also, the rosary was still on the tree from the last drop– hard to see because it was a green that blended in with the Palo Verde branches.

I found four cans of beans opened and empty behind the little clearing of the jug site. The labels on the cans were quite new, not sun worn or waterlogged indicating that the cans were used very recently. Alice found another one like that a little way from the site. Based on how we found the site, I could imagine a group of travelers finding the site, relieved, opening a jug of water, passing out the cans of beans, and going to rest behind the clearing because it was probably shady on that side, sitting among the rocks and enjoying nourishment when they could. This site filled me more with hope that what we were doing was affecting someone, someone who needed food and water. I imagine that is why Alice and Dan were so dismayed at the last sites. Dismayed that all their work, hours of driving almost impassable roads and packing water like mules a mile into the desert for no benefit to the tired and struggling migrants crossing the desert in hopes of a different life.

I wrote on bottles while Alice collected and smashed all the empty jugs to fit in her pack. Dan readied socks and picked up trash. After finishing my messages, with my three phrases and hearts, I shimmied the crate over the top of the jugs while Dan placed rocks on the other crates that he had put cans of beans under. Dan also recorded what we found and what we left in his creased field notebook.

Alice and Dan explained to me that before the Samaritans began to organize these drop sites there was lots of debris and trash in this area left by migrants. In this particular area, they said that they had found hundreds of the black water jugs typically sold in Mexico. Alice said it took two days for them to clean it out. So, the humanitarian sites serve as a place for migrants to refuel, but also a reliable place to clear out trash on a regular basis, a job Alice and Dan took seriously as part of their mission out and in.

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As we walked back, I took more pictures, lagging further behind the other two. Again, they were not there to stop and smell the creosote so to speak. These drops were a job, and they were focused on that and the implications of the politics based on the clues they found around the sites, the most speculation they did was around the human traffic of the area. At one point Alice said that she thought it was a shame that 'they', meaning law enforcement, particularly border patrol, weaponized this beautiful place. This is a common narrative among the humanitarian aid workers due to prevention by deterrence– a strategy employed officially by border patrol as a whole. In short, prevention through deterrence is a whole organization strategy developed in Washington where traditional ports of entry like El Paso and Tijuana had tightened security so that migrants would take the less patrolled though more treacherous routes through the middle of the desert– one of those being the desert corridor with Ajo directly in the center. I mentioned that this land had a very long history of people walking through here and dying- Spanish settlers, gold rush hopefuls, and migrants before border patrol. She said she sometimes wrote articles for her order, saying that the desert was harsh and deadly. I wonder at this narrative particularly considering the Tohono O'odham lived here and survived well. The desert is foreign and hard to get to know, it can be dangerous with water so hard to find, and large swaths of isolated spaces- but isn't it ignorance that is deadly- poverty that is deadly- desperation and lack of help that is deadly? I don't know, I have to think about that. It seems too easy to say that the desert is harsh and deadly- there is more to that story- taking at least two to tango.

As we walked back, Dan consulted his GPS more often. Having no trail is hard even when you have been there several times as Dan and Alice had. I was not in a great

deal of pain or physical distress, but my wear was showing in my slowing pace. Once I stepped on a rock, it shifted under my foot and my hand shot out instinctively toward a saguaro, the only stable thing around. I remembered just in time to pull my hand back, but for that moment it seemed like something to lend stability, maybe that it was what Alice meant. Usually something that large, well over three times my height would be a welcome comfort, but not here, not in the desert, I cannot reach out to a cactus to stabilize myself. Maybe it is the sheer lack of comfort or the stingy comfort offered by the desert that she is calling harsh.

The sun was lowering as we walked back. The sky was utterly clear, no clouds anywhere so the setting sun had no spectacular play with the clouds although the lessening light was welcome. We came out about a half a football field east of the truck due to the lack of trails and the way we came back. Dan decided to set up an additional site at the game water enclosure, one that was not there before. We had beans and water left, so we put out six gallons under a crate and left eight cans of beans, and of course, a rosary. We did not write much on these bottles as we needed to leave with enough light to drive the rocky roads back home. We did put hearts on the lids.

Our drive home was directly into the setting sun, it was slightly less rocky, but there were lots of places with huge water puddles in the middle of the road. Most of our trip after the gap was done at 5-10 mph, leaving we were doing 15-20 mph, less rocky, but visibility was tough. Earlier in the day we had splashed through a huge muddy puddle spraying drops of mud water on the windshield and collecting dust on the wet surface as we drove. With the sun directly ahead, it was hard to see. I was in the passenger seat, and I could not see well enough to drive from my vantage point, and Dan

was constantly bobbing and weaving his head to see past the mud and glare. He tried his windshield wipers to dislodge some of the dirt which succeeded in smearing the glass and making it less visible. I finally suggested that we use some of our water to clean it. I hopped out of the truck and got a jug, standing on my tippy toes beside the driver's side windshield I poured water down the glass and Dan turned on the wipers. It worked remarkably well. It was fast driving after that, a few times getting up to 30 mph.

There was only one huge wash we passed. This one, not rocky at all, was filled with finely round rocks, a kind of rough sand that was deep and intractable. Dan said he had to be careful because it was as easy to get stuck here as it was in mud and rock. We made it, really, we had no near misses of getting stuck. Dan was experienced driving this vehicle; it was old and worn evident by the fact that to start it took a skilled and patient touch of turning the key forward then back, then forward, then back sometimes sliding it back and forth. Dan did this patiently for about 2 minutes on the last time we had to start the truck when we left. Additionally, the truncated door on the passenger side that led to the back seat could only be opened from the outside; each time we stopped, I had to let Alice out using Barbara's technique explained earlier in the day, push on the top, and pull on the bottom. Alice was never stuck in the back seat, and Dan was always able to start the car regardless of the mechanical quirks.

Travelling the desert is not a straightforward proposition. It is vast and isolated with few water sources. As I packed water in, I imagined what it must be like to walk in this rocky, sun-drenched place accosted by cholla buds and weaving around saguaro, thorn bushes, and prickly pear cacti while fleeing border patrol. I could easily imagine walking on ground that is unstable, sometimes rocks rolling under your step, hauling a

little water with little likelihood of finding more natural sources across vast distances, all while wearing old clothes and cheap plastic tennis shoes. I remembered the reports of finding parents and children both alive and dead in the desert and tried to picture dragging my nine-year-old across that landscape scarcely outfitted and poor. Although, most travelers are not children, it happens often enough. I also imagined the necessity of traveling in the unrelenting sun because it would be lethal to try walking around that rocky and unpredictable terrain even with a flashlight.

It seemed to me that it was an almost impossible proposition. What could lure me into that situation? But that is just the point, the people taking those risks are not me– that is the point revealing the injustice– they are risking and dying in a journey that I find wholly untenable. It is interesting to me that humanitarian sites would be 'cleaned out'. Don't those doing the 'cleaning' have the same thoughts I do? It really takes no imagination at all to extrapolate your own journey to those sites a hundred times to crossing this area– if you made it to those sites to 'clean'- why would you do it?

They must be riding a different current than the one I did. It is the only way to explain it. Some hints to that came from the border patrol agent who regularly attends the 'town' council meetings, he countered that anyone has a choice not to enter this area illegally when one of the council members said that the migrants have no choice. Clearly entering illegally with all its risks is a preferable choice to not, evident by the very fact that migrants choose to do so, but what does that say about the other choices they have available?

When we finally made it off the dirt pipeline road coming back to where we had entered the desert initially, we were faced with what Alice said was called "over burden'

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from the mine, and Dan called a slag heap, directly in front of us. The first wash of feeling over me was repulsion, followed by those conscious thoughts that erupt in the actual occasion of experience. The infrastructure contrast for me at that moment was monumental. I had just spent an entire day in almost pristine desert, constructing and maintaining water drop sites for migrants in their bid to cross this desert, and before me was the waste of not quite a hundred years of mining. A huge tower structure of unearthed rock and debris covering acres with its sole purpose, to stay out of the way of mining copper. This unsightly monstrosity would not be the cause of fines or the focus of law enforcement, and although BLM lands did not fine humanitarians for dropping food and water in the desert, two of the other public lands surrounding Ajo did.

Here I saw a great question of not, truth, but of beauty. I agree with Whitehead that what we create, what bodies come jutting up from the past and the future into our present, what bodies endure through continuously supported processes, is a matter of a value force. Not our 'values' as traditionally spoken of imposed from the outside reached through thought and reflection, but the coalescing force that allows bodies to become realized in actual occasions of experience. They are shaped and formed by a value force that is evident in the past, the present, and in our future visions. That the slag heap was legal, but a water drop was not entirely, gives us a glimpse of the major chord of values at play. That the water drops exist at all gives us a glimpse of the minor chords of value at play. The intensity of one over the other, the duration of one over the other, another clue to the dominant episteme housed in the material that we encounter, the shapes the forms and structures from actual slag heaps to laws, and to rosaries hung on trees above water jugs to compassion for others.

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Although I appreciated the work and the desert and was filled with thoughts of valuing differently, driving into town was amazing. We came around the bend and saw the aid office backgrounded by the plaza and other buildings of business (Figure 21). A feeling enveloped me, safely, security, comfort-relief. It really did look like an oasis, a place to be safe, at least for us. We would not be stuck in the desert; we could buy a cup of coffee or a sandwich. This sight after the sheer isolation of the desert was welcome; it seemed to mean that people were here, alive and thriving. In this oasis, you did not have to work so hard for every little thing, your water, your food. You had choice and safety. You, being a U.S. citizen with at least a little means.

Figure 21

Return

I felt that the tension between my feelings of revulsion for the slag heap and my feelings of relief at seeing the town after an entire day in the desert. The part of the town that we saw first as we drove in was the plaza with its colonial past housed in its arches, but on the side of town we entered, I could also see all the street art painted on the sides of buildings with its myriad of styles and messages. At that moment I was also reminded of the 'call' I felt from Ajo as I contemplated a dissertation site. This part of Ajo was literally directly in the middle, between the slag heap and pristine desert. Those buildings and colors, the small adobe humanitarian aid office stuffed full of water jugs and cases of beans, the road that the old beat-up truck rolled along unhindered– this part of Ajo was doing something else, something not as extreme as the slag heap or the vast stretching desert, but it was doing something beautiful.

Section 4.2 Decline

Figure 22

Decline

Figure 22 is a still taken from the multimedia video composition Decline that can be viewed in the supplementary material and is listed in Appendix C. Following is a flash fiction in response.

Ruth's Life/Death

Ruth rose unsteadily from her chair, and Ann leaned forward, hands out as if to catch her should she fall. Ruth straightened painfully and took a few shuffling steps toward the wall. Ann sat with a slightly worried expression, gaze darting to all of the clutter precariously balanced on small tables as Ruth swayed and scooted across the floor of the tiny living room.

Reaching for a picture, Ruth said, "I was not always this way."

Ann sat back relaxing when Ruth finally made her way back to her chair. Ruth extended a shaky, bone thin arm, presenting the picture to Ann.

"That's me in my 40's", Ruth said proudly.

Ann studied the 8x10 framed photo, holding it slightly off her lap. The photo showed a tall, athletic woman with blonde hair gazing slightly off into the distant desert. She snuck a look at Ruth, noticing the still tall frame, the hint of blond in among gray, but with growing sadness, Ann realized the strength and vitality had leaked from Ruth over the years.

"It started with a car accident", Ruth said reaching to take the picture back.

Ann had heard this story before but never from Ruth. It was always related second hand in hushed and pained voices- how Ruth's body had been broken and fractured.

"Then while I was on the mend, my stupid sandal got caught up and I broke my hip when I fell."

Ann glanced at the picture lying where Ruth had sat it on the small side table amid a smattering of books. The picture exuded independence– younger Ruth stood straight and tall with sun darkened skin and a sharp gaze. Current Ruth sat hunched and thin, shaking with effort as she reached for her teacup.

Ruth pointed to a collection of pictures on the opposite wall, saying in a slow raspy voice, "That there is Janey, I think you met her once."

Ann turned carefully in her seat not wanting to upset any of the small tables surrounding her chair. Yes, she thought, she had met Janey, the small terrier, a few years ago. The small dog had been stiff with arthritis, and Ruth doted on her. Ann felt a bit guilty as she realized Janey must have passed on, the cluster of pictures taking on a shrine-like quality as that thought dawned.

"She passed a few months ago," Ruth said as if reading Ann's next questions telepathically, "I thought about finding another companion, but who could replace Janey? We really understood each other. Anyway, I don't think I could keep up with a younger dog."

Ann sat uncomfortably searching for something to say, finally murmuring, "I remember Janey, I am so sorry she is gone."

Looking around the cluttered living room into the tiny kitchen, Ann realized why her grandmother had been so insistent that she visit, toting a generic noodle casserole with her. Ann did not ever know the Ruth in the photo, but she remembered Ruth being more vital and animated when Janey was alive.

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"I am so glad there is a good turnout", Ann's grandmother, Rose, leaned over, whispering to her neighbor.

Ann sat up straighter, the soft organ music coming into sharper focus as she emerged from the vivid memory of last seeing Ruth. She took in the room, filled to capacity and dominated by women her grandmother's age and older, many festooned with bright brooches and rings that stood out in contrast against the black they wore.

It *was* a good turnout. Ruth had no children, and she had been long divorced before she settled in Ajo. Although Ann knew from talk in coffee shops and church that Ruth had been an active member of the community, registering people to vote, going to community meetings, and volunteering with the garden club and the International Sonoran Desert Alliance, Ann had been too young to have her own memories of that Ruth.

Ann looked sideways at her grandmother who had half turned away from her to whisper/talk to the ladies around her as they waited for the service to start. After being widowed when her husband, James, succumbed to cancer a few years ago, Rose moved to Ajo making her and James' winter home permanent. Up until this moment, Ann had never really understood what Rose had meant when she told her that she wanted to grow old with the other women in Ajo. They had been sitting side by side in uncomfortable hospital chairs on one of her grandfather's last days.

In Ann's mind, you grew old with your husband, or surrounded by your family, but looking around at the women gathered here, she got it. With new clarity Ann could see that these women saw one another every day, listened to one another's concerns and worries, and took care of one another when they were in need. Rose's children and

grandchildren only visited or called occasionally, if Rose relied on just her family after James passed, she would be growing old alone.

Looking at Rose and her friends with new appreciation, she was able to shake some of the sadness. Ann had felt sorry for Ruth, alone with her dog then without. She distinctly recalled the wide gulf she felt when she visited Ruth the last time just six months ago. Ann had everything ahead of her, she had just graduated college, and was about to accept a job with the architecture firm that had recently offered her a job in Chicago. She remembered wanting to leave about halfway through her visit as her brush with Ruth's obvious mortality grated on her. At the time, she could only think of Ruth's life as in decline. Now sitting among Ruth's peers, she realized that she misjudged Ruth, characterizing her only by her losses as she had not really understood all of her gains. At the time, those gains had been too foreign, too unrecognizable, but here at this gathering in remembrance of Ruth's life she could feel the connections and care even though they were still just out of reach of her own experiences.

She breathed a sigh of relief and smiled for the first time that day. She leaned over and asked her grandmother, "What happened to all the stuff in Ruth's house?"

"A bunch of us packed it up and some of the local boys put it in my storage shed. We are going to donate it."

After the service, Ann sat amid boxes of Ruth's stuff having finally found the photos. She arranged them in a semi-circle and considered them. She chose three pictures and set them aside, one of younger Ruth staring off into the desert, one of Janey laying in a chair, and one of Janey and Ruth in the yard with the street in the background.

Later that week, on her way out of town, to finally pack up her own stuff in Phoenix, Ann stopped by the small graveyard. She drove toward the new graves locating Ruth's. Ann jumped out and propped the younger Ruth picture and the picture of Janey on the base of the new headstone. She smiled, thinking about Ruth's life and death in a new light. Settling herself back in her car, she looked over at the photo that she had kept of Ruth and Janey in Ruth's overgrown yard. She had told her confused grandmother that she really needed that photo to remind her that change is not always decline, but instead maybe something different and unimaginably important, something not to be dreaded, but something to embrace.

Section 4.3 Precarity

Figure 23

Precarity

Figure 23 is a still frame taken from the multimedia composition Precarity that can be viewed in the supplementary material and is listed in Appendix C. Following is written text in response to the artwork.

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The Ballad of the Desert Spring

There's a place in the desert, a marvel a wonder
Where fowl stop to rest
And mud turtles slumber
Among rushes and trees there lies shimmering water.

Though today it is harder to access this treasure
Brackets of roads
And a wall of displeasure
Alas water yet springs from the earthen wrought channels.

The history in annals say flow was much heightened
In long ago eras
Ere time was enlightened
Dirt to mud, mud to mélange, hot land shaped and changed.

Among basin and range water's invitation
To myriad creatures
In webs of relation
Pup fish and beetles and birds of song lent to this garden of eco

Not id, not ego, not plan, not design
Proved abundantly thriving
For all this life-kind
In a not-yet-named arid space and forgotten fervid time

This lively shrine lived millions of seasons
Untouched by thought
No words, no reason
Time passes, new creatures arrive shaping a desert homeland

People of sand and of desert and peace
Arriving in awe
On whispering feet
Lived partner to willows and warblers in this sacred oasis

The People made spaces of honor and home
Villages grew
And pronghorn roamed
Until appeared new creatures wrought both fiery and fraught

Men of cloth and of Christ and of mine
Seeking souls
And drawing lines

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Few stopping for long driven on by shiny golden dreams

More a means than an end this place of grace
Saw many Men
Along the devil's trace
And no matter their narrow stare, it offered them drinks of life

These times were rife witnessing greed and need
But water endured
As life's seed
Still more Men from other climes poured upon the desert to rule

Men of tools and of trade and of cash
Shook bloody hands
Among the ash
Trading wealth for imagined contours against other's jealousy

Manifest their destiny Men trod the soil carelessly
And laid spoil
Whistling cheerfully
But the water flowed still, so near the vivid cut of the boarder

Men called it order to render to divvy to take
Blind to those
Not in their stake
Dominance their method was diverting flows of water and people

Sad the day a peaceful village changed hands
From the People
To protected lands
Pristine wilderness maintained at the cost of sacred relation

In this nation of biased law and reprisal
People's virtue
Named too tribal
State protection extends to Men rather than gardens of eco

Men's insatiable libido of progress
Leads Endangerment
Extinction and egress
As life is drained in water pipes meant for faraway others

A partner, a mother, a brother, a lover
Elan Vital linking
All creatures, and others

Recedes back to ground flow slow, levels sinking, progress praised

Alarms have been raised and tears shed
As the land
Is covered in the dead
But too many believe in Man's dominance upon this desert sand

But weak human hands cannot bind as does water
Not nail, not seam
Not metal in solder
Has risen to levels of all life force growing and sowing more.

Section 4.4 Celebrate

Figure 24

Celebrate

       Figure 24 is a still frame taken from the multimedia composition Celebrate that

can be viewed in the supplementary material and is listed in Appendix C. Following is a

formal essay in the style of a magazine article in response to the art-working.

From ME to WE with Collective Joy

A few years ago, I came across a clever image on The Nature Conservancy website. The top half of the image depicted a polluted and degraded landscape with the text ME printed in large, white block letters. The bottom half showed a pristine landscape including clear blue water with WE centered beneath ME as if it were reflecting upon the water's glassy surface. I thought this to be a rather clear message about our current state of affairs both politically and environmentally and the lack of collective action and feeling in regard to addressing modern, complex socio-ecological problems.

Of course, American culture does not typically see the ideal of WE in such a rosy light. *WE* is the title of a dystopian novel written by Soviet dissident, Yevgeny Zamyatin, in the 1920's. *WE's* stark criticism of the totalitarian state influenced an entire dystopic genre written by authors concerned with the possible extrapolation of communism and totalitarianism. Among these famous authors are George Orwell, Aldous Huxley, Kurt Vonnegut, and Ayn Rand. Many of these author's iconic novels depict a gray world of sameness where individual's wants and needs are subverted to the collective under strict surveillance and techniques of pathologizing emotions.

Our disdain for the collective fueled by that calamity of the now defunct Soviet Union, a long cold war, and our own country's idea of progress, seems to seethe beneath our inability to act on behalf of one another and a damaged planet– a collective welfare. Indeed, the word *welfare* seems to have become a dirty word meaning hard-working individuals sacrificing goods and money for a population of hangers-on, parasites to the social body. With the backdrop of individualism as a shining light in the darkness of a

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totalitarian state, the commons and the public good seems to mean only less for deserving individuals.

But is this the only way to view collectivism, the commons, and the welfare of one another and the planet?

Interestingly, Edward E. Sampson, an academic author writing in the 1980's, suggests that it is America's cultural view of the individual that would lead to the need for a centralized government to maintain social order.

Sampson (1985) shows that our cultural view of a healthy individual identity is cohesive and integrated, stable and static, and accomplished by "personal control and mastery" (p. 1203). Sampson (1985) cites one influential theorist who likens a healthy ego to a totalitarian state in its efforts to maintain itself by minimizing the effects of outside influences.

Sampson (1985) sees this totalitarian concept of individual identity to be aligned with the notion of a closed system in a state of equilibrium (stasis) described in the natural sciences. He goes on to explain that if individuals are indeed this type of closed, autonomous system then to accomplish social order among such individuals, centralized control and monitoring would be necessary. In other words, if every individual minimizes the effect of others and the environment on themselves, the only way to work towards social order would be a hierarchy over those individuals that controls them.

So maybe those vehemently opposed to the collectivism depicted in the dystopic novels of the early to mid- 20th century were correct if not explicit about their assumptions of individuals and collective action. If individuals are indeed "totalitarian states" unto themselves, closed systems unresponsive to the flux and flow of others

around them, then it would take hyper-surveillance to organize them for social order and end in the dreary homogeneity depicted in their writing.

Sampson (1985) does not advocate this by the way. Instead, he asks us to reimagine individual identity. He cites the famed anthropologist, Clifford Geertz, to point out that the totalitarian state conception of individual identity is actually rather unique when compared to numerous other cultures. In other words, this totalitarian state identity is our own cultural idiosyncrasy, not some broad rule of human nature.

Sampson (1985) suggests that instead we think of individuals as open, non-equilibrium (constant flux) systems. He comes to this not as an opposite to the closed system, but rather through the work of the 1977 Nobel Laureate in Chemistry, Ilya Prigogine. Prigogine (1962) demonstrated that closed, equilibrium systems in nature remain quite rare and that all living systems are continually receiving energy and matter from the outside and reorganizing themselves in response. Further, order results from the ability of open systems to reorganize in response to other open systems. So, in what may seem counter-intuitive to our American conceptions of order, changing in relation to new information, energy, and matter provides a more stable foundation for open, living systems. Sampson (1985) summarizes this by writing that to "close off the parts in the name of finding order and coherence is to threaten" (p. 1207) social order as our society is a living system and acts more as Prigogine's non-equilibrium systems than Newton's mechanical ones.

Sampson (1985) proposes that instead we think of healthy individual identities as persons-in-process where the only coherent singular attribute an individual exhibits is its continuous becoming. In less esoteric terms, a learning, growing, changing individual

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identity that responds to others would be a healthy individual in society and help to create social order.

Sampson's (1983) writings contain a sense of urgency that I find prophetic. He often writes that we need research and writing that explores individual identity as person-in-process as he believes it to be key for "human survival and wellbeing" (p. 141).

So, returning to the Nature Conservancy's ME/WE message, it is easy to understand that the shifting from me to we couched in a totalitarian individual identity and with the catastrophic history of totalitarian states seems rather unappealing. It reeks of government control, surveillance, and sacrifice to the point of collective misery.

But is another way forward from ME to WE possible?

Oddly, one possible answer comes from an entirely different contemporary writer, Barbara Ehrenreich (2006), in her book *Dancing in the Streets: A History of Collective Joy*.

Ehrenreich (2006) takes the reader on a journey from the worship of Dionysus to modern rock festivals to show that collective joy arises from participatory celebration that is not concerned with the instrumentality of work, gain, and productivity. Working her way through the history of the rise of modern society intertwined with cultural and conceptual strands of Calvinism and capitalism, she shows how communal celebrations have continually been squashed by authorities only to arise again in differing forms.

She cites historical events like the Roman persecution of the worshipers of Dionysus; the Catholic Church's ban of revelry during religious service; the aristocracy's attempts to eradicate Carnival; and imperial forces abolishment of native rituals and celebration in numerous countries and contexts. Her point with these examples is that

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authority as it has evolved in Western civilization has continually felt threatened by rhythmic dancing around bonfires and peasants cross-dressing and singing in the streets.

It seems such a small, irrelevant activity, people coming together in revelry, but the extensive efforts of those in power to erase these customs says otherwise as does the fact that they reoccur again and again. Ehrenreich (2006) provides modern examples of collective joy like the rock rebellion of the 1960's and what she terms the carnivalization of sports seen notably among soccer fans.

Particularly in these modern examples, she explains that the difference in acceptable group conduct and non revolves around audience participation. In acceptable conduct, large groups act as spectators; when the audience begins to spontaneously participate, they have crossed the line as when fans would mob the stage of rock performers. She points out that spectatorship and consumerism go hand in hand, but productivity and celebration typically do not. Group celebration and participation in collective joy for the sake of itself does not fit neatly into current capitalistic ethos of hard work and consumerism.

This friction between traditional social order and the bubbling up of revelry harkens back to Sampson's (1985) point about closed equilibrium systems and open non-equilibrium systems. Throughout thousands of years of Western history, these tensions have flared between the idea of civilized, stable individuals contributing productively to society and the joyous collective celebrations of savages and peasants. One is seen as social order typically married to a totalitarian individual identity and the other is seen as, at best, savage and chaotic and, at worst, as destructive to that social order.

Additionally, Ehrenreich (2006) goes on to suggest that our current state of affairs exemplified in the ME/WE image has resulted in isolated individuals who carry collective responsibility on solitary shoulders. She suggests that we are missing something in our modern life and that something might be connected to our historic tendencies to participate in joyous collective celebration. Ehrenreich (2006) acknowledges that the Robespierres and Lenins among us would say that "you would have to be a fool, or a drug-addled hippie, to imagine that a restoration of festivity and ecstatic ritual would get us out of our current crisis" (p. 257). But she goes on to counter that history points to activities of collective joy as important and alternative ways of relating to one another.

In the end, she does not profess celebration and other activities of collective joy to be a cure all, but she asks us to seriously consider their importance.

Although Sampson (1985) suggests a new view of the individual that is counter to our current cultural conception as important to our wellbeing and survivability, it can seem like an insurmountable task to change culture from the ant's eye view of one individual even if that individual accepts their state as person-in-process. Ehrenreich (2006) provides an opening, one that we can participate in immediately, that has existed throughout the history of Western civilization. We can sing together, laugh together, dance together, share food with one other for no other reason than enjoyment. Perhaps here we can begin to see that moving from ME to WE does not mean a slate grey homogenized society, but instead a vibrant celebratory feast where everyone can eat.

Section 4.5 Directions

Figure 25

Directions

Figure 25 is a still taken from the multimedia composition Directions that can be

viewed in the supplementary material and is listed in Appendix C. Following is a talk

poem written in response to Directions.

No More Islands

I remember being disturbed by quantum theory
I could not accept Heisenberg's uncertainty principle
Surely
he must have been mistaken
How can we fail to have the capacity to know
both the speed and location of an object

I did not care that the object in question
was an electron
small
ridiculously fast
I pinned my hopes on a problem of measurement
We have just not gotten there yet
Clearly it is a problem of technology

Perhaps it was the old measurement itself
disturbing the ridiculously small object
causing motion to be confused with its own momentum
Big clumsy fingers of scientists measuring angels
on a pin head
Time in the form of ever-growing progress
will sort out this misunderstanding
Then we will shake our heads
at Heisenberg's folly much as we are
embarrassed for Lamarck[1]

I did not like the idea that something would
limit my knowing
I was young
my experiences limited
Now
not old exactly
I can accept the fuzziness
the smeared waveform of something
that once I needed to be a particle

Today I marvel at my then need
that need for finiteness
That had I settled there would have locked me into
a determined path
Forever following the yellow brick road
because everyone knows that poppies are dangerous

The straight and narrow is paved with dead dinosaurs
Offering no forks in the road
Dangers lurk in divergence and difference
What is at stake is the status quo

Manning mocking the calcified
crumbling and frightened voice
of nation state politics says

---

[1] Common in biology textbooks Lamarck, a French biologist, is attributed with developing the erroneous theory of inheritance of acquired characteristics. The example most used in textbooks is that Lamarck believed that giraffes developed long necks due to individual shorter necked giraffes stretching to reach leaves would lengthen and strengthen their necks, passing that acquired trait to their offspring.   Although this is a simplification of Lamarck's theories and the modern study of epigenetics has revived inheritance of acquired characteristics at the gene (not phenotype) level, his is still held up as an example of embarrassing and erroneous views of evolution.

