

IMPROVISING MEANING IN THE AGE OF HUMANS

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Robert K. Bingham
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Examining Committee Members:

Dr. Karen Bond, Advisory Chair, Dance
Dr. Kariamuwelsh, Dance
Dr. Kimmika Williams-Witherspoon, Theater
Dr. Kimerer LaMothe, External Member, Independent Scholar

ABSTRACT

This dissertation is an ecological philosophy rooted in dance as a somatic mode of knowing and as a way of perceiving the world through and as movement. It is phenomenological, drawing meaning from a dedicated practice of improvisational dance and from extensive dialogue with dance and somatics artist/philosopher Sondra Horton Fraleigh. This emergent knowledge is integrated into discourses and practices addressing the relationship of the human and more than human world in the context of a deepening environmental crisis in the 21st century. Employing both somatic and conceptual ways of knowing, I investigate dance as a tool for restoring a sense of ecological kinship with nonhuman co-habitants of planet Earth.

The pretext for the dissertation is the emerging concept of the Anthropocene, a term introduced by Paul Crutzen in the early 2000s which defines human activity as the dominant geophysical force affecting the movements of the Earth system, including weather patterns and chemistries of soil, air and water. This concept, while subject to debate both in and out of the sciences, highlights the entanglement of humans and Earth and calls into question anthropocentric notions placing humans at the center of the universe of significance and meaning. In light of growing challenges associated with the Anthropocene, including climate change and mass extinction, the dissertation makes a case for greater inclusion of ecological and environmental contexts in dance studies scholarship as an epistemological move towards increasing reciprocity with Earth. I argue that environmental crisis, while daunting, presents an opportunity for radical creativity in re-thinking the interconnected movements of human bodies and planet Earth.

In summer 2015, I conducted a one-month, fieldwork-based interview with Fraleigh, which included verbal dialog, dancing, and exploration of the landscape of southern Utah, where she lives following retirement from university teaching. Fraleigh, whom I had known personally and professionally for twelve years since studying with her as an MFA student in the early 2000s, is a dance artist, philosopher and somatic educator widely known within and outside the academic dance community for her writing and teaching in phenomenology, dance aesthetics, somatics, and butoh. Her decades of inquiry into the nature and meaning of dance and human embodiment have consistently included questions about the relationship of humans and nature, and she has argued that humans are ecological as well as cultural beings. Prior to our interview, she had never framed her work in the context of Earth-scale environmental crises associated with the Anthropocene. Through collaborative somatic and intellectual processes, we extended questions we shared about the relationship of humans with Earth through its contextualization within the emerging paradigm of the geologic Age of Humans.

The dissertation is organized into two parts. Part One describes the onto-epistemological context for the fieldwork I conducted in Utah and includes background literature on the subjects of body, perception, matter and environmental ethics, followed by an explanation of the research methodologies I employed. Part Two is a phenomenological account of the fieldwork, which spirals between thick description of specific experiences and theoretical reflections on emergent meanings. Through this format, I integrate somatic and conceptual ways of knowing and illuminate dance as a mode of meaning making and response to geologic transformations taking place on Earth. By engaging dance as a tool for thinking about and with the Anthropocene, I aim to

promote more scholarly inquiry into ways that dance can and does transform, heal, revitalize and aestheticize human-Earth relations in the context of a planet in crisis.

Dedicated to planet Earth and to all beings who call this home.

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PREFACE

This dissertation is an ecological philosophy rooted in dance as a somatic mode of knowing and as a way of perceiving the world through and as movement. It is phenomenological, drawing meaning from my practice of a particular mode of dance that I refer to as somatic improvisation and from extensive dialogue with dance and somatics artist/philosopher Sondra Horton Fraleigh. I integrate this emergent knowledge with a wider context of discourses and practices addressing the relationship of the human and more-than-human world (Abram, *Spell*). The philosophy I set forth arises from what has become, in my mind, a dance among interweaving epistemologies of somatic and intellectual knowing; pre-reflective and reflective consciousness; direct experience and representational thinking. I hope to offer the rapidly proliferating network of discourses addressing environmental crisis a perspective that honors and, indeed, resources embodied ways of knowing (Barbour). I am asking if consciously bodied ways of knowing might be a powerful tool in restoring a sense of ecological kinship with the nonhuman co-habitants of planet earth.

As the culmination of a phenomenological, practice-based study, this dissertation retains, both in structure and content, the sensibility of lived experiences of dancing. While the writing travels widely through theoretical terrain, it moves beyond abstractions, texturing conceptual engagements with detailed descriptions of specific events and with photographic images. My hope is that you, the reader, will, as autoethnographer Carolyn Ellis writes, “both think and feel” (273) through this study, and

that the text might be a space where feeling, like thinking, can be engaged as a way of knowing and appreciated as a significant dimension of philosophical practice, particularly in dance.

Rather than presenting an impersonal argument, this dissertation tells a story – in first, third and occasionally second person – of dance as a mode of questioning practical and conceptual habits that place humans at the center of the universe of significance vis-à-vis the more-than-human world, in the context of a deepening crisis of dwindling resources (shared by all life forms) and changing planetary chemistry. The story is organized around selected instances of personal and shared dances, mostly outdoors, that were gateways to modes of consciousness that, in distinction from the mode of everyday consciousness (Nagatomo), were instrumental in bringing a whole (human) body and “living ambiance” into a single field of awareness (xxv). These moments, while fleeting, joined other comparable moments in my personal history of dancing and living, lending coherence to a somatic perspective from which to engage questions about the relationship of human and more-than-human environment in the context of crisis.

As far as I recall, I did not experience these fleeting moments of nondualistic consciousness while writing a text interrogating the relationship of anthropocentrism and environmental crisis. I recovered them in somatic memory and allowed their felt qualities to influence my writing of this text, opening my arms to the possibility that even the abstract space of theoretical words on a page might be a place for feeling into one’s body and its connection with the world. Like Stoller (*Sensuous*), I often find that academic discourses on “the body” cut me off from a sense of connection with body and world, and I am left feeling that a significant portion of the spectrum of embodied ways

of knowing has been pushed to the margins (see Barbour). I am led to wonder if this marginalization is an uncritically accepted premise upon which some academic writing, such as that which theorizes human bodies and movement as text, rests. If it is, one of the aims of this dissertation is to challenge that premise as a way of challenging *cogito ergo sum*. If the reader will accept, tentatively, the following conceptual leap, this is also a challenge to “man’s” superior status as the “thinking” animal. I hope that this perspective becomes intelligible in the pages that follow.

The frame of reference for this study is Anthropocene, the proposed designation for our current geologic time period. The term, introduced by chemist Paul Crutzen in the early 2000s, identifies human activity as the defining feature of the current geologic era (McNeill). To meet the stringent standards necessary to rename the contemporary era Anthropocene,¹ human alterations to the planet’s chemistry—including a spike in carbon and methane levels, a change in the fossil record due to mass extinction (Kolbert), and the redistribution of plants and animals, radiation from nuclear weapons testing, global distribution of plastics, concrete, and industrial chemicals—would need to leave a chemical “signal” in the Earth’s surface that is measurably different from that left by the Holocene. Assuming this condition is met, a stratigrapher millions of years from now would be able to identify the transition in the sedimentary record.

To imagine this future perspective in the present is to visualize the profound speed at which the planet is changing, which will be made vivid when the Age of

¹ We are still officially in the 11,000 year old Holocene.

² For instance, I grew up with no songs, dances, stories, or other rituals for thanking or maintaining balanced ecological relations with Earth. When my family said grace

Humans stratum is compared to the earlier strata upon which it sits. Relative to Earth's 4.5-billion-year history and the slow ontology of the planetary archive, the speed of transformation will appear comparable to the meteoric collision that destroyed the dinosaurs sixty-five million years earlier. If the stratigrapher is lucky enough to discover, embedded in an undamaged microchip or satellite pitched back to earth, written or other representational records, perhaps she will find dire warnings from long ago: red flags raised by scientists and concerned citizens worldwide with increasing urgency around the dawn of the 21st century. Perhaps she will glean the emergence of the term Anthropocene itself, along with its recasting of the human species as a geophysical force akin to meteors, deviations in planetary orbit and other cosmic events. Or, perhaps, the stratigrapher will find no trace of the thoughts of those ancient humans, with only an odd layer of matter left to tell the story. The vibrant remains of today's world may then torment her with a tantalizing, unanswerable question: what happened?

PART I

Welcome to the Anthropocene

CHAPTER 1
PROJECT OVERVIEW

Sometimes it is not...only about the human.

- Eiko Otake (Yokobosky 27)

In the introduction to *Vibrant Matter*, Jane Bennett describes noticing, while walking down a Baltimore street, a tableau of five diverse items scattered across a street corner: one dead rat, a single man's glove, a bottle cap, a stick and some oak pollen. The tableau stops her in her tracks, shimmering with a peculiar energy that she will later describe as "thing-power:"

As I encountered these items, they shimmied back and forth between debris and thing – between, on the one hand, stuff to ignore, except insofar as it betokened human activity...and, on the other hand, stuff that commanded attention in its own right...In the second moment, stuff exhibited its thing-power: it issued a call, even if I did not understand quite what it was saying. (4)

The stuff which appears, in one moment, as inconsequential trash appears, in the next, as vibrant matter that seems to have a story beyond mere "trash." Bennett recognizes that as her view changes, so changes that which she views, and she begins to wonder about how other things may be different than they seem.

For the rest of the book, she reflects on the nature of matter and the way humans relate to it, in part as a way to consider our context of deepening environmental crisis. In a world forced to continually adapt to the "hyperconsumptive necessity of junking

[commodities] to make room for new ones” (5), Bennett makes an ecological appeal to re-thinking matter:

If I am right that an image of inert matter helps animate our current practice of aggressively wasteful and planet-endangering consumption, then a materiality experienced as a lively force with agentic capacity could animate a more ecologically-sustainable public. (51)

Her appeal is to re-thinking matter conceptually, as agentic and creative, yet she also suggests re-thinking matter experientially. How might one do this? She does not explain, and her encounter on the Baltimore street suggests that the choice to re-view the tableau emanated from the things’ power, rather than her intentions alone. Still, she implies a way of approaching matter as she states her intention for the book:

[T]he hope is that the story will enhance receptivity to the impersonal life that surrounds us, will generate a more subtle awareness of the complicated web of dissonant connections between bodies, and will enable wiser interventions into that ecology. (4)

This dissertation is written with a similar orientation. Like Bennett, I aim to account for the vibrancy, agency and creativity of nonhuman beings and things as a means of responding to a global environmental crisis brought on by human activity. As a dance improviser and phenomenologist, I approach the subject in a spirit of playful rupture of assumptions about what is human and what isn’t, and where knowledge resides. Rather than attempting to produce an exhaustively defined and defended theoretical position on these questions, however, my aim is to provoke further questions into how dance can and does transform, heal, revitalize and aestheticize human-Earth

relations in the context of a planet in crisis. In short, I am asking, and inviting the reader to ask, what it means to dance in the Age of Humans (Robin).

There is nothing new in engaging dance as a means of connection with nonhuman co-denizens of Earth. Indigenous cultural practices and histories worldwide include traditional dances relating to the movements of specific animals (Clark, Ikuta, Murphy) and of the wider ecological world (Maass). According to Maass, Indigenous animal dances throughout the world are practiced as pathways to “remember[ing] and perpetuat[ing] essential ecological relationships” binding humans with the more than human world (196). For many contemporary dance artists, both Indigenous (Murphy, “Editor’s Note”) and non-Indigenous, dance is a means of exploring, negotiating and/or re-imagining human-environmental relations, as I address later. Despite these connections of dance and ecological knowledge, little scholarly attention has been paid to meanings that emerge when ecologically-informed dance practices and histories of practice are framed in the context of Anthropocene challenges such as mass species extinction. The aim of this dissertation is to help build a framework for more robust responses, within dance scholarship, to the growing urgency of environmental crisis, while leaving open the question of how dance historians, anthropologists, philosophers, psychologists, scientists and cultural theorists might apply their various disciplinary knowledges to the problem.

In this dissertation, my orientation is what Abram refers to as the “more-than-human world” (*Spell*), and the relationship of the human species with other than human beings, things, histories and temporalities, particularly geologic time. I am asking how, as a human whose personal world view was formed in the context of anthropocentric

religion, schooling and cultural practices², I might learn afresh how to know the world and to develop the capacity to tell stories that do not, intentionally or unintentionally, reinforce humanity's positioning at the center of the universe of significance in relation to all living beings on Earth. How might this influence my sense of responsibility and citizenship? A dedicated practice of improvisational dance, informed by my training in release techniques, butoh, and somatics (see Chapter Three) as well as my studies in Buddhism, forms the backbone of the investigation. Through improvised dancing joined with the phenomenological procedure of "bracketing" assumptions about the phenomena I encounter in dancing, I enter a world whose nonhuman denizens become strange (Sheets-Johnstone, *Primacy*) in the nature of their vibrancy and in their co-participation in human movement and thinking. In this world, matter matters (Barad, *Meeting the Universe*). From the perspective of this world, I examine the issue of environmental crisis as a reason to dance.

How might one define "environmental crisis?" With seemingly daily reports of record-breaking heat, storms, extinctions, flooding, wildfires, oil spills and poisoned water, it is challenging to find an organizing principle that speaks to both specific circumstances, including human and nonhuman suffering, adaptation, and resistant action, and to the global nature of anthropogenic changes to planetary beings and systems. "Global warming" and "climate change" signal Earth-wide change, but, to someone like myself unschooled in the profound complexity of these phenomena and

² For instance, I grew up with no songs, dances, stories, or other rituals for thanking or maintaining balanced ecological relations with Earth. When my family said grace before meals, we thanked God, whom I understood as an abstract, omniscient authority overlooking and protecting us. I had no image of soil, sunlight, rainfall, plants, animals or humans involved in producing the food I ate.

their effects, these representations can seem innocuous, particularly as their effects are not in stark evidence where I live. Moreover, from a lay perspective, the terminologies appear to be limited to the domain of “weather,” which, for most of my life in circumstances of relative privilege³, has existed as a backdrop to existence, generally pleasing or irritating, the emblem of banality in the realm of human significances: *we talked about the weather*. In my experience, weather, until very recently, did not figure as a living expression of Earth’s nature and meaning.

The meaning of Anthropocene, the proposed designation for our current geologic time period (Working Group), extends beyond human-caused changes to weather patterns, as it includes anthropogenic changes in the chemistries and behavior of soil, water, air and plant and animal tissue worldwide, including those associated with global nuclear fallout following decades of Cold War weapons tests (Simon et al). As a pithy, unhyphenated term, Anthropocene signals the entanglement of human and Earth history, and it puts pressure on enduring notions of Earth as mere backdrop to human histories and composite of raw materials for human projects.

Anthropocene is a contested term, however, because it does not, in itself, account for profound inequalities woven into the history of anthropogenic changes to the Earth system, nor ecocidal connections with colonial violence, capitalism, and theft of Indigenous land (Todd). Other terms, such as Capitalocene and Eurocene, are sometimes employed outside the sciences; these effectively shift emphasis from *homo sapiens* as

³ As a white male who grew up middle-class in urban America, and as a rich country (Nixon 2011) citizen, I was distanced from, for example, experiences of food insecurity and from weather-dependent agricultural processes upon which my existence relied. I only saw food after it had been packaged and shelved at the supermarket.

innate embodiment of devastation to specific, uneven patterns of human activity within the larger field of ecological relations, which are steadily pushing the Earth towards chaos (Davis and Turpin). Not all humans are equally implicated in the crisis, nor are all humans equally vulnerable to the effects of what Michelle Murphy, who studies the impacts of industrial chemicals such as PCBs, calls “the aftermath” of environmental violence (“Afterlife”). As sociologist Rob Nixon writes, those who contribute the least to the crisis tend to absorb the worst of its effects, particularly in the Global South, to which much of the crisis is “outsourced” (22).

Recognizing its limitations, I choose to employ Anthropocene as a term that, on its very surface, gives the lie to the fiction of a nature-culture split and, on a deeper level, integrates notions of human and Earth time. Dance phenomenology led me to the concept, whose meaning is rooted in Earth’s geologic past. As I describe later, geology represents a world that opened up to me through the act of dancing.

CHAPTER 2

INTRODUCING SONDRA HORTON FRALEIGH

Fieldwork for this dissertation study took place in the summer of 2015 when I traveled to southern Utah to conduct a twenty-five day, fieldwork-based interview with Sondra Fraleigh spread over two months. Sondra,⁴ whom I have known personally and professionally for twelve years since studying with her as an MFA student in the early 2000s, is a dance artist, philosopher and somatic educator widely known within and outside the academic dance community for her writing and teaching in phenomenology, dance aesthetics, somatics, and butoh. Her decades of inquiry into the nature and meaning of dance and human embodiment have consistently, if not always predominantly, included questions about the relationship of humans and nature. She is a primary source and significant influence on my process of developing the ideas represented in this text.

At age 76, Sondra is retired from university teaching and recently resettled in southwest Utah where she was born and raised before leaving home for points beyond when she entered college. For the next half-century, she settled variously throughout the US, most notably in Brockport NY, where she lived for three decades while a professor at SUNY Brockport. Her creative and scholarly oeuvre during and after those three decades is substantial, including at least fifty choreographed dances and nearly two dozen books

⁴ I refer to her as Sondra throughout the dissertation, as this is how I address her in person and how I think of her in relation to the fieldwork. When citing her publications, I employ last name in keeping with MLA convention.

and articles whose topics include dance philosophy, history and aesthetics, as well as butoh and somatics.

While continuing to publish, since retiring from SUNY Brockport nearly fifteen years ago Sondra has devoted much of her energy to teaching under the auspices of the Eastwest Somatics Institute for Yoga, Dance and Movement Studies, a school she founded in 1990. She has trained and certified dozens of instructors—myself included – in Shin Somatics®, a modality she developed that includes several forms including “Land to Water Yoga.” In developing these, she draws from diverse somatic methodologies, including Feldenkrais Method®, Alexander Technique, Bodymind Centering®, Yoga, CranioSacral Therapy, and Contact Improvisation. In her workshops, she folds the sensibilities of these diverse practices, and her own practice as dance artist, into improvisational structures for listening through the body and moving with listening consciousness.⁵

Such structures exist for individual movement exploration as well as hands-on partner work, where one partner may help another discover greater bodily range of motion; a new relationship to skeletal alignment; enhanced awareness of breath; integration of upper and lower body through movement, etc. Their aim is restoring “sensual authority” (Behnke 8) of the body through structures for integrated mindbody consciousness, which distinguishes them from fitness regimens or dance techniques whose goal is transformation of the present body towards an “improved” future (and thus hypothetical) body that is more graceful, skilled, articulate or buff.

⁵ Like many somaticians I use the term “listening” to connote a quality of enhanced sensory awareness throughout the body (see Eddy 6).

This does not mean that there is no skill involved, but “skill” here is not defined according to third-person measurability. It is the capacity for being present to the is-ness of the body as it manifests in the moment. Such a skill can only be measured in the first person; however, I believe that a discerning teacher such as Sondra intuitively senses the subjective experience of a student and is thus able to help guide them towards deeper connection to their mindbody experience, either through words or touch. I arrive at this through my own first-person experience: I have sensed her awareness as a hand guiding me towards perceptual opening and towards the discovery of kinesthetic potentials unfolding within ongoing patterns of movement.

The operative principle of somatic learning and knowing is consciousness, and Sondra has described her somatic practices and teaching as “choreographing consciousness” (“Dancing” 107). These practices are structures for querying the meaning and nature of consciousness through the vehicle of thinking in movement. Her teaching tends towards perceptual subtlety, though this does not lessen its power: breathing into an open, listening hand on one’s back may be enough to effect deep internal change. Always a dancer first, however, she is liable to spontaneously change a class’s rhythm, perhaps, in a moment’s notice, having everybody rise to their feet and begin dancing to music. Her sensibility as an improviser permeates her teaching as, indeed, her life (“Improvising” 5).

Sondra’s approach to teaching blurs distinctions between “dance” and “non-dance” categories of somatic education. In community classes she teaches in St. George,

many if not most of the students do not identify as dancers.⁶ Yet, her structures for movement awareness often lead into intrinsic dances that exist for themselves as aesthetic movement experience (*Metaphysics*). It may be that her improvisational approach is what draws some students towards her work as opposed to more mainstream systems such as Feldenkrais or Alexander. Codification lends clarity and coherence to a systematized field of training, yet it can curtail knowledge arising from the unknowns of more open-ended improvisational practices (Albright 82, Bailey 66). Though Sondra's pedagogy may be less well-known than those associated with other somatics modalities, scholar Martha Eddy identifies her as one of eight contemporary "somatic leaders" who follow earlier twentieth century pioneers such as F.M. Alexander, Moshe Feldenkrais, Irmgard Bartenieff and Ida Rolf (17). A critical discussion of somatics appears in the following chapter.

Running through Sondra's teaching and philosophical writing is a deep concern for the well-being of Earth, with an eco-centric sensibility resonating in her movement practices and her theoretical writing. In "Improvising Nature," a keynote address she delivered at the TransDisciplinary Improvisation Network Conference, Sondra stated:

Attention is a virtue not only because it contributes to well-being, but also because it regards difference, allowing otherness to disclose more of its nature. For this, one needs to let nature be and not interfere or manipulate. One might wonder if the canyon holding my dance cares to be attended to. I think it does. In being appreciated in our dances, the canyon, the mountain, and the lake are revealed to us in their natures, or perhaps in their many natures, according to the dance and the moment in time. We attend to many kinds of nature, as they are, and in the time of the dance, we are earthlings together.

⁶ Sondra confirmed this in an email communication on 21 Feb. 2017.

She suggests that conscious attention cultivates awareness of a “we” beyond only humans: “in the time of the dance, we are earthlings together.” For her, improvising nature is a mode of attunement to a more than human “we” (for contrast, see discussion of Earth as “it” in Chapter Nine). Sondra’s teaching attends to human-nonhuman intersubjectivity, incorporating structures for bonding with Earth by means of conscious movement through and atop formations of soil, water, sand, and stone. In workshops she teaches in Utah, she often takes students to Snow Canyon, where they explore the terrain through somatic improvisations. I elaborate on this later.

Sondra’s scholarly writing has long involved criticism of the nature-culture divide in western philosophy, beginning with *Dance and the Lived Body* and continuing through *Dancing Identity: Metaphysics in Motion* and all of her many writings on butoh, which discuss somatic metamorphoses through other than human phenomena such as mud, slime, rock, animal, and ash. She describes these metamorphoses as engagements with intersubjective fields that include nonhuman subjects, including chickens and pigs, and butoh practitioners’ disposition towards “recovering the body that has not been robbed,” as butoh founder Tatsumi Hijikata described (*Butoh* 4), which I have understood to mean recovering the body living beyond the grasp of conceptual thought, including limiting notions of “human.”

In *Metaphysics in Motion*, Sondra argues from an eco-feminist perspective against both masculinist ideologies of mastery – mind over body and matter, “man” over nature – and social constructivist perspectives that, in her view, marginalize nature by consigning it to the status of “construction” (6). She proposes, as alternative, a philosophy of matching that emerges conceptually from enfolded practices of listening and response in

somatics and dance. Matching is not about imitating, but about attuning to subtle rhythms and qualities flowing within a given intersubjective field. In somatic partner work, such attunement might entail following and supporting a movement process with gentle touch or through non-judgmental witnessing. By articulating a philosophy of matching while simultaneously widening the lens of inquiry to include more than human nature, Sondra suggests that practices and dispositions oriented to matching can extend beyond somatics and dance studios to include the living Earth itself.