"Be secure! Conform! …. Confirm your conformation by organizing your excess: we may be able to protect you! But hide your differences at all costs!"[2]

Conforming is drawing a contour
a line around the fuzzy waveform of becoming in motion and uncertainty
and calling that contour
I and me
Conforming is allowing the
snip snip snip
Trimming
of free-flowing fluxing forming-in-the-moment
to be cut off by a laser focus of attention to objects

Thus
we call ourselves subjects
Numbly falling into a lethal relationship with all the Others
Tightly drawing the line of the moral community around us
Stratifying and organizing
until we are alone in our exceptionalism

As Manning says

"Being and the human-as-supreme cannot be disengaged, and with the human at the center, the frame is unequivocally in place for the eclipsing of the complexity of other ecologies, of other surfaces of experience."[3]

Reduce, Represent, Reproduce
An endless cycle of objects and subjects
Tightly wound around nothing but market forces
Efficacy, efficiency, economy
Tell me what it means
But
Keep it simple stupid

Keep your hands to your self
Keep your eyes on your own paper
Focus on the future laid out in front of you
Don't look back
Don't stop
Don't deviate or you will be punished

The direction is up an away
Or as Latour says

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[2] Manning (2007, p. 140)
[3] Manning (2013, p. 46)

"Out of this world"[4]
In an effort to make us aliens on our own Earth
Then the clinical glare of science
combined with the metallic tanging taste of technology
will allow us to know

Hermetically sealed in knowing
wrapped up and warped into
a safely secure cocoon that both cushions the impact of other bodies
and gives us the requisite distance to disengage from feeling
Untethering us from Others
This space narrows our world to predictability
Because only closed systems can be predicted
A closed system is the very epitome of exclusion
But at least those of us inside
can participate in the performative illusion of safety
I mean really
Think about the children

Reduce, Represent, Reproduce
An endless cycle of objects and subjects
Tightly wound around nothing but market forces
Efficacy, efficiency, economy
Tell me what it means
But
Keep it simple stupid
Or maybe
Keep it sterile stupid

Thus shaped we have no choice
But to continue forward
Literally Determined
Committed to a strategy that will lead to
Collapse

No exit strategy
Someone's mother should have warned us
Not to put all of our eggs in one basket
But we keep cutting and cutting and cutting
Convinced that there is an essence in those objects that will save us
Not understanding that every amputation performed
Leaves us stranded
On the island of ideas from the Enlightenment

---

[4] Latour (2018, p.)

An island is an apt image
Islands are the closest to closed systems as we can find in
The natural world
Scientists love islands
Without the enormity of flow
From adjacent ecosystems
Of material and information
The shape of bodies can first be weighted and measured
Then tied tightly to finite process of the island

How comforting it must be to consider only a few relations
How satisfying it must be to answer a question
Don't get me wrong
I don't think it is easy
But it is clear
and it is a knowing
That many would call a fact
Again
nothing wrong with facts
But we must acknowledge that facts are found on islands
And unfortunately for our comfort and satisfaction
Unfortunately for our feelings of safety and security
There are no islands anymore

Reduce, Represent, Reproduce
An endless cycle of objects and subjects
Tightly wound around nothing but market forces
Efficacy, efficiency, economy
Tell me what it means
But
Keep it simple stupid
Or maybe
Keep it sterile stupid
Or maybe
Keep it in context

The excitement of making things work
In clockwork precision of mechanical purchase
Churning out marvelous tools beyond the imagination
Of cave dwellers
Riding the high of human progress
Now literally turning to ash in the forests and mountains
Of California and Australia

But it worked so well when we were islands

Less connected, separated by spaces lined with asbestos
Ironically our own marvelous ingenuity
Eradicated physical distance
Compressing space/time by pressing buttons
It all happened so fast
Now we are all contagious

The Criss Cross of infinite relations leaves us reeling
Collectively off balance
The weight of this massive body is uneven
Our hands whirling as we tip toward the abyss
And the only thing we know is despair

There are not even round holes
To force square pegs into anymore

We pulled so hard on a massive force
That the release of that elastic tension has left us dazed
Seeing stars
stumbling around erratically
Scrambling
some of us back pedal
Let's make America Great Again
Let's go back to a safe operating system, the Holocene
We know that worked

Reduce, Represent, Reproduce
An endless cycle of objects and subjects
Tightly wound around nothing but market forces
Efficacy, efficiency, economy
Tell me what it means
But
Keep it simple stupid
Or maybe
Keep it sterile stupid
Or maybe
Keep it in context
Or maybe

Keep everything
Every messy, sloshing feeling and thought
That ruptures out of the past and future in the plane of actual occasions
Something James called radical empiricism

"Everything real must be experienceable somewhere, and every kind of thing experienced must somewhere be real."[5]

It is not so much knowing more
Content upon content upon content
But knowing in a different register
Rolling around in experience
Feeling it squish between your fingers
And responding without presupposition

Mirka Koro urges on:
"uncertainty, rawness, and creative chaos prompted by doing, engaging, collaborating, and reflecting through failure and unfinishedness (without constant and continual purification and 'cleaning' efforts) is conceptually stirring and theoretically life changing,"[6]

Through a surrender of certainty and coherence
Our becoming bodies may escape I and me
Uncertain but vaster in our techniques
Surprised by the spontaneity of our becoming
As new directions burst forth
Radiating in fuzzy waveforms
Infinite and undetermined

In many ways it is connectivity that spun us out of control
The rapid rise of relations
Taking on material form
That our predominant system of thought was ill equipped to deal with
But no particular way has to be
There are glimmers of possible other directions
They are sitting on a trash heap of excluded ideas
Growing despite neglect

Perhaps in a great dumpster dive
In a flurry of action
We can resurrect ourselves in the image of connection

We could include everything
"Every kind of experience"
We could more-than-know
We could think-do
Perhaps by reading the world more closely
With an open attitude of adventure

[5] James (1996, p. 160)

[6] Koro (p. 103)

We could resist the urge to discard so that meaning can be made
In the image of progress and market forces
We could allow disjointed space/times to co-exist
Maybe even co-create

Refusing the logics of individualism and the sanctity of the human
Haraway writes
"We require each other in unexpected collaborations and combinations, in hot compost piles. We become-with each other or not at all"

In a grand movement of Jovian Expansion
We could throw open our arms and
include and include and include
Until difference and diversity threatens to turn us all
Back into stardust
And we cannot help but touch and contaminate one another
Perhaps then the straitjacket of I and me will loosen
And the terms us, our, and we can never be assumed again
As novel bodies rupture into actual occasion

Possibilities for Reader Engagement

I understand that the above sections of ~~findings~~ creations may be a new experience

for some readers. Typical research findings are loaded with information, and although

the above works contain information in various modes, their main action asks more

requires more intimacy from the reader than typical of academic text. I realize that this

type of work puts a great deal of burden on the reader, and some readers could find it

jarring and uncomfortable while others could find it exhilarating and generative.

Although through my dissertation process I have engaged with papers and projects

like the above, I did not typically encounter inquiry in this form prior to my dissertation

project. When I do encounter inquiry that resonates with the above, I enjoy the freedom

of thought, the affect it has on my own forming thoughts and feelings. I find it quite

generative, but I acknowledge that other readers will have differing experiences. With

that in mind, following are some suggestions and examples for engaging with this type of

work. I did not include them prior to the sections above as some readers would not want them, and I did not want to bind any reader's initial experience.

Some questions that preoccupy me as I move through these bodies and this project that some readers may find helpful:

a. How do these bodies relate to the environmental issues of Anthropocene?

b. How does art-workings and text manifest as more-than-human?

c. How might these bodies help imagine education differently?

d. How do these bodies politic or organize bodies in relation?

e. How do these bodies engage in an ecology of practices that shape my own body's becoming?

Readers may want to return and re-experience some or all of the creations in the sections above, or even create new bodies through various composition techniques in connection with the above works, seeing what new ideas pour forth. Alternatively, some readers may want to add more reading, reaching out to other authors to explore ideas that emerge from the experience above.

Conclusion

In this collection, I purposefully foreground the aesthetic (axiology) over the epistemological. With that said, one is not possible without the other. I choose this focus in alignment with my guiding theories, but also because this is where the work needs to be done (Law, 2004; Koro-Ljungberg, 2012; St. Pierre, 2013). Law (2004) in his book *After Method*, argues that our current methods "have many strengths" (p. 151) performing well for determination and predictability, but he argues that inquiry that includes aesthetics (beauties) needs more attention. He writes that "their [beauties] blanket

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absence from the processes of crafting realities is not a good. It works to exclude ontic/epistemic aesthetic imaginaries. It represses their fluidities, fractionalities, and indefinitenesses." (Law, 2004, p. 150).

His entire book acts as a call for "broader and more modest" (Law, 2004, p. 155) methods that attend to the transient, ephemeral, and all kinds of knowing that dance on the outside of conscious thought. Law (2004) suggests that we "move beyond academic texts to texts in other modalities" (p. 153) as our current research methods and their enactment, while important, "are much too restrictive" (p. 154). He believes that we need novel immaterialities, but there is much work to be done as we need a "whole range of materially innovative methods" (Law, 2004, p. 154). I contribute to this range with this project.

Although Law (2004) does not frame his argument within the Anthropocene, I would add that the issues of the Anthropocene add further weight to his argument that traditional methods are not complete enough. He, like St. Pierre (2016) and others (Lather, 2016; Jackson & Mazzei, 2012; Koro-Ljungberg, 2016; Tesar, 2020; Ulmer, 2017), believe that ontological methodology provides a way forward as current methods "both presuppose and enact a specific set of metaphysical assumptions" (Law, 2004, p. 151). In Law's (2004) view those assumptions include the passivity of the Other, a division of labor built on disciplines, truth without beauty and politics, and a "bias against process in favor of product" (p. 152). These resonate with the concerns Anthropocene theorist have around human exceptionalism, scientism, and neutral, apolitical facts as solutions as well as aligns with my use of process philosophy.

Law (2004) never dictates how to do this rather he opens up the conversation on methods with a variety of suggestions and a series of questions. He writes,

Perhaps we will need to rethink our ideas about clarity and rigor and find ways of knowing the indistinct and the slippery without trying to grasp and hold them tight. Here knowing would become possible through techniques of deliberate imprecision. (Law, 2004, p. 3)

The works in this chapter were produced through "techniques of deliberate imprecision", drawing on arts-based techniques (Leavy, 2015; Manning, 2016) in an effort to allow that which we often exclude in traditional research to shine through. Although the resultant bodies are clearly aesthetic much knowing in a traditional sense shaped these works.

I do not present those facts formally here as that is not in the scope of this project at present and they are not novel additions to the research body. There currently exist several research findings as well as other non-fiction works that include facts and information about Ajo and the surrounding desert as well as issues and events that touch Ajo (Arizona Department of Environmental Quality, 2017; Burnett, 2020; Coggin, 1999; Devereaux, 2019; Dimmitt, et al., 2015; Fallows & Fallows, 2018; Felbab-Brown, 2017; Gilluly, 1946; Haddal, 2010; Hoy, 1995; Krouse, 1997; Lundstrom, 2019; Martinez et al, 2014; Magrane & Cokinos, 2016; Miller, 2017; Nabhan, 1982; O'Brien, 2008; Warren, 2015; U.S. Census Bureau, 2018). I engaged with those texts and others in my process, but this project is not about Ajo: it was performed with and through Ajo and its surroundings. I am not trying to answer questions about Ajo as it is not the topic or 'object' of the inquiry it is more a partner in inquiry, and much of the methodology of Remixing Data Experiences arises from inventing ways to engage Ajo as an active

partner. Although I know a great deal of facts concerning Ajo and the surrounding desert that most certainly affected the project, one project can only do so much, and the most urgent work to be done was that of understanding how to engage in inquiry under a different ontology that fundamentally undergirds the more-than-human.

As such, I did not expect the creative pieces of Chapter 4 to inform in a representative manner about a topic. I did expect them to be an experiential spacetime for the reader. The art-based techniques employed were chosen to be evocative rather than expository (Leavy, 2015).

With that said, much 'fact work' went into the creation of the collection in the sections above during data generation, I read newspaper articles from the local newspaper's archives beginning in 1916. I read local history, articles about boarder relations, a book done by the Ajo memory project, I listened to people's stories, and engaged in many activities related to traditional research. Although the methodology I employed and the collection encountered in the above sections does not resemble a reporting of fact, those bodies do have facts included in their becoming as any body would under Whitehead (1967).

My written responses show how the ideas generated by Ajo and I were explored in relation to further ideas and texts. Although the forms of fiction, poetry, memoir, and formal essay do not support the norms of academic citation, I participated in 'research' around each of these ideas. There were a few cited quotations, but they do not quite show the kind of work undergone to produce the writing responses. For example, to write *The Ballad of a Desert Spring*, I read one dissertation, eight newspaper articles, three government reports, and a several academic papers. Additionally, I researched the

styles of writing text that I employed. Where appropriate, I used Abrams & Harpham's (1999) reference book, *A Glossary Literary Terms*, to find the general definitions and guidelines for each style and then read several examples of works written in that style. Chapter Five contains a more robust discussion of the texts, styles, and guidelines in the methodological conversations section.

I should mention that this project could proceed almost indefinitely. There is no clear stopping point. For example, I could have generated more random data sets and created more multimedia bodies with more and more ideas generated between Ajo and I. In addition, or alternatively, I could have written more than one response to each idea generated. In a way it is hopeful that possible creative products in this project are endless as that aligns with Whitehead's (1967) notion around the adventure of ideas and Manning's (2020) conception of the catalytic nature of the anarchive. In practice, I must admit it is challenging.

I personally had to learn much to engage in this process. Not only was I learning about Ajo the desert and its issues and events (like in a typical research project), but I had to learn and put into practice several unfamiliar techniques. I do not typically write poetry or produce multimedia works. Every step was tentative and included learning about a multitude of additional steps just to complete one work. In the end, I decided upon the doneness of the project by both time/effort and satisfaction with the produced work. I spent four months generating data, five months piloting methodology, six months creating multimedia pieces, and five months creating the written responses, and of course some of these overlapped and interpenetrated over time. This does not include the work done in Chapter Two and early parts of Chapter Three in preparation for performing the

project. When this is complete including dissertation formatting and revisions, I will have spent two, intense years on this project when my program typically assumes one year spent in dissertation.

With regards to satisfaction, I am satisfied that this work exists in a complete enough form to accomplish my own personal goals of inquiry as well as my program's goals for a dissertation. My program asks that a dissertation be original and substantial, contributing scholarly work to my field. For my own goals as a scholar, this work has helped to create direction in my future work and will be discussed in Chapter 5. I qualify the dissertation as 'complete enough' rather than complete as process philosophy does not encourage thinking in end points, but in practice, at least at this moment, an end point is part of the form of a dissertation. With that in mind, I include two unfinished creations to honor my commitment to process as well as to allow readers to materially experience unfinishedness.

The Unfinished

Figure 26

Extraction

Figure 26 is a layered photograph composition from a random data set and is a

completed art-working. I began taking brainstorming notes around ideas for the written

response but stopped there. Most of the above art-workings were completed before I

wrote the responses. On some occasions, ideas for writing would come to me as I was

editing and revising different versions of the art-workings. In the case of this

composition in Figure 26, I completed the art-working long before writing ideas emerged.

Notes for writing are shown below in Figure 27.

Figure 27

Extraction Response Notes
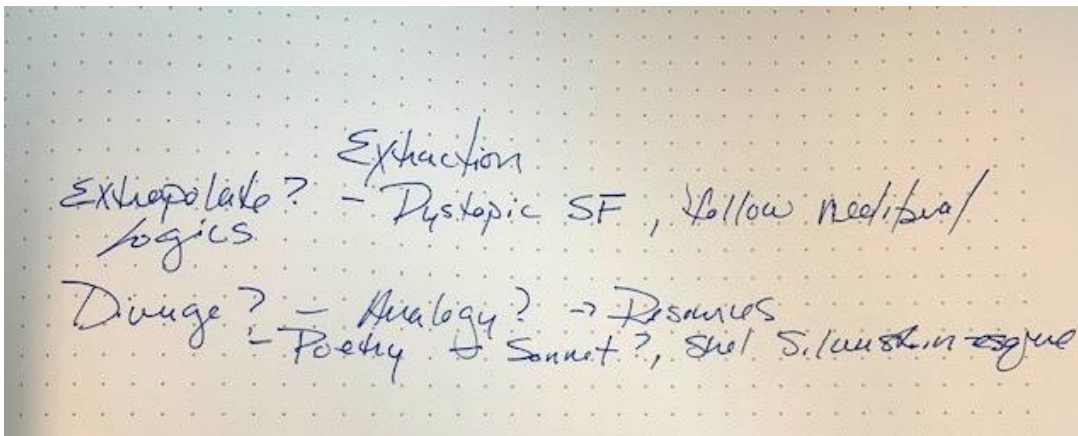
Note. This handwritten note says: Extraction. Extrapolate?- Dystopic SF [speculative

fiction], follow neoliberal logics. Diverge?-Analogy?- Resources- Poetry– Sonnet? Shel

Silversteinesque

Figure 28

A Tour of Ajo

Figure 28 is a still taken from the multimedia composition, *A Tour of Ajo*, that can be viewed in the supplementary material and is listed in Appendix C. This composition is unfinished and unedited. I had only gotten as far as importing one video (without cutting it down to the duration on the set piece) from the data set and adding a few sound recordings. This unfinished work was just the very start of multimedia composing. In the other art-workings, I would start by putting all of the various data bodies into the video editing platform then I would play with different arrangements and editing techniques often making compositions that were not quite satisfactory then revising. The unfinished work here has only been through the very first step of loading a few files into the software.

For this piece, I did have one idea for a written response, but had not explored other possible ideas. As I thought about the data set and the video that I uploaded, I

considered writing a series of realistic vignettes, like a photo diary of scenes that I

experienced in Ajo related to the data set.

Moving On

Here in Chapter Four, I invite the reader to share in the inquiry process through

experience. In Chapter Five, I will engage in the speculative phase of the project. What

this means is that in Chapter Five I will explore what this process of inquiry might mean

to the areas of concern expressed in my tentative, guiding research questions. Although I

can see that it was a possibility to do this in Chapter Four after each section, I decided to

separate the action of presenting the creations and speculating on their possible

relationships. I did this for two reasons. First, I wanted to provide readers a chance to

experience the works of Chapter 4 prior to my speculation, and second, I am following

the constraints of the dissertation form. Chapter Five typically explains results in light of

the research questions and extant literature. The form of Chapter Five will unfold as

~~explaining~~ speculating with ~~results~~ creations through methodological and educational

conversations, discussing salient implications through ways and means, elaborating on

limitations and absences, and discussing future work.

CHAPTER 5

SPECULATIVE PROPOSITIONS AND IMAGINATIVE GENERALIZATIONS

Throughout this dissertation I have argued that moving past the Anthropocene will require new methodologies founded on ontologies not currently held in the mainstream of Western research and education. In Chapter Three, I introduce Remixing Data Experiences (RDE) based on the process ontology of Whitehead (1926, 1929, 1938, 1967, 1978, 2004) guided by Manning (2007, 2013, 2016, 2018, 2020), Muraca (2011, 2016), Shaviro (2009, 2014), and Amerika (2011). Remixing Data Experiences contributes to a call for work on innovative methodologies and contributes to a range of methodologies that are currently being explored through theory and post qualitative inquiry (Koro-Ljungberg, 2012; Lather, 2016; Law, 2004; MacLure, 2013; St. Pierre; 2016).

Chapter Four invites readers to engage with art-workings, arts-based compositions that emerged through RDE with data bodies generated during experiences in Ajo and the surrounding Sonoran Desert. Additionally, Chapter Four presents feed forward work past the art-working anarchive exploring the variance possible when engaging anarchic elements through writing. As a collection, the creations in Chapter Four are meant to catalyze a generative response in readers rather than providing them with information– to evoke rather than posit. The creations in Chapter Four are bound loosely through experiences of emplaced data generation and the inquirer as well as experiences with texts that attune to the driving research questions.

The principles of Beauty as Intensity Proper as well as the idea of agencement, the multiplicity of forces that generate the forms that modifies the forces that generates

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further forms and so on, guided the art-workings and the methodology of RDE. Agencement remains central to process philosophy, in very simplified terms it is the process. Beauty as Intensity Proper allows understanding of how novel bodies arise in that the most beautiful forms include the most difference, not in conflict, but in patterns of contrast held together in unity according to Whitehead (1967). In RDE, I held fast to the principle of differences joined in unity while working with the randomly generated data sets, in other words, it was the *way* I worked with them. I engaged with the data sets through mapping and multimedia composition until an idea formed with an idea being a concept with a feeling (Manning, 2007). Of course, other readers relate differently with the ideas in experience with the art-workings, and the ideas that form are speculative at this point and as such indicate avenues of further inquiry.

Intensely more-than human forces shaped the art-workings as explained by the processes and forms in Chapter Three. Process philosophy, generated data bodies, and the emplaced bodies in-formed the art-workings. This process can be imagined fractally through the inherited past as well. In other words, my choice of process philosophy, my focused concerns within the Anthropocene and around education, and my interest in the environment must also be forces shaping this present process. Additionally, the inherited past must include many things that are not directly connected in concreased spacetime but are still relevant to my own body's ability at any point in spacetime– for example, ample time spent alone in the woods as a child, training in biology, and other life experiences that I may not even consciously recall. With that said, my point here is that the shape of the art-workings responds and relates to my own inherited past, this project's inherited past (seen partly in literature) as well as the inherited past of other emplaced

bodies that I engaged through inquiry with each having multiple inherited pasts spiraling off them. The anticipated future of a dissertation that explores inquiry with the more-than-human also influenced the shape of the art-workings. These many forces manifest cannot be tracked, not only because they were never captured in the far past, but also because there always remains that which cannot be known about other bodies and parts of our own body's experiences that never came to the light of conscious thought but affect us none-the-less (Manning, 2013; Whitehead, 1967). What we do have, what we can speculate with are the art-workings and textual creations which have now become stubborn fact (actual bodies).

Whitehead (1926) does not villainize conscious thinking, but he does ask that we always acknowledge the speculative nature of that thought as I have done above. He asks also that we take seriously all which occurs not as a simple linear causation but rather as emergent. So, when I say that this project is intensely more-than-human, a simple (non-process) explanation would be that it came to be as such because *I* want it to be as *I* already believe that the world is more-than-human. This is the argument of bias in scientific research that Whitehead (1926, 1929, 1938, 1967, 1978, 2004) has spent a great deal of energy untangling ontologically. That *I* think that more-than-humans shape the world, that *I* make certain decisions in this project is not a simple fact of my own agency-volition-intention (Manning, 2013). Braidotti (2006) expresses this by writing that "life in me is not mine in the appropriative sense espoused by liberal individualism but is rather a time-sharing device" (p. 23). Thoughts and feelings that arise with my body in experience matter to more than myself as more than myself generated those thoughts and feelings. That those thoughts and feelings exist is an occurrence of note and matter for further

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speculation. Bias is simply not a topic in process philosophy and certainly is not a concept that works within radical empiricism. As Whitehead (2004) wrote "[i]t is, perhaps, as well to state explicitly that if the reader indulges in the facile vice of bifurcation not a word of what I have here written will be intelligible" (p. vii).

In Chapter Three, I explain the tension that normative uses of research questions present to process design through Manning's (2007) politics of touch. The aim to definitively answer research questions while also acting through immediate and experiential response-ability with a commitment to means without ends remains incongruent. The research questions themselves may present an enabling constraint, but research questions, taken as traditionally assumed remain product oriented. In other words, asking research questions in a process design acts more to shape the process of research than it does to provide an end point for the research (answers to the research questions). I prefer to think of the entire dissertation project as a process of answering that cannot provide finite absolute answers or truths. Another way to think of this is that each decision I made (where to point my camera, what events to attend, who to talk to, what music to incorporate in compositions, and so on) during the research process was shaped (not caused) by the research questions as all other bodies encountered in the process also provided a shaping force, including my own. The work that research questions do through process inquiry differs from the work they do in traditional research.

I argue, that at this point, the original research questions have done their work, and their specificity remains too rigid for continued response-ability honoring process. In process inquiry, cuts that erupt in the fabric of infinite possibilities guided by, in this

case, research questions, possess no primacy (Manning, 2016). Although they clearly act as something doing and remain available in the inherited past of the research creations, setting them firmly into the anticipated future (as something to be answered) creates an artificially rigid, deadening constraint, rather than an enabling constraint, acting to reign in further mutations, variations, and possibilities (Manning, 2016).

To continue to stay immersed in process, at this point, means going beyond interpretation of 'data' in light of research questions. I do not mean to eradicate interpretation, but process inquiry confounds interpretation much like MacLure (2013) suggests that research based on new materialism should. Manning (2016) suggests that we must go "beyond analysis that would seek to measure only according to the given" (p. 218). One might wonder here why I am concerned with analysis– wasn't that Chapter Three? Why would I bring it up in Chapter Five? In a variety of dissertation guides, students are asked to interpret the results in light of applicable literature, theoretical foundations, and limitations. I argue that it is a kind of past-facing analysis– an excavation or a nostalgia for the research questions and prior literature in particular (Manning, 2016). Manning (2016) explains this by writing:

> In a gesture similar to that of nostalgic harking back that breeds a lackluster relationship of affirmation of life in the making, this excavation of the past relies on the belief that the truth will forever stay the same. The work of the excavator is to build resistant tunnels into the past so that this unwavering truth can easily be reached. Life is attended to in reverse, with the past as the barometer for the present. (p. 218)

The past here being earlier in the process of the project when the research questions were formed in conjunction with the bodies of Chapter Two, but much has occurred between now and then, not least of which, is the appearance of new bodies in Chapter Four. In place of excavation, Manning (2016) suggests fabulation which I see as an aspect in the practice of speculation. Topics of the research questions will certainly surface, but the organization and approach to this chapter will revolve around the creations of Chapter Four, following the multiple directions of the ideas generated there without restraint from the research questions or the prior literature of Chapter Two. The propositions seeded throughout this chapter can be taken as imaginative generalizations (Gaskill & Nocek, 2014), and are not necessarily absolutely 'true' nor are they completed without relation to the concerns and events of this project which include but are not eclipsed by the research question and prior literature. As Whitehead (1967) states, "it is more important that a proposition be interesting than true" (p. 244).

The rest of this chapter will unfold first as a series of conversations held between scholarly literature and the creations of Chapter Four. These conversations will be organized in two separate sections, methodological and educational. Each section will engage different creations from Chapter Four as well as different possible propositional directions seeded by the ideas in Chapter Four. Different creations will be discussed both conceptually and through following their affective force. Following the conversations, I will discuss salient implications, limitations, and elaborate on future research.

Methodological Conversations

I begin with methodological conversations as methodological invention and improvisation make up a large part of this project. I explain early in the project that the Anthropocene calls for new modes of inquiry as we cannot expect the tools and logics that brought us the crises of the Anthropocene to also alleviate them. In Chapter Two, I argue that the Anthropocene is not just a socio-ecological phenomenon, but also, and more significantly a "philosophical event" (Johnson & Morehouse, 2014, p. 447).

In Chapter Two, I detail the arguments of many Anthropocene theorist who see some of the philosophical problems of the Anthropocene to be anthropocentricity, reliance on facts as apolitical and ignoring questions of power, and technocratic scientism. To entertain potentially new visions of working through the Anthropocene (in both inquiry and education), I adopt process philosophy as my ontological base for enacting theory as methodology.