In my interview-based research with Sondra, I wanted to further develop this line of inquiry, which she had initiated decades earlier. In particular, I was interested in discovering what directions it might take if framed in the contemporary context of environmental crisis. While Sondra discusses, in *Metaphysics in Motion* and elsewhere, her own lived experience of the specific historical crisis of Cold War nuclear testing in southern Nevada, her writing prior to “Butoh Translations and the Suffering of Nature” is not framed in terms of environmental crisis on a global scale. However, she has written that “we forget our connection to nature at our peril” (*Metaphysics* 11), which may be viewed as a warning of what is to come.

Recognition of humanity’s capacity to transform the whole Earth dates back to at least to the 19th century, culminating in the 21st century conceptualization of the Anthropocene (McNeill et al). While Sondra did not reference the Anthropocene or its antecedents, her warning of peril provoked my curiosity. Are the consequences of a break from nature to be felt by us humans? By Earth? I wished to enter this ambiguity with her. Through an interview process that included extensive conversation, improvisations, choreography and photography, Sondra and I explored our embodiment,

our individual and collective relations with the body of Earth. We asked, through solo and collaborative inquiry, what meanings emerge when dance is framed in the context of environmental crisis, and, at times, we danced in the absence of a chosen frame.

As noted previously, Sondra's *Metaphysics in Motion* takes on traditional "masculinist" metaphysics separating mind/body and culture/nature, yet it also critiques feminist theorists such as Judith Butler who "bracket nature" (4), choosing instead to "stress the connection between the social, the personal, the political, and the ecological" (11). Elaborating a "corporeal metaphysics" (6) that draws on first person experiences of dancing, she writes that dancing dissolves, if temporarily, mind-body dualism maintained in everyday consciousness (Nagatomo). She thus tries to challenge, through reference to nondualistic consciousness, the othering of body and earth, vis-à-vis mind, within dualistic metaphysics. She textures this challenge with engagements with the phenomenological writings of Martin Heidegger, Maurice Merleau-Ponty, and Hiroshi Ichikawa, and with the work of feminist scholars such as Val Plumwood, Anna Yeatman and Maxine Sheets-Johnstone.

In identifying an intrinsic human connection to nature, Sondra does not deny culture nor cancel out its influence on the lived body, but articulates a "nature-culture continuum" (22) whereby "what is acquired and what is natural are in perpetual relation" (54). Referencing diverse epistemologies including phenomenology, ecology, Taoism and quantum physics, Sondra articulates a vision of the world as an interconnected, if highly differentiated, field of relations that includes human, Earth, nature, and culture. This perspective, which emphasizes synthesis more than analysis, is analogous with Merleau-Ponty's account of perception as an event in which putatively independent

perceiving subject and perceived object come into alignment within a shared field of perception (*Phenomenology*). For Sondra, pre-reflective conscious perception in dancing offers somatic insight into the nature of the human-more than human field of relations, prior to its analytic atomization into “human,” “nonhuman,” “culture,” “nature,” etc. I return to the human-nonhuman divide in Part II.

Sondra cites the field of eco-psychology in her statement that “to perceive the world is to co-perceive oneself” (*Metaphysics* 55), a concept she relates to dance. When a dancer moves with conscious awareness, she may find, for example, that her pushing into the floor is the floor’s pushing into her, or that “pushing” is an event within the gestalt of body, floor and earth, gravity, air and energy permeating the shaped things within the “living ambiance” (Nagatomo). Within the immersive experience of dancing, consciousness may be experienced as directed (or navigable) energy; further, “the mere direction of awareness effects change in the body” (*Metaphysics* 58). According to Sondra, this has been verified experimentally in neuroscientific and biomolecular research.

Sondra’s writing and teaching, particularly as it intersects with ecological issues and meanings, were especially relevant to my research orientation as I began the fieldwork. Through the interview, I wanted to investigate further, together, the theme of human-nonhuman interconnectedness, framing the inquiry within the context of environmental crisis.

CHAPTER 3

BACKGROUND LITERATURE

Introduction

This chapter provides theoretical background to the dissertation, indicating discourses that inform the research and writing. I organize these discourses into several overlapping categories, highlighting themes pertinent to my work. “Somatics,” briefly defines the term and outlines key theories, practices and individuals associated with somatics as a loosely organized field. This section is intended to orient the reader to terms and concepts that appear later in the dissertation. “Body and Consciousness” addresses theories and practices pertaining to direct or pre-reflective experience as a way of knowing. This provides theoretical background to my exploration, in Part II, of dance as a practice of direct experiential knowing. “Phenomenology of Practice” describes a specific mode of experiential knowing elaborated by Dutch-Canadian phenomenologist Max van Manen, which informed my approach to the improvisation-based phenomenology of practice elaborated in Part II. “Epistemologies of the Senses and Emplacement” outlines discourses, largely anthropological, that highlight the relevance and significance of sensory knowing in conducting ethnographic research.

While this dissertation is more philosophical than anthropological, I grounded it in fieldwork that drew methodologically from ethnography (see Chapter Four).

Emplacement refers to the relationship of research practice to physical place, thereby attending to environmental context. This is significant to the overall aim of the dissertation, which is to contribute to developing a foundation for scholarship that

accounts for dance's situatedness in environmental and ecological contexts. The next section, "Environmental Philosophy," outlines philosophical writing that accounts for nonhuman agency and/or acknowledges environmental crisis. This section, like the previous one, addresses sensory knowing, though with an orientation towards knowing place, environment and Earth. The final section, "Dance, Nature and Environmental Crisis," identifies dance artists and scholars who address the relationship of human and more than human world and/or environmental crisis through dance. The purpose of this dissertation is to contribute to and develop this area of theory and practice.

Somatics

I begin this section by defining the term "somatic," as I use it throughout the dissertation, and distinguishing "somatic" from the field of theory and practice referred to as "somatics." My use of "somatic" differs from common dictionary definitions. The *Cambridge Dictionary* defines "somatic" as "relating to the body as opposed to the mind," while *Merriam-Webster Dictionary* defines the term as "of, relating to or affecting the body." While these definitions make no reference to perception, I employ the term in relation to practice, indicating the body as perceived subjectively. Thus, somatic knowing emerges within the felt sense of one's own body. Like Nagatomo (*Attunement*), I use the terms "somatic" and "felt sense" interchangeably. At the risk of stating the obvious, somatic knowledge and experience are not contained to somatics practices, including those I describe momentarily, and the latter represents only one of a perhaps infinite number of ways that humans may access and cultivate somatic consciousness. Regarding the more than human world, I maintain throughout the dissertation a sense of

curiosity and mystery regarding the somatic consciousness of other than human sentient beings, choosing to honor something that I do not, and may not ever, understand.⁷

According to scholar-practitioner Martha Eddy, who has written a “brief history of somatics and dance,” somatics is a set of theories and practices that address the human body-mind connection as a means of facilitating well-being, greater sense of ease and movement possibility, and fuller participation in the “natural movement or flow of life” that exists within living bodies (6). Premised on first-person bodily awareness, these processes are experiential, providing structure for conscious participation in the movement of one’s embodied self. Its methods are generally disseminated by trained and/or licensed practitioners of a given system, who guide student or client experiences in workshop or in one-on-one practitioner-client settings.

The emphasis in somatics is always on heightening sensory awareness of movement patterns, and usually on subtle movement awareness. As attention settles on the details of movement patterns, a new or renewed awareness of habits, along with possibilities for non-habitual patterns, can emerge. Somatics is thus often framed as educating or re-educating the nervous system in order to provide the experiencing person a sense of choice in how they might inhabit and live their body. Its starting point is embodied consciousness itself and emergent awareness of what is and what may become in physical experience.

While Thomas Hanna coined the term “somatics” in the 1970s, the practices and practitioners associated with what became known as somatics date back to the 19th

⁷ In *What a Plant Knows*, Daniel Chamovitz states that some contemporary botanists refer to the perceptual capacity of plants in terms of anoetic consciousness.

century. Eddy provides a brief history, citing a particular lineage of European, Australian, and North American practitioners whom she identifies as “somatic pioneers:” F. M. Alexander, Moshe Feldenkrais, Mabel Ellsworth Todd, Gerda Alexander, Charlotte Selver, Ida Rolf, Milton Trager, and Irmgard Bartenieff. She gives brief life histories of these pioneers, noting salient experiences that informed their thinking and practice, for example, Feldenkrais’ knee injury and Rudolf Laban’s influence on Bartenieff’s movement methodologies.

Eddy cites a wide range of cultural and philosophical influences on the early development of the field, including phenomenology, existential philosophy, Eastern philosophy, dance, yoga, martial arts, and the theories of Dewey, Merleau-Ponty, Whitehead, Freud, Jung, Reich, Delsarte, Laban, Jacoby, and Jacobson across diverse fields of philosophy, psychology, medicine, cultural studies, and education. She identifies 19th century European theories and practices that pre-dated yet influenced the pioneers, including particular exercise systems that grew out of gymnastik and theories promoting physical self-awareness. Subsequent to the pioneers’ life stories, Eddy identifies seven “contemporary somatic leaders” who are “dancers motivated by dance, global exchange and their students” (15). These include Sondra, as noted earlier, along with Elaine Summers, Bonnie Bainbridge Cohen, Emilie Conrad, Anna Halprin, Joan Skinner, and Nancy Topf.

Eddy elaborates the field of somatics’ many ties to contemporaneous western theatrical dance. As a dancer herself, she wishes to emphasize this connection. The relationship of dance and somatics is complex, as most of the pioneers she cites had little or no connection to theatrical dance, even as their techniques (for instance Feldenkrais

and Alexander) have been engaged widely both in and out of theatrical dance contexts. As I elaborate later in the dissertation, Sondra's philosophy and pedagogy draw liberally from both dance and somatics.⁸

Eddy notes that in recent decades somatics has significantly influenced (and been influenced by) contemporary western dance pedagogies and practices. University dance programs often include courses in somatics, either on their own or integrated into dance technique, dance science and/or injury prevention curricula. Even as these programs have become "academic homes for somatic work" (21), Eddy argues that dance and somatic practices continue to be marginalized within general education, with "a meagerness of kinesthetic experience in education across disciplines" (Ibid.) including kinesiology, cultural studies, and psychology.

At the same time, somatics has been critiqued by scholars within dance studies. Doran George, a recent graduate of UCLA's doctoral program in dance, argues that somatics' orientation to uncovering "natural" movement constructs "a canonical [white] body as an invisible category of nature, which purportedly accounted for ontology, yet marked difference and enacted exclusion from its supposedly universal purview" (iv). Susan Foster, too, criticizes the notion of "natural" in relation to movement, indirectly implicating somatics vis-à-vis Eddy's description given above. In an interview at the Springdance Festival in Utrecht, Foster was asked to explain how "universal" functions as ideological operation. She began her response by referencing "the natural" as ideological operation:

⁸ For instance, "contact unwinding," a somatic movement structure that includes elements of contact improvisation.

Here, I follow poststructuralist theory. For instance, Roland Barthes in *Mythologies* and his other texts talks about the “natural” as ideological operation: anybody who claims that something is natural is actually trying to push forward a particular agenda, to put forward a claim that apparently doesn’t need to be examined, that seems to be obvious, legitimizing something as the best or only way. I think that “universal”...functions in a similar way (Čičigoj).

Foster goes on to explain how this ideological operation functions in dance training: “The label ‘universal’ is a way of making a specific dance practice become the norm and justifying why it should be the norm.” In this exchange, Foster naturalizes a connection between “natural” and “universal” and seemingly ascribes to both a universal intent: to advance a hidden assertion of superiority that is beyond critique. I notice that Foster (like George) does not define “natural” – her concern is the term’s ideological underpinnings rather than a precise definition – nor does Eddy in the quote cited above. It is possible that they have different understandings of the word “nature” and all its declensions, especially if nature is the most complicated word in the English language (Fensham). While Eddy, George and Foster’s invocations of nature focus on human movement enacted in the context of dance and/or somatics practices, I propose later in the dissertation a non-anthropocentric definition of nature as the movement of the cosmos, thereby rendering obsolete distinctions between natural and unnatural movement. According to this understanding, even the movements of thoughts objectifying “nature” as a concept are themselves nature.

Dance academic and Feldenkrais practitioner Isabelle Ginot’s critique focuses on ways that somatics pedagogies attempt to prove their efficacy through references to scientific discourses, while failing to engage the rigorous methods of science that would

“require the descriptions of experiments, the determinations of the limits of validity, or the possible presentation of contradictory hypotheses” (15). She argues that the purpose of these references is not rigorous scientific description of embodied phenomena but to foster belief: “[S]omatics induces us to *believe* [sic] in the ‘scientific,’ universal and ‘provable’ nature of experience, in order to provide a stable collective context for what is fundamentally an unstable, highly individualized experience” (Ibid.). While Ginot implicates a few specific practitioners such as Alexander, Cohen, and Feldenkrais, her article is about “somatics” *writ large*. Thus, her claim seems to unify all practices and practitioners under a single, universalizing intention of inducing scientific belief. As a client-based practitioner myself, I know that this is not always the case, as I make clear to clients that the work is not centered on scientific or medical proof but on first-person experience and discovery (see Behnke).

At the same time, as a somatics practitioner herself, Ginot’s intention is not to undermine or discredit somatics but to:

move beyond naïve meliorism and engage the complexity that is engaged each time that something changes in the relation of a subject to its physical, symbolic, social, economic, and political environment. Somatics therefore does not restore a so-called natural or original body but rather contributes to the reorganization of the multiplicity and heterogeneity of that which we call the body (25).

She asks a series of questions that call on somatics to imagine its political potential for enabling resistance. These questions speak compellingly to the activities of individuals and organizations such as SEEDS,⁹ an interdisciplinary arts festival whose activities of

⁹ Formerly known as Somatic Experiments in Earth, Dance, + Science (www.ilandart.org/seeds-2016/)

aesthetic connection to physical body support political activism.

While Ginot, too, critiques the trope of the “natural” body, her failure to reference ecological context among the overlapping circles of an individual’s somatic context causes me to wonder if the critique of the “natural” body (shared by Foster and George) masks, by attending to nature as sign while ignoring the agency of physical nature, a current of anthropocentrism running through their arguments. Does the arguably hegemonic critique of the construct “nature” inadvertently excise from scholarly gaze the participation and influence of other than human nature in human bodily experiences and discourses? If so, my hope is to move beyond both the trope in somatics practices of restoring a “natural” body (per Ginot) and the poststructuralist trope of critiquing the “natural” (while ignoring physical nature per Ginot), even as I join Ginot in wanting to reach past naïve historical models of meliorism. I share with her a desire to explore political potentials within somatics, in particular the ways that resourcing a physically-mentally-spiritually integrated self can support health, well-being, clarity and commitment within one’s activism.

Body and Consciousness

Since Edmund Husserl, a century ago, called on philosophy to engage directly with “the things themselves” (*Ideas I*), phenomenology’s methodological orientation has been description of phenomena as they arise to consciousness. Husserl’s position was that a problematic schism existed between what he would call in his late career “the flowing live present” (Bruzina 30) and its representations within abstract conceptual models, with

the latter receiving a privileged metaphysical status vis-a-vis the former (Brown and Toadvine xi). As a corrective to this imbalance, Husserl proposed phenomenology as a means of directly encountering *Lebenswelt*, or life-world, through *epoché*, the suspension of abstracting conceptions and preconceptions—sometimes referred to as bracketing (*Ideas I*).

According to this methodology, an account or analysis of a given phenomenon begins with direct experience, hence the intention of suspending theoretical presuppositions formulated consciously or unconsciously in advance. Husserl recognized that being a socially and culturally situated human includes developing habituated views about the world through learning, experience, and what would decades later be popularly referred to as “cultural inscription.” His term for the habituated stance was “natural attitude.” (*Logical Investigations*) The phenomenological method entailed tearing through the fabric of habit, a process demanding a high level of rigor:

To turn off previous habits of thinking in their entirety, to recognize and tear down the mind's barriers in which those habits envelop the horizon of our thinking, the genuine problems, the philosophical problems that need to be posed in a completely new way, problems that only the horizon freed of barriers on all sides makes accessible to us – these are hard, exacting demands. Yet nothing less is required (*Ideas I* 4).

For Husserl, direct, non-conceptual experience of phenomena was an antidote to the distorting effect of previously sedimented assumptions about them. He believed that a body’s perceptual capacities, rather than concepts objectified in thought, were key to gaining an “intuitive grasp” of phenomena (Moran 134).

Dermot Moran notes that since Husserl phenomenologists have followed widely divergent paths. This rhizomatic future was predicted as early as 1927 by Martin Heidegger: “there is no such thing as *the one* phenomenology” (328). However, as a tradition, phenomenologists have consistently emphasized the role of subjectivity in the creation of knowledge. Indeed, as a research methodology phenomenology makes subjectivity explicit, as it favors moving through first-person perceptual experience en route to textual abstraction. Its analyses develop hermeneutically and/or heuristically following the first-person encounter (van Manen, *Phenomenology*). According to Japanese philosopher Yasuo Yuasa, the flow from experience to theory can be found also in East Asian philosophy. While an epistemological comparison is beyond the scope of this discussion, I am interested that Husserl and Yuasa identify the same limitation within western philosophy, namely the propensity to privilege theoretical thinking vis-à-vis knowledge arising through direct sensory experience. This tendency is reflected in Eddy’s complaint, which I cited earlier, that academic institutions eschew somatic and kinesthetic knowledge in their curricula and research paradigms.

At every stage of researching and writing this dissertation, I have endeavored to integrate a somatic mode of knowing (direct experience) with theoretical inquiry. I am inspired, in part, by Kitaro Nishida’s *Inquiry into the Good*, Shigenori Nagatomo’s *Attunement through the Body* and Yasuo Yuasa’s *The Body, Self-Cultivation, and Ki-Energy*, all of which bring direct experience and reflective analysis into a single frame. Yuasa, drawing from East Asian philosophy, phenomenology, Chinese medicine and depth psychology, describes ki energy as the unifying factor that integrates mind-body and human-nature. I reference this work later in a reflection on animate matter as

perceived through dancing-with the Earth. I cite Nagatomo's work throughout the text, borrowing specific key terms to account for the animate qualities of phenomena as perceived through the act of dancing. Nagatomo's *Attunement Through the Body* draws on the work of Yuasa, for example, in differentiating everyday and transformative consciousness (Nagatomo is also Yuasa's translator).

I rely more on Nagatomo than Yuasa, as the former's focus is somatic epistemology, which resonates with my articulation of a somatically-grounded ecological philosophy. Like Nagatomo, Nishida differentiates modes of consciousness, though using different language. Nishida identifies "direct" or "pure" experience as a mode of consciousness free from the "fabrications" of thinking (3); thinking is experiential, and even abstract concepts are a "type of feeling in the present" (4). Yet pure experience refers to conscious perception prior to discriminations or judgments about what is perceived. In direct experience, things are perceived "as they are" (4). One particular line in *Inquiry into the Good* stood out for me as I reflected on my experience of dancing in the desert with Sondra: "There is not an experience because there is an individual, there is an individual because there is an experience" (xvi). I describe this moment in Part II.

In his phenomenological account of body, Hiroshi Ichikawa arrives at the conclusion that body is spirit (Nagatomo). He determines that the fundamental body structure, of which the concepts "body" and "spirit" are abstractions, is lived as a unified vital field. Prior to conceptual abstraction, the living body is spirit. (This resembles the quantum physics conception of the nature of matter prior to its conceptual abstraction into "matter" and "energy." I address this in Chapter Ten.) Ichikawa's view counters

Cartesian assumptions that separate body, mind, and spirit, and challenges contemporary academic discourses around “the body” that fail to acknowledge spirit (Williamson). Bearing this in mind, I cite somatic movement practice as a mode in which questions of spirit and animacy may surface of their own accord, not only vis-à-vis the human body but also Earth’s body. Are marginalizations of the former and the latter related? I hold questions of spirit in mind in my discussion of philosophies addressing quantum matter and ki energy.

Sondra’s writing on butoh attends to its potential to effect transformations of somatic consciousness. Drawing from western phenomenology and Zen Buddhist philosophy, she articulates an aesthetics of transformation (*Butoh* 44) and morphologic processes. Juliette Crump, another butoh practitioner and scholar, identifies an ethics of compassion shared with Buddhist traditions, which emanates from butoh’s corporealization of rejected aspects of self and world, including illness, weakness, mud, slime, etc. (“One Who Hears”). Butoh progenitor Hijikata’s “Being Jealous of a Dog’s Vein” offers an aesthetically potent embrace of abjection, though its tone does not convey an obvious sense of compassion. He expresses jealousy of the dog mindlessly beaten by children, its exposed innards tempting them into acts of violence. Yet Hijikata’s narrator is the agent of violence, too:

With birds, I am unable to get excited unless I first crush the birds together with their nesting box before taking them on. I get my first thrill only after I struggle to clear away heavy obstacles, then find lots of eggs incubating underneath it all (57).

These are among many surreal images that evoke the world through the eyes of a “butoh person” (Ibid.), which deserve a greater depth of analysis than I offer here. Still, butoh practitioners often engage striking images, as I elaborate later, and it is useful to consider how images function on the level of somatic consciousness, keeping in mind Nishida’s assertion that mental activities are “feelings in the present” (4). Hijikata’s internal experience of imagining crushing birds can be known only to him, yet the witness to his dancing has an experience too: will their heart open as performer descends into a violent, subjectively experienced image world? Kazuo Ohno had a gentler mien than Hijikata, dancing with the fragility of a dead leaf tossed about in the wind as I recall from a performance I saw at the Japan Society, New York, in 1996. In my conversations with Sondra, she distanced herself from Hijikata’s harshness, identifying more closely with Ohno in her own approaches to movement.

Individual characteristics aside, both Hijikata and Ohno connected aesthetically with the more than human world, whether performing with a live chicken, wallowing with pigs, or becoming ash or a peacock in high heels.¹⁰ According to Sondra, nonhuman nature’s agency and meaning is a central concern of butoh generally, as evidenced in Swedish artist Su-En’s workshops conducted in chicken coops and Atsushi Takenouchi’s healing dances performed on volcanoes, glaciers and in deserts in response to environmental destruction.

Dance can, and I hope will, play an increasingly substantive role in finding new pathways and patterns for consciously bodied beings to respond and think into the crisis. Psychological theorist Barnaby Barrett holds the optimistic view that an epistemic shift

¹⁰ These refer to dances by Hijikata and Ohno, cited by Sondra in conversation.

away from western hegemony is underway that may offer tools and momentum towards a more harmoniously embodied world (*Emergence*). His particular focus is what he regards as an epidemic of alienation from felt bodily experience and health implications of such alienation. In contrast to Eddy's view of somatic knowledge as marginalized, he writes that the cultivation of somatic knowing and mindbody integration are gaining traction as therapeutic tools vis-à-vis talk-centered therapy:

Let us make a bold prediction that...by the middle to end of the twenty-first century, psychoanalysis as we know it will no longer be much in evidence [and]...psychology will become *somatic psychology* and psychotherapy will be *bodymind therapy* (21).

Somatic psychology, as well as ecopsychology and terrapsychology, promote holistic models based on the premise that perception is always already a mode of intelligence among human and other-than-human subjects (see Vakoch and Castrillon).