The methodology that manifests in this project could be described as post-qualitative (Lather, 2013; St. Pierre, 2013), post-human (Snaza & Weaver, 2014), non-representational (Vannini, 2015), and speculative (Shaviro, 2014), but the methodology in this project has no interest in conforming to particular categories, but rather it arises from an ontology that allows it to work post-qualitatively, more-than-humanely, non-representationally, and speculatively. As such, I provide elaborate detailing of the guiding principles and the possibilities that permitted the invention and improvisation of methodology throughout every chapter in this dissertation. Chapter Three specifically details RDE and remains a contribution to methodological fields described above.

In the following section, I extend my methodological contributions by putting Celebrate and Directions into methodological conversations. Celebrate helps us understand surprise and how we might work as more-than-human inquirers while Directions details and discusses how different forms of writing may help to move ideas forward while continuing to retain anarchic elements. It may be helpful for the reader to return to the art-workings detailed for another viewing; all videos may be found in the supplementary material and are listed in Appendix C.

Surprise! Idiosyncratic Suicides and Fighting Addiction

The idea of Celebrate entirely surprised me. Not just surprised, shocked. This art-working's voice was perhaps furthest from what I could have anticipated when I left Ajo. Mirka Koro (2012),

> challenges researchers to ask such questions as….'Are my research processes creative or innovative in ways that they push me off to other directions and toward the unthought?' 'How often do I get surprised when conducting research studies?' 'How often does my research surprise others?' 'How do my methodological approaches create analytical surprises?' (p. 808)

The feeling of surprise in this project, I take to be recognition that I was able to quiet my radically individual human voice enough to allow the voices of the other bodies that I co-composed with to be heard in our joint composition. The process and techniques of that quieting involved the methodology described in Chapter Three with random generation of composing partners as well as the choice to delay language by reaching for visual and auditory art-based techniques first. Following, I elaborate on the importance of surprise.

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At a conference some years ago, I began my presentation by saying, "Hi my name is Nicole, and I am a recovering structuralist". The paper that I was presenting was my very first work employing the philosophy of Erin Manning. As a hook, the introduction was effective, but I believe that framing my prior philosophical leanings which also included post-positivism as an addiction conveyed exactly how I felt as I went through the process of rehabilitation/transformation through other's texts and writing. Like any addiction, it never really goes away. In that paper I wrote:

> Even now, after some successful rehabilitation, my addiction lurks in anticipation. It whispers to me that bodies must be dismembered as only ripped asunder do they reveal their truths. Those whispers threaten to turn to shouts on my darker days, but often, with a clearer head, I begin to peer into the in-between of the false gods to see process. (Bowers, 2018, p. 1 unpublished work)

I still hear those whispers and know that I could easily fall back into patterns of addition. But how does addiction help understand methodology?

> Braidotti (2006) explains the process of addiction:

> Addiction is not an opening up, but a narrowing-down of the field of possible becomings. It increases the rigidity, not the fluidity of the subject: it locks the subject up in a black hole of inner fragmentation without encounters with others. The black hole is the point beyond which the line-of-flight of becoming implodes and disintegrates. (p. 10)

Here Braidotti (2006) talks about literal drug addiction to demonstrate the idea of sustainable thresholds of becoming. Addiction acts not precisely as a continuum but as an intensely negative accumulation of one thing over all others (a threshold) that limits

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our ability to be affected and thus, eventually, our ability to affect. Or put another way, it limits our ability to act as self-organizing open systems, making us more like the closed systems of totalitarian identities that I mention in the essay, *From ME to WE with Collective Joy,* that accompanies the art-working Celebrate in section four of Chapter Four.

This is one consideration that came out of my writing in response to the art-working, Celebrate. I was, again, surprised that my efforts to perform as more-than-human brought about considerations of the human individual. Following the idea of Celebrate brought me to texts wrestling with our normative conception of the human individual as seen in the essay. I worried that perhaps writing, the use of language, was dragging me back to humans and their identities, but I think that if I view section 4.4 as a whole, I would argue that it indicates that the move toward the-more-than-human requires a simultaneous move through the human individual. Tesar (2020) elaborates:

Perhaps one must still ponder how to respond to the demise of Cartesian thinking and subject-object binaries and how to work with and beyond the philosophy of the subject, and with entanglements of human and nonhuman, or more than human world, and a thread of ecological, economic, and social crises and threats that go along with it…. As such, that remains the challenge for philosophy as a method, to reconcile the genealogies of a philosophical thought and its humanist traditions, in order to synthesize with the other recently emerging schools of thoughts and movements. It is impossible to disregard the histories of the human 'I' and the past human-based philosophies and methodologies, as they are integral

to our understanding, and further development of projects of new ontologies and

new empiricism. (p. 9)

In Chapter Three, I convey my attempts to work as more-than-human, and I believe that

the surprise that I described earlier at the emergence of Celebrate indicates that I did

achieve more-than-human work. The essay accompanying Celebrate deals with human

identity and practices, not as a failure, but as a reminder that the concept of the individual

human still troubles practice and needs more work even when we take on alternative

ontologies as suggested by Tesar (2020). I believe that the frame of addiction may be

helpful in our practices.

So, if we frame our accepted tendencies, like our humanist tendencies in

traditional qualitative methodology (Bright, 2018; Lather, 2016; MacLure, 2013; St.

Pierre, 2016), as addictions, can we understand the collective actions of our fields to

shape predominantly with academic language, to prioritize conscious thought with its

predictability and certainty as addictions to the precision of language, rational thought,

and certainty? And might it be those addictions that generate the radically individual

human, the totalitarian I, leading to destructive tendencies of the Anthropocene?

What I believe thinking in addictions as thresholds of sustainability as Braidotti

(2006) suggests is that we can then lose the binaries in *practice*. We don't have to

demonize rational thought, certainty, or language per se– we must be wary of finding

only those things as a hallmark of collective addiction that produces a kind of human that

becomes incapable of becoming more-than-human, or as Braidotti (2006) diagnoses,

becomes incapable of further becoming full stop. When I felt my prior theoretical

commitments as addictions, I became wary of normative practices that might cut me off

from the affective force of others. It was non-language, arts-based techniques that I leaned on for methodological rehabilitation in this project.

These art-based techniques allowed me to commit idiosyncratic suicides. Braidotti (2006) borrows the term, idiosyncratic suicide, from Adam Phillips (1999) as she reframes life and death beyond the binary images and so-called dialectical tensions of Eros and Thanatos. Braidotti (2006) advocates neither nihilism nor "the tragic solemnity of traditional morality" by insisting that "you have to die to the self in order to enter qualitatively finer processes of becoming" (p. 26). She founds these claims on her theories of bios/zoe which I will not fully reiterate here (Braidotti, 2006). Idiosyncratic suicide can be understood as self-styling death:

> Self-styling one's death means cultivating an approach, a 'style' of conceptual creativity which sustains counter-habits, or alternative memories that do not repeat and confirm the dominant modes of representation. The aesthetic model drawn from painting or from musical refrain is crucial to understand this mixture of conceptual rigor and creativity. The main issue at stake here is to break the cycles of inert repetitions. (Braidotti, 2006, p. 22).

Braidotti (2006) expresses a link between aesthetic modes and idiosyncratic suicides to become imperceptible in one's 'own' work. Although Braidotti (2006) terms these approaches as an ethics, and much of her writing is concerned with the paradox of the subject, I believe that the modes of idiosyncratic suicides or becoming-imperceptible resonates with axiological approaches to inquiry (and life in general) as well as Whitehead's (1967) insistence that Truth is secondary to Beauty. Putting Braidotti (2006) in conversation with the theories foundational to the project, I argue that Intensity

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Proper (Beauty) can be achieved through idiosyncratic suicide as it moves into the realm that includes more-than-conscious thought. Further, in this project, art-based techniques became a way to commit idiosyncratic suicide– techniques of "deliberate imprecision" (Law, 2004, p. 3) of thought and of the self. Additionally, this process births new bodies with new interactive capabilities (anarchival)– affective capacities, and that the entire process is creativity. All the art-workings employed Beauty and techniques of deliberate imprecision to commit idiosyncratic suicides to escape addiction thus showing a way to escape the foundations of the Anthropocene.

The bottleneck to creativity for me was an addiction to language, particularly academic language. Visual and media art techniques and music literally provided the way out (in practice) of addiction for this project. I had to let go of certainty, representation, and informative knowing as first and only tendencies. I had to let go of traditional notions of the individual self in control of inquiring and composing. Each time I would reach first for language, I was drawn back into patterns of addiction. This is not necessarily true for every researcher; I do not think language need be a defense of radical individuality and rationality that cuts us off from further becomings. In fact, I explore this through texts in different styles and will come to that later. Additionally, Rautio (2013) defends writing as a negotiation with the more-than-human as interspecies articulation, and I take her point but was unable to start there under the influence of my prior addictions. I believe that the place of language and text in process inquiry remains an open question that requires more experimentation and exploration, more adventure. This question is well expressed by Sweet et al. (2019):

> Bartender (speaking slowly): Note this: I think you measure your participation with word count only. There is so much more than words. You were there. Your corporeal presence was there. And, YOU decided to create this interaction, this dialogue, using text, language only. Are you stuck on words?
>
> Emppu: Is that so bad? Words are my element; they're how I produce academic stuff. (p. 395)

Is it so bad?

Although I don't see choices as bad or good precisely, just ending up in different places, creating different bodies to both good and bad effects, I think the answer to that question comes through asking different questions, those asked earlier:

> 'Are my research processes creative or innovative in ways that they push me off to other directions and toward the unthought?' 'How often do I get surprised when conducting research studies?' 'How often does my research surprise others?' 'How do my methodological approaches create analytical surprises?' (Koro-Ljungberg, 2012, p. 808)

If we are never surprised, then for those of us in search of excessive, processual, messy inquiry, then that is 'bad'. Language, particularly academic language, married tactfully to representation, inhibits surprise for me. Perhaps instead of asking what is bad or good we could ask, "Does text alone allow me to commit idiosyncratic suicides?", with the understanding that the feeling of surprise indicates that it does. Surprise in inquiry indicates that we have retained the capacity to be affected, and in more-than-human inquiry, I believe that this remains an important hallmark.

Directions for Writing

In Directions, the beginning, middle (top frame), and end make me aware that from any given spacetime present the future radiates in multiple directions, and when you take one direction, even if it is laid out for you like in the middle bottom frames, each step, each moment of present occurrence still allows for any number of divergent directions. For me, really seeing the multiplicity of directions radiating from the concrete actual occasion takes time, imagination, and sympathetic curiosity which can be eclipsed by the fast pace and end product valuation of following pre-made paths leading in only one direction defined by specific ends. But the exploration and path taking are not mutually exclusive as even on the pre-made paths there exists opportunity to take new directions.

Moving on from the ideas of the art-workings meant taking a direction. Sitting with one of the ideas mirrored the action of the first, top, and last part of Directions. So many directions radiated out from just one idea. To move in one direction, or even to move between a few adjacent directions means to subtract from the generative idea to make a decisive cut in the whole. I could spend a lifetime marveling at infinite directions, but to move the idea, means taking some direction and leaving others.

The ideas often tempted me to write academically– to take the direction that would lead to something I already knew about or in a direction that was familiar where I could make an academic argument. The ideas tempted me to close and narrow them down, to give prior meaning using 'data' from both my stay in Ajo and other sources to make my point. In fact, for Precarity, I began a rather academic textual response and finally discarded it as it did not take me in the direction I wanted to create. I abandoned

that direction as I glimpsed where it might end up– justifying my point, amplifying my voice. Manning (2020) writes that "when an event develops personal stakes, those personal stakes will always operate within the logic of the dominant order" (p. 101). We must meet the dominant logic at times; in fact, this entire chapter meets other logics that already exist in scholarly literature, dominant or otherwise, but when we only narrow down to our points within dominant logic (often productively manifest as critique), we become less able to answer Whitehead's (1967) call for adventure of ideas. He contends that "bolder adventure is needed– the adventure of ideas, and the adventure of practice conforming itself to ideas" (Whitehead, 1967, p. 259). I agree that particularly in the Anthropocene, bolder adventure is needed. I experimented with that adventure in Chapter Four. I attempted to keep from foreclosing thought too soon and in doing so I hoped that the texts would retain an active element for potential audiences and my own further thinking.

I believe that the art-workings hold active elements, but they were generated differently. The data bodies and I actively co-composed those art-workings. This stronger more-than-human partnering allowed for bolder ideas to be born creating bodies of rich experience. But what other practices could be employed to move with bolder ideas? Is there an edge to the anarchive or the more-than-human? Theoretically, I could have stopped at the art-workings, but I remained curious about how the ideas might be moved through written text. Academic-language-only works present a challenge to remaining "imprecise" enough to keep inquiry space open and anarchival, but what can other techniques of composing with language do?

I reached for form and style of writing to experiment with the balance of imprecision needed for retaining some life in work while, at the same time, can forge directions with the ideas (the beginnings of abstraction). I worked with different genres for each response to experiment with the multiple directions genres might enable through the process of writing shaped by each genre. An additional reason that I eschewed traditional academic writing remains that I am already familiar with that directionality, as are many who will read this dissertation. I found that each genre gave form but did not necessarily dictate the details of the outcome (means without specific ends), but I believe that each genre acted differently.

Merriam-Webster (n.d) defines genre as "a category of artistic, musical, or literary composition characterized by a particular style, form, or content". I would add that genres contain historic conventions, explored and experimented with over time making them a heterogenous constellation of practices that coalesce around a few key likenesses (a body). I invited these conventions to provide means but not necessarily specific ends in direction taking from the ideas to honor process over product. In the following section, I will discuss each textual response, the process of taking direction from the art-working to written text through each genre, and how each experience with genre afforded something different.

Writing with Decline. Moving to writing from the art-working Decline happened quickly. The images in Decline were mostly buildings and desert, but many of my human participants in Ajo were past retirement age– in their 'declining' years. That particular element of decline was not seen actively in Decline. The first few paragraphs of *Ruth's Life/Death* were an actual experience during an interview that kept running a loop in my

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thoughts as I experienced Decline after its making. Writing that description, sent me in the direction of short fiction.

For *Ruth's Life/Death* I began with a scene that, to me, resonated with typical notions of Decline. The scene seemed to invite narration. When I began, I did not yet know what or how I was thinking with Decline; I was writing as a technique for coming to know in a broad sense. The genre invited into the composition process became short fiction. Abrams & Harpham (2012) describe fiction:

> I. A. Richards, … held that fiction is a form of emotive language composed of pseudostatements; and that whereas a statement in 'referential language' is 'justified by its truth, that is, its correspondence . . . with the fact to which it points,' a pseudostatement 'is justified entirely by its effect in releasing or organizing our attitudes' (I. A. Richards, 1926 as cited in Abrams & Harpham, 2012, p. 128).

The "pseudostatements" allow for the imprecision necessary for retention of anarchival elements as they allow for more evocative use of words and scenes. Additionally, working through fiction allowed me to play with actual events, thoughts, and feelings in new ways– organized differently which alters the logic/politics of real occurrences. I see this play and ability to reorganize as helpful for moving ideas without strangling them. By that I mean, corresponding to referential fact did not restrict my writing or movement of the idea as it does in non-fiction. Fiction unmoored my exploration from a single event, allowing other events and their manifest thoughts and feelings to come together in a new event (that does not correspond referentially to any *one* actual event) that is the written text of *Ruth's Life/Death*. The other events and feelings came from my own

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memories of different times and events that were called to the surface as I began to write the initial scene. I took from those other events that never overlapped physically with my spacetime in Ajo and wove them together into a novel event story driven by Decline.

Decline worked somewhat as a theme. Abrams & Harpham (2012) write that "[t]he narrator's own assertions about the world, about human life, or about the human situation; the central, or controlling, generalizations of the latter sort are said to be the theme or thesis of a work." (p. 129). In the case of the *Ruth's Life/Death*, I (the narrator) did not begin with an assertion; I wrote to find an assertion. The assertation that emerged about Decline during writing was summarized in the story:

> Now sitting among Ruth's peers, she realized that she misjudged Ruth,
> characterizing her only by her losses as she had not really understood all of her
> gains. At the time, those gains had been too foreign, too unrecognizable, but,
> here, at this gathering in remembrance of Ruth's life, she could feel the
> connections and care even though they were still just out of reach of her own
> experiences.

I arrived at this point through following the idea that a shift in meaning can create patterns of contrasts in place of conflict (Shaviro, 2014). The other character, Rose, emerged from an amalgamation of other retirement aged participants in Ajo and my own past, who never brought to my mind the traditional idea of decline. Anne also acts as contrast as she is at a different point on the trajectory of life traditionally ending in 'decline'. Often fiction works to illustrate pre-decided assertations, and both Truth and Beauty can be found in literature (Abrams & Harpham, 2012; Whitehead, 1967), but a process approach to fiction, particularly for inquiry, can work more loosely and can

create assertions in the activity. This process included participating in an event-in-the-making (writing the story) driven by a catalytic idea (Decline) and principles (ways) of finding patterns of contrast concluding with a new body that hopefully carries the excess of the event (the written text).

Writing with Precarity. The Ballad was the last textual response written although Precarity was the first art-working completed. As mentioned previously, I started with a more academic text. I stopped, wrote all the other texts in Chapter Four, and then I decided that I should remain with non-academic styles from my writing experience as I could not find the balance between anarchiving and direction taking with ideas with academic text. I believe that my initial desire to write academically stemmed from my strong personally political response to what I saw as injustice in Precarity. I wanted to 'say' something about the situation, make my own point, precisely and with academic language and 'rigor'. I wanted to write an academically critical response, but I felt that it was too precise and not open to new logics of "deliberate imprecision" (Law, 2004, p. 3). I stayed with my initial feelings, but let go of the initial tendency to move through thought more rigidly.

The balladic genre greatly facilitated moving with the idea of Precarity.   By the time I prepared to write with Precarity, I had already employed short, realist fiction, ethnographic memoir, an essay modeled from magazine articles, and a talk poem. I had yet to work with highly formalized writing or poetry in a more traditional sense. I decided on the form of a ballad for two reasons. First, I enjoy reading and listening to ballads. Second, I did not want to let go of my feelings of frustration and anger in response to injustice.

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As a long-time fan of Bob Dylan, I took his storytelling and ballads as inspirations. Many of Dylan's songs strongly critic social events and cultural norms. I crafted a process of writing a ballad by employing some of the typical conventions of traditional ballads and taking songs like *Hurricane*, *The Lonesome Death of Hattie Carroll*, and *Ballad of Hollis Brown* as examples of process. From literary balladic conventions, I chose to write in quatrains with a rhyme scheme common to each stanza although different from the traditional schemes of rhyming lines in ballads (Abrams & Harpham, 2012). Traditionally, only lines two and four rhyme, and occasionally the first and third line also rhyme. I created a slightly different rhythm by only rhyming the first and third line as well as employing a middle rhyme in the first line of each stanza with the last word of the last line of the previous stanza (Abrams & Harpham, 2012). From Dylan's process, I chose a 'character' related to social-ecological injustice (often a real person with real events for Dylan) and told a story. As I am working with more-than-human theories, I chose to center the story on Quitobaquito Springs and the history that it both witnesses and shapes. The constraints of the genre that I chose were topic, content, and form. With these constraints I began writing without knowing quite what would form.

The enabling constraints, as techniques, provided by the balladic form and the process allowed me to organize my own thoughts alongside the history of the region. The ballad differed from the short fiction in that it gave form to many thoughts, feelings, and facts, but did not express anything entirely new to me. I already knew what and how I thought/felt about the conflict and history of the border region around the spring whereas I had not worked out how or how I thought/felt about Decline. I do not claim that ballads

are good for one thing and short fiction good for another; I am merely describing how they worked here for the project and myself.

The stricter form of the ballad amplified my thoughts and feelings and provided some clarity to my previous nebulous thoughts and feelings. The constraint of four lines per stanza as well as the rhyming and the rhythm patterns forced me to employ words and syntax differently. Each stanza meant to move the story along, so it had to describe some action, but I found it did so with a great deal of feeling due to the constraints on word choice. It conveys both 'what happened' but tinted in a light of my concerns (and others) and actually expressed "the narrator's own assertions" (Abrams & Harpham, 2012, p. 129) more strongly than did the devices employed in composing the short story.

My point here about the enabling constraints is that they force organization and patterns of thoughts and feelings around an idea. They act as a technique, anchoring a process without necessarily defining a specific end. I took a non-human body in precarity, and followed the history surrounding that body. Although it is clear my own thoughts and feelings seep into the narrative, I felt as though the ballad wrote itself. Most of the events had already occurred, I just wrote them, playing with words under constraints of conventions which interestingly allowed for my own thoughts and feelings to become clearer (although not done initially with that intention). Also, the ballad's form allowed me to compress loads of information and history together with concerns and theories.

The ballad does not bring me entirely new and unexpected thoughts or questions as did the short story, but it did express the question of human-centered superiority differently than I have previously expressed it. It organized 'data' from other sources as

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well my experiences in and around Ajo intensifying the questioning. Additionally, the ballad relates the question through its organization to Precarity, showing human-centered superiority's connection to Precarity. It broadens and relates discussion of precarity to the more-than-human. In this way, the ballad allowed, not precisely for new directions of thought previously unacknowledged, but performed a knotting together of semi-anticipated directions.

Writing with Oasis. The feelings evoked in me by the art-working Oasis (seen on page 231) so mirrored one of my actual experiences in Ajo that I did not write the text in response but rather connected an already written text to the art-working. Throughout my time in Ajo and its surroundings, I wrote ethnographic field notes most days. Ethnographic field notes differ in style and kind, but typically do not differ in purpose (Bernard, 2011; LeCompte & Preissle, 1993). Ethnographers traditionally consider field notes to be objective data (Bernard, 2011). The kind of field notes employed largely depends on where in the activity the researcher falls on the continuum from full participate to observer. Researchers use jottings when they immerse themselves in an experience and want to make quick, small notes about events to include later in descriptive notes (Bernard, 2011; LeCompte & Preissle, 1993). Descriptive field notes are richly detailed notes about an event, often written directly after the event from jottings (Bernard, 2011; LeCompte & Preissle, 1993). If a researcher acts mostly as an observer, they might use transcription notes, catching all the of the details and dialogue as best and accurately as they can (LeCompte & Preissle, 1993).

During my time in Ajo, I employed techniques of ethnographic field notes divorced from their theory of objectivity. I also employed the technique of including

philosophical field notes in descriptive and transcriptive notes (Bridges-Rhodes, 2018). Although Bridges-Rhodes (2018) describes philosophical field notes as an in-the-moment thinking/doing/writing connected to theories in which she is immersed and I performed these as well, in the text accompanying Oasis, I wonder through theory at the end of the notes that were written after the actual experience.

I believe that the text that accompanies Oasis might be best described as a kind of ethnographic memoir. I detail an experience from my focal point including my own feelings and thoughts that arose and my own physical conditions during the event. Although it is descriptive, I do not stand outside of the event and treat it as an object. The addition of philosophy connects the event to my concerns and guiding theories. A memoir differs from autobiography in that it focuses on the events the author involves themselves in rather than the development of the author (Abrams & Harpham, 2012). This connects more to the type of field notes such as journals and diaries that ethnographers write to separate their subjective experiences from their objective experiences and are not typically considered relevant as data (Bernard, 2011; LeCompte & Preissle, 1993).

Like the ballad, this ethnographic memoir acts to intensify and add mass to a direction of thinking and feeling with the idea that I anticipated from my experiences in Ajo. Unlike the ballad, this text does not compress and weave together various other bodies (other written works, histories, and actors) from across time and space. It delves deeply into one actual occasion of experience and only connects with other texts at the end as a part of philosophical notes. Both Oasis and the text circle around one another, amplifying the feeling of relief and safety that I write about in *Water Drop*. The text also

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serves to connect past experience (directly experienced by the inquirer) with the experience of the present art-working. I imagine that although the ballad and the memoir deal with related topics that they may provide the reader with different experiences although this question is never fully explored within the scope of this project.

Writing with Celebrate. The text accompanying Celebrate took the longest to write. The actual writing did not occupy so much time rather the exploration of the idea did. As mentioned before, I found Celebrate surprising. I had no previous conscious thought or feeling that something like Celebrate might be born of concerns with the Anthropocene and education. On the surface, the Anthropocene does not inspire dancing with joy. At first, it seemed out of place with my concerns, but I put trusted in the process. I invented and followed a process of composing with more-than-human bodies, and Celebrate emerged within that process; so, I looked for connections and directions for the ideas in connection with my concerns.

Elements of Celebrate like dancing, joy, and fun could not be found directly in literature associated with the Anthropocene and was rarely connected to education (more on that later). I was left wondering: What might Celebrate have to do with the concerns that drive this project? I searched and read, searched and read again in scholarly literature but found little resonance with Celebrate. Finally, I encountered *Dancing in the Streets: A History of Collective Joy* by Barbara Ehrenreich (2006). This book helped shape possible connections with Celebrate to my concerns with the Anthropocene and education.

Like the response to Precarity, I was tempted toward writing academically. In this case, I was not wanting to make a point but instead bring together literature to show and

make connections between the Anthropocene, education, and the idea of Celebrate. Similar to my choice of ballad, I did not want to let go of my initial need/desire around connecting ideas, but I did want to employ a non-academic style. I chose to write an essay in the style of a magazine article. Again, this style is one I am quite familiar with as I frequently read lay articles particularly in *The Atlantic* and *The Economist*. Essays differ from journal articles in lacking "pretension to be a systematic and complete exposition, and in being addressed to a general rather than a specialized audience" (Abrams & Harpham, 2012, p. 114). A writer accomplishes this using a nontechnical style, brevity, and openness to various devices like humor or anecdotes not usually welcome in technical exposition (Abrams & Harpham, 2012).

Magazine articles can be considered essays, and there are a variety of styles offering less constraints than something more formalized like a ballad. I looked for conventions, devices, and guides to writing the essay/article by reading several magazine articles and noting enabling constraints. For example, many articles in *The Atlantic* used questions to transition and to allude to their main point. I used this device by asking: But is this the only way to view collectivism, the commons, and the welfare of one another and the planet? Additionally, I employed the limited focus and brevity suggested by Abrams & Harpham (2012).

This text served to help me connect Celebrate with other's ideas, but it does so in a particularly narrow fashion. In some ways, I see it as academic writing lite. The focus and clarity combined with the less dense nontechnical language kept me from adding or exploring different directions simultaneously. For example, none of the text I explored or that found their way into the essay deals with more-than-human aspects of Celebrate.

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The art-working clearly shows non-humans, only shows non-humans, but I do not

explore feelings of collective joy specifically with the non-human in the essay. I only

hint at them. As Abrams & Harpham (2012) argues, essays are not complete or

systematic. On the other hand, the essay did help clarify ideas and connections around

ideas of individuality, problems with traditional individuality and the environment, and

alternate ideas of individuality connected to collective joy. So, the essay functioned here

to narrow and hone one modest direction from Celebrate.

This brings me to wonder if writing multiple essays from an art-working might be

a fruitful endeavor. I appreciate the clarity and focus as well as the welcoming of a

general audience, but one essay develops a tight-rope direction whereas I see the other

styles that I employed forming, at very least, a walking path direction of

thinking/feeling/doing.

Writing with Directions. I wrote the text accompanying Directions next to last,

and this text mirrored the process of co-composing the art-workings more than the other

written texts. The other written texts employed more conscious thought, more intentional

crafting. They required me to lean further toward thinking than feeling or intuition during

their composition. I don't mean to say thinking as in logic or rationality only, but in

purposeful choice of words, editing, and following conventions. Employing the style of

talk poem released me from that.

Although we might define any improvised spoken poetry as talk poetry, the talk

poetry of David Antin guides the written text accompanying Directions. David Antin

(1976) writes about "his mixed feelings about being considered a poet at all" (p. 278):

if robert lowell is a poet   i don't want to be a poet

if robert frost was a poet	i don't want to be a poet
if socrates was a poet	ill consider it (p. 2)

Antin's written poems come from improvisational talks that often include critique and philosophy. His talks are transcribed and slightly reworked. The written texts ignore traditional punctuation and grammar to create less performance of conscious choice. The poems themselves wander, connecting what might seem like random thoughts, feelings, and events to an idea.