Nishida's view that consciousness does not reside in a body, but that a body resides in consciousness, evokes a non-anthropocentric view of human subjectivity that emerges from a vast tapestry of earthly and cosmic being rather than being the center of the universe of significance pulling the rest of Earth towards it (*Inquiry*). Can somatic movement practices play a role in re-thinking human positionality? Nishida suggests that unindividuated consciousness underlies individuated subjecthood, which raises the question of where consciousness lives beyond the container of a human body.

Drawing from a catalogue of experiences with somatic movement practice, I can recall that a felt sense of unindividuated consciousness may arise from quieting internal monologues and attending to subtle movement experience. At times this has yielded the

sense of animate presence – energy? consciousness? – permeating the shaped things in milieu, be they constructed objects or living entities such as trees and water. In these moments, I have experienced the world as pulsing with invisible energy; consciousness and matter seemed to merge in this pulse, even stray thoughts that insist on intruding, floating upward and dissipating like small mushroom clouds. Attuning to body's animacy becomes attuning to the world's animacy.

Nagatomo notes that prior to the Enlightenment, a microcosm-macrocosm view vis-à-vis body and universe was “cherished” by Europeans (82). While that view was replaced with mind-body dualism in the western tradition, Buddhist philosophy holds that body is continuous with the animate world, sharing the same basic elements of earth, water, fire and wind corresponding with qualities of firmness, fluidity, body-heat and mobility (Ibid.). Descriptions of the universe in quantum physics and Tibetan science seem to offer a contemporary echo of the microcosm-macrocosm view, where cosmic activity is described as music and breathing respectively:

Theoretical physicists...take quanta—the discontinuous aspect of physical reality—as basic. But the physical nature of quanta is reinterpreted: they are no longer discrete matter-energy particles but rather vibrating, one-dimensional filaments: “strings” and “superstrings.” ... They see each particle as a string that makes its own "music" together with all other particles. Cosmically, entire stars and galaxies vibrate together as, in the final analysis, does the whole universe (Lazslo 9).

From here on this energy-matter-crystallization unfolds on increasingly coarser levels up until that which we perceive as the five sense objects, and which forms our material world. At the same time the reverse process of enfoldment of matter back into its energy origin takes place incessantly. This process of simultaneous and continuous arising and cessation can be described as the fundamental pulsation or ‘breathing’ of the universe (Tulku).

These descriptions suggest that the subjective experience of one's own animate being, such as breathing or movement phrasing in dance, may provide a phenomenological corollary to theoretical accounts of matter generated by science, a theme to which I return in Part II. Reflections on the world through dance as one of many "embodied ways of knowing" (Barbour 15) offer an alternative way of viewing dance vis-à-vis dance as art object (Pakes) or as "system of signs" (Williams 67).

Phenomenology of Practice

Max van Manen, a contemporary educational philosopher trained in the Dutch School of phenomenology, writes that phenomenology "aims at gaining a deeper understanding of the meaning or nature of our everyday experience" ("Phenomenology" 9). In characterizing phenomenology in this way, he suggests that in its nature experience is already meaningful; the "grasping" of meaning issues forth from *attention to* experience in all its complexity and detail. This is an issue of consciousness and body, as attention is a function or quality of consciousness, and consciousness is incarnate. van Manen highlights lived body as one of four "lifeworld existentials," which also include spatiality, temporality and relationality. These existentials "probably pervade the lifeworlds of all human beings" (*Researching* 101), and phenomenological research can draw substantial meaning from inquiry into their presence in lived experience. The emphasis of this dissertation is lived body; however, the other existentials come into play, as will become evident in the phenomenological descriptions of dancing with Sondra in Part II.

van Manen highlights bodily attentionality within what he calls the phenomenology of practice:

The pathically tuned body recognizes itself in its responsiveness to the things of its world and to the others who share our world or break into our world...[this attunement is] dependent on the sense and sensuality of the body (“Phenomenology” 20).

Phenomenology of practice emphasizes knowledge gleaned through the “sensual and felt aspects” (20) of phenomena, be they human or non-human; such knowledge arrives through the windows of perception that are part of the “package” of the researcher’s body.

van Manen sounds a note of caution regarding “theoretical intoxications” (12), which bears some resemblance to Nishida’s notion of “fabrications” (2) of the thinking mind. Both describe pre-reflective modes of relating to the world when the mind is quiet. Satchidananda, who wrote a translation and commentary on the Yoga Sutras of Patanjali, likens thinking to ripples on the surface of a pond that distort the reflection of its environment (*Yoga*). I vividly recall my first yoga teacher saying in a class over twenty years ago, “the problem with thoughts is that we believe them.” In retrospect, I do not take this as a judgment of thinking or ideas produced by thinking, but as validation of embodied ways of knowing cultivated through hatha yoga and meditation practices, whether labeled as somatic, spiritual or aesthetic. van Manen, too, validates other-than-intellectual/theoretical knowledge that emerges within phenomenology of practice—through sensitivity to the felt qualities of the lifeworld. In this dissertation, I illustrate

how a phenomenology of improvisational dance practice can give rise to new meanings and appreciation for the more than human lifeworld.

Epistemologies of the Senses and Emplacement

The emphasis on reflexivity and sensoriality in van Manen's phenomenology of practice (*Researching, Phenomenology*) resonates with the sensorial turns in anthropology and related disciplines (Bond, "Human Nature"; Pink, *Doing*; Stoller, *Sensuous*), characterized by increased attention to epistemologies of the senses in different cultural contexts (Howes) and in ethnographic methodologies. Sensoriality is connected to the notion of emplacement, which extends theorizations of embodiment: "While the paradigm of 'embodiment' implies integration of mind and body, the emergent paradigm of emplacement suggests the sensuous interrelationship of body–mind–environment" (Howes 7). The relationship of sensoriality and emplacement is logical in that attending to the senses is part and parcel with attending to phenomena within the sensory field. In the fieldwork I conducted, Sondra's and my outdoor dances enhanced our subjective experiences of emplacement, as I describe in Part II. Sondra referred to these as "place dances" to signify the significance of place, both in itself and in its contributions to experiences of dancing and knowing. Emplacement is a relevant concept to the research, which explores relationship to place and environment through dance.

Conceptualizing emplacement as the sensuous inter-relationship of body-mind-environment provides a basis for scholars to consider how they engage their own faculties of perception in their research processes. Concurrent with the emergence of

emplacement are theories that emphasize practice (van Manen *Researching*, “Phenomenology,” *Phenomenology*), experience (Titon) and ethics (Barrett), as well as a plethora of ethnographic studies structured around specific senses including hearing (Schine), touch (Blake), smell (Pink), kinesthesia (Downey; Ness, *Body*; Sklar; Spinney) and multi-sensory inquiry (Bond, “Human”). The emphasis on place as a sensuous field has made emplacement a productive meeting ground for academics and artists to engage in collaborative research (Pink, *Doing*).

Sensory epistemology offers an alternative to understandings of culture modeled on linguistics (Pink 26). The latter, which Howes traces to Barthes and Ricoeur in the 1960s, textualizes body (including the dancer’s body) in order to articulate culture’s influence on body as a site of inscription (Csordas, *Embodiment* 136). While the linguistic model may be useful for certain theoretical arguments, it has limitations insofar as it analogizes sentient, animate beings with text, which epitomizes abstraction. Scholars such as Csordas, Stoller, and Ingold frame sensorial emphasis as balancing the relationship of perceptual and conceptual knowing in scholarly endeavors, arguing that reducing the meanings of phenomena to semiotics reinforces the Cartesian pre-eminence of mind/brain over body.

As noted earlier, referencing Bennett’s *Vibrant Matter*, reduction to semiotics can obscure the inherent vibrancy of matter and implies anthropocentric bias insofar as other organisms don’t engage with the world through human semiotic filters. Similar appeals to sensoriality appear in dance (Barbour; Bond, “Human,” “Me”; Fraleigh, *Metaphysics*; Midgellow; Sklar; Stinson), sociology (Ellis) and psychology (Barrett; Gendlin). By

contrast, some dance scholars, such as Jane Desmond and Susan Foster, textualize bodies and movement in order to extend the reach of cultural and literary analysis to dance:

...much is to be gained by opening up cultural studies to questions of kinesthetic semiotics and by placing dance research (and by extension, human movement studies) on the agenda of cultural studies. By enlarging our studies of bodily "texts" to include dance in all of its forms - among them social dance, theatrical performance, and ritualized movement - we can further our understandings of how social identities are signaled, formed, and negotiated through bodily movement... We can move away from the bias for verbal texts and visual object-based investigations that currently form the core of ideological analysis in British and North American cultural studies (Desmond 34).

In addition to the issues cited above, reduction of lived movement to semiotics seemingly eliminates the possibility of acknowledging the shared and interdependent nature of movement, viz., the interplay of the movements of humans and the world. It also creates a challenge if one wishes to consider culture's ecological context or the inter-relationship of culture and ecology. How, for example, are the movements of climate change influencing the movements of culture and vice versa? This would be difficult to analyze using a lens that reduces bodies and movement to text. Though this dissertation is not oriented to cultural studies as a field, I hope that it might inspire interest in exploring the relationship of culture and environmental crisis through the lens of dance and movement studies.

In addition to challenging linguistic models in anthropology and related fields, sensory ethnography attempts to shift traditional scholar-informant relations towards more collaborative models in which researchers make "knowledge with, not about, others" (Pink, *Doing* 271). This includes collaborative art-making projects, such as research participants writing about and photographing places of significance to them

(Irving). These practices, as described in the literature, appear to have similarities to collaboration-based choreographic projects comprised of the stories and movement of “non-dancers” (such as Liz Lerman’s *Shipyard Project* (1995) and Headlong Dance Theater’s *This Town Is a Mystery* (2012)). Similarities and potential for cross-fertilization between choreographic and ethnographic practices could be a dissertation in its own right, building on Joan Frosch’s claim that dance is well-suited to ethnography (258). In conceiving my fieldwork-based interview with Sondra as both scholarly and creative process, I drew inspiration from the collaborative and aesthetic potentials of sensory ethnography, as well as from what I perceived as similarities between some ethnographic and choreographic research methodologies that employ shared creative processes. While this dissertation is a philosophical text, rather than an anthropological text or a choreographed dance, it employs inter-disciplinary methods. A full description of research methods is provided in Chapter Four.

Environmental Philosophy

Discourses cited in the previous section, based primarily in anthropology, focus on humans through the lens of culture and attend to culture through the lens of human experience. Emplacement brings attention to another dimension of culture, namely the more than human environment as it shapes humans and as it is shaped and experienced by humans. Yet the perspective of many scholars vis-à-vis emplacement (Howes; Pink) is anthropocentric, considering the ways humans experience environments but not the ways environments experience humans. Nonetheless, emplacement offers one possible

means, among others, of widening interpretive lenses to include other than human subjectivity and agency.

Recent theoretical trends, such as the “non-human” (Desmond; Fraleigh, *Metaphysics*) or “post-human” (Barad, “Towards”), suggest a growing need to account for the world without humans at the center of the universe of significance, an understanding demonstrated readily by children (Bond, “Human,” “Me”; Merleau-Ponty). Discourses addressing the relationship of human and more than human are frequently tied to the problem of environmental crisis. For example, in 2016-2017 the University of Pennsylvania Program for the Environmental Humanities hosted a series of conferences, lectures and film screenings addressing issues such as human-caused mass extinction, the human and environmental implications of the Dakota Access Pipeline and trans-disciplinary envisioning of an eco-topian future (Upenn, *Timescales; Ecotopian*). Novelist and literary theorist Amitav Ghosh, noting an increasing academic interest in nonhuman agency, intelligence and consciousness, wonders if a changing Earth is expressing itself through changes in the thinking of many humans (*Great Derangement*).

The collision of human and Earth histories and epistemologies is represented by the concept Anthropocene, which merges human and geologic scales of time and is an organizing principle bringing together disparate disciplines across the sciences, humanities and arts (Davis and Turpin). At the same time, as anyone who followed the 2016 presidential election in the U. S. would likely agree, climate change continues to languish as a political issue, with Donald Trump declaring it a hoax and promising to tear up the Paris Climate Treaty signed by two hundred-plus nations in 2015. Over the course

of four and a half hours of presidential debate, moderators failed to raise the issue even once.

Theories abound as to why environmental crisis is not treated with greater urgency in mainstream political discourses as, indeed, academic discourses. Some contemporary philosophers and psychologists identify a schism between what might be called head vs. heart knowledge of humanity's interdependent relationship with the ecological world. Poet-scholar David Hinton evokes the role of consciousness, stating that unless people "weave consciousness into the world," they are unlikely to care about its ecological plight (Tonino 11). In my understanding of this statement, he highlights the challenge of fostering care for the animals, plants, humans, watersheds, glaciers, etc. upon which one's life depends when these beings are physically removed and/or marginal in everyday consciousness. Yet one's relationship to contexts of land and Earth may change in practice. I experienced a shift in my own consciousness when I joined a community garden and learned how to grow vegetables. Experiencing growing and harvesting food directly, through senses and physical actions of digging, watering, weeding, composting, etc., I developed a greatly enhanced sense of the inter-animacy of sunlight, rainfall, soil microbes, plants, pollinating insects, stray cats, etc., as well as a sense of food as something that connects me to an animate world. Feeling part of this concretely, I became far more conscious and conscientious relative to the problem of extreme food waste in this country.¹¹

¹¹ The U.S. sends 40% of its food to landfills. At the same time, 25% of food wasted worldwide could feed the 800 million people who suffer severe hunger and malnutrition (Lyons), indicating the colossal human and environmental toll of waste. I revisit the topic of waste in Chapter Six.

Growing up in a city, I entered and came of age in the movements of post-industrial, fossil fuel-based capitalism; globalization (Klein); and rising tides of world populations migrating to cities, all of which separate people from the sources of their food, water and the ecological origins of their commodities derive and, increasingly, from uncontaminated air and water. Weaving consciousness into the world, according to Hinton, suggests countering the effects of perceptual and conceptual alienation from it. A poet and translator, he finds in ancient Chinese poetry a means for attending aesthetically to the more than human, enviroing world, suggesting that language, like direct experience, can play a role in weaving consciousness into the world.

Other theorists (Abram; Brown; Haraway; Vakoch and Castrillon) make arguments similar to Hinton's, suggesting that a lack of synergy between intellectual knowledge about and sensuous engagement with the more than human world hinders the potential for more sustainable practices. In the absence of experiential verification, intellectual understandings of human-other than human interdependence seem hard-pressed to excite the kind of radical change that many say is needed (Klein). Eco-psychologist Puhakka advocates for sensuous practices that allow people to feel “part of nature in their bones and at the basis of their moral compass” and to find a connection with “intersentience—the aspect of our ecological wiring which attunes us to our kinship with all life...” (12).

While Yuasa does not address environmental crisis directly, he describes a prevailing Western view of “man” as “*homo faber* who conquers nature” (188). He articulates an alternative Eastern [sic] view, vis-à-vis ki energy, which I elaborate in Part

II. Dakota/Dine Elder Tom Goldtooth similarly articulates European anthropocentrism as an ingredient of colonial dominance, though his emphasis is the function of capitalism:

The European concept of the natural world has become a dominant concept world-wide. It holds that knowledge and culture are property, with the attitude that commodities are to be exploited freely, and bought and sold at will [resulting] in disharmony between beings and the natural world as well as the current environmental crisis affecting all life... [This is] completely at odds with the indigenous world view. (Hansen)

In Roxanne Dunbar-Ortiz's historical account of settler-colonialism in the United States (*Indigenous*), aggressive land acquisition and exploitation are inseparably linked to racist violence directed at Indigenous peoples in North America. The colonial mindset vis-à-vis land and Earth emphasizing individualism, private property and profit motive prevailed, and continues to prevail, over Indigenous ecological knowledge including an emphasis on maintaining reciprocal relations with the natural world (Todd). While Dunbar-Ortiz's account is specific to the United States, it offers insight into some of the ways in which the European concept of the natural world, coupled with the idea of Europeans as a superior "civilized" race, has become a dominant concept worldwide as Goldtooth states.

Feminist Scholar Val Plumwood contends that in western colonization of the globe "anthropocentrism and Eurocentrism were so closely aligned as to be at times almost inseparable" (Ashcroft et al 23), spreading globally through colonialism and supercharged by petro-capitalism in recent decades following the Great Acceleration. She and Elizabeth Grosz (*Volatile*) suggest that European dualistic thinking separating consciousness and matter is linked to anthropocentrism and somatophobia. Dominant

models of thinking still seem to privilege a “mind over” body and nature stance—with mind routinely associated with humans—over a holistic view that mind, body and nature are aspects of an interconnected whole. In this dissertation, I question how somatic knowing, neglected in the dominant philosophical tradition that produced mind/body and spirit/matter dualism, may be brought to bear in transforming the relationship of human and Earth bodies. This project seeks to create change through the engagement of sensory ways of knowing in relation to intellectual and narrative representations of environmental crisis.

There are significant obstacles to change. According to Nixon’s *Slow Violence and the Environmentalism of the Poor*, environmental crisis is shouldered with a heavy narrative burden: how can the problem of slow violence, which gradually degrades Earth across human and geologic time, be distilled to a narrative that provokes the kind of response that is needed in order to change course? While his focus is literature, Nixon’s framing of the issue as a problem of storytelling raises important questions. Do thousands of scientific papers, which describe a steadily deepening crisis and potentially catastrophic future, fail on the level of communicating urgency to non-science audiences? Literature across a wide range of sources that include *The Anthropocene Review*, NASA, NOAA, and *Scientific American* reveal a dire story of runaway extraction, consumption, and pollution that is forcing earth’s climate outside its range of natural variation, triggering bewilderingly complex sets of inter-related processes that include mass extinction, desertification, debilitating storms, sea-level rise, feedback loops, tipping points, and a staggering environmental refugee crisis that could balloon to a billion

climate refugees by mid-century (Smith). How could this possibly be captured in a concise image?

Geology provides a frame that can accommodate the scale of crisis. While Earth's 4.5-billion-year history includes many catastrophic events, such as the meteor that wiped out the dinosaurs and 70% of all species 65 million years ago, there is no known precedent for one species transforming the planet on the scale witnessed today (Chakrabarty). The concept of Anthropocene defines humanity as a geophysical force whose effects may live on long after humans are gone.¹² As noted already, substantial debate surrounds the term, which on its own does not account for the widely unequal distribution of environmental impact within our species, nor the reality that the world's poor who contribute least to anthropogenic climate change tend to suffer the worst of its effects (Malm). Feminist scholar Donna Haraway employs the term "Capitalocene," indicating that environmental destruction has more to do with patterns of capitalism than with humanity per se ("Anthropocene"). Scientific data bear this out, demonstrating, for instance, a clear correlation between economic activity and greenhouse gas emissions (Klein).

Other debates surrounding Anthropocene are temporal, focusing on what date should be designated as the beginning of the geologic "Age of Humans" (Robin). Should its official origins be the Industrial Revolution, when humans first began transforming in earnest its energy economy from renewable energy harvested from the planet's surface – plants, water, wind, muscle – to erstwhile renewable energy buried underground for

¹² Physicist Steven Hawking predicts that human life is viable for another 1000 years, while plastics and radioactive nuclear waste will be present in orders of magnitude beyond that time (Criss).

millions of years? Among its many “triumphs” (Klein 173), the technology of the coal-fired steam engine allowed industry to untether itself from natural earth surface patterns of weather, health, seasons, decay and regeneration, etc. Fossil fuel-powered engines can run 24/7x365.

Is the start of the Anthropocene “Trinity,” the first atomic blast in 1945, which ushered in the nuclear era? Radioactive fallout from the thousands of bombs subsequently tested and used in war now blankets the entire globe, inscribing fissile debris into the Earth’s geologic record. Or is it the start of the Great Acceleration following World War II? Graphs indicating population, carbon emissions, and economic activity show a sharp increase at this time (McNeill). Today, we continue to live the Great Acceleration, with population growing by a billion every twelve to thirteen years and economic activity growing even faster, albeit increasingly inequitably. The cumulative effects of just the last few decades will extend their reach into geologic time (Berwyn).

Graphs, pie charts, statistics, and scientific papers describe these circumstances with specificity, but how effective are they on their own in igniting change? According to Nixon, the narrative crisis reflects in part a contemporary circumstance of a media-saturated world that encourages states of “partial attention” (13), a situation that is difficult to reconcile with the pace of slow violence:

Politically and emotionally, different kinds of disaster possess unequal heft. Falling bodies, burning towers, exploding heads, avalanches, volcanoes, and tsunamis have a visceral, eye catching and page-turning power that tales of slow violence, unfolding over years, decades, even centuries, cannot match. Stories of toxic buildup, massing greenhouse gases, and accelerated species loss due to ravaged habitats are all cataclysmic, but they are scientifically convoluted

cataclysms in which casualties are postponed, often for generations. In an age when the media venerate the spectacular, when public policy is shaped primarily around perceived immediate need, a central question is strategic and representational: how can we convert into image and narrative the disasters that are slow moving and long in the making, disasters that are anonymous and star nobody, disasters that are attritional and of indifferent interest to the sensation-driven technologies of our image-world? (20)

If, following Nixon, contemporary narratives of crisis are conceived as stories, then the stories of many contemporary philosophers and dance artists are organized around age-old questions: what does it mean to be human; what is the relationship of human and nature, humans and animals, and the human and more-than-human world (Abram, *Spell*; Kloetzal; Monson; Ness, *Choreographies*; Olsen; Takenouchi). What new meanings emerge when philosophical, aesthetic and spiritual knowledge is framed in the context of anthropogenic ecological crisis? In *Learning to Die in the Anthropocene*, Roy Scranton interrogates philosophy itself, arguing that the ancient practice of reflecting on the nature of reality exists precisely for the kind of existential crisis we now face. Philosophy is learning how to die, he asserts, referencing 16th century French philosopher Michel de Montaigne (121). In a dying world, philosophy can guide us towards dying gracefully.

Brennan and Lo give an overview of various movements and debates in environmental ethics, a sub-field of western philosophy that developed in the 1970s as an alternative to the anthropocentrism of Judeo-Christian religious dogma, western philosophy, and post-industrial environmental destruction (“Environmental”). While some debates initially focused on whether the value of the non-human natural world should be considered instrumental—related to its utility to humans—or intrinsic, other

debates centered on the law and whether other than human life should have legal rights. Routley argued that the same “human chauvinism” responsible for destroying the natural world is responsible for discrimination against non-privileged classes (“Is There”), anticipating Nixon’s assessment that the world’s richest citizens and nations are “outsourcing” crisis to the world’s poor (*Slow*). Val Plumwood, whom I cite elsewhere, connects the exploitation of nonhuman nature with race, class and gender inequality (*Feminism*). The current standoff at Standing Rock, represented by Sundeen (“What’s Happening”) as an example of the intersection of environmental racism and climate change, confirms the complex connections among North American settler-colonial history, petro-capitalism, racism, and environmental crisis (see also Roxanne Dunbar-Ortiz).

Brennan and Lo cite the sensuous writing of naturalist Aldo Leopold in the 1940s, anticipating by a half century the eco-phenomenological work of David Abram (*Spell; Becoming*) and others (Brown and Toadvine; Vakoch and Castrillon) that focus on the relationship of human and nonhuman nature. The latter turn to the aesthetic or felt experience of the more than human world as a way to cultivate ecological knowledge and an ethic of care. However, not everyone has the time or resources to experience nonhuman nature, particularly in urban areas where grass, trees, rivers and animals may be in short supply.