Mark Amerika (2011) also writes talk poetry inspired by Antin. To devise a process of writing, I used Amerika's (2011) texts as examples of Antin's ideas. In Directions, my first connected thought was to knowledge and knowing and my frustration with the current narrowness of knowing and knowledge under mainstream research. I wrote with those thoughts and feelings. I improvised words and images as they came to me rather than editing out expressions or trying to explain. I wrote with a disregard for punctuation, grammar, or explanation. It felt like a tumbling sort of writing that just comes out and out onto the page. In the other written texts, I would stop, choose words, edit, and ruminate but not in the talk poem. I was talking to myself, and I just wrote it down. Later, I went back to add 'conventions' to conform to academic requirements of the dissertation formatting. The quotes were often somewhat remembered, so bending to dissertation format, I made them precise and cited them after I finished writing. Amerika (2011) often uses quotes in his work including the author's name in the poem but not citing page numbers or years.

I found it interesting that a style with so little constraint could produce something cohesive or directional. *No More Islands* exhibits an emergent cohesiveness that seems to

point out that the author can be a site of relation, clarity, and direction taking without formal devices or emphasis on control with rational thought and choice. In addition, *No More Islands* was a joy to write. I connected to ideas, other authors, previous experiences, and images without planning or conformation. The talk poem functioned to take Directions immanently into directions that surprised me although they are clearly related to my concerns throughout the dissertation. Of all the genres of writing with which I experimented in this project, I believe that talk poetry may be most resonate with process philosophy as a technique of aesthetic experience through language.

Talk poetry may work well with process philosophy through enhancing a politics of touch. By removing traditional writing constraints, thoughts, feelings, words, ideas, and intuitions may have been freed to reach toward one another without presupposition and become concreased in the written text without so much reliance on conscious thought– somewhat like abstracting without total conscious control. I am not claiming that there were no constraints. I believe the constraints were immanent from within the inherited past of my own body, Direction's body, and the body of works of other authors as well as the anticipated future of a talk poem. This differs somewhat from known constraints invited through choosing to work with more structured genres. For example, in choosing to write a ballad, I invited (reached out to) the inherited past of that body (genre) into the process of concreasance in an actual occasion of experience. I also invited the anticipated future of a particular genre to the process– in choosing to work with a ballad, a ballad pushed both from the past and pulled from the future.

The talk poem, of course, worked similarly, but the inherited past of the talk poem specifically incites nonconformity and improvisation– both amplifying a politics of

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touch. The other genres' conventions supplied more formal, structural constraints that formed barriers, although more porous barriers than academic writing to touch. Worded differently, they supplied more direction through previously known forms to the writing.

Writing Across Directions. In the above sections, I describe the process of composing each written text from Chapter Four. I detail the genre and include how that genre functioned in taking ideas in different directions. I also discussed some differences between the written works. In the following section, I will discuss some of their similarities.

I believe that all the written texts allowed for the ideas to be directed through means without specific ends. I mentioned that in academic writing, specific ends, arguments, points to be made, are likely prior to the beginning of writing and that academic writing facilitates the specificity and precision needed to reach specific ends. I consider all of the written works means without specific ends (pre-planned arguments or points) facilitated by techniques of deliberate imprecision found in more literary styles of writing. Certainly, points and arguments arose in the writing, but they were not pre-designed. Additionally, for some, I was not even aware of the possible point to be made prior to the writing. Inviting the inherited past and anticipated future through genre choice provided techniques that acted as enabling constraints to pattern and organize thought immanently– a sort of immanent politics of writing.

Clearly all the written works have me in common. In fact, all of the written works use my own experiences (some in Ajo, others not) to begin the writing. I do not consider any of the works as autoethnographical or autobiographic as they are not 'about' me, but they move ideas through my own thoughts and feelings within actual experiences; all

directions are taken through a becoming 'me'– with me as a more-than-human inquiring. The writing then remains both constrained and enabled by my own body as well as others but those other bodies differ from event to event. I provide the 'site' of inquiry, and my experiences, readings, other writings– all of my inherited past– become available to inquiry. Again, the inquiry is not tuned to me directly, but I am common within all the processes of composition.

Ethnography considers the researcher the main instrument of research (Bernard, 2011). I agree, but I do not take the same objective stance typical in traditional ethnography. I never tried to remove myself from the 'data' or the writing as in process philosophy that is not preferrable nor entirely possible. In process inquiry, the inquirer remains bodily common to all aspects of research while other bodies differ. We could say that the site is not the place the inquirer goes– as we know that is just a collection of diverse participating bodies– but rather the researcher provides the site of inquiry. Also, of note, the researcher in process exists in flux rather than stasis. My inherited past changes as I procced through inquiry adding to the past, opening multiple futures for both myself and the inquiry.

By inviting multiple bodies to inquiry, like the different genres, more directions of thinking, feeling, doing, and becoming actualize. The written responses demonstrate this differencing, but they also demonstrate their cohesion to the concerns of the project. Both can occur through means (techniques) without specific ends and the commonality of the inquirer to all processes. The unique inquirer does not have to be seen as a source of bias, rather the inquirer can act as a type of gravity around which the processes of inquiry coalesce in both difference and unity.

Methodological Conversations Concluded

The above methodological conversations focus on techniques of deliberate imprecision. I make clear that audio and visual technique made space for me to act as a more-than-human during RDE. I used visual media and audio to better partner with my non-human co-composers, and I argue that these techniques allowed me to commit idiosyncratic suicides necessary to working as a more-than-human inquirer. I contend that the feeling of surprise indicates a successful partnering with others in inquiry. Additionally, I discuss addictions to academic language and its possible relationship to perpetuating human centered superiority in research. I do not foreclose the possibilities of further use of academic language by characterizing addiction through thresholds and suggesting that the *addiction* to academic language may be responsible rather than academic language per se. The methodological conversation centered on Celebrate suggests that more-than-human work might benefit from non-language, art-based techniques, requires more inquiry around academic language and the prevalence of the traditional human *I,* and argues that surprise may validate more-than-human work.

The methodological conversation centered on Directions details the different directions that genre invitation may make available to inquiry. I frame the genres as bodies with inherited pasts as well as anticipated futures that can be invited to the process of writing to know in a broad sense. I also frame process writing as a means without specific ends arguing that genres can provide some means, and each may move toward different ends generated within the process of writing as inquiry. I give examples of each process and genre in hopes of encouraging others to take on these different directions

within inquiry and to provide a foundation from which to begin exploring their own work through genre invitation. Although I only employed five different genres, I believe that further work using different genres may expand inquiry particularly in more-than-human directions if they contribute constraints that are suitably imprecise. I suggest that literary genres may be more apt to include the deliberate imprecision that facilitate more-than-human work and leads to surprise.

Further, I argue that inquiry itself participates in an emergent logic based on the commonality of the inquirer and the focused concerns within the inquiry project generated by various techniques. In other words, in place of binding a study from the outside, the inquirer provides a type of loose gravity around which ideas may form and collide. Additionally, the inquirer as a site of inquiry remains in flux as the inquiry proceeds which distinguishes process inquiry from mainstreams notions of research, particularly the notion of bias. I suggest that what is normally called bias and all the techniques to reduce bias reduce the open system of inquiry to a closed system of inquiry (bound from the outset and outside) that tends to close down divergence in thought and creativity. I believe that process inquiry can produce cohesion without mainstream notions, and I illustrate a loose, imprecise cohesion in the art-workings and written texts of Chapter Four. In the following section, I continue to move with the ideas of Chapter Fours and put those bodies into educational conversations.

Educational Conversations

This dissertation process concerns the Anthropocene and education. As such, in Chapter Two, I take environmental and sustainability education (ESE) as an orienting direction for research design. Environmental and sustainability education organically

invites partnering with non-humans and naturally has concerns about the crises of the Anthropocene. In other words, the field itself arises around intensely more-than-human concerns with a desire to alleviate crises seen in the Anthropocene. Of course, the field remains heterogenous, particularly in the positioning of the non-human onto-epistemologically. Although there exists much ESE research and education that treats the non-human as a passive object of study or passive content for learning about the environment (Dieser & Bogner, 2016; Lee et al., 2020; Monroe, et al., 2019), a small but growing group of ESE researcher employ alternative epistemological positioning of non-humans and humans in inquiry and educational practice (McKenzie, 2005).

In Chapter Two, I discuss the problem of ESE in schools. Recall that I elaborate on its history as well as its failure to be embraced in schooling. Although ESE does occur in schools, it usually is only prevalent when educators are working with researchers or as reduced to the content area of ecology. The concerns and history of the field resonate with my own concerns around education in the Anthropocene, but the ideas in Chapter Four are not specifically about ESE. In fact, I would say that the environmental and sustainability part of ESE provides a gravity of concerns, but education remains an open question. When education becomes adjectivally qualified by content inquiry activity often takes education as a given. Under process philosophy in process inquiry, I cannot take normative ideas around what education is and does as given.

With that said, in the next section, I broaden my discussion by putting the ideas from Chapter Four in conversation with education more generally. I do this not to move purposefully away from ESE, but to enhance ESE by including other bodies of work in the conversation around the ideas generated in Chapter Four. This enhancement comes in

the form of more-than-human directions. Although the concerns for the Anthropocene can be clearly located within ESE, the Anthropocene concerns all education generally. I found bodies in public and critical pedagogy particularly generative. Those generative conversations unfold in the following section.

Education and Process Philosophy

It may not surprise readers that I little agree to the reduction of education to schooling or the argument that teaching causes or can control learning. Does education occur in schooling? Yes. Does teaching influence learning? Yes. But what I disagree with is that education and learning are secondary, inert activities unless intentionally activated through a series of 'best practices' in a classroom. Educational research, in its major keys, manifests as school research even in ESE. Although research done in/on schools remains well conceived, its intense and massive practice revolving around one place, a stratified neoliberal societal institution, is, like Law (2004) says of traditional research practices, "much too restrictive" (p. 154).

Increasingly, I believe that Law's (2004) book *After Method* could be rewritten into *After Schooling*. We could transform many of the same arguments he uses as he defends his call for "broader and more modest" (p. 151) methods of inquiry into a call for "broader and more modest" methods of education. I question the dividing line between methods of inquiry and methods of education, and this is one of the many reasons that this dissertation project takes a highly methodological turn. Methods of inquiry and methods of education (pedagogy) interpenetrate one another and intensify a certain version of epistemology which is made by those methods as those methods are made by that version. In this case, a standard version of both inquiry and education rests on an

epistemology embedded in ontologies of substance. An alternative ontology would drive alternative methodologies and alternative pedagogies.

Throughout this project, I have written little about epistemology on its own, but how we know what we know and what we think can be known remains inseparable from ontology and axiology. I have made it clear that ontological process and immanence lead to a necessary degree of uncertainty in principle not only in practice. The flux and flow of insistent process will only allow us to know partially from our own focal point within actual occasions of experience, manifest as stubborn facts in the past that cannot wholly be summed up to know/predict or even fully understand the present and the future. These past facts exist in relation to the present and the future, but their relating acts non-linearly or more ecologically. I have also made clear that knowing, in the traditional sense of conscious cognitive thought, is not enough should we wish to inquire within process. I have additionally argued that inquiry within process may help to provide new tools to work through the Anthropocene without reifying its own logic. Law (2004) asks researchers to move from new ontologies as current methods "both presuppose and enact a specific set of metaphysical assumptions" (p. 151). In Law's (2004) view those assumptions include the passivity of the Other, a division of labor built on disciplines, truth without beauty and politics, and a "bias against process in favor of product" (p. 152). As I have mentioned previously, these resonate with the concerns Anthropocene theorist have around human exceptionalism, scientism, and neutral apolitical facts as solutions as well as aligns with my use of process philosophy.

The passive Other, divisions by disciplines, truth that lacks beauty and politics, as well as favoring product to process, describes traditional schooling and structures of

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education as well as it does traditional research methods. In the following sections, I will address these normative modes of education and put those modes into conversation with the ideas from Chapter Four and their potential pedogeological movement.

Education Without Schooling

Education now occurs everywhere, *but* inside the school… school deform has expelled pedagogy from schools, evidently into the streets (including parades), onto television, into movies, on the Internet, through music (and not only hip-hop), poetry and the visual arts (including graffiti), in museums, on bodies, and at the zoo. It is as if the world has somehow become a 'safe haven' where, paroled from the 'prison' of school-as-institution, we can (finally) teach. (Pinar 2010, p. xv)

The fields of critical and public pedagogy and related theorists have been exceptionally critical of classroom learning for several years in much the way that Pinar (2010) articulates above (Brady, 2006; Burdick & Sandlin, 2013; Casey et al., 2013; Ellsworth, 2005; Giroux, 2020; Gee, 2004; Illich, 1971; Schubert, 2010). Many scholars have turned to learning outside of school to study education (Christen, 2010; Cordova, 2017; Hayes & Gee, 2010; Hickey, 2010; Powell, 2019; Sandlin & Milam, 2008; Schuermans et al., 2012; Williams, 2010). This includes learning in informal spaces like museums, zoos, and after school programs that tout an explicit mission tied to education (Barton & Tan, 2010; Bell et al., 2009; Eisner & Dobbs, 1988; Lindemann-Matthies & Kamer, 2006; Tran, 2007) as well as everyday spaces and practices (Ellsworth, 2005) and cultural practices including punk rock music (Cordova, 2017) and cultural jamming (Sandlin & Milam, 2008) that are not traditionally considered educative. Theorists have

written about the deleterious as well as emancipatory effects (Biesta, 2012; Ehrenreich, 2010; Giroux, 2020; Rich, 2011) of public pedagogy in its many forms. Two main points emerge as important within the scope of public pedagogy research related to this dissertation. First, inherent in this line of research is that educative forces abound and learning occurs constantly (Burdick & Sandlin, 2013; Ellsworth, 2005). Second, modern schooling provides a narrow learning experience too frequently serving as a mode of "social, political, and cultural reproduction" with goals "defined through the promise of economic growth, job training, and… utility" (Giroux, 2020, p. 5). Further, these neoliberal educational goals that tightly bind schooling act institutionally to further exacerbate crises of the Anthropocene, and we should not expect to find abundant pedagogical techniques in traditional schooling to alleviate those crises. I have made this argument throughout this dissertation project particularly with regards to methodology, and I believe that it applies equally to education.

Many theorists see "the prison" version of school as being founded on neoliberal ideologies put into practice through legislation like No Child Left Behind supported by standardized curricula and testing that forms an educational-industrial complex aimed at education as workforce development in the name of national economic progress (Bencze, 2010; Carter, 2005; Giroux, 2020; Sterling, 2017; Webb et al., 2009; Weinstein, 2017). Some feel that over the past 40 years these neoliberal aims have made education in schooling narrower and narrower by excising diverse pedagogies and ways of knowing in favor of practices and approaches that ultimately help students to perform well on standardized tests (Giroux, 2020; Sterling, 2017; Webb et al., 2009). Sterling (2017) provides a list of assumptions shaping narrow neoliberal schooling to include: "Education

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is key to economic success; Cognitive knowledge is prime; Values, ethics, emotions, and intuition have little or no place in education; [and] The best default pedagogy is 'delivery' by experts" (p 34). Giroux (2020) calls this logic the culture of positivism. In Chapter Two, I detail neoliberal forces in education generally, science education specifically, and discuss the trouble that ESE has faced in becoming a legitimate subject due to this culture.

Theorists like Giroux (2020) and Sterling (2017) point to a problem of epistemology wrapped up in neoliberal aims that commodifies students through schooling. The culture of positivism, which I agree is an excellent characterization, explicitly names the epistemology of positivism while Sterling (2017) points to hyper-rational cognitivism which might be considered, if not exactly positivism, then very close. Earlier, I pointed out the deep overlap of methodology with education in my appeal to Law's (2004) arguments for new ontological approaches, and my own approach in this dissertation has been ontological first as deep problems of epistemology cannot be extricated from problematic ontology. The classroom culture of positivism cannot be separated from substance ontologies that support knowledge as absolute and objective. Sterling's (2017) list of assumptions above demonstrate the attunement of schooling with mainstream Anthropocene narratives seen in Chapter Two. I believe new ontological assumptions applied to learning and education may be a productive line of inquiry and action within public pedagogy, ESE, and education generally.

I agree that positivistic views of knowledge guide classroom practices. Said another way, neoliberal classroom politics necessarily treat knowledge as positive. The politics of the classroom remarkably mirror the politics of the nation state in Manning's

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(2007) *Politics of Touch* that I fully elaborate in Chapter Three with regard to methodology and research design. The politics of the nation state reflected in the classroom demands that we 'do not touch'.

Figure 29

"Classroom Box"
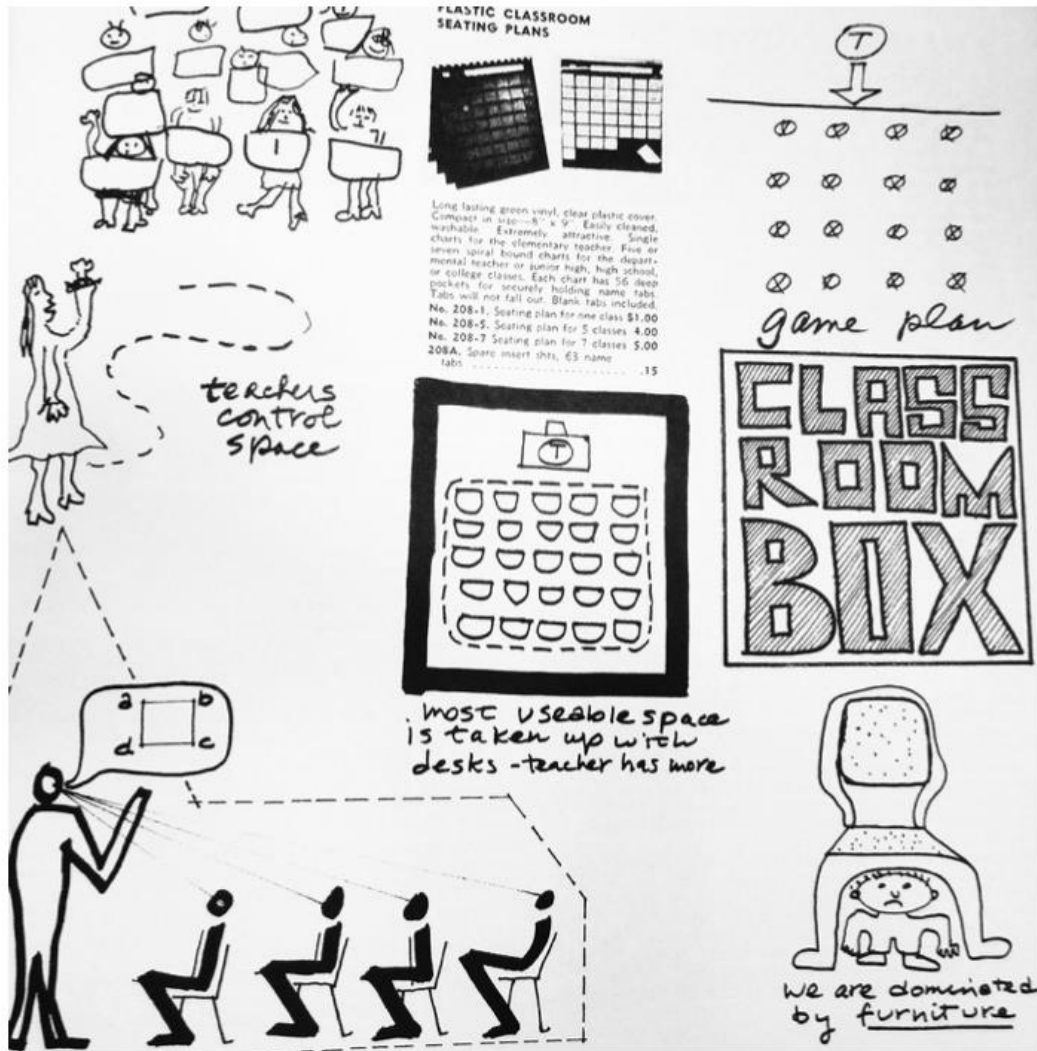
Note. 'Classroom Box' is from Sim Van der Ryn et al. (1971, p. 27). Illustration credit, Farallones Designs.

Barriers to touching abound in the classroom as illustrated in Figure 29. Students remain bodily isolated in separate seats. Classroom rules proclaim the disruptiveness of student talking, touching, and moving. These strategies ensure a passive Other (Van der Ryn, 1971; Foucault, 1979; Raynsford, 2020), not explicitly in Law's (2004) conception of a passive object of study, but analogously, students become passives objects of teaching. Being passive objects of teaching implies that learning exists as reception of some substance. Classroom discussions exists as monologues disguised as dialogue, and even in classrooms claiming to be student-centered, the direction of classroom activity flows toward the teacher who holds the authority of and responsibility for the prefab curriculum and objectives (Birmingham et al., 2017; Lemke, 1990; Yerrick et al., 1998: Yang, 2006). Teachers re-present knowledge to their students as value neutral facts, exhibiting another assumption Law (2004) takes issue with– that of truth without beauty and politics (Yerrick et al., 1998). Standardized tests, written long before the student begins their own learning processes, hold teachers, students, and administrators accountable to standards handed down by experts influenced by corporations (Berliner, 2005; Granger, 2008; Weinstein, 2017). These tests clearly prize product over process particularly considering the accountability measures attached to test achievement. Academic disciplines divide school time and types of legitimate knowledge handed down by experts (Noddings, 2005), where "subject-matter furnishes the end and it determines the method" (Dewey, 1920, p. 13). This is clearly the division of labor by disciplines that Law (2004) warns about.

The worse thing about these barrier techniques is that they *seem* to work. The isolation bodies, the individualization of learning, the fragmentation of (neutral?)

knowledge into positive pill packets arranged by discipline– all these techniques work to raise test scores (Kim & Axelrod, 2005). No matter that these techniques have been refined over years to raise test scores. For many, the end (higher test scores) justifies the means (direct teaching to passive students) and both define and reify one another. But what justifies this end? Critical scholars say employment and ultimately economic growth (Giroux, 2020; Sterling, 2017). With these means and with these ends, teaching must be enacted as transmission and learning as reception, and a positivistic epistemology works best here in collaboration with substance ontologies and an eradication or ignore-ance of axiology (values, aesthetic, and ethics).

Many critical educational theorist, educators, and researchers have worked to detail injustices of these classrooms as well as suggests alternative pedagogies (Barton & Tan, 2009; Birmingham et al., 2017; Case, 2016; Garcia & Guerra, 2004; Gutiérrez & Rogoff, 2003; Jacob et al., 2015; Moll, et al., 1992; Noddings, 2005; Seawright, 2014). Very few educational theorists (critical or otherwise) actively advocate transmission teaching. Unfortunately, this work has yet to permeate schools in meaningful and socially transformative ways (Gutiérrez, 2016; Jickling, 2017). With the lack of porousness in schooling and through forty years of intensification of neoliberalism throughout politics, economics, and education, the crises of the Anthropocene proliferate unrestrained and unrestrainable. Schooling is a type of technicity, an empire of functions, that is complicit in the creation and maintenance of ways of living, thinking, and learning that endanger all life on Earth.

Turning away from schooling as the sole site of education and learning provides an opportunity to find new ways forward past the Anthropocene, and public pedagogy

may provide a site of alternate education inquiry conversations as does ESE. The concept of public pedagogy breaks the restraints of schooling on educational research and learning. With that break from the proximate end being test scores and the ultimate end being economic progress, learning and education can become open to prolific inquiry where something other than schooling can be imagined as educative. As schooling and the endless cycle of perfecting schooling within the neoliberal power/knowledge regime sets and calcifies barriers against touch, public pedagogy and ESE in some of its forms defies these boundaries in a politics of touch (Giroux,2020; Manning, 2007).

Propositions From Process

If we think with Whitehead (1926,1929, 1938, 1967,1978, 2004) about learning, then every experience is educative, and I want to make this clear, educative is not necessarily 'good'. With Whitehead (1926,1929, 1938, 1967,1978, 2004)), our default mode of existence is experiential. We become/form/are shaped as bodies in the events within myriads of ecologies of practice; we undergo constant transformation. This happens moment to moment, a constant becoming, dissolving, becoming ad infinitum. This is the process of process philosophy. As we become, we are affected by the inherited past, the anticipated futures, simultaneous presents, and other bodies in their own processes with no less connections to pasts/presents/futures (Whitehead, 1967, 1978). The only hard universal property of process philosophy is this process (Whitehead, 1978). If we are constantly becoming within these constellations, we are constantly modified, constantly different from one moment to the next no matter how consistent and stable we may seem. What this means is that we are constantly learning. Ellsworth (2005) agrees, writing:

Thinking and feeling ourselves as we make sense is more than merely the

sensation of knowledge in the making. It is a sensing of ourselves in making, and

is that not the root of what we call learning? (p. 1).

Although Ellsworth (2004) arrives at this point through a study of pedogeological action outside of school, not necessarily ontologically, her conception of learning resonates with process philosophy and may be well supported by its ontological assumptions. Process philosophy takes our very existence as a complex interplay of past/present/futures joined in a dance of lures, repulsions, and absences. We exist as a complex matrix of becoming through which the entire universe can flow where forces coalesce, combine, amplify, diminish, and annihilate in such unique unities of difference that individual bodies become forms– just to unravel and do it all again. This becoming, this process could be considered learning in its broadest sense.

Every experience is educative in the sense that every experience climaxes in a constellation of affects that become instantiated in our inherited past even those affects that do not fully form in the concreased bodies of the experience. I am using the terms learn and educative more ontologically than epistemologically here. Educative in this case does not have to mean 'good' or that one learns what someone else dictates they learn. A person could easily learn that they don't fit the mold of the classroom. They could easily learn that their skills and interests hold little value in passing standardized tests. They could easily learn that their past perspectives and life ways of experiencing the world are not respected or welcome in mainstream classroom practices. They could easily learn that they are barred from further becoming in the classroom.

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The Joyless Spectacle of Learning, Let's Celebrate Instead. Critical

educational researchers often cite a lack of student agency in the classroom as a central

problem for just, open, and critical learning (Arnold & Clarke, 2014; Carlone et al., 2015;

Cook-Sather, 2020; Gutiérrez & Barton, 2015; Varelas et al., 2015). On the surface, I

agree. Classroom learning exhibits a remarkable lack of agency on the part of any student

but particularly on the part of historically marginalized students. In many ways, this line

of inquiry and proposition among critical educational scholars resonates with Law's

(2004) concern with the passive Other. Law's work historically has focused on ways of

inquiring into the activity of the Other– typically the nonhuman (see for example Law,

1984; Law, 2002). But what does the nonhuman activity/passivity have to do with student

learning in school or elsewhere? Are students considered not-quite human? Are

historically marginalized students considered even less than that?

I believe that a connection exists between the commonsense notion of passive

objects and passive students linked through Kant's notion of the moral community (MC)

that I detail in Chapter Two. Recall that Kant sees rational humans as ends in themselves

(automatic members of the MC) while all others may be used as means for those rational

humans. In fact, Kant claims that morality rests on the ability to be rational (consciously

logical thought). In many ways, this Kantian notion leads to respect and action for any

MC member's agency and often is cited as the basis for human rights (Muraca, 2011).

Muraca writes (2011) about environmental theorists attempting to expand the MC to

nonhumans, but historically, the MC contracts to exclude others not considered rational

enough to be ends in themselves like women, African Americans, and Indigenous

peoples. Although Kant's MC should not be considered a free-for-all of rational power as

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MC members are encouraged to extend care to non-MC members, only MC members remain capable and ultimately deserving of actual agential freedom.

We might consider students, particularly children (k-12), as a special case. They are not *yet* rational MC member but hold the potential to be. They must remain under the authority of full MC members until they actualize and adequately demonstrate their own rational abilities. I believe developmental theories of education[7] fit well into this Kantian scheme and schooling itself controls (enacts an ecology of specific practices) students 'for their own good' as defined by eventually being accepted as members of the MC so that they may then (and only then) exercise agential freedom. I detail some of these controls above: classroom settings, rules, school-based pedagogies, and the focus of positive knowledge.

Muraca (2011) troubles Kant's MC by pointing out that Kant's definition only works for rational beings by definition of Kantian morality, and no matter how wide we might want to draw the circle of the MC there must be a criterion for inclusion and exclusion. In other words, this line drawing will always be based on some criteria (most likely defined by the dominate episteme) and bodies will always be excluded becoming mere means for those considered ends in themselves; the MC cannot deal with difference or collectivity as the line revolves around likeness and individuality culminating in homogeneity. The use of some bodies will always be justifiable depending on where we draw the line of the MC circle. Muraca (2011) calls this a poor axiology.