In Philadelphia, schools, urban farms, community gardens and organizations such as the Philadelphia Horticultural Society have collaborated in providing people of all ages with experiential education in sustainable food production practices. If ecologically destructive activities are associated with colonialism and race and class privilege, these

local, ecologically sustainable practices model alternative relationships, in which the benefits of healthy food, shared work, and time spent outdoors can be distributed more equitably among humans, while life-enabling energy is returned to the Earth through organic and traditional farming techniques. What benefits humans need not be the enemy of what benefits the Earth, though our world, particularly the powers that be, require a vastly expanded imagination to figure out how to realize this as a guiding principle over and above corporate profit.

Dance, Nature and Environmental Crisis

The relevance of dance to epistemologies of the senses and worldly emplacement becomes clear when dance is considered a means of access to gravity-consciousness, rhythm-consciousness, breathing-consciousness, stillness-consciousness, flying-consciousness, and any other among an infinite horizon of passing modes of consciousness. Might these modes of consciously participating in one's movement experience be physical, imaginative, spiritual and somatic gateways to human intersentience with other animate beings, including for people, such as myself, inscribed through religion and schooling with a European anthropocentric mindset that distances and dominates nonhuman nature? Sondra Fraleigh,¹³ Anna Halprin, Merián Soto, Eiko and Koma, Atsushi Takenouchi, Jennifer Monson, Jill Sigman, Leah Stein, Ann Carlson, Rulan Tangen, and many other dance practitioners and choreographers explore nonhuman natural environments and histories through somatic inquiry and/or performance, with some site-specific choreographers employing outdoor performance as

a space for audiences to experience and reflect on more than human nature, including animals, in the first-person (see Desmond, “Moving”; Kloetzal).



Illustration 1. Eiko Otake. *A Body in Fukushima* (2014)

Sondra employs dance and somatics practices as a means of “affirm[ing] our kinship with the natural world: animals and plants rocks and rivers sky and water” (*Metaphysics* 22), as when she teaches and choreographs in Snow Canyon, Utah (as I describe in Part II). Merián Soto’s *Branch Dance: The Practice of Peace* (2015), in which I performed, filled the stage with twelve dancers balancing six-foot long branches harvested from the floor of the Wissahickon Park. This kinetic installation was grounded in human movement interacting with the subtle dancing of wood seeking equilibrium on shoulders, wrists, heads, knees, etc. The dance film *Ridden by Nature* (2016) features butoh artist Atsushi Takenouchi’s dances for healing damaged Earth on glaciers, in the

desert, and atop a volcanic mountain. Choreographer Emily Johnson, who was raised in Alaska and is of Yup-ik descent, creates work that is oriented to land and history.

Writing about her work *Niicugni* (2012), which means “pay attention” in Yup-ik, she states:

Niicugni tunes our attention and asks us to recognize one another, to acknowledge our ancestors, and the land and communities we all come from. How do we listen to one another? To the land? Can this listening be a way to actively engage and connect not only with the present (where we are and who we are with), but also the past and future? (37)

Site-specific artist Leah Stein creates ensemble work in and around Philadelphia, often choosing locations that appear neglected or are removed from heavy foot traffic.

Attending to these sites through dancing is a way to “feel a part of rather than apart from” the taken-for-granted environments in which people live (Kloetzel 149).

Can tapping a sense of emplacement enhance quality of life while shoring one’s ethical commitment to the more than human world? I explored this question in “In the Shadow of Crisis: Dance and Meaning in the Anthropocene” (forthcoming), an article based on a year-long daily practice of dancing, photographing and removing trash from the Wissahickon Park in Philadelphia. Through that practice, I tracked my deepening physical and emotional investment in the land, observing that Earth’s condition of health became more of a consideration in my behavior relating to food and energy consumption. Jill Sigman’s “Weed Heart” (2016), a residency at Gibney Dance Center in New York that included performance, installation, and community conversations over tea brewed with wild-harvested city weeds, sought to address connections between environmental and social justice.

While an exhaustive account of dance artists and practitioners seeking to sustain, discover and/or deepen human-environmental interconnectedness is beyond the scope of this dissertation, I provide this small sample for context (I reference others in Chapter Eight). I hope dance scholars will extend this research into more thorough studies of the relationship of dance and the environment, particularly as climate change, species extinction, environmental dislocation and other crises deepen. I believe dance plays, and can further play in the future, a critical role in cultivating enflashed potentials for creating a more sustainable and equitable future on planet Earth.

While a wide array of artists and practitioners attend to the relationship of humans and the environment, a small but growing number of dance theorists are publishing scholarship addressing human-nature relationship in reference to environmental crisis (Fraleigh, “Butoh Translations”; Kramer; Lamothe; Olsen; Stewart). UK-based dancer-scholar Nigel Stewart writes about environmental dance, which he defines as the “plethora of dance and somatic practices concerned with the human body’s relationship to landscape and environment, including the other-than-human world of animals and plants” (32). He focuses in particular on a particular category of environmental dance that he characterizes as “somatic education, dance training and movement research that occur wholly or partially outside of the studio” (30).

Stewart, who identifies himself as a phenomenologist, conducted outdoor dance research in the UK with choreographer Jennifer Monson. He describes dance as a phenomenological tool for kinesthetically engaging the inter-relationality of body and Earth, thereby countering the presumption that “human society is fundamentally set apart from nature and that nature itself consists of purely quantifiable matter [as] resource”

(32). Attuning through conscious movement to the particularities of a given site disclose “values of nature within nature” by somatically overriding the dualism of human/nature maintained in abstract thought (33). Dissolution of dualism reveals oneness, and practices supporting integrated rather than atomized knowing respond to the need to think in terms of larger wholes—a whole, sentient body not separate from a thinking brain, a whole planet of interdependent sentient beings not separate from the human being. There is an implied urgency to Stewart’s claims, given the “possibility of irreversible environmental catastrophe” (32).

Kimmerer LaMothe’s *Why We Dance* offers what may be, to date, the most extensive philosophical treatment of dance in relation to environmental crisis. In the book’s introduction, she characterizes dance as “creating and becoming patterns of sensation and response” (5) and subsequently defines dance as “conscious participation in the rhythms of bodily becoming” (7), which presupposes that body is not noun but verb – becoming – whose processual nature is characterized by rhythmicity. While she does not define “rhythm” explicitly, she gives examples such as heartbeat and pulse (29), and one might extend the concept to include the movements of digestion, respiratory and cellular breathing, thought patterns, cerebro-spinal fluid movements, and generalized patterns of activity and rest in a given day. For LaMothe, body (and nature, as I will elaborate) are always already moving; dancing is consciously participating in the myriad rhythms of bodily becoming that are the currency of life and choosing how these unfolding patterns play out in time and space.

LaMothe’s definition emphasizes consciousness, which suggests a different view from those cited earlier that emphasize movements’ semiotics (one does not negate the

other; rather, each facilitates a different line of interrogation). Thus, LaMothe invites the reader to consider dance as a transformation of consciousness vis-à-vis body,¹⁴ creating space for identification of and reflection on distinctions between everyday consciousness (Nagatomo) and dancing consciousness. I explore this theme in Chapter Five.

LaMothe's definition clears another path that facilitates extending reflection beyond human subjectivity. While her definition implies that the becoming "body" is a human body, it does not specify it as such absolutely. Therefore, "conscious participation in the rhythms of bodily becoming" does not finalize dance as a human-only phenomenon, nor as a phenomenon with relevance only to humans. It thus facilitates reflection on dance that is interactive with other than human bodies and environments, including "the" environment, in which dancing occurs, whether indoor or out. Floor and walls; ground, rocks and trees; animals, insects, water, dust; air sound and sunlight: perception may open to include more fully the many co-existing layers of bodily becoming in a given ambiance. No material body is inert (Bennett 2010), each one bodying forth through the movements of distinct yet interconnected unfolding chemistries. The cosmic field of relations, which includes many bodies, unfolds intra-actively (Barad, *Meeting*), with bodies and their environments together "bringing[ing] forth new worlds" (170). I return to this theme in Chapter Six.

By not sealing dance's meaning to the bodies and thoughts of humans, LaMothe allows for an understanding of dance that includes conscious participation in the more than human world's bodily becoming. According to physicist David Bohm (*Wholeness*), environment, world and cosmos are, at the level of quantum mechanics, a vast field of

¹⁴ See also Fraleigh's *Dance and the Lived Body* and Hay's *Lamb at the Altar*.

movement of which an individual human (whether dancing or not) is an abstraction. This does not mean the individual is abstract, but that they are indivisibly entangled with the environment and, indeed, the whole cosmic field. Too often, he argues, individual phenomena are treated as separate and independent following the logic of Newtonian physics. LaMothe's integrative thinking parallels Bohm's, though, some thirty-five years later, her emphasis is not the cosmic field but the ecological context (or field) enveloping and enabling human life.

Why We Dance explicitly addresses a deepening environmental crisis, one of few in-depth responses to the issue in published dance scholarship. Rather than employing a quantum mechanics frame, LaMothe explores dance's ecological meaning in relation to the life-affirming activities of planet Earth (172-202). In her analysis, conscious participation in the vitality of body and environment through dancing enables a way of knowing Earth that is holistic and intimate, yet may be shared publically with audience or witness. (LaMothe's engagement of dance as a method of research in *Why We Dance* does not necessitate an audience, unless readers of her philosophy conceive of themselves as audience.)

Each chapter begins with a first-person description of specific experiences of dancing, which segues into theoretical analysis on the given topic of the chapter. This progression allows the reader to feel into theory along with LaMothe (I follow a similar pattern in Part II). For me, this progression functions as a reminder that theorizing never takes place in abstraction from the sentient, living bodies of thinkers; theoretical

thinking,¹⁵ too, is emplaced in body-environmental contexts, even when these contexts are unacknowledged. LaMothe's concern as theorist is not only human bodies, but also Earth's body, as hyper-consumption forces the world down a path of ecological destruction.

Moreover, movements of human bodily becoming are emplaced within the movements of Earth's bodily becoming: "All elements of the natural world also move [whether] [c]liff, coral or koala" (176). Conscious participation in body is conscious participation in interpenetrating becoming, which resonates with a comment Sondra made during our summer together that "listening to your body is listening to its environment." The abstract notion of bodily-environmental co-becoming, or ensemble becoming, may be most efficiently understood through dancing itself (or other self-cultivation practices) to the extent that dancing opens senses to inter-related body and environment, vivifying ways that breath, gravity, ground, space etc. participate in shaping experience. In LaMothe's accounts of dancing, she dives deeper into her entanglement with Earth, stirring up its affective, intellectual and aesthetic dimensions. (I am suddenly reminded of the title of a book written by poet Zach Savich, *Diving Makes the Water Deep*, wondering when dancing and poetry become indistinguishable.)

LaMothe describes *and* explains, employing phenomenological description coupled with a critique of a still-prevalent materialist paradigm that treats mind/body,

¹⁵ Yuasa distinguishes abstract thought in philosophy – theoretical thinking – from "bodily recognition or realization" which arises through utilization of one's "total mind and body" (*Towards* 25). When I engage in theoretical thinking in producing scholarship, my interconnectedness with my environmental context continues, even if my felt connection to body and environmental context evaporates.

culture/nature as separate and independent phenomena with the former dominating the latter. Building on the notion of bodily becoming, she writes:

Human culture... is not the result of a mind-over-matter process. It emerges as a collection of movement patterns – as stories, songs and dances; as rituals, tools and symbols – that support humans in becoming, connecting and healing in ways that are sensitive and responsive to the challenges and opportunities of their bodily selves and living environments. From the perspective of bodily becoming, culture represents an attempt to achieve some sort of life-enabling ecological adaptability... (176).

Elsewhere, she writes that nature is the movement of life (Ibid.), which includes and exceeds culture conceived as a human-only phenomenon. Dancing, in the dualistic materialist paradigm that she argues against, has traditionally been inferiorized through its association with “body” and “nature.” Rather than theorizing dance as a text, thus elevating its status to a human-only realm separate from species that don’t relate to the world textually, LaMothe dances as a means of connection to the world beyond humans. She describes thoughts and sensations arising while moving in a world that is in motion, making explicit her process of coming to know and theorize through movement.