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[7] Wong (2007) elaborates on the history of control and rationality in Western education linking educational psychology theories of development to theories that resonate with Kantian logics.

Although it might seem at odds to discuss axiology rather than epistemology considering the earlier discussion of the culture of positivism, I believe that the locus of 'agency' begins in axiology as value forces and aesthetic experience acting prior to epistemology (as defined by knowing through conscious rational thought). Earlier, I wrote that by the time bodies fully actualize, their agency, as conceived as external links between already formed bodies, has been 'decided' within the event. Recall Pinar's image of schools as prisons. Using Manning's (2007, 2016) idea of agencement and her description of the politics of the nation state (transferred to the politics of schooling), we could imagine the ability to affect muted in students subjected to traditional schooling. I also imagine that their ability to be affected mutates also, and that would have repercussions for 'learning'. Affective capability lies in agencement within the event shaping an ecology of practices in the moment. When Dewey (1938) claims that all education is experiential, but not all experience is educative and further some experiences are miseducative, I believe that we can tie that to axiology as a modification of the ontological educative forces that I discussed earlier; to mute[8] the ability to affect may have repercussions on the ability to be affected (which could be considered as learning), and when experiences cause less affective ability in students this is miseducative. With regards to schooling, many researchers and educators are concerned with student

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[8] Muting in this case would not be 'caused' precisely by the controls, but the controls show the evidence of muting. For Whitehead, present occasions form from the inherited past and the anticipated future. Both shape what actually occurs. The present moment remains a manifestation of lures, repulsions, absences, and annihilations as the inherited past and the anticipated future negotiate all bodies in the immediate overlapping spacetime. This negotiation occurs through preindividual valuation to make the bodies and their capabilities within the experience. Although students certainly always have access to difference in their inherited past, ecologies of practice may bar students from being able to participate in the anticipated future. I imagine that the less access someone has to the anticipated future that the less their inherited past actually comes to matter in the present occasion although these differences may have an opportunity to affect in a minor gesture.

participation, engagement, and motivation (Deci & Ryan, 2012; Fredricks et al., 2004; Martin, 2008; Wu et al., 2013). But can students be engaged and participate in a matrix of practices that does not allow them to, in turn, affect it? Schools do not change, re-organize, or respond to student differences and diversity; in the constellation of practices that manifest mainstream schooling, students are to change, reorganize, and respond to teachers, learning materials, classroom layouts, and school policies. Spinoza connects the ability to affect to Joy (Curley, 1994), in this way, schooling or any institution or practice that reduces the affective capabilities of students may be considered Joyless.

Both the practice and research of traditional education that perpetuates toxic neoliberal logics associated with the Anthropocene "both presuppose and enact a specific set of metaphysical assumptions" (Law p. 151). Therefore, an ontology that supports assumptions of active Others, usually called posthuman or more-than-human, may open new possibilities within educative inquiry and practices. The more-than-human orientation through Manning (2007, 2013, 2016, 2020) and Whitehead (1926, 1929, 1938, 1967, 1978, 2004) inspires less categorical thinking about humans and non-humans as well as activates previously unimagined connections[9]; more-than-human philosophies do not necessarily require us to think the human category and the non-human category rather it directs our attention to reconsider what may typically be treated as passive or non-performative. The ideas generated in Chapter Four hold pedological potential as they were generated differently than ideas about schooling and best practices within the narrow confines of school pedagogy. Additionally, concerns for techniques of the

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[9] Both Manning's and Whitehead's theories supply alternate assumptions around Law's (2004) other concerns to include a lack of division by discipline, truth connected to beauty and politics, and making process primary to product in addition to an active Other.

Anthropocene and their alternatives, including the generation of the passive or active Other, intensely shaped the resultant ideas. The art-working, Celebrate, and its textual companion provides an initial springboard for discussing pedagogies related to the passive/active Other.

No Joy? Celebrate provides me with a joyous feeling. It makes me want to move and dance. I associated Celebrate with revel or rejoice rather than honoring as in an accomplish or a person's life work. I saw Celebrate as joining in joy. Although a few educators and researchers lament the lack of joy in school and often locate joylessness in testing culture (Wolk, 2008; Nichols & Berliner, 2008) and Dewey (1938) questioned the benefit of acquiring prescribed amounts of subject-matter at the cost of one's "soul"[10] (p. 49), educational research and practice seems little concerned with joy. Why should we be concerned with joy any more than any other positive feeling when thinking about education? I would not be pursuing ideas of joy if I had not encountered the idea of Celebrate during RDE as joy rarely surfaces in discourse around education or the Anthropocene.

Most articles around joy, learning, and education seem to take joy as an end product to be achieved or evidence that an individual is internally motivated (Csikszentmihayli, 1990; Silberman, 1970; Wolk, 2008), but might joy instead be a technique of education and learning not only "the emotion of great delight or happiness caused by something good or satisfying" (Wolk, 2008, p.10)? What would joyous knowing be like? What ecology of practices would activate joy in education? Regarding

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[10] Dewey's discussion of soul is wrapped up with ideas of individual passion and motivation.

the general observation of a lack of joy in schools, how is joy negatively prehended in traditional education?

In exploring the idea of Celebrate, I engaged Barbara Ehrenreich's (2006) *Dancing in the Streets: A History of Collective Joy* that provided me with new ways to think about joy and celebration. I briefly describe Ehrenreich's (2006) text in my written response to Celebrate. Recall that she traces the history of communal celebrations like Indigenous ecstatic rituals and carnival showing that traditional Western authority sought to repress communal celebrations throughout the history of Western civilization. Further, she contends that our modern society of fragmented individuals might be missing practices of collective joy as techniques of much needed undirected connection (Ehrenreich, 2006). Although she never presents these types of festive celebrations as an absolute antidote to the crisis of modernity, her intensely historic scholarship around festivals of collective celebration provides a fertile ground for imaginative speculation around joy, collectivity, celebration, and pedagogy.

Spectacle. I begin with her basic idea of participation and the more modern phenomena of the spectacle. She suggests that the spectacle may be a usurpation of carnival by the nation state (Ehrenreich, 2006). She uses the examples of post-revolution France and fascist Germany and Italy (Ehrenreich, 2006). In these spectacles, large groups still gathered (often compulsory) not engaging with one another spontaneously but rather acting as spectators to massive dramatic productions of nationalist ideas including military parades and speeches. Ehrenreich (2006) says of the difference between the carnival and the spectacle that "[w]hereas the carnival had been joyously irreverent, the national rallies, and especially the fascist ones, were celebrations of state

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authority, designed to instill citizenly virtue or at least inspire awe" (p. 205). This type of

celebration of state authority has surfaced in schools. Nichols and Berliner (2008) see a

"prevalence of schoolwide pep rallies, ice cream socials, and other peculiar events meant

to 'motivate' students to do well on the state-mandated test" (p. 16). In one Texas school,

the principle spoke dramatically at a pep rally for parents, teachers, and students about

the importance of the Texas Assessment of Knowledge, and the rally ended in a class

pledge with students promising to "pass the test and take Parker High School to the top

and lead us to exemplary" (Nichols & Berliner, 2008, p. 16).

Part of designing state sanctioned celebrations revolved around the policing of the

events and/or isolating bodies in chairs or dark theaters to hear speeches (Ehrenreich,

2006). The spectacle directs all attention to a joint sight purposefully designed by those

in authority and asks that the group participate passively, to watch together and

sometimes respond in scripted gestures or scripted verbal responses. Although I do not

want to dramatically compare schooling to fascist rallies[11], I cannot fail to see the

technique of the spectacle clearly used in the schools. Recall Figure 29, the Classroom

Box, as well as the test prep rally mentioned above.

The fascists rallies and the classroom spectacle both have a type of policing

involved although initially fascists rallies also contained a lure before they became

compulsory. Guy Debord (1977), author of *The Society of the Spectacle*, theorizes the

spectacle through consumer culture where images act as ubiquitous lures to passivity and

act more strongly than compulsion accompanied by stringent surveillance as well as

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[11] Upton Sinclair (1922, 1924) does embrace this comparison in two non-fiction books, *The Goose Step A Study of American Education*, about American higher education and, *The Goslings: A Study of American Schools*, focused on k-12 public schooling.

punitive consequences. Debord (1977) describes modern society as a "an epoch without festivals" writing that "the spectacle is the nightmare of imprisoned modern society which ultimately expresses nothing more than its desire to sleep" (para. 154). I take this desire to sleep as a desire towards passivity, and Debord's (1977) point remains that modern passivity no longer rests solely with external policing and control but rather is induced so that the members of the society police themselves through their own desires. Schooling may be considered an enculturation of this desire that begins in policing but mutates into compliance and self policing.

Although many researchers take up Debord's (1977) theories as critique of mass media (Bracken, 1997; Jappe, 1999; Vinson et al., 2010), Debord "very explicitly states…the 'mass media' is only a 'glaring superficial manifestation' of the spectacle" (Bracken 1997, pp. 130-131). The spectacle reigns when "[e]verything that was directly lived has receded into a representation" (Debord, 2014, para. 1), and although the spectacle clearly works through images, representative images manifest from a process of mediating social relationships through representations in place of actual experiences. Debord sees the society of the spectacle as "one of separation and alienation, passivity, non-life, and mere observation" (Vison et al., 2008, p. 90).

Like Law's (2004) arguments in *After Method*, Debord's writings could be applied to education. If we focus on the premise that the spectacle manifests when representation usurps direct experience, we can easily see this in the traditional classroom as described above in techniques barring touching that preserve nation state-like hierarchy in school. Knowledge is presented without experience (Dewey, 1938). Further, Debord (2014) locates the spectacle and resistance to the spectacle in aesthetic

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experience. What this means for the classroom is that even positive knowledge is not an experience of epistemology. Instead, the only epistemology available in the classroom is that of knowing through authority as positive knowledge (facts arrived through positivism in the past) are re-presented to students as a collection of 'images'. Although the epistemology of positivism lends itself to this process of knowledge gained by authority due to the static vision of knowledge, students subjected to this process undergo an aesthetic experience that amplifies passivity as well as negatively prehends joy.

The beauty of Celebrate comes from its iridescence. Above, I move through the idea of Celebrate, not to simply suggest that we celebrate more in school, but rather that Celebrate already occurs in school albeit in a different quality than I experienced Celebrate. Celebrate manifests in the technicity that embraces schooling as spectacle. The spectacle is a type of celebration, but one based on ridged hierarchies, uni-directed attention, and individualization performed with techniques of the nation state that bar touching. Additionally, it seems that this type of celebration negatively prehends joy. In Ehrenreich's (2006) description, the carnival type of celebration negatively prehends hierarchy characterized by anarchy in the sense of non-coercive spontaneous cooperation or collectivity enabled by techniques of touch which include dancing, singing, sharing food, and humor through parody. The spectacle dominates the classroom, and carnival shrinks beyond rarity in such an ecology of practices. I suggest that Celebrate manifests differently depending on the ecologies of practice in which it is embedded. I believe that the above discussion around the spectacle and techniques that present barriers to touching as well as the role of positive knowledge provides a speculative proposition in response to the question: Regarding the general observation of a lack of joy in schools, how is joy

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negatively prehended in traditional education? Although the above discussion still leaves us wondering: What would joyous knowing be like? What ecology of practices would activate joy in education?

Dérive. Debord and the Situationist International (SI) suggest the specific practice of dérive in overcoming the spectacle (Debord, 1956). Dérive literally means to drift. SI conceived of these this practice "as the invention of games… of an essentially new type" (Debord, 1957, p. 13). To further elaborate,

> The situationist game is distinguished from the classic conception of the game by its radical negation of the element of competition and of separation from everyday life. The situationist game is not distinct from moral choice, the taking of one's stand in favor of what will ensure the future reign of freedom and play. (Debord, 1957, p. 13)

Debord and SI see dérive as a playful intervention of the spectacle (Vinson et al., 2008).

> Debord (1956) describes the method of dérive:

> In a dérive one or more persons during a certain period drop their relations, their work and leisure activities, and all their other usual motives for movement and action and let themselves be drawn by the attractions of the terrain and the encounters they find there. (para. 2)

He goes on to elaborate that the basis for being "drawn by the attractions of the terrain" concerns psychogeography– with psychogeography being "the study of precise laws and specific effects of the geographical environment, whether consciously organized or not, on the emotions and behavior of individuals" (Debord, 1954, para. 2). So, performing a dérive as a means of intervention to the spectacle includes wandering through terrain, in

the case of SI, the terrain was specifically urban, guided by attunement to non-purposeful directions inspired by the terrain itself.

Debord and the SI meant for dérive to counter-act normative narratives and inspire critical thinking and revolutionary action (Debord 1955, 1956, 1957). The theories of the spectacle and its interventions rests on the philosophies of Hegel, Marx, and psychoanalytics (Debord, 2014), and although I applaud as well as can feel myself sometimes swept away by their revolutionary counter-culture nature, these theories do not attune to the theories that I employ in this project. Additionally, this project while responding to and conversing with critical approaches seeks contrast rather than conflict or overturn as a technique of eschewing dualism as well as dialectics. I do not reject the techniques of dérive, but I find it necessary to realign parts of that practice with the theories that I employ in this project. Clearly, dérive could be considered a pedagogical practice. But my purpose here remains the exploration of more-than-human pedagogies rather than identifying past pedagogies under different assumptions, so applying pedagogies developed under different ontological assumptions without qualification employs a logic that has been consistently toxic as seen in the Anthropocene. In the above discussion of the spectacle, I tempered the underlying theories through a discussion around Celebrate, springing from the art-working's idea and the exploration of that idea through the accompanying textual response which activates Manning's (2007, 2016) agencement and politics of touch. To extend dérive toward the more-than-human, I employ a similar tactic. I bring them into conversation with Decline and Directions while continuing to hold onto Celebrate.

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More-Than-Human Dérive With Directions and Decline. Both art-working's names, Decline and Directions, can be taken in different ways. For example, decline can mean to worsen or to not accept an invitation, and directions could be orientations for travel or instructions given that one could follow. Both art-workings employ a juxtaposition that makes space for multiple experiences within the art-working as well as amplifies the contrast within the ideas. This manifests as divergence within one idea.

For me, Decline brings to light that decrease, deterioration, and loss depend on valuation within a process and is typically defined by what is thought to be 'good' or needed in a particular nexus of occasions. Decline as loss or decrease remains specific to one criterion like economic decline, bodily decline, or mental decline. The deterioration of the commercial businesses as well as the graves in the art-working brings this type of decline to mind in the art-working. Additionally, in the written response, Anne realizes that she had seen Ruth's and Rose's lives as in decline, characterizing them only by their losses and ignoring their gains. In other words, decline always means loss of one specific characteristic and must ignore or excise what might be gained in the same experience[12]. Decline foregrounds loss in this sense, but in an actual experience loss and gain both exist together, not in conflict, but in a pattern of contrasts. This further suggests that progress and development toward progress are not the opposite of Decline but rather the process of valuation and later judgement acts identically to that of decline by prioritizing only one or a narrow set of related characteristics and experiences. In other words, in 'progress' loss

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[12] In this way, decline is somewhat related to development where in decline something was once in a desired state but that state is lessening or lost while in development something has not yet reached that desired state but has the potential to do so.

and gain exist together in experience but dominate modes of thought define the primary characteristics of the experience excising others.

I see the alternative definition of decline as to refuse through the desertscape in the art-working as in refusing the invitation to be defined by economics or life loss as well as normative categories of separation. The desertscape in Decline shows many ocotillos and cholla. These ocotillos appear 'dead'. The narration points out that this is an adaptation to the arid climate; ocotillo lose their leaves when there is less water and gain them when there is more water. This suggests a different logic than mere decline as in the deterioration of commercial buildings and the disappearance of businesses that drive economic growth. Ocotillos decline the unidirectional valuing and participate instead in a more embedded and relational valuing that manifests as periodicity. The cholla appear to be individuals, but the narration points out that they are, in fact, genetic clones. The cholla decline to participate in traditions of individuality. So, Decline allows us to not participate in certain logics and makes us aware that definitions of decline only refer to and foreground one characterization of experience which is often defined by the dominate episteme as most important. This amplifies an understanding that when decline (as loss) describes an experience we excise whatever might be simultaneously gained, and we are elevating whatever was 'lost' as superior.

Earlier, in the *Methodological Conversations* section, I describe my response to Directions, writing that the art-working shows multiple directions that can be taken from any one point along with the taking of those directions. I suggest that Directions shows that the exploration and path taking are not mutually exclusive as even on the pre-made paths there exists opportunity to take new directions. The talk poem that accompanies

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Directions expresses this understanding also. The written response additionally suggests that instead of taking pre-made paths, we might engage in path-making of our own particularly with regards to knowledge and inquiry, or perhaps more radically, take multiple paths simultaneously.

Directions and dérive easily attune towards one another. Where Directions brings forth an awareness of indefinite possible divergence from moment to moment, dérive suggests a technique for moving in new directions disconnected from traditional ends. Although Debord (1955) characterizes the attraction to terrain as psychogeography, I find this to be a confused notion. Debord and the SI saw psychogeography to be both the cause of being drawn to a place and a method of mapping terrain differently although in practice the SI purposefully wondered in neglected areas of the city to find the cracks in capitalism (Debord, 1955). The prefix psycho- leads us to believe that geography effects the individual psychologically manifest in behavior and emotions, and this tips dérive toward the human and away from the more-than-human, but the term, psychogeography, in its entirety does admit that geography can actively affect.

The embodied act of dérive allows us space to coopt this technique from the rather human-centric, objective theories of Debord (1955, 2014), and I believe that the act of dérive may have opened more-than-human activity despite its original foundations resting in traditional Western logics. In other words, the dérive, as the act of wandering and the acknowledgement of the active Other, opens towards a politics of touch in its bodily performance no matter what any dériver intended to do. Conceived this way, the dérive acts as a good example of how we might move from critique to alternative ways forward that escape the logic of the original object of critique. In purposefully engaging

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with space that fails to participate in the dominate episteme of capitalism, as the SI did as a form of critical opposition to gentrification and the spectacle in general (Debord, 1956), new alternative ideas and bodies have the opportunity to form.

Although Debord and the SI successfully mobilized powerful techniques of critique still in use today, new ways forward never completely manifest. Debord's aim was political critique and anti-capitalist activism (Vinson et al., 2010). I believe that Debord's efforts to overcome capitalism reified the logics of capitalism. Recall that he describes the dérive as a moral choice of freedom. In locating the activity of the dérive in human choice he uses the same Kantian logic of the MC but defines the 'good' not as rationality per se (although he allows that logic to continue with his understanding of choice) but rather as anything that increases freedom. In other words, his theoretical frames still carry the ontological and axiological assumptions that perpetuate mainstream capitalism, and his employment of academic/theoretical text only amplifies those logics. He does not Decline to participate in the logics of capitalism although the physical performance of the dérive may have given him ample opportunity to do so. In contrast, some SI members turned toward art-based techniques in the style of Dadaism and Surrealism[13] to purposefully challenge the rationalism underlying capitalism. Unfortunately, Debord broke the tie between the SI and the Surrealists and Dadaist when

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[13] Dadaism and Surrealism were movements in art and literature that purposely tried to create irrationally or sub-consciously to erode rational norms (Rubin, 1968)). Dadaism aggressively confronted norms becoming an anti-art movement often using juxtaposition of random or unrelated images with no attempt to reconcile meaning for the viewer to for the experience of the absurd; Marcel Duchamp is perhaps the most recognizable Dadaist (Rubin, 1968). Surrealism "was a revolt against all restraints on free creativity, including logical reason, standard morality, social and artistic conventions and norms, and all control over the artistic process by forethought and intention" (Abrams & Harpham, 2012, p. 393). Surrealist often looked to dreams and hallucinations as non-rational experiences from which to produce are, and the most recognizable artist in the latter part of this movement is Salvador Dali (Ruben, 1968).

he derided the "famous aimless wondering attempted in 1923 by four surrealists" as a "dismal failure" calling their reliance on non-conscious choice (that he characterizes as chance) imbecilic (Debord, 1956, para. 8). Debord's voice spoke loudly among the SI, and his insistence on the objective, scientific experimental nature of dérive as a form of research barred the more unconscious, non-cognitive (irrational) approaches of the Dadaists and Surrealist.

I find the tension between Debord and the Dadaists and Surrealist extremely compelling. What if the tension had been more generative than destructive? Could the dérive as opposing, taking or literally walking in the opposite direction of capitalism (critique), and dérive as declining to participate in the rational logics of capitalism come together in a pattern of contrast that create a unity of difference? Perhaps we might begin by taking a step away, in the opposite direction guided by conscious critique but then stop and find within that line innumerable Directions of departure allowing diverse logics to flourish.

Directions (the art-working) shows that possibility. It begins by looking around as a part of the dérive often neglected in modern writings that Debord (1956) calls the "possible rendezvous" (para. 16). The possible rendezvous brings the wanderer "without warning to a place he may or may not know" where he may experience an "unexpected turn" (Debord, 1956, para. 16). Debord, of course, frames this as observation of a place/space and unexpected meetings with other humans, but Directions shows a possible rendezvous (the beginning, end, and top middle) theorized differently. In a revised possible rendezvous, the wanderer listens radically through a politics of touch using response-ability and curious sympathy reaching towards other bodies employing the

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whole body as an organ of relating, opening to being affected. In this possible rendezvous, the body does not need to physically move as in Directions this occurs when the wanderer remains still and open to affect while thoughts and feelings may wander. Here, the wanderer sits at the verge of possibilities where they might take a direction that allows them to decline the invitation to continue on the paths of normative logics.

Finding Joy. Earlier, I detail how the spectacle of schooling traps individual bodies into only being affected without being able to affect, so how might the possible rendezvous as an opening to be affected differ from the joylessness of only being affected in schooling? I believe the difference to be in the reciprocal action of the wandering. In dérive, the student or group of students may move in any direction, and if we add in Dadaism and Surrealism, in any manner including non-conscious non-rational thought. The difference in the possible rendezvous is that the immediate action of being affected considers the many possible bodies, feelings, and thoughts manifest as lures of direction while in school the immediate action of being affected is narrowed to only one acceptable way to be affected with only more 'being affected' following.

The process generated by Directions and Decline shows both wandering (in the possible rendezvous) as well as taking a conscious direction or focusing attention and the ability to decline (to affect) any possible direction ending in another round of wandering, in a possible rendezvous (more to be affected and to affect simultaneously). This aligns with Whitehead's (1967) notion of the emergence of both conscious thoughts as well as less rational 'feelings' in actual occasions of experience, and in more-than-human dérives both provide impetus for more wandering. Another important point seen in Directions is that directed attention and consciously directed thought should culminate in more

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wandering not in pre-conceived ends like fulfilling curricular objectives and succeeding on standardized tests. More-than-human dérive, as discussed above, provides a new pedagogy that does not favor the product over the process, one of the assumptions that Law (2004) asks us to displace. Favoring the process also allows the reciprocity of affecting and being affected which makes all bodies active and more-than-human in that moment.

Although the above reconceptualization of dérive helps seed new assumptions, we should not forget the embodied physical aspects suggested by Debord's (1956) original dérive. The directions for such a dérive would be to walk toward previously neglected places, abandoning normal routine movement, and attune to affect and conscious thought allowing this experience to form new questions and directions of thought as well as following lures or avoiding repulsions not previously defined by norms. Interestingly, this physicality resonates with place-based and outdoor learning found often in ESE where student learning is expanded in relation to places outside of the classroom where they are physically relocated (Clarke, 2019; Rousell, 2018).

Although Debord and the SI conceived of the dérive as an urban wandering, under the influence of Whitehead (1978, 1967) and Manning (2007, 2013) the difference between urban and 'natural' environments are not a given. Rivers, trees, cacti, weeds, abandoned tires, people sitting at a bus stop– anything has affective ability. This type of dérive only asks that the wanderer place themselves in relational experience by sharing an overlapping spacetime with these others (conceived as active) which can be facilitated through physically engaging with live places. To achieve that overlapping spacetime, process-oriented movement (wandering) allows for more relational experiences to

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achieve something previously unimagined by the product-oriented movement confined physically and conceptually to the classroom.

Does more-than-human dérive make 'knowing' more joyous? It certainly both quantitatively and qualitatively differs from being affected by only the spectacle defined by schooling, but more than that, wandering implies an element of affecting. When one is drawn towards an active Other or takes steps to find active Others that are not part of the re-presenting in classrooms, one puts their own forces of becoming into those experiences– thus affecting those experiences. I believe that to be affected and to affect must occur simultaneously through experience, not through agency-intention-volition, but rather in the process of agencement which reciprocally joins the excess forces of all bodies that eventually concrease in the actual occasion. The wanderer's ability to affect through dérive may not be entirely consciously known in the immediacy of experience, but we can assume that the wander is no less an active Other to different subjects within the event based on Whitehead's (1967, 1978) and Manning's (2007, 2013) theories. The potency of the more-than-human dérive comes through the catalytic nature of bodies coming together in the actual occasions (situations? Places?) where action manifest more action, and the wanderer and their partners derange the spectacle's power of representation by engaging in live experiences instead. In this way, the joy of being able to affect is joined and enabled by a process-oriented ability to be affected, and perhaps this results in joyous knowing (learning). When Smith (2007) writes that place-based education in ESE can break through the "constraining regularities of public school" (p. 189), I believe that the discussion above illustrates *how* engaging other emplaced bodies may resist school's spectacle and its constraining regularities.

So, what might this look like in education? Interestingly, I believe that I enacted this process already during this project. Apparently, I employed a type of more-than-human dérive in my research process. I began with my concerns and critiques, grounded my concerns and critiques further within past facts and theories (seen explicitly in Chapter 2), this is analogous to the first and top frames of Directions– a conceptual possible rendezvous. My research design was based on Manning's (2007) *Politics of Touch* detailed in Chapter Three which could be considered a type of declining to participate in traditional logics. I traveled to someplace I would not normally frequent, Ajo. Moving in a direction as seen in the middle bottom frames of Directions. I moved to Ajo, in part because Ajo and the surrounding desert had already experienced many of the pressures of the Anthropocene, to include extraction, abandonment by capitalistic industry, and disturbance to biodiversity coupled with intense land and resource management. Ajo struggles under these acute pressures yet remains, manifesting differently than it did when it was a productive and valued part of a neoliberal system. In moving toward Ajo, I moved towards a place neglected by the neoliberalism as the SI did in urban areas. Ajo was also someplace out of the ordinary for me (as suggested by the dérive). While in Ajo, I participated in a more-than-human version of the dérive including possible rendezvous where I allowed myself to wander or be drawn to events and people although I did also participate in my own everyday living routines like going to the grocery store. This could be seen as returning to experiencing the multiplicity of directions after taking one direction, as seen in the last part of Directions. Unlike traditional dérive, I worked under assumptions from process philosophy and more-than-human ideas, and I did not wish to continue critique but rather move forward from it

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towards previously unimagined directions– perhaps more like the Dadaists and Surrealist in place of Debord's conception. Throughout this dissertation, I detail and explain all of these experiences and how they work methodologically, but again, I believe the line between inquiry and education to be razor thin if it exists at all as both are (or should be) involved in knowledge creation.

This may not seem like a particularly satisfactory answer: a more joyous knowing might mirror the process I underwent in this project and we might call that process a more-than-human dérive. What about children? Can they undergo this pedagogy and learn? Would this be truly educative for anyone at any age? Theoretically, there is no reason to assume that children could not learn in this manner of wandering. In fact, I would further speculate that children already learn in this manner but as it is not directed to products of schooling so goes unnoticed. At this point, I will leave these questions and speculations hanging as I believe moving through conversations with Oasis and Precarity may add to or provide other directions of thought.

Dangerous Certainty. In Precarity, I see both the construction of the wall and the protest as responses to the uncertainty and unpredictability inherent within the Anthropocene. Although appearing as conflict, precarity moves through all the bodies in Precarity. In other words, the wall and its protest both respond to the same feelings of precarity quite evidently and materially manifest in the Anthropocene. I named Precarity prior to reading other's theories around precarity; Precarity sent me out to connect with texts discussing precarity, pushing me in new directions. One of the authors that I encountered helps further one direction that we can take from Precarity. Nancy Ettlinger (2007) writes:

Reflexive denial of precarious life entails essentialist strategies that implicitly or

explicitly classify and homogenize people and phenomena, legitimize the

constructed boundaries, and in the process aim at eliminating differences and

possibilities for negotiation; the tension between these goals and material realities

helps explain misrepresentations that can be catastrophic at multiple scales, re-

creating precarity. (p. 319)

Ettlinger (2007) argues that precarity "is located in the microspaces of everyday life and

is an enduring feature of the human condition" (p. 320) and as such, "people attempt to

disengage the stress of precarious life by constructing the illusions of certainty" (p. 319).