LaMothe’s assertion that “dancing is an ecological necessity” arrives in the book’s final chapter, subsequent to a chapter titled “To Dance is to Heal” (137). The latter highlights the ways that conscious participation in the movements of one’s body is a way to align with movement already underway, while the latter is a reminder that body is always emplaced within an ecological context. Dance’s power to heal can extend beyond aligning with the movements of a personal body to aligning with the movements of Earth, healing a broken connection. Have (some) humans made bad on a contract with our planet? LaMothe’s account of dance illuminates the possibility of questioning what

Earth means to her and is an invitation to readers to ask this question of themselves.

Such questioning can occur in language, yet she offers a vision of movement itself as an essential mode of questioning in the context of an ecological world that is always in motion.

CHAPTER 4

FIELDWORK

Introductory Note

Citing Heidegger's observation that "Nothing comes of philosophy; you can't do anything with it," van Manen asks if "phenomenology may do something with us" ("Phenomenology" 13). As I prepared to conduct research in Utah, I was asking how a sustained practice of "remembering a forgotten whole," a phrase that came to me at the time, might change me. I was particularly interested in the possibility that the dissertation research, in addition to producing new knowledge, might move my habits of living in the direction of greater reciprocity with Earth. Indeed, I set the intention of transforming my patterns of thinking, dancing, and daily living to be more attentive to and reciprocal with the ecological world, whether or not personal transformation became a topic of the dissertation. An orientation to transforming self through a research process is compatible with van Manen's question about phenomenology, as it is also with Clark Moustakas' heuristic research methodology (*Phenomenological*), as I outline later. My guiding principle was to endeavor to "be the change" I hoped to see, as captured by the popular activist slogan.

In the dissertation proposal, I wrote, in reference to research I had already conducted in preparation for fieldwork:

I am already beginning to change, for example through taking concrete steps towards softening my footprint on the earth's environment.¹⁶ I am also trying to change how I think about and experience the natural world.

I continued on, describing a practice-based research project that I assumed I would incorporate in the dissertation:

My present research is photo-documenting non-human nature in the Wissahickon Park¹⁷, within a half mile of my apartment. Once or twice daily I head into the woods with camera to catch all that draws me to it. So far, this includes tree skins, dead leaves, animal footprints, melting icicles, and words etched into trees. Ten days into the research, I feel change happening, as winter becomes spring and the silence of ice becomes the laughter of running water. By means of the camera's lens, I see things with fresh eyes and "the familiar becomes strange" (Sheets-Johnstone, *Corporeal* 229). For example, I see in structures around me echoes of the structures of my body. The thick, bare vines wrapping fallen trees are veins wrapping a heart the trees spreading out against the sky the inverse of human lungs. Trees figure largely and they should; they are the lungs of the world, breathing in what we breath out, and returning to us new air.

Several months later, however, I determined that the place-based research in the Wissahickon Park would be difficult to incorporate into the dissertation, which was rooted in the textures and rhythms of southern Utah. This was largely an aesthetic determination based on my preference for deepening the inquiry of one place rather than dividing into two. Still, my forays into the Wissahickon Park continued while I wrote the dissertation, and I owe a great debt to the wordless intelligence of those woods in helping me find clarity in my thinking and a renewed commitment to giving back to Earth

¹⁶ This is an accumulation of small steps, including changes in personal energy and water use; reducing food waste, including starting a compost; volunteering at an urban farm and joining a community garden; volunteering in neighborhood tree-planting activities, conducting interdisciplinary research (arts, humanities, sciences) into climate change and other environmental crises; participating in political actions, etc.

¹⁷ Part of Lenni Lenape territory prior to European colonization.

through my writing and living practices. I thus reference the Wissahickon Park as part of a framework of physical practices I engaged in transforming my relationship with Earth.

While a self-reflexive examination of an endeavor to change my habits of living is not the subject of the dissertation, it informs my perspective. I assert that the dissertation, whose intention is to widen analytical lenses in dance studies to better accommodate nonhuman agency and subjectivity, is itself an expression of reciprocity with Earth, using the tools of dance practice and scholarship.

Life Story

Before going to Utah to conduct the fieldwork-based interview, I conceived of the dissertation as a life story of Sondra Horton Fraleigh, which I would contextualize within a framework of ecological concerns. However, as the fieldwork progressed, the possibility of writing a life story became increasingly untenable for a variety of reasons, the most prominent being that our conversations flowed more towards philosophical reflection than personal storytelling, though the latter was a significant aspect of our dialog and often segued into the former. Moreover, our roles became somewhat blurred, as it became increasingly clear that the interview was evolving into a site for *both* of our research. As someone who thrives on collaborative processes, I was delighted that Sondra was incorporating material from our conversations and dances into her own choreographic research and philosophical writing. In this way, the interview broadened its purpose, becoming a laboratory for both collaborative and individual research, echoing the *Migration Project*, a research laboratory I initiated while on a Fulbright in Berlin, Germany in 2013.

Despite the dissertation's re-orientation, the Utah fieldwork remained true to life story methodology as conceived by folklorist Jeff Todd Titon. In his 1980 article, "The Life Story," Titon writes that a life story is "a person's story of his or her life, or of what he or she thinks is a significant part of that life. It is therefore a personal narrative, a story of personal experience" (276). While interviewing Sondra, I allowed the direction of our conversations to follow her curiosity, which tended towards philosophical reflection on wide-ranging issues related to dance, including phenomenological and metaphysical dualism, consciousness, ecology, psychology and research methods, from which I culled the specific interactions upon which I elaborate in Part II. Still, the experience was intimate; we often shared stories about our personal lives, including secrets. On several occasions, we discussed the heuristic nature of the interview itself, which was thematically oriented while continually opening to emerging ideas and questions. During our conversations, Sondra noted parallels between heuristic research processes and improvisational dance and somatics practice. In one exchange comparing Alexander and Feldenkrais somatic methodologies, I asked her about this connection directly:

Sondra: Feldenkrais teaches adaptation, Alexander teaches how to do things correctly. So I got this more "allowing" perspective from the Feldenkrais work. I let people tell their stories: this is something I've learned from Feldenkrais work too. They said, "We do not diagnose. When people come to you, they want bodywork. They'll start asking, 'What's wrong with me?' First thing, say, 'I respect your feelings and am interested in that, but it's not my job to diagnose, I'm just going to work with what I find. Can we be ok with that?'" This language has been really helpful.

Robert: Do you see a connection between that and heuristic research methods?

Sondra: I hadn't thought about that, but I do. Neither is about moving towards what is correct, they are about moving from a place of "let's begin where we are," then...discovering along the way.

In Sondra's view, heuristic phenomenology and the somatic improvisational methods she engages share a common intention: these processes are "not about being right, but about shedding light," a phrase she repeated on a number of occasions over the summer.

Sondra was not familiar with Clark Moustakas prior to our interview, though she quickly embraced his theorization of heuristic research after reading work that I referred to in conversation, discovering a resonance with the ways she was already practicing phenomenology:

Robert: You never encountered a clear methodology about how to do phenomenology?

Sondra: No, so I created a method, the spiral: You take the 1st take [description of phenomenon] and read it over, then you take the 2nd take, and you keep circling back. You're in a spiral, and you pull out the most salient aspects from each take. So you're always selecting – choreographing – and you say: here's what I found out, I'll pull it out. You ask "what pops up as important in my thinking?" and you go back in with that. It's a spiral...quite heuristic.

During our exchanges, I allowed conversation to follow Sondra's "story of personal experience," as elaborated by Titon, which generally led towards theoretical reflections on dance and somatics practice as ground for research. This is important to her in her current life, as she continues to be active as a somatician and dance philosopher. Though the dissertation does not take the form of a biographical life story, it contains the spirit of Titon's concept of life story as fiction. In his theorization, fiction does not oppose truth, but instead draws etymologically from the word's Latin root *facio*:

“fiction is not a lie, but a *making*” (278). He distinguishes fiction from history (noting its Greek root “*istorin*... found out,”), writing that “A story is made; history is found out. A story is language at play; history is language at work” (278). There are, of course, storytellers who consider themselves historians and historians who consider themselves storytellers. Titon’s emphasis, however, is not scholarly identification but language: “The language of story is charged with power: it creates” (278).

In writing this text, I embraced Titon’s view of language as energy, paying attention, as best as I was able within the parameters of scholarly writing, to the aesthetics of language over and above the referents to which it pointed. For example, I employ the words “nonhuman,” “other than human,” or “more than human” interchangeably throughout the dissertation, often choosing one or the other based on how it sounds and feels in a sentence. In general, I am sparing with the use of jargon such as “anthropogenic,” choosing language that I hope promotes thinking *and* feeling as noted earlier.

Titon’s life story methodology of listening and allowing stories to unfold with minimal interference echoes van Manen’s call in phenomenological practice to “hear the things of the world in their own voice” (*Researching* 11) without the potentially distorting effects of a predetermined theoretical framework. However, as indicated earlier, I entered the fieldwork with an orientation towards framing the research within ecological concerns, specifically the Anthropocene, as a yardstick of environmental change. Still, as a phenomenologist drawing methodologically from a background in improvisation, my intention was to be openly responsive to circumstances—conversations, events, and experiences—rather than a pre-determined agenda.

My plan, had the content of our interviews been incompatible with an ecological orientation, was to either postpone the latter for another study, or, within post-fieldwork analysis, find a way to reflect on the asynchrony. As it turned out, Sondra welcomed the orientation I brought, remarking in one of our first meetings that “I did not think you would be able to write about ecology” as a PhD student in dance. Three decades as a dance scholar had led her to the conclusion that the field had little interest in ecological issues and contexts.

Titon’s conception of the life story was an important methodological reference point in spite of its logocentrism. In characterizing how life stories are communicated (quoted above), Titon acknowledges only listening and talking, demonstrating no awareness that a life story may (and perhaps should) include details about the physical context beyond words exchanged. Such accounting attends to sensoriality, including the presence of whole bodies, recognizing that the storyteller’s and listener’s bodies are the loci of their perceptions. This study further expands the storytelling exchange to include place as a participant.

As noted in the previous chapter, emerging theories of emplacement argue that foregrounding the sensuous details of place in ethnographic accounts, as known through sight, hearing, smell, taste, touch, visceral and other senses, can benefit scholarship, as it more accurately reflects conditions in the field than accounts that ignore these lived experiences (Stoller, *Taste* 9). Fieldwork researchers are emplaced in the “living ambiance” (Nagatomo) of their inquiry, the field of relations that includes human and non-human animal beings and other phenomena and events such as weather patterns, sounds, landscape, bodies of water, food, flora, health and illness, etc.

I entered the fieldwork holding myself accountable for attending to the specificities of place as well as Sondra's and my discursive and kinesthetic exchanges. I envisioned textual and photographic documentation of place as a layer of what I initially thought would be a biographical life story. As I addressed in the review of literature, this choice emanated from both ethnographic epistemological theory and ecological philosophy as perspectives seeking to widen the lens of theory beyond the human in order to better address the contemporary context of environmental crisis.

Fieldwork in Detail

I conducted fieldwork in June and July of 2015, as per the itinerary below. My base of operations was Moab, Utah where my partner Rahul and I have close friends and connections to affordable accommodations. On three occasions, for about a week each time, I traveled to St. George to interview Sondra. Sondra, who had never been to Moab despite growing up in Utah, came to visit me once there, and we also met once in Boulder, Utah where we stayed for one night. All told, we spent between three and four weeks together.

During the periods between meetings with Sondra, I spent considerable time exploring the canyons and mountains around Moab, taking photographs, videos and audio notes. I meditated each morning on a rock overlooking Mill Creek and took long walks