The art-working Precarity illustrates her thesis to some degree. The wall could be

considered a "reflexive denial of precarious life" that materially attempts to "legitimize

the constructed boundaries" yet recreates precarity as some of the protesters aim to point

out (Ettlinger, 2007, p. 319).

Ettlinger (2007) describes precarity "as a condition of vulnerability relative to

contingency and the inability to predict" (p. 320). She further argues that this condition

remains an unavoidable and uncomfortable reality of a nonessentialist complex world

(Ettlinger, 2007). Although Ettlinger focuses on the human condition of life, I can see

resonance with Whitehead's (1926, 1967) and Manning's (2007) claims of unknowability

in principle due to our own focal points in experience and the slipperiness of non-

conscious thought as well as the complexity of multiple entangled bodies in process.

Recall that Manning (2007) criticizes nation state politics for requiring the belief that

bodies can remain in equilibrium (unchanging) and erecting barriers to touch to reify that

belief. Under process, bodies work as far-from-equilibrium systems "marked by an

element of unpredictability" (Manning, 2007, p. xx). Ettlinger pushes even further than criticizing mainstream politics for reifying the belief in the static certainty of bodies; she claims that this results in such an incongruency with the reality of bodies that it causes the very precarity it sought to avoid. She argues that certainty is an illusion which brings me to Oasis.

The art-working Oasis and its accompanying text help me to understand/feel the comfort and relief brought about by encountering an oasis in contrast to challenging or potentially precarious experiences. Perhaps these feelings of comfort and safety brought about by an oasis have caused us to insulate ourselves, both remaining stuck on oases and even enlarging the conceptual oases to a point that we do not see or directly experience the inherent precarity of living. This could be framed as an addiction to those feelings of the oasis where we pass a threshold of only feeling comfortable, staying within the oasis and never venturing toward the unknown and unknowable. If we take Ettlinger's (2007) point, then this oasis becomes somewhat of a mirage that will eventually turn into precarity anyway.

Schooling Certainty: Structuring Disciplines. I believe that this direction through Oasis, Precarity, Ettlinger (2007), and Manning (2007) discussed above may provide some insight into education and learning. First, we may consider schooling as a place of certainty that quixotically attempts to activate learning (which must have something to do with non-equilibrium bodies and re-organization) in students through practices and knowledge based on static equilibrium theories inherent in essentialism and delivered through authority. Years of educational reform have refined this direction in schooling around standardization of curriculum and assessments founded on the idea that:

Anyone…who followed whatever method was recommended would be in a

position to know, and what they knew would be the same as what was known by

anyone else who followed that method. Thus, replicability become the hallmark

of reputable experimentation, as universalization became the hallmark of

reputable moral thought: who you were in particular, to whom you were

particularly connected, where you were particularly placed, was supposed to make

no difference on how things seemed to you– provided, of course, that you were

following the prescribed method, the main features of which were designed

precisely to insulate your judgment from all of those particularities. (Scheman,

1989, p. 41 as cited in Noddings, 2005, p. 7).

Noddings (2005) sees this worship of method described above as replacing actual

connections between teachers and students, students and students, and students and

knowledge as reformists claimed that precise methods would put teaching "onto firm

scientific footing" (p. 7). She also locates this craze in schooling historically during the

structure of the disciplines movement.

Noddings (2005) describes school reform in the late 1950's and early 1960's as a

reorganization of school around disciplines informed by experts who put "tremendous

emphasis on an understanding of the fundamental structure, principles, and methods of

the disciplines with which they were involved" (p. 3). Recall that Whitehead (1929)

warns us that too broadly applying one method of narrow interests to other modes of

becoming can be disastrous. This reform period included new bouts of teacher training as

well as textbook production and manifest in the classroom through the use of

behavioral/performance objectives and strict adherence to textbooks and standardized curriculum (Noddings, 2005).

Kliebard (1988) explains that these changes arose in a constellation of new concerns as the nation moved from World War II into the era of the Cold War. Noddings (2005) contends that the need for technical excellence and its ensuing reform was shaped and supported by "the federal government, fearing the possible superiority of Russian technology" (p. 3). Kliebard (1988) adds that the structure of the disciplines movement formed as "almost the polar opposite from life adjustment education" (p. 151). Where life adjust education centered on skills and knowledge around everyday life, the structure of the disciplines centered on expert defined principles.

According to Noddings (2005), the structure of the discipline movement attempted to homogenize content and pedagogy under the flag of the science of teaching and learning. Kliebard (1988) explains that these reforms additionally:

> Bludgeoned teachers…into accepting a practice regardless of the teacher's own sense of how teaching goes forward in individual classrooms. It superimposed rules of action on the invaluable lore that teachers possess about how education actually goes forward, and therefore, was thwarted at the point where so-called scientific results collided with the craft of teaching. (p. 148)

So, both a zeal for increased technical expertise in students as well as a 'scientific' approach to teaching removed negotiation of practices from the actual site of learning to be governed by curriculum crafted by 'experts'. We might frame this as creating a spectacle out of learning by removing the ability to affect away from both teachers and students in the name of certainty promised by positivistic notions of science. This same

action was seen in Chapter Two in the discussion of the development of the current NGSS.

Kliebard (1988) characterizes the findings underlying the structure of the discipline movement as tenuous and argues that they fail to account for the "supremely contextual nature of educational practice" (p. 147). He further argues that the implementation and design of this particular reform was founded on a bastardized notion of the purpose and process of science. The worship of method mentioned by Noddings (2005) sought to extract generalized rules to govern methods of teaching (and learning) that when applied would assure outcomes with no need or room to negotiate at the site of learning itself. Kliebard (1988) argues through Dewey that laws and facts do not produce rules of practice but rather provide us with "intellectual tools by which we fashion our own pathways" (p. 148). Interestingly, this view of science resonates with Whitehead's (1926) warning that scientific findings should be conceived more modestly lest they deaden our ability to explore new ideas and directions. Indeed, the structure of the disciplines movement seemed to narrowly define the direction education was able to take. The closure of the space of negotiation between teachers and students with regard to both practice and content occurred through a process of shifting the ability to affect towards institutional bodies and away from the diverse bodies within individual and different classrooms.

The discussion of the structure of the disciplines movement illustrates Ettlinger's (2007) reflexive denial of precarity. The reform "homogenized people and phenomena, legitimized the constructed boundaries" (p. 319) and eliminated differences and possibilities for negotiation. It also illustrates that this occurs through muting the

relational and affective capabilities of actual bodies in occasions of the very process it hopes to enhance. Perhaps the structure of the disciplines movement created a mirage-like oasis that perpetuates precarity. Further, the structure of the disciplines movement rests on the fallacy of misplaced concreteness.

Misplaced Concreteness. Whitehead (1926) contends that application of facts and rules abstracted then implemented as though they were concrete is fallacious thinking. Thompson (1997) describes this as mistaking "the map for the territory" (p. 220). Whitehead (1926) defines concreteness as the immediate experience in the actual occasion as bodies concrease. This experience is first and foremost an aesthetic experience arising out of the agencement settling into different bodies as whole organs of experience manifesting in feelings, thoughts, and intuitions in the actual occasion. Although this process connects us to the world, it remains partial and specifically shaped, meaning that the thoughts, feelings, and intuitions within experience never grant us access to the entirety of the world without relations born in very specific constellations of activity.

In inquiry (and learning), we abstract from the concrete, real experience. We form concepts around features that we foreground in inquiry/learning and how and what we foreground can lead to specific concepts but always leaves other concepts that could have been foregrounded from the same experiences. Abstraction remains important in developing and moving concepts, but abstraction does not lead to absolute truth as "we inquire and live with inadequate abstractions and insufficient concreteness" (Thompson, 1997, p. 221). When we fail to heed the limitations of abstraction, dogma develops, and in the structure of the disciplines movement, this dogma not only formed rigid rules of

practice but also eradicated the space for concrete exploration of those rules to be refined and modified by those that it affected (affecting without being affected, joyless).

I would add that there is more at stake than just fallacious thinking. When abstraction becomes dogma, injustice grows. When one possible direction becomes the only possible direction, only bodies that align with the fallaciously thought absolute truth retain some ability to affect. Manning (2007) expresses this in her politics of touch as she described the politics of the nation state. In a large theoretical way, it does not ultimately matter as that dogma will certainly shatter at some point due to the nature of diverse bodies and the very real multiplicity of potential within an any actual occasion of experience no matter the rules and institution. But if we take Ettlinger's (2007) premise that precarity inhabits the microspaces of the everyday, we can see that it does matter to individual bodies in immediacy; this depends upon the duration of the dogma, as if it lasts a human lifetime, whole stretches of lives become more precarious. Joining Ettlinger's (2007) and Whitehead's (1926) arguments, we can see that the structure of the disciplines movement went too far becoming a dangerous oasis that allowed no directions off that fallacious oasis. I believe this is the *how* of Pinar's (2010) "prison" of schooling as well as *how* mainstream technocracy responses to the Anthropocene.

Embracing Precarity and Providing Modest Oases. To move away from this oasis of certainty, we must find a way to deal with and perhaps generatively embrace the precarity inherent in life including knowing without falsely constructing absolute certainty and reifying it. Whitehead (1926) suggests that we balance concreteness and abstractness returning to each often allowing them to continually affect one another, and this can only occur through returning often to actual occasions of experience. He writes

that "sensitiveness without impulse spells decadence, and impulse without sensitiveness spells brutality" (Whitehead, 1926, p. 200). Here Whitehead (1926) suggests that remaining only in the aesthetic experience of concreate occasions leads to a type of knowing that can never be mobilized and shared whereas remaining only in abstraction narrows knowing dogmatically stripping experience of knowing as actual affective capability in real occasions. Ettlinger (2007) furthers the "brutality", acknowledging that it creates more precarity.

In a similar theme of balance, Wong (2007) suggests that learning should include "the tension in the dramatic line that connects 'what if' to 'what is'" (p. 208). What-if rests on not knowing while what-is rests on the already known or thought to be known. Schooling seems to commit far too much to what-is and very little to what-if.

Further, Wong (2007) places the ability of asking 'what if' in aesthetic experience. This means that the questioning, 'what if', arises in the reciprocal action of undergoing, being affected by other bodies and the activity of affecting other bodies, prior to conscious thought and choice. Earlier, I argue something similar writing: the joy of being able to affect is joined and enabled by a process-oriented ability to be affected, and perhaps this results in joyous knowing. The what-if process of learning seems to be missing in traditional schooling with learning being characterized as only being able to follow directions to previously known what-is. In this way, traditional schooling marks success at arriving in the past. In my own work in graduate school, I feel as though the what-if may be more emphasized than schooling prior to graduate work. This may be due to our treatment of knowledge as static and essential to avoid precarity. Modern schooling may see that taking the risk of asking what-if can only be done after years of

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participating in what-is. But if learning actually happens in the tension between the two then all levels of schooling need to be open to both rather than performing education prior to graduate work as a consumption of a long list of what-is.

I would extend Wong's (2007) idea by saying that learning exists in the tension between what-if and what-is as well as the tension between what-is and what-if. Both Directions and Decline point to this type of reciprocity. Directions shows the what-if process as both the beginning and end with the what-is arising from within. Decline's ocotillo suggests that a response-able periodicity may keep a body alive through precarious times although not statically in the same state at all times. In other words, what-if, the stage of precarious not-knowing should arise in response to the immediate constellation of practices through the affective capacities of all bodies as should what-is, but this should not end in what-is or what-if (brutality or decadence). Knowledge developed in process should not be artificially halted at what-is and certainly should not be only re-presented as what-is as traditional schooling does, the culture of positivism of which Giroux writes. Learning emerges from in-between the periodicity of precarity (what if) and oasis (what is) that never completely stops. Further, Directions show us that from any one point of what-is, multiple points of what-if are possible (and vice versa) and to embrace truly emancipatory learning those multiple directions must not be barred by taking any one of them as absolute truths–the 'right' direction. Ettlinger (2007) adds that stopping on an oasis, the comfortable safe feelings of what-is, and reifying it through abstractions (misplaced concreteness) creates more precarity and leaves us with the inability to negotiate through the precarity to come.

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This process learning indicates that education should enable a body to move from what-if to what-is to what-if and so on in any direction that body can take. Enhancing this type of learning requires that education also enable bodies to attune to ecologies of practice through reaching toward other bodies without the presupposition of what-is first as well as being able to affect the ecologies of practice. This requires embracing true uncertainty in what might arise within experience, to turn towards the uncertainty and allow what-if to emerge as one moves in a possible direction. What-is will arise from the reaching toward possibilities rather than learning arising from following direct paths to what another past body already experienced as what-is– to certainty. Past experiences of what-is may work here as modest oasis, waypoints, that a learner would continue from back into precarious knowing. This process remains absent in traditional schooling, but we can catch glimpses of it in levels that include research and inquiry.

I am suggesting that contrary to normal logics and commonly held notions of education, learning is hindered in schools as joyous knowing does not occur in schools particularly in levels of school below graduate school. Schooling as it stands now does not resemble the process I describe above; it seems almost half the process, the brutality without the sensitivity to concrete experiences. If schooling does not embrace the process that I describe above, is it truly learning? Additionally, techniques of attunement and response-able periodic movement between what-is and what-if remain truncated in traditional schooling. As such, what is education doing other than perpetuating the fallacy of misplaced concreteness by both enacted example and enforced dogma? Further, how can reified dogmatic past knowledge serve to negotiate through the very real, material precarity of the Anthropocene?

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We could live our entire lives in aesthetic experience without creating anything–
the decadence of which Whitehead (1926) speaks, and by expanding inquiry into
aesthetics, I am not suggesting that we stay here, becoming addicted. Abstracting and
moving concepts forward through creation of texts, art, technology– anything really–
allows us to share what we glean from our aesthetic experiences and requires some
abstraction (what-is). I argue that it might even add to further novel aesthetics
experiences if creations contain anarchival ability. Unfortunately, that is not how
knowledge and knowledge creation is currently viewed in inquiry or education; certainly,
we create text, art, and technology, but we do so under dogmatic visions of certain
knowing– stranded on an oasis of our own narrow making leaving out anarchival
elements in the name of precision and predictability. This is the brutality of which
Whitehead (1926) writes, and we are stuck here, addicted. We do not typically open
inquiry or education to further relations in multiple and different directions causing
injustice and increasing precarity for specific bodies in their immediacy of experience
and perhaps throughout the duration of their entire lives. We cut knowledge off from
experience particularly in schooling, but past knowledge, present experience, and
tentative knowledge are all necessary for learning and inquiry.

Educational Conversations Concluded

In the above educational conversations, I give examples of how our current
educational methods in schooling "are much too restrictive" (Law, 2004, p. 154) as they
are based on assumptions and techniques that perpetual the passivity of students (the
spectacle), division by disciplines (structure of the disciplines movement), truth that lacks
beauty and politics (culture of positivism), and favoring product to process (emphasis on

standard curriculum and tests). I suggest that schooling may have created an oasis of false comfort by focusing on the only a narrow part of knowing, one that is certain and positive, and this action, according to Ettlinger (2007), creates precarity and annihilates space for negotiation through precarity.

By putting education and learning into conversations with the ideas of Chapter Four, I suggest that more joyous knowing may enhance learning through the idea of Celebrate– as joining in joy. I define this joyous knowing as the ability of the learning body to both affect and to be affected in an ecology of practices that reduces barriers to touch. I note that current practices of outdoor learning and place-based learning in ESE already exhibit a limited potential as they help to reduce the barriers of touch experienced in the confinement of the Classroom Box (Figure 29). I suggest that a more-than-human dérive may be one technique that acknowledges critical directions but moves beyond them by declining dominant logics. The art-workings Directions and Decline give hints to how this may occur. Overall, I am suggesting that schooling in its current form is not enough for learning, and I believe that practices and theories may need to be developed outside of the ecology of practice of modern schooling.

I have no definitive answers here regarding how this may work for learners in K-12. I have some imaginative propositions, some alternate directions to further explore, but these must return to experience in a radical empiricism. I believe that an education where learning is more open, more subject to the politics of touch would look nothing like traditional schooling but would have a better chance at opening spaces to negotiate through the precarity of the Anthropocene. I believe that it would include techniques that

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I both enact and discuss in this project as well as much, much more that I have not explored or maybe even imagined yet.

In the final sections of my dissertation, I will outline the contributions and suggestions from this project in a section entitled Ways and Means. I will discuss each idea generated in the art-working through RDE along with techniques for and potential direction of their further use. I will then discuss limitations and absences within this project followed by suggestions for further research.

Contributions and ~~Implications~~ Suggestions

This dissertation began with concerns around inquiry and education in the Anthropocene. The evidence of human wrought Earth systems damages as well the dire predictions of further catastrophic events that will affect all life on Earth requires urgent attention from all fields of study. The Anthropocene theorists that I lean on in Chapter Two contend that the Anthropocene requires research that decenters the human, works transdisciplinarity, and considers power and politics in knowledge. I agree, and I enact more-than-human, transdisciplinary inquiry that considers power and politics in this project.

This project serves as an example of employing theory as methodology to circumvent the underlying assumptions that have brought us the Anthropocene. I employ the process of radical empiricism under the guiding principles in Whitehead's (1926, 1929, 1938, 1967, 1978, 2004) process philosophy as well as Manning's (2007, 2013, 2016, 2018, 2020) theories. Employing Whitehead to such an extent remains a novel contribution to educational research, particularly methodology, to the best of my knowledge. The use of process philosophy as methodology allows inquiry to be guided

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by assumptions that greatly differ from those driving the Anthropocene. Whitehead (1926, 1929, 1938, 1967, 1978, 2004) specifically worked to question traditional Western assumptions and delivers a philosophy that has the ability to drive new kinds of inquiry and education without annihilating current approaches although it does extend and modify them. Further, Whitehead's philosophy is founded on the question, "How is it that there is always something new?" (Shaviro, 2009, p. ix). As such, he also calls for adventures of ideas finding new ways through process within the old, and I believe that the Anthropocene requires adventurous ideas.

Working under an ontology that is foreign to mainstream inquiry requires a great deal of invention moving from what we know currently to how we might possibly know differently. In this project, I focus on more-than-human process inquiry inventing new techniques and modifying old ones to be coherent with Whitehead's (1926, 1929, 1938, 1967, 1978, 2004) and Manning's (2007, 2013, 2016, 2020) logics. I identify techniques like photographing, videoing, interviewing, and inquirer participation, typical ethnographic techniques, as less subtractive of experience thus closer to the concrete actual occasions that include all bodies shaping the event as more-than-human bodies. In the following sections, I will elaborate some propositions stemming from more-than-human inquiry through process. This project serves as one example of what more-than-human inquiry can be.

This project also introduces remixing data experiences (RDE) as a specific process within more-than-human process inquiry that employs arts-based techniques. RDE honors each body's agencement within composition of art-workings to generate ideas immanently bound by the concerns of an inquiry project. RDE remains a novel

contribution of this project, and in the following section, *Ways and Means*, I will elaborate on how the specific ideas generated through creating the art-working in Chapter Four might work for further inquiry or any artful practice. Although RDE was born of process philosophy, I believe that the process of RDE detailed in Chapter Three may be helpful for any researcher or educator who seeks more-than-human practices. I am not suggesting RDE as a template, procedure, or protocol, but my process may provide points of divergence that resonate with any more-than-human theory driven method creation.

The creations in Chapter Four and the conversations in Chapter Five show that arts-based techniques can further thought. This illustrates a transdisciplinarity past the joining of specific academic discipline's content as seen in Chapter Two. Enlisting techniques of art and philosophy as well as social science leads to modest propositions and further inquiry (to be discussed soon). Manning's (2007) theories provide guidance for thinning the barriers of disciplinary practice, and this project stands as an example of inquiry that exceeds those barriers.

The written texts in Chapter Four and their methodological conversation with Directions in Chapter Five show how different specific genres work in furthering ideas and suggest that some genres may enable retention of more affective capacity even as the anarchival elements of the art-workings are reduced and abstracted. The collection of all of the written texts in Chapter Four illustrate that different ideas moved through different genres can still adhere to concerns of an inquiry project. Additionally, they further thought, and have the ability to further thought-in-the-act of writing. The written texts contribute an example of writing as process inquiry, and the methodological conversation

in this chapter suggests that the more-than-human inquirer may be the site of research in process inquiry.

Although this project certainly contributes to any research in any field employing Whitehead's (1926, 1029, 1938, 1967, 1978, 2004) and Manning's (2007, 2013, 2016, 2020) theories, it also may aid other researchers as an example of working with theory as method no matter which theories they chose to include.

The ideas from Chapter Four contribute to fields such as public and critical pedagogy as well as ESE and suggest that learning may be a process related to inquiry. In educational conversations, I suggest that this project may act as an example of joyous learning where I was able to engage in a periodic tension of what-is and what-if without barriers to possible directions through a technique of more-than-human dérive. I add to the suppositions in critical and public pedagogy that school is a prison for learning by illustrating how it may work as such with regard to Celebrate, Precarity, and Oasis. I also add to suppositions in ESE around placed-based and outdoor education that learning is enhanced by engaging 'natural' bodies outside of the classroom again by showing how that might occur through actual occasions of experience with Directions and Decline. I further suggest that ontological process may be able to enhance theories of learning if educational research broadens through radical empiricism to include learning anywhere and everywhere as a becoming and transformation in a variety of ecologies of practice beyond schooling.

Ways and Means

Earlier in this chapter, I name Beauty as Intensity Proper as the *way* that I work with the data bodies during RDE. Additionally, Manning (2016) discusses art in its more

ancient usage as way. To engage in artful practices, we must employ ways as means without ends, and Manning (2016) calls this research-creation. Guiding principles can act as ways of shaping as Beauty as Intensity Proper as well as Manning's (2007) politics of touch shaped this more-than-human inquiry project.

Of course, we can include techniques of embodied actions within ways. For example, in RDE, the data bodies and I performed media techniques to follow Beauty as Intensity Proper as a guiding way. In data generation, I submitted to the shaping way of politics of touch with bodies that I encountered in Ajo and the surrounding Sonoran Desert when I followed ethnographic-like data generation techniques. My point here is that ways, as guiding principles, can join with embodied techniques to create an artful practice in technicity. The coming together of both drives inquiry/learning and the actual occasions of these various events of concreasance creates the nexus that becomes the inquiry/education project. This may more properly be considered artful rather than 'scientific', and in an analogous move to Whitehead's (1967) argument that Beauty is more important than Truth, I suggest that artful practice is more fundamental to inquiry/education than science. Additionally, as Whitehead (1967) goes on to say that Beauty encompasses Truth, but Truth does not necessarily encompass Beauty, I suggest that artful practice can encompass science, but science does not encompass artfulness.

Further, I wish to point out that no one embodied technique must always be married to one way or vice versa. I call the videos in Chapter Four art-workings rather than artwork. I chose this to acknowledge that I participate in artfulness rather than participating in art making. I believe that the art-workings embody the ways that I and the co-composers engage within the actual occasion of experience where the art-workings

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were birthed. I am suggesting that those bodies are working the way– participating in embodying the guiding principles. The embodying techniques of media performance arose in the process of artfulness shaped by my own abilities and the form of the generated data bodies as well as the guiding principles. Different guiding principles might call to different embodied techniques and different inquirers.

Rousell (2019) argues that art making does not provide an 'answer' to post qualitative research, and I agree. I similarly suggest that artful practice does provide an 'answer' to pursuing theory as method. In other words, pursuing theory as methodology requires artful practice in that ways must provide enabling constraints that enter into the occasions of inquiry as a shaping force. This may or may not result in employing art-based techniques. When Manning (2016) suggests that research-creation cannot be a free-for-all, I believe that she means that ways must be employed, and those ways may call the occasion of inquiry into different shapes. The implication here is that inquiry as research-creation becomes an action of embodied techniques shaped by theoretical principles (ways) encountering other bodies that can further generate ways so that this process can be undertaken again and again and again.

I engage in process inquiry in this project. This means that I take as a guide Whitehead's (1967, 1978) process philosophy and Manning's (2013, 2016, 2020) processual theories, and that philosophy and those theories provide ways to inquire like Beauty and politics of touch. This methodology does not use methods as typically imagined but rather invites ways into the actual occasions of inquiry. Embodied techniques like photographing or video editing are not methods in the sense that they are procedures to be followed to ensure a desired end. Reaching for those methods arises in

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the process of inquiry shaped by invited guided principles, the specific and unique

inquirer, and the other bodies of concern within inquiry. The techniques then can

participate in an emergent technicity.

     I believe that this is how all inquiry is, in fact, performed– even inquiry that uses

calcified methodologies and rote methods. They form a technicity that we take as

absolute. I believe that the fact that these canned methodologies and methods are so

prevalent acts as evidence that our current era, the Anthropocene, is based on a finely

honed, exclusive ontology that is now manifesting in actual physical precarity to so many

bodies. Those theories provide ways, and those ways remain narrow, and perhaps at this

juncture, dangerous. Thus, I found it imperative to engage in an adventure of ideas rather

than follow traditional ways and means to ends that have been so rigidly defined.

One waypoint in process inquire is the creation of different ways. The ideas that

erupt in the art-workings that I further explore in both the written texts in Chapter Four

and the above conversations in Chapter Five are speculative ways much like Beauty as

Intensity Proper or politics of touch. These ways may provide others (and myself) means

for further process inquiry.

More-Than-Human Ways. I engage in process inquiry because Whitehead's

(1926, 1929, 1939, 1967, 1978, 2004) philosophy and Manning's theories (2007, 2013,

2016, 2020) erode anthropocentricity ontologically. Traditional ontologies of substance

and essence do not support more-than-human inquiry or adventure of ideas in more-than-

human directions, rather they support hyper-rational epistemologies founded entirely in

anthropocentricity. Throughout this project, I argue that moving from traditional

ontologies is a constraint that remains incongruent to alleviate the crises of the Anthropocene.

Although Whitehead (1926, 1929, 1939, 1967, 1978, 2004) and Manning (2007, 2013, 2016, 2020) provide ways that enable more-than-human work, more ways must be created in actual occasions of inquiry around diverse and different concerns. My dissertation project enacts ways suggested by Whitehead (1967) and Manning (2007) as well as creates additional more-than-human ways that I believe capable of guiding inquiry further. I have already discussed the implications of employing Whitehead's (1967) and Manning's (2007) ways. For example, surprise indicates more-than-human work, and in this project, surprise was shaped by the use of non-language, embodied techniques in RDE. In Chapter Three, I also discuss that more-than-human work must employ less-subtracting techniques with regard to experience. Further, I employ art-based techniques in the art-workings as well as some of the written responses as Whitehead (1967) suggests that poetry, literature, and art remain more concrete than does science and mathematics which is more abstract.

This project contributes additional ways. These ways could be used in any artful practice– inquiry, educating, writing, living, and can create a more-than-human technicity which I see as imperative for practices to alleviate crises of the Anthropocene. In the following section, I will elaborate on these ways from the ideas of the art-working, Celebrate, Directions, Decline, Precarity, and Oasis. I will work through each idea separately for the sake of clarity, but some or all the ideas resonate in such a manner that they are not entirely separate.

***The Way of Celebrate*.** I locate the main action of Celebrate in collective joy where the achievement of maximum reciprocal affective capability among bodies in an actual occasion defines joyousness or perhaps joying. I consider collective joy to be more than the sum of individual joy within the actual occasion; in other words, I am not saying that each individual body will 'feel' maximum joy. I suggest that this can arise when participating bodies can both affect other bodies as well as be affected by other bodies in the immediacy of experience. I enact this in data generation and RDE. The specific embodied techniques that I embraced were a radical listening or reading through hypothetic sympathy and delaying my own ability to affect making space for other bodies' abilities to affect. This same delaying action was accomplished by the use of art-based technique so as not to close down non-human bodies' affecting capacity in favor of my own.

Typical processes of research amplify the human researcher's ability to affect (at the expense of non-human and other human bodies' affecting capacity), so delaying through hypothetic sympathy and employing deliberate imprecision through arts-based composing allowed space for other bodies to intensify the actual occasion of inquiry. This did not remove my own affective capacity from inquiry, but rather allowed the inquiry to be more collectively joyous which manifest in me as surprise. In inquiry, any delaying of conscious thought or judgement would most likely make space for the other.

In this project, I reduced barriers to affective capacity through more-than-human dérive inviting diverse and multiple bodies into inquiry through partnering with place[14]

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[14] Here place is conceived as an overlap of multiple, diverse bodies creating a spacetime nexus of duration. In the case of this project, the place was a nexus of Ajo and the surrounding Sonoran Desert

rather than presupposing a research design and composing with a variety of embodied techniques to include arts-based techniques. Celebrate manifests as a feeling of being part of the process as well as not always consciously knowing and deciding within the process as described in RDE. It also manifests as surprise (in the inquirer and perhaps the readers) when the process concludes indicating that one body did not exclude the participation of other bodies in the immediacy of the experience. Further, these same techniques could be invited into the practice of education in a pedagogy of Celebrate as discussed in this chapter. Perhaps teachers could practice this delay, becoming more a part of the process than its conductor as teachers occupy an analogous position to the traditional researcher in authority and control.

   The Way of Directions. Directions can be considered as creating a rhythm of curious sympathy and focused path taking/making in inquiry and education. Curious sympathy aligns with radical empiricism where all experience becomes welcome as part of inquiry or learning. In other words, inquiry/learning should begin in experience and be allowed to take any directions from within that experience as real and empirically valid. For example, I took two different directions from my experience with Celebrate. In the first, I followed the idea of joyful dancing with others which eventually led me to compose *From ME to We with Collective Joy*. I also followed the feeling of surprise generated through Celebrate which eventually led me to the section discussing surprise, addition, and idiosyncratic suicides. Both elements that catalyzed the direction taking are radically empirical and more-than-human.

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created at a particular time (September 2019-December 2019) by bodies coming together in actual occasions of events.

The other part of the rhythm entails taking off in a direction from those catalyzing ideas. For example, I took two different directions with Precarity also. In my first, I write a ballad about a body that was brought to mind in my experience with Precarity, and in my second, I join Ettlinger (2007) in discussing precarity. In both the Celebrate and Precarity examples, I am moving from a concrete experience– co-composing Celebrate or Precarity- towards abstraction. In other words, I take some small part of one experience and move it somewhere else (abstracting). While this abstracting is necessary for moving, connecting, and sharing thoughts and feelings, it necessarily leaves many parts of the actual experience out (infinite directions not taken).

In Precarity, *The Ballad of the Desert Spring* focuses on a body in connection to the feelings and physical location of the other bodies in Precarity, the spring. I do not focus on the politics of environmental and cultural protection law waivers to build the wall. I could, but I did not. That is left out. With that said, the ballad does include other bodies and thoughts: it alludes to laws (not the waivers); it alludes to endangered animal species; it alludes to the plight of migrants, and it evokes more than just a sense of unease and anxiety. Although it excludes from the original experience, it also provides additional directions not seen in Precarity and therefore is anarchival. Taking the ballad as an experience may provide directions that taking Precarity as an experience did not.

Abstracting necessarily requires conscious thought, but as in the case of the ballad it can evoke more than conscious thought in the audience and the author. This is the power of literary techniques in writing. The essay that accompanied Celebrate stays more in conscious thought. In other words, it employs conscious thought in the making as well as keeps the reader in the rational. In that way, I would consider *From ME to WE with*

Collective Joy to be less anarchival than the ballad. A work that retains more potential directions is more anarchival, but not all works needs to maximize the anarchic and there is nothing wrong with abstracting per se; abstracting becomes a problem if we reify it and cut out other possible abstractions.

This is the beauty of RDE. The art-workings are not precisely abstractions. The way that the art-workings were composed allowed for a reduction from the entirety of the data generating experience– not through abstraction but through random selection. The data bodies co-composed the art-working with me. The art-workings create smaller, more modest experiences. This occurs not by representing or beginning in abstraction of the experiences undergone in Ajo and the surrounding Sonoran Desert, but rather by bringing together actual bodies holding inherited past relating to Ajo and the surrounding Sonoran Desert together through Beauty in an event of co-composing. The naming of the art-workings is an abstraction, but the art-workings remain available to me and anyone else as an immediate experience from which to take directions. This means that although in this project I only take a few directions from each art-working, I could always return for another experience with any of the art-workings and take directions that I left unexplored. Further, as I continue the process of becoming, each time I return to experience the art-workings, new elements and new directions may be available that were not there in the past.

Although *From Me to We with Collective Joy* may be less anarchival than the ballad, when presented alongside the art-working Celebrate it does not stop thought, or only archive. For me the essay was a generative mode of abstraction by evidence that I was able to further Celebrate in conversations seen in this chapter. I wonder if readers

may be more able to move from the more anarchival elements of Chapter Four (the art-workings themselves as well as written texts in more literary styles) to their own radically different directions of inquiry more easily. Meaning that I wonder if readers moving from the essay may be more likely to stick with directions similar to my own and readers of the ballad may go in unexpected directions. This was not part of this project but remains an interesting direction of further inquiry and one that would follow one direction of inquiry found in this project back to concrete experience.

This brings me to the importance of tempo in the rhythm of Directions. We start from the concrete experiences, we take directions which, in inquiry, necessarily include abstraction. The further we go into abstraction and often the way that we abstract (ballad, essay, academic text, and so on) takes us further from the concrete which takes us further from more-than-human involvement and performance. To work as more-than-human, we must return to the concrete, or return to experience often. This means that the rhythm of curious sympathy (directions arising in experience) and path taking/making (abstracting) need to continue with equal importance for each. Inquiry never stops at one or the other, and more-than-human interactions arise more intensely during actual occasions of experience than they do during abstraction– although I am not certain that more-than-human is limited to just one or the other part of the rhythm.

Directions in the spirit of more-than-human radical empiricism would not return to concrete experience from abstracting with a set agenda. For example, I wonder if more anarchival works catalyze more radically different directions of inquiry taken by an audience than do less anarchival works. If I were to move this question forward, I could not definitively say they do or don't (no matter the design I employed), but I would get

more ideas that arise out of the concern for anarchival work and its affective capacity with regard to other inquirers. In the experience, I would be inviting a previously passive Other into inquiry– the audience. Although the audience in this case would be human, our activity together has the capacity to be shaped by more-than-one.

Techniques for Directions include radical empiricism, means without ends, a commitment to include anarchival elements within the inquiry process, and abstracting as taking ideas from one experience and consciously making meaning through logic and connection to existing abstractions. Although empiricism (not radical, but strictly material) and abstraction (through analytical expression only) currently occurs in traditional research, I believe that strictly material empiricism combined with too much time in and limits on types of abstraction (scientific or explanatory) narrows inquiry in a time that we need broader inquiry, the time of the Anthropocene.

The Way of Decline. I consider Decline to be resistance to dominant binary logic. To decline to participate in traditional logics, Decline asks that we enact a relational axiology rather than perform Kant's poor axiology of demarking a moral community. This enactment comes only through actual occasions of experience without presupposition.

In *Ruth's Life/Death*, Ann's prior assumptions and even feelings about Ruth take a different turn during Ruth's funeral. Ann's prior assumptions come from only attending to Ruth as an individual object of her thoughts and feelings and attending to herself as the knowing subject. At the funeral, Ruth, the individual is no longer actually present, but the funeral as an occasion expresses concern for Ruth's life/death certainly included something 'Ruth'. Without the focused attention on Ruth the individual, Anne

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experiences the relationality of Ruth's life/death to other entities that Anne has previously treated as individuals, like Rose.

When we focus our attention on individual bodies and prioritize only conscious thought and feeling driving to make sense, we enact substance ontologies buying into essentialism. In this manner, we may take what we consciously experience in one instance as completely true of all instances, past, present, and future, where that individual body (or worse where that category of body) has acted, acts, or will act. This denies the ontological entanglement of all bodies and sets a rather deterministic frame for any bodies in the world. This can cause us to categorize bodies within value-judgements guided by dominant thought akin to Kant's MC.

We can embrace a relational axiology if we attune more broadly to the vague totality of actual occasions of experiences without jumping to focus on individual bodies– the actual Other and our actual Self that arises as complete in the moment. Instead of rushing to smooth out inconstancies of vague thoughts and feelings that arise in experience in a conscious act of sense making, we could embrace all the seemingly incoherent tendencies, feelings, and 'random' thoughts that arise before we discard them to dominate logic and modes of value judgement.

Staying within the vagueness feels akin to 'letting your mind wander' which Ann experiences at the funeral. She experiences an epiphany, an organization of thoughts and feelings that she herself did not organize. Memories of Ruth and Rose, thoughts of her own life, feelings about herself and others arise in a jumble of experience, and instead of making sense, she participates in the wash of experience without taking control which enacts a less determinant frame. Eventually, she intensifies that epiphany through sense

making, but it is a delayed, secondary action. The occasion of the funeral itself aids Ann in this process as Ruth's physically animate life is absent but the occasion continues to carry some Ruth-ness. If Ruth is somehow still able to affect experience after her bodily death, then Ruth is not properly 'located' in the substance of her body but rather exists also in entanglements manifesting other bodies. The opposite would also have to exist– that Ruth's body when alive included entanglements that manifest 'Ruth' but do not belong to her.

All binaries arise from category and criteria that are presupposed and reified through conscious sense making (to know definitively, positively). In the welter of experience, the attributes of those categories and that criteria are only a few among many; they are additionally parts of a whole made possible through the relations that we eventually excise in abstracting from actual experiences. Jumping towards familiar, known category and criteria, making sense for the sake of efficiency and utility, excises all else that could possibly affect our own becoming differently. This is the entire point of asking, "What else a body can do?". The initial vague totality is an aesthetic experience rather than an epistemological experience. Acknowledging and participating in the aesthetic experience with the same zeal that we acknowledge and participate in during epistemological experience permits a more relational axiology where multiple criteria can co-exist, or no criteria for that matter.

This differs from consciously declining to participate in dominate logics through critic although I believe that both aesthetically declining and epistemologically declining dominate logics can resonate in such a way as to amplify one another. With that said, without the aesthetic experience, conscious critic often holds the oppositional logic as the

only option to circumvent dominant logic, ironically participating in the dominant logic by defining alternatives only in reference to that dominant logic. Our escape hatches from dominant logic appear in actual occasions of experience when we open ourselves up to the aesthetics of the experience prior to conscious sense making to take in all the amazing possibilities in that single moment that already exist.

The techniques enacted in this project, the time spent with other bodies before 'making sense', and random selection of composing partners during RDE, the deliberate imprecision of arts-based techniques, and the lack of presupposed research design allow bodies to move with the vague totality of experience prior to conscious sense making. Including this approach to inquiry remains important to overcoming dominant logics that perpetuate the Anthropocene as well as provides a direction of truly more-than-human inquiry.

The Way of Precarity. Precarity asks first for us to simply acknowledge that the element of precarity exists in all actual occasions of experiences. Second, Precarity asks us to both acknowledge that the future, no matter how well planned or designed, remains precarious but to act despite that discomfort. Further, Precarity asks us to attend to reflexive denials of precarious life to include "homogenization of people and phenomena, legitimized and constructed boundaries" (Ettlinger, 2007, p. 319), and the elimination of space for possible negotiation of difference.

In practice, this means that we should turn our attention to strict boundaries and understand that those boundaries do not protect us from precarity but rather enhance it as it is the "legitimized and constructed boundaries" that enable the homogenization of bodies as well as the eradication of space that could facilitate negotiation of difference.

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In *The Ballad of the Desert Spring*, lines are drawn, and bodies are removed and

destroyed when Men act:

> Men of cloth and of Christ and of mine
> Seeking souls
> And drawing lines
> Few stopping for long driven on by shiny golden dreams
>
> More a means than an end this place of grace
> Saw many Men
> Along the devil's trace
> And no matter their narrow stare, it offered them drinks of life
>
> These times were rife witnessing greed and need
> But water endured
> As life's seed
> Still more Men from other climes poured upon the desert to rule
>
> Men of tools and of trade and of cash
> Shook bloody hands
> Among the ash
> Trading wealth for imagined contours against other's jealousy
>
> Manifest their destiny Men trod the soil carelessly
> And laid spoil
> Whistling cheerfully
> But the water flowed still, so near the vivid cut of the boarder
>
> Men called it order to render to divvy to take
> Blind to those
> Not in their stake
> Dominance their method was diverting flows of water and people

We often call the political hierarchy that humans create order. The ballad points

out that prior to Men's order life flourished without consciously imposed 'order':

> Among basin and range water's invitation
> To myriad creatures
> In webs of relation
> Pup fish and beetles and birds of song lent to this garden of eco
>
> Not id, not ego, not plan, not design
> Proved abundantly thriving

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> For all this life-kind
> In a not-yet-named arid space and forgotten fervid time
>
> This lively shrine lived millions of seasons
> Untouched by thought
> No words, no reason
> Time passes, new creatures arrive shaping a desert homeland

This indicates that order can arise without hierarchical authority built on human thought and design. Order and boundaries that arise between bodies without conscious human design do so ecologically, shaped by difference in unity. I do not claim that immanent order is not precarious, but I am not convinced that hierarchical human order brings less precarity. The final stanza expresses this sentiment:

> But weak human hands cannot bind as does water
> Not nail, not seam
> Not metal in solder
> Has risen to levels of all life force growing and sowing more.

I do not mean to propagate a romantic vision of nature or advocate a return to 'living in harmony' with nature. Here I mean to question the assumption that humans can control precarity as well as question our specific methods of control as seen in the art-working Precarity.

Both the ballad and the art-working suggest that our attempts to control through erecting boundaries that do not emerge within the actual ecology of practices in a specific spacetime (boundaries that are not truly emplaced), lessens possibilities of relationality. The example of the structure of the discipline movement also illustrations that erecting boundaries externally removes possibilities for action and response from the actual sites that contain differences as prescribed methods are enacted.

The ballad suggests that these boundaries actual strip the ecology of practice of important bodies within the ecology of practice eventually amplifying precarity. This process is clearly seen in the Anthropocene in biodiversity decline. With boundaries in place along with the sometime literal loss of bodies, the entire ecology experiences more precarity due to the unavailability of relationality with bodies of difference.

If we embrace the inherent uncertainty of actual occasions and no longer hide under illusions of control, we don't eradicate precarity, but we do leave open more possibilities for negotiating that precarity. Acknowledging that the argument that erecting boundaries and borders (between grade levels, academic content, levels of mastery, methods, landmasses) keeps us 'safe', is false, moves us in the first step of negotiating precarity. I believe that our reaction to precarity may be more productive if we do not reflexively deny it but rather immerse ourselves within ecologies of practice with different bodies to negotiate it.

Techniques of Precarity in this project include inquiry through process design and Manning's (2007) principle of politics of touch. In this case, I not only acknowledged my own inability to predict the outcome of inquiry, but I also accepted the response-ability of allowing other bodies to act on me as a medium of expression that could potentially transform me in ways that I might not be able to imagine. Practically, I understood in this process that I might not arrive at the end knowing exactly what I wanted to know, but I had to trust in the process, the ways, and the techniques to aid me in knowing something.

Other techniques of Precarity in this project include interacting with techniques and content that I was minimally familiar with, like writing a ballad or producing videos as art-workings. Here I had to overcome the barrier of skill level mastery; I literally had

no idea if I could enact the arts-based techniques that I had identified as helpful. This

fear, this uncertainty can stall generative thought by closing off avenues of possibilities.

That I am not an 'artist' or a 'poet' as defined by barriers of entry to disciplines stalled

the process of creation in Chapter Four. I overcame this by relations with other bodies–

genres with historical conventions, example and instructional texts, and conversations

with current artists who helped me understand that mastery only comes from starting the

process and should never bar any body from undertaking the process. In other words, I

focused on the process, not the product and extended my relationality to bodies that I had

not come in contact with previously or intensely. Although the creations in Chapter Four

do not exhibit the elegance of Byron or Negative Land, they do the work of furthering

thought. Codifying boundaries only serves to hinder inquiry and education. We will

never escape precarity, but we can create spaces of negotiation through interactions with

bodies of difference.

    ***The Way of Oasis*.** Oasis asks us to be modest in our abstractions. The memoir

illustrates this modestly with the simple spaces of refuge set up by Palo Verde trees in the

desert. It also allows us to understand that small Oases, modest waypoints, can support a

precarious journey.

    In this way, we might imagine that scattered amidst inherent precarity small

Oases provide limited respite. The water drops include some basics– water, food, shade,

socks, and blankets. They include enough to continue, but not enough for inhabiting.

Further, others construct these oases through sympathy generated by precarity.

    This process differs greatly from erecting barriers as discussed above in Precarity.

This suggests that in place of barriers, we could establish modest waypoints to encourage

the continuation of precarious journeys. In the memoir, volunteers can never be certain that the waypoints are used. In fact, I am certain that not every waypoint is used by every migrant that passes through this stretch of the desert; they remain available but not 'required'.

In this project, Chapter Two acts as a waypoint, or Manning (2020) might say a springboard. I move from scholarly literature, knowledge that exists (what-is) toward what-if of knowing and knowledge that did not exist previously. At a smaller level, historical techniques, like ethnography, arts-based techniques, even conversations with other people, acted as waypoints. None of these eradicated the precarity of the project, but they all made the project possible. Additionally, I do not remain on any one waypoint, I keep moving. For example, I take the research questions that Chapter Two helps me craft to propel thought but do not hold on to them long enough to deaden it. I take ethnographic techniques in less historical directions by starting with them but letting go of old ways when necessary. In other words, Oases as waypoints, move inquiry forward, past the waypoint although the waypoint is always part of the process.

When waypoints become ends as opposed to means, we can become stuck, only repeating processes offered by the waypoints. There is a danger as described in Precarity above in staying on an Oasis. Regarding abstraction, if we do not move off the waypoint despite the precarity of the journey, we end up enacting the fallacy of misplaced concreteness that Whitehead (1926) warns about. We can end up on a 'brutal' Oasis formed by dogma that results in more precarity without negotiating space. I believe that in inquiry and education in the Anthropocene we may be on a brutal Oasis. It is through

experience, or true concreteness in aesthetic experience that we can move away from brutal dogma.

In this project, I stop at modest Oases (like Chapter Two) as well as attempt to create modest Oases, like the written text in Chapter Four and conversations in Chapter Five. The written texts in Chapter Four attempt to abstract from experience so that thoughts may be refined and shared, but they also attempt to hold open thought through techniques of deliberate imprecision of language. Like the water drop sites, I mean them to provide just enough to continue but not enough to stay. I believe that this could also be applied to sites of education, providing just enough what-is to continue but not enough to stay there spurring on the journey with more what-if.

Concluding Ways and Means. The above section offers ways as means for enacting artful inquiry and education. Although clearly related to the ideas in Chapter Four, here I make suggests for how the ways might help guide any artful practice. Although these ways arose from process inquiry, I do not believe their origins limit their future application to process inquiry only. With that said, I do believe that they will best resonate with more-than-human theories and practices.

Employing ways, or guiding principles, to practice rather than following procedures work as Beauty did for RDE. The principle of Beauty as Intensity Proper guided the compositions by asking that the bodies involved express a shift in meaning that changes patterns of conflict to patterns of contrast (Shaviro, 2014; Whitehead, 1967). As such many specific techniques could be called upon but were not required such as split screens in Directions or the mixed audio present in all the art-workings.

The specific ways above include Celebrate, Directions, Decline, Precarity, and Oasis. The way of Celebrate asks that the researcher employ techniques to delay their own ability to affect the process of creation. The way of Directions asks the inquirer to create a rhythm between possible directionality, taking/making directions, and possible directionality. The way of Decline asks that inquiry include aesthetic experiences alongside of epistemological experiences. The way of Precarity ask the researcher to focus on the process, embracing the precarity inherent in any journey with thought as well as to eschew boundaries that reduce relationality. The way of Oasis asks the researcher for modest and numerous abstractions. These ways certainly can work together, for example the delay in Celebrate can help to create the rhythm of Directions and open up inquiry or learning to the aesthetic experience of Decline. Precarity and Oasis can bolster one another, with the inquirer or learner trusting in the process despite the inherent unpredictability while alleviating that uncertainty with numerous and frequent modest abstractions.

Limitations in Theory

When undertaking ontology to guide methodology, some conceptual questions become closed. For example, with regards to theorizing place, Whitehead's (1978) theories asked me to treat place as a nexus of actual occasions among bodies creating specific spacetimes. The duration of this nexus does not depend on any one body but does manifest as different spacetimes that coalesce around 'Ajo-ness', but Ajo today is not *actually* the Ajo that I lived in, properly speaking from process. I took this as given in this project although the question could remain open. The opening would have to come at a different level than how I performed this project; I would have to conceptually knit

together Whitehead's theories with more specific theories of place, then engage in radical empiricism to see how those theories respond in concrete instances of experience. I elected not to start at that level, but instead only follow Whitehead where his theories took me as I partnered with place based on the suggestions and hints from ESE. Thus, I offer no theory of place (although place was a springboard for the project) apart from Whitehead's version of place that provided multiple insights on working as more-than-human.

Although this project embodies the concepts that it announces, the raw newness of the process inquiry dictated a fragmented, stepwise process of improvisation that I see as both a strength and a limitation. I began in the midst of constraints of normative research. For example, the literature review of Chapter Two is quite typical although the following chapters are not. When I began the process of inquiry, it was before I had invented within process inquiry, and as such it moves into the process style with stops and starts. At this point in the process, I can easily imagine a different process of beginning that was unavailable to me in the past. Although this makes the point that the new can arise from within the constraints of the old as well as supports Manning's (2020) supposition that the anarchive needs the archive as a springboard, this particular process does not enact a good example of process inquiry from the beginning. In other words, if I were to undertake process inquiry again, the beginning stages of the project would be different, so as an example for other researchers wanting to enact process inquiry it remains only partial.

Although I demonstrate as well as theorize around the movement between aesthetic and consciously logical ways of knowing, this project focuses inquiry on the

aesthetic experience as this is where work is most needed. I do not consider this a limitation precisely, but I want to note invention around the consciously logical experience is backgrounded. My point is that the project should act as an example of inquiry in aesthetic experience, but it should not foreclose applying Whitehead's theories to consciously logical experiences of knowing.

Limitation in Practice

The limits of practice also stem from the raw newness of employing Whitehead's theories specifically as methodology. The academic ecology of practice around inquiry and dissertating rests on assumption that Whitehead's theories strafe against. As such, practices typical of academic research as well as dissertations are unwelcoming to process inquiry. The practices, which have become procedures include the dissertation formatting rules and the Institutional Review Board (IRB) procedures.

As mentioned above, the chapters progress with more improvising and freedom within constraints of normative research practice. Although the typical dissertation format of five chapters, each with their own pre-dictated purpose, provided an enabling constraint, it forced a type of linearity upon the writing that remains incongruent with process inquiry. By enabling constraints, I mean that the overall structure of the dissertation allows for more conceptual legibility. For example, the known expectations of the sections of the dissertation allowed to me to show difference without having to detail what is typical, and this worked well in Chapter Three. By Chapter Four and Five, I found the characterization of findings and interpretation of findings chaffing, but the presence of the first chapters kept me within typical structure. Further, rules around font

style and size reduced media of expression in writing further constraining points of departure.

The IRB process assumes that research design occurs before the process of inquiry begins and further, that the details of that process can be completely known a priori. These assumptions arise from objective epistemologies embedded in ontologies of substance and essentialism which act almost hostilely to alternative epistemological frames (Staller, 2013). Clearly, inquiry relying on Whitehead for methodological guidance does not fit within those assumptions. Although I did my best to predict all types of procedures that I *might* employ that dealt with humans during inquiry through suggestions in extant literature, I was unable to use some techniques in creating the art-workings during RDE.

I applied for approval of several types of interviews including, storytelling, walking, arts-project, and shadowing, and for each type I asked for approval for both individuals as well as groups. I performed most of these, but it was the structure of consent that barred me from using some of the 'data' in different ways. During RDE, parts of interviews were randomly selected to be composing partners. Although I did include them conceptually, I would have liked to include them physically by using the audio in the art-workings, but I had failed to predict this usage in the application because I had yet to invent RDE so was unable to include them in this way. Additionally, I did not include minors in my study as my criteria for selections (anyone living and working in Ajo) was considered too broad by the IRB to justify including minors as it was not a study about children specifically. Although I was not basing my inquiry in schools, I did encounter minors in my everyday life so data bodies around minors remain somewhat

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absent (I could take field notes). I am not alone in these experiences as many researchers have written about tensions between their methodological approaches and IRB requirements and the problematic restraints placed on inquiry by positivistic assumptions (Boser, 2007; Lincoln & Guba, 1989; Staller, 2013; Swauger, 2009). Many of the authors cited previously were simply working in traditional qualitative methods, not inventing new methods. The animosity traditional non-positivistic methods experience at the hands of IRB becomes amplified when radically new assumptions drive the creation of new methodology; I see the IRB process as hindering methodological research specifically, slowing the process of exploration and experimentation around new methodologies which base their work on alternative epistemologies.

Continuations of Inquiry

Although this project contributes to concerns around education and inquiry in the Anthropocene with possible ways to move both in alternate directions not based on logics that brought us the Anthropocene, those concerns remain far from exhausted. I believe that not only should more methodological and education inquiry be done with the process theories of Whitehead, but I also believe that more methodological and education inquiry needs to be done to answer Law's (2004) call for "broader and more modest methods" with any theories that do not reify assumptions of the passivity of the Other, a division of labor built on disciplines, truth without beauty and politics, and a "bias against process in favor of product" (p. 152). My own work will continue under the influence of Whitehead's process theories, and this project, working in the Way of Directions, illuminates several avenues of future inquiry. Generally, they fall into beginning in theory and beginning in experience.

Beginning in Theory

Directions that begin in theory would proceed in two major ways. First, particularly with regards to education, well known theories can be deconstructed and reconstructed through Whitehead's (1926, 1929, 1938, 1967, 1978, 2004) theories. For example, Dewey's (1920, 1938) educational theories are well known to advocate experience as the base of education. This provides a remarkable point of overlap with Whitehead, but Dewey theorizes experiential education with much more continuity and substance than process theory tolerates. From the point of overlap, Dewey's theories could be reorganized under process. Additionally, it might be fruitful to subject social constructionism to a similar theoretical reorganization around ontological process. I believe it might be possible and productive as a large portion of education research currently works under this theory and process philosophy may be able to loosen the 'construction' from humanistic, mind-body theories.

Working to realign well-known theories in education to process would provide a bridge from current thought to process though and would provide a way to include much of the productive work done under those theories. In other words, deconstructed and reconstructed current educational theories that have points of resonance with process through Whitehead's theories would result in a new theory of education.

The second theoretical process would not deconstruct and reconstruct but would investigate resonances between current theories driving inquiry and Whitehead's theories. For example, I find little outright contradiction between Whitehead and Foucault at present. I believe that the two theorists may be quite complementary to one another where Whitehead provides points not provided by Foucault and Foucault providing

points Whitehead never addresses. Whitehead never explicitly discusses power, and I believe that Foucault's notions of power to be relational enough to fit into process philosophy. Whitehead's philosophy remains remarkably open, and I believe that many theorists not based in substance ontologies would extend our ability to move Whitehead which leads to yet another possible project, that of identifying other theorist and theories that resonate with Whitehead.

Beginning in Experience

The future work that would begin in experience comes directly from this project. Methodological questions include exploring the anarchive through audience response, taking on new more-than-human partners in composing through RDE, refining specific data generation technique for RDE, problematizing the difference between data collection and generation in process inquiry, and developing interactive platforms that allow participation in RDE Questions around education include exploring learning through the ways suggested in Chapter Five and exploring the line between inquiry and learning as well as applying aesthetic inquiry to classroom learning.

The methodological conversations with Directions as wells as the presentation of art-working and written text in Chapter Four imply that I expect the audience to have an experience. I would like to inquire into what kind of experiences the audience can have as well as extend this to how the audience might create art-workings and texts in relation to those experiences. In this project the feed forward capacity of the art-workings is only explored through my own continued work, but I believe that the anarchival openness of the art-workings without my own body physically involved remains an open question.

This type of inquiry might help us understand more broadly how aesthetic experiences further thought.

With that in mind, I would like to develop a platform that makes the art-workings, text, and even the other generated data bodies from Ajo (those not seen in this project) available and interactive to a broad, outside audience. This project would serve to understand anarchiving more broadly, but it would also provide processual, aesthetic thinking tools to a general audience. Although I have not worked out the technical specifics, I imagine that this would be a digital platform that in some ways allows a digital more-than-human dérive. It might simply be an interactive website or a more complex digital environment that is game like. This type of platform could certainly be a partner in my own inquiry, but it would also mobilize process thinking to a broad audience.

There are two specific data generation techniques that I experienced in this project as needing more exploration, interviewing and taking field notes. In Chapter Three, I mention that I interviewed human participants and used parts of their interviews that were randomly selected; I did not treat the interviews as one would in phenomenology or narrative research. I underwent the experience of speaking with people who have various inherited pasts that relate to Ajo, and those experiences coalesce within me as well as remain in their interview audio and transcription For example, one of the data bodies in Directions came from an interview where the participant said, "I don't know where people think they are going", with regards to political strife, particularly the Trump administration. This clip clearly helped shape the art-working and the idea of Directions. Although I believe that my approach to the interviews during generation and RDE was

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congruent with my theories and did further thought, I think that use of human interviews in more-than-human inquiry remains an open question and is worth a project focused on such.

Additionally, writing field notes needs more attention as a specific technique. I looked to both ethnography and qualitative research generally for guidance on field notes and did include them in this project. In fact, my use of field notes was congruent enough with my theories that I was able to use one event's field notes in Chapter Four with Oasis. I melded techniques of transcriptive field notes (when appropriate), descriptive field notes, philosophical field notes, and journal/diary-style field notes in my writing of field notes during data generation. I wonder if the historic idea of field notes perhaps constrained possible directions of writing in the field. For example, I did not write poems, short stories, or essays. I remained realistic or philosophical in my writings. I wonder what might come if each day after an event, I would have written in more literary styles– taking the thoughts and feelings of a real event in new directions like seen in Chapter Four's written text. Would insight be lost; would insight be gained? I did create a few art-workings, sketches and drawings that were added to the database of generated data available for random selection, but those did not surface in this project.

So, there are two questions here. First, when we began with historical bodies and extant scholarly literature, are we directed too narrowly? For example, I theorized and enacted interviews and field notes differently than ethnography typically advises, but I did not experiment further, for example with fictional field notes. Second, is there an actual difference between data generation (collection) and data engagement (analysis) in process inquiry? Although I bring up the similarities between data collection and data

analysis in process inquiry in Chapter Three, I had no prior scholarly basis with which to move from with regard to collapsing or combining those typical phases. I relied on retheorizing known techniques that are typically enacted in experiential research. I simply do not know all of what might be possible in process inquiry as I worked from such raw newness. Now that I have undergone process inquiry, I can pursue these more specific questions to further develop new possible techniques within process inquiry.

I believe it would be fruitful to undergo process inquiry and RDE with other more-than-human partners. For example, other places will provide new ways with regard to education and the Anthropocene. As aesthetic knowing remains a type of inquiry, more partners will not only provide new insights, but will also contribute to modifying process inquiry and RDE. I believe that best way to refine and explore process inquiry and RDE is to enlist other more-than-human partners. For example, other towns, other bioregions (not the Sonoran Desert), and other places with different relationship to the crises of the Anthropocene or education specifically- perhaps a place that thrives as opposed to struggles as does Ajo, or places that struggle differently such as a place operating with more environmental toxins. Additionally, digital spaces may be extremely generative more-than-human partners offering new insights into process inquiry, RDE, and education in the Anthropocene.

With regard specifically to education, the ways suggested in this project could be introduced as ways of learning in practice. These ways could be incorporated into learning experiences, and I believe that this would not only provide insight into the connection between inquiry and learning, but also help to add concrete experience to the theoretical approach I suggest above for retheorizing learning. Of course, given the points

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made about schooling in educational conversations, this project would best fit in what we currently consider informal learning spaces. I believe that this type of project would include a partnering and co-composition of ideas resonate with participatory research, but perhaps more radically more-than-human.

Above I suggest some future projects and questions that would continue from this project. I limit the suggestions to projects that I am interested in pursuing, but anyone interested in more-than-human inquiry might find even more numerous and diverse directions for future research. As mentioned before, although this research is framed in process philosophy, it still has implications that resonate with any more-than-human research. The very nature of process inquiry catalyzes new Directions.

Embarking on an Adventure of Ideas: Re-forming Ecologies of Practice

If we take seriously that the Anthropocene manifests not only from an environmental crisis of carbon, but also from a crisis of imagination and critical thinking, then "bolder adventure is needed– the adventure of ideas, and the adventure of practice conforming itself to ideas" (Whitehead, 1967, p. 259). This dissertation participates in an adventure of ideas and offers new techniques for practicing differently. In this final section of the dissertation, I challenge the readers to embark upon an adventure of ideas specific to their own ecologies of practices. Following, are a number of provocations meant to empower researchers and educators to identify and engage with the minor gestures that exist in even the most rigid and traditional empire of functions. Although the challenges are written to accompany one another, readers may choose to engage with any or all or to engage in these challenges again and again.

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Explore Your Ecologies of Practice

There exists no other researcher or educator that is engaged in precisely the same way that you are in your own ecologies of practice. Often, we reiterate the same practices due to the forces and lures of the dominate gestures within our ecologies of practice. To step outside of those dominant forces, I suggest a process of developing concerns from actual occasions of experience as a first step. In this section are actions that help to develop those concerns within experience.

Actual Occasions of Experience

Write a series of at least three vignettes that describe events in your professional or personal practice. Use anecdotes of spacetimes that you have experienced over the course of your practice that are intense and surprising. Remember that vignettes are a small slice-of-life, and the series of vignettes should feel more like flipping through a photo album than entering a full narrative.

Some questions to ask in forming your vignettes:

1. What events have erupted in the course of my practice that have made me feel intensely (either good or bad)?

2. What events have surprised me the most?

3. When/Where in my practice have I experienced rigid, legitimized boundaries that narrow the space of negotiation in my practice where relations are presupposed and subject to specific methods?

4. When/Where in my practice have I experienced the use of spectacle where I or others are asked to engage passively engage in representation rather than experience?

5. When/Where in my practice have I experienced homogenization of bodies into general categories?

Explore Concerns Regarding Your Practice.

Reread your vignettes feeling for concerns. Remember that Shaviro (2014) explains: concern implies a weight on the spirit. When something concerns me, I cannot ignore it or walk away from it. It presses on my being and compels me to respond. Concern, therefore, is an involuntary experience of being affected by others. It opens me, in spite of myself, to the outside. It compromises my autonomy, leading me toward something beyond myself. Concern is relational, rather than absolute…. (p. 15)

Write about your concerns regarding your practice. Begin your writing with the first nagging thoughts and feelings about your practice that flicker into your awareness. Let go of structure and form in the first iteration of this writing. Use the act of writing to explore your concerns first before trying to comprehensively articulate them. This section should begin to abstract from the actual occasion of experiences in the vignettes, but you may find that new vignettes arise in this process. If so, add them to the vignettes above. It is okay if your concerns seem nebulous, varied, or difficult to articulate.

Experiment with New Ways in Your Practice

Re-watch each of the multimedia art-workings in this dissertation. For each art-working answer the following questions in writing.

1. Do the feelings and thoughts that arise as I experience this art-working occur in my practice?

   a. If so, when/where do they occur?

b. If so, how do they occur, what bodies participate in this idea during my practice?

c. If not, would I like my practice to activate these feelings and thoughts?

    i. If so, how are bodies affectively muted in my practice? Are there borders and boundaries, rigid categories, or addictions present that excise these feelings and thoughts?

    ii. If so, how can I shift my practice to create space for these feelings and thoughts? Would reading with hypothetical sympathy help? Would introducing new bodies help? Would muting my own intention-volition-agency help?

Techniques for Engaging in Minor Gestures

The next step to remixing your practice is to create with other bodies in minor gestures. Holding your concerns and questions that arose in the above step, engage in the following activities to find novel openings in your practice and begin the creation of a new ecology of practices.

Randomly Exploring Your Place of Practice

Over the next week, generate bodies for future collaboration during your practice. Take pictures, notes, sketches, video or audio recordings, or gather artifacts during your practice. Choose generative techniques (pictures, video, sketching) that do not pull you from participating in your practice. For example, if you are in the classroom, you may hit an audio recording for a minute or snap a few pictures as your students work. To ensure an escape from reified or common narratives of your practice, use randomly generated

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times to guide when/where you generate these bodies. Following are instructions and tips for this challenge.

1. For the next week, randomly generate clock times for data generation. This can be done by using a random clock time generator such as the one found at RANDOM.ORG. Generate at least 5 times per day and use one-minute intervals if your generator gives you that option.

2. Set notifications in your smartphone for those times.

3. During those generated times, generate bodies in experience through ethnographic or literary note taking, photo, video, audio, artifact collection, or sketching/drawing. Choose whatever method is most appropriate to the spacetime of your practice during the notified time.

4. Keep your generation periods under one minute. In other words, only take photos or write notes for one minute. It will also be helpful for future exercises to keep video or audio recordings to no more than 20 seconds.

5. Participate in a dance of attention during body generation. This means that you should feel free to generate bodies without presupposition of an idea or concern. Whatever interests you the most in the moment of the event should draw the aim of your camera, the motion of your pen, or the focusing of your audio recording device.   Remember the principles of radical empiricism, anything that manifests during that event can be considered important to that event.

6. Create an archive, a file on your computer or smartphone or a physical file with artifacts and print outs of the week's generated bodies.

Collaborating with Place as a More-than-Human Practitioner

The broader community within which you practice can also provide wisdom and collaborative action. During the same week that you generate bodies during practice, generate bodies with small places in your local community. Again, to avoid reifying a narrative in which you already participate, choose these places/spaces randomly. Go to at least one random place a day over a week. While there, explore the space, participate in any way that you can, meaning that you might walk around the space, sit in the space, or participate in an event that is going on in the space. During your participation, generate bodies (photos, video, audio recording, artifact gathering, ethnographic or literary note taking) through practicing a dance of attention. Let spontaneous interest guide your generation. Following are instructions for this challenge:

1. Randomly generate a place of collaboration that is in your community. You may search for generators online or use Randonautica, a smart phone app that allows you to choose a radius of random location generation. If you use the app, make sure to select blind spots and pseudo to get truly random places.

2. Travel to the random place and spend at least 15 minutes there exploring and radically 'listening' without presupposing what this place might 'mean' to your practice or concern.

3. During those 15 minutes, generate bodies through any techniques that fit with participation at that location (photos, video, notes, artifacts, audio).

4. During body generation, practice a dance of attention and radical empiricism as described in step five in the above challenge.

5. Add these bodies to the archive you created in the challenge above.

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Remix Your Practice

Make at least three remixes from your week generating bodies. I encourage you to remix digitally, making a multimedia art-working, but if analog techniques call to you, collaging and selecting music to play while viewing will work also. For digital remixes, you will need a video editing software. This software should support layering of images, video, and audio to enable the most mixing. If you already have a video editing software, great! If not, I suggest the KineMaster App for use on your smartphone or its sister computer version from Wondershare Filmora. You may also find that free video editing software currently exists on your computer, or you may find more options by searching online.

Follow this process to make a remix:

1. Number all the individual bodies in your archive.

2. Randomly select six bodies using an online generator. For this step simply type 'random number generator' into the Google search bar. In the Google generator set your min to one and your max should be the number of all the bodies in the archive that you have created. Hit generate six separate times and note which numbers are generated.

3. Find the bodies that correspond to those numbers in your archive. Print out pictures, transcribe audio (or write a note about what the audio is), and gather artifacts.

4. Create an engagement board of the six bodies placing it somewhere you will see it every day.

5. Occasionally, write thoughts, notes, and feelings as you encounter the engagement board. Feel free to rearrange the print outs on the board. Spend at least three days of engagement with each set.

6. Begin the making process. Play with the bodies digitally. Layer them in different ways, add filters and effects.

7. Practice Beauty as Intensity Proper as you play. This means that you should not try to eliminate any of the bodies because they don't seem to fit. Play with the bodies in different ways until you and the bodies create an idea (a concept with a feeling) that provides a thread through all the randomly selected bodies. You are looking for a pattern of contrast that touches one idea rather than how bodies oppose or conflict with one another.

8. Tip- If you are having trouble finding an idea with a set, feel free to add new generated bodies that come to mind but do not eliminate any bodies.

9. Add music to your remix. If you can compose music, wonderful, compose as you remix. If you do not compose music, using both the idea and literal parts of the generated bodies, search the Free Music Archive found online. The key words you use to search should be related to your idea, for example when searching for music for precarity I used words like precarity, uncertain, anxiety, unease. Also, you might see lots of water or trash in the images, those can be used to search also.

10. Choose at least two musical compositions for your remix and add them to your new digital art-working. You may want to layer them or cut parts of the songs to

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accompany parts of the visual remix. You can also layer the music with sounds

that you record during body generation.

11. Find a feeling of satisfaction. In this play, an entirely new body, a remix will

    arise. This new art-working will move the idea that is related to all the bodies in

    the mix but will emerge as more than the sum of those bodies. The art-working

    and its related idea should surprise you in some way, diverging from what you

    thought you might find in the course of your practice.

12. Tip for satisfaction- The vague feeling of accomplishing a new remix can come

    about with small changes like changing a color, speed, or layering or reiterating

    an image.

13. Save your art-working, naming it as the idea that encompasses Beauty as Intensity

    Proper for these bodies.

14. Do this process with three different randomly generated sets of bodies to make

    three separate art-workings.

Anarchiving: Feed Forward Ideas in Writing

Engage each of your art-workings through text. Chose an art-working to respond

with a ballad. Chose another art-working and respond with a short story. Chose an art-

working and respond with a talk poem. These three different genres help to explore

different temporal aspects of your practice. A ballad allows you to explore the inherited

past, the short story can allow you to explore simultaneous presents, and the talk poem

can allow you to explore possibilities of anticipated futures.

Ballad. For this challenge, you will write a ballad as a history of one body that in

some way relates to the idea or bodies in one of your art-workings. This history should

be true, and you may have to research the story that will form the plot of your ballad. Although many ballas play with form, for this writing use the traditional form. Make up your ballad with a series of four-line stanzas where each stanza moves the story along. Within each stanza at least two lines should rhyme (1 and 3 or 2 and 4) and across stanzas the same rhyme scheme should be used for every stanza. The tighter structure provides an enabling constraint paired with the true history. Following are instructions and tips for writing the ballad.

1. Get acquainted with different ballads. Listen to and read the lyrics of Bod Dylan's songs *Hurricane*, *The Lonesome Death of Hattie Carroll*, and *Ballad of Hollis Brown*. Read *The Rime of the Ancient Mariner* by Samuel Taylor Coleridge. Reread *The Ballad of a Desert Spring* in this dissertation.

2. Choose a focal body for the ballad. In mine it is a spring. The body can be human or non, but it must be a body with a known history.

3. Re-watch your art-working as you choose the body and write. This could be a body in the art-working itself or a body that is brought to mind that is never shown in the art-working but related to the idea.

4. Write your ballad.

Short Story. To begin this short story, write a scene that comes vividly to mind as you watch the art-working you chose for short story response. Center a story around that scene or event but add in other characters, scenes, and events from both your life experiences across time and your imagination. This story is meant for you to play with the idea of the art-working through various scenes and characters. This fictional story allows you to bring any thoughts, feelings, and experiences to the idea.

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Talk Poem. A talk poem is a stream of conscious form of writing done in relation with ideas, other texts, and experiences. Instructions and tips for the talk poem are as follows:

1. Re-watch the art-work you chose for this response, reread the vignettes and concerns you wrote earlier, and re-engage with one section of this dissertation– this could be one of the art-workings or one of the sections like Eroding Anthropocentricity Ontologically, Politics of Touch, or Surprise! Idiosyncratic Suicides and Fighting Addiction. Just choose a small section of the dissertation that you experienced intensely.

2. Have all those bodies (your art-working, vignettes, concerns, and one dissertation section) available to listen to or read as you write your poem (open on your computer or printed out).

3. Start by writing the first thing you are thinking.

4. Make a new line when you pause in thought or speaking.

5. Tip– It helps to say what you are thinking aloud and write it.

6. Glance between the above bodies as you write.

7. Tip– Don't edit out thoughts, feelings, or expressions; if it comes to mind express it in the poem. Don't use punctuation or capitalization unless you automatically include it.

Provocation Conclusion

Try performing one of the ways that come from your art-workings in your professional or personal practice. Keep your remixes and archives. You can return to them as often as you like, and they should provide you with ways to open practice to

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novel and currently unimaginable ecologies.   Additionally, the process above will

always create new ideas as your practice arises in an ecology of constant flux.

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APPENDIX A

WHY AJO?

In this section, I will discuss the title question, but first, I would like to elaborate on this section's placement in the dissertation. Ajo, Arizona and the surrounding Sonoran Desert would normally be considered the setting of my research. As such, focused information about the setting would typically be delivered in the methods section of the dissertation. Providing detailed information about setting in a qualitative research study means to provide the reader with context pertaining to the phenomena studied. These details would help a reader interested in a similar phenomenon to understand specifics around potential environmental influences on the phenomena that may or may not apply to the reader's own context of interest (Creswell, 2015).

As explained in the methods section of the dissertation, Ajo and the surrounding Sonoran Desert were not the context of a phenomena nor were they the object of the study. They were my partners in inquiry. Information such as population (2,841), poverty rate (19.1%), and median age (50.5) seems to add little to a process inquiry project (U.S. Census Bureau, 2018). I believe that much information is conveyed about my partner in the creations in Chapter Four without the typical categorization that comes with writing a section on setting. Just as I present the creations in Chapter Four without much meaning telling, I wanted to let the reader get to know Ajo and the Surrounding Desert through their action in the inquiry much like a reader gets to know the human author of inquiry. I discuss the question, why Ajo, here, in the Appendix, because it did not seem to fit in the typical section of setting, is ancillary to the action Ajo and the surrounding desert takes in Chapter Four, and, in theory, this project could have been done with any place. With that said, I could have chosen a different partner for inquiry, so the inevitable question becomes, why Ajo?

I get this question often, and there is quite a lot implied when it is asked. Some

people have been to or driven through Ajo, AZ, and they have asked this question with

incredulity. Their tone and slightly disgusted and perplex look indicate that they mean: I

have seen Ajo, and I don't think there is anything of value there. Why would anyone

choose to do research in Ajo? Others ask it from a scholarly standpoint, and usually they

mean, out of all the places you could choose, what makes Ajo so well suited for your

study?

I believe there to be a paradox of place in this type of inquiry. Interestingly, the

place both matters very much and not at all. The question, why Ajo, reminds me of the

questions, why did you marry your spouse, or why is that person your best friend? Of

course, there are reasons that we can give, but there exists something ineffable about the

attraction to another that well-argued reasons just cannot convey. My spouse and my best

friend both strongly shape my life as it currently exists, but I would still have a life

without them, just a very different life. This is how I think of Ajo, AZ and the

surrounding Sonoran Desert. This specific project would not be the same without them,

but a process inquiry with place could easily be done without them.

One reason that I chose Ajo is because I have never lived there, but it resides in

the Sonoran Desert, with the same biotic and abiotic features as much of the state of

Arizona where I have lived for more than ten years. Place-based education is grounded in

the local place, and I wanted to keep to that principle in inquiry. Not having lived there

seemed a boon to a more dynamic dance of attention as my own surroundings in the

Phoenix Valley have begun to hum in the background of my life, a phenomena Tuck and

McKenzie (2014) warn about in researching place; we cannot let place just be a setting

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for human events. Taking this into consideration, I felt someplace new but not completely foreign would be helpful.

I did not arbitrarily pick a place on the map within the confines of the Sonoran Desert; I became aware of Ajo two years prior when I attended the 2018 Rural Policy Forum in Wickenburg, AZ. The Arizona Rural Development Council holds a conference every year where rural Arizona town leaders, activist, and community organizers speak to exchange ideas about sustaining their small towns.

Although Ajo, AZ is considered rural and it was, in part, the size that attracted me, I did not think that a rural area would necessarily offer more (or less) insight as an inquiry partner. I chose a small place as my prior experiences have led me to believe it is easier to get involved in a smaller town than a larger town. Really, I had a fifty-fifty chance of that being true, but it turns out that I was correct. This was not only supported by the fact that I was able to easily volunteer and attend events in Ajo, but also several of my participants confessed that being able to jump in and be involved was one of the aspects they enjoyed about Ajo. One woman who is a long-time winter resident says that "we've been in Montana for 37 years, but never as involved as we have been in the years that we've been here (Ajo) because we can be."

Her statement reflected in my own volunteer experience in the Phoenix Valley. The two organizations that I have volunteered with have a rather bureaucratic process for entry. The first requires that you attend a scheduled orientation meeting, receive a volunteer identification, and sign up for volunteer times online. The second requires that you take a 60-hour course prior to volunteering with their organization. In Ajo, one of the organizations that I volunteered with directed people who wanted to volunteer to

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"stop by our office and meet our friendly staff" (International Sonoran Desert Alliance [ISDA], n.d., para. 1), this being the only pre-requisite for volunteering.

Additionally, I wanted to work with a place that struggles with some of the issues that Jared Diamond (2005) mentioned in Collapse: climate changes, hostile neighbors, environmental degradation and over extraction, fragile environments, and lack of alternative energy and material from either lack of trade or due to obstacles of distance for gathering. Also, I was interested in a partner that struggled to exist within the neoliberal status quo. These pressures are the combined pressures of the Anthropocene. I framed my dissertation work with the Anthropocene and given the predicted decline of resources due to environmental changes, issues of mass migration, and food shortages, I was interested in places that had already experienced economic decline through extraction. This interest may seem like it would narrow the field quite a lot, but that is not the case in Arizona.

Mining shaped many of Arizona's small towns and ghost towns with several small towns across Arizona originating as mining camps (Fallows, 2015). Mining districts in Arizona predate Arizona's recognition as a territory in 1863; in fact, there were several claims made prior to the Gadsden purchase of 1854 (Ascarza, 2016). But the purchase marks a boom in mining district development (Tenney, 1927). Momentum from earlier claims accelerated in the late 1890's with the growth of the electric industry. Copper filled Arizona mines, and large mining companies began to develop mining camps into full-fledged company towns (Tenney, 1927). Ajo is one such town.

Arizona boomed with mining until the 1980's, then came the bust (Fallows, 2015). I found no shortage of small Arizona towns with a history for mining prosperity

followed by a declining economy once mining was no longer profitable. Many assume that the mines 'ran out', and although that happened in a few places, global competition forced mines to close as they could not produce copper at a price they could sell profitably. In fact, in several former mining towns, the mine still exists and is owned by a mining company that holds onto the mine in the event that mining in that local can be made profitable again.

Of course, Arizona houses several other small towns that would fall into a boom-bust narrative, and I met individuals from Clarksdale, Parker, Globe, and Bisbee at the forum mentioned earlier. Each place had their own set of concerns and cares that would have provided a variety of insights as an inquiry partner. So again, why Ajo?

Although Ajo's past exhibits the conditions that may provide insights about post-boom sustainability, I do not consider Ajo as representing a type of town. I thought that a town with Ajo's history might make an interesting and dynamic partner around concerns for the Anthropocene. I also do not think that my human agency, volition, and intention deftly chose Ajo for my research. My philosophical commitments which are presented in detail in the above chapters, led me to believe that Ajo lured me as much as I 'chose' it.

Of the towns that I was considering, I visited Ajo first. I thought it would be helpful to go to the place before I committed to researching there. My family and I drove two hours from Phoenix to Ajo on a Saturday. Upon entering Ajo for the first time, I was struck by how unapologetically desert Ajo was. There were saguaro, cholla, prickly pear, creosote bushes and not a grass lawn in sight. Ajo and the Sonoran Desert were closely aligned.

We stopped in the historic town center, an open grass plaza surrounded on three sides by breezy, arch ladened walkways leading to shops, the library, the post office, and the visitor's center. That day on the only non-desert landscaped lawn surrounded by imported palm trees, vendors dotted spaces along the sidewalk selling cookies, pottery, jewelry, and various other sundries. It was not a large collection of booths, perhaps fifteen total, but as we walked along, people engaged us in conversation.

An older woman stopped my son and I and asked my son if he had ever seen barley. She proceeded to share stalks of barely with him teaching him how to separate the grain from the shaft. We walked away with several stalks to practice on. Further up the row of booths, a passionate woman explained the planned rate hike on utilities to my husband even though he already admitted to not being a resident of Pima County and unable to sign her petition.

My son and I sat on what seemed to have once been a bandstand gazebo eating homemade frittata and watching people mill about the farmer's market, and he said to me, "Everyone here is so nice, I really like it here". In the five hours we spent in Ajo, no less than four people tried to convince us to move there.

Ajo worked its charm on me from the ubiquitous presences of the Sonoran Desert to the built historic environment and the friendly people. It called to me, lured me. Together these factors coalesced in a more-than-rational way to make that cut in reality that we call a decision enabling new becomings.

I am not alone in experiencing this lure of Ajo. Several of my participants told me stories of accidentally ending up in Ajo and staying. One man who had been living in Ajo since the 1960's stopped in Ajo on his way to a job interview in Tucson, met a man

who owned a garage, got a job, and stayed. Another woman's car broke down while she was visiting a friend in Ajo, she found a job, and stayed. Yet another couple was searching for an open RV park as their routine RV park in another town was full; they found Ajo and bought a winter house within 48 hours of arriving. One participant described the events that led to her living in Ajo as "magical and serendipitous", and there were definitely magical and serendipitous elements in my choice of Ajo as an inquiry partner.

APPENDIX B

INSTITUTIONAL REVIEW BOARD PROTOCOL APPROVAL

APPROVAL: EXPEDITED REVIEW

David Carlson
Division of Educational Leadership and Innovation - Tempe
-
David.L.Carlson@asu.edu

Dear David Carlson:

On 10/1/2019 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Creating Alternative Narratives in the Anthropocene: Becoming with Place
Investigator:	David Carlson
IRB ID:	STUDY00010663
Category of review:	(6) Voice, video, digital, or image recordings, (7)(a) Behavioral research
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Protocol_Storytelling_Interview_Bowers_2019.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Protocol_Project_Interview_Bowers_2019.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Storytelling_Interview_Consent_Bowers_2019.pdf, Category: Consent Form; • Walking_Interview_Consent_Bowers_2019.pdf, Category: Consent Form; • Place_Narratives_Bowers_2019.docx, Category: IRB Protocol; • Protocol_Walking_Interview_Bowers_2019.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • General_Activity_ Consent_Bowers_ 2019 .pdf, Category: Consent Form;

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	• Protocol_Shadowing_Interview_Bowers_2019.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Video_Consent_By_Stander_Bowers_2019.pdf, Category: Consent Form; • Face-to-Face Recruitment Script.pdf, Category: Recruitment Materials; • Email Recruitment Script Community Project Creator.pdf, Category: Recruitment Materials; • Protocol_Focus_Groups_and_ Interview_Bowers_2019.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Focus_Group_Consent_ Bowers_2019 .pdf, Category: Consent Form; • Shadowing_Interview_Consent-Bowers_2019.pdf, Category: Consent Form; • Individual_Interview_ Consent_Bowers_2019 .pdf, Category: Consent Form; • Project_Interview_Consent_Bowers_2019 .pdf, Category: Consent Form; • Shadowing_Interview_Group_Consent_Bowers_2019.pdf, Category: Consent Form;

The IRB approved the protocol from 10/1/2019 to 9/30/2020 inclusive. Three weeks before 9/30/2020 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of 9/30/2020 approval of this protocol expires on that date. When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Nicole Bowers
         Nicole Bowers

APPENDIX C

CREATIONS: MULTIMEDIA VIDEOS

The multimedia videos are listed in order of presentation in Chapter Four. The section numbers are included in the list, and the videos may be accessed through the supplementary material accompanying this dissertation. The videos are meant to be watched in conjunction with the writing found in the corresponding section. Section page numbers are provided for ease of reference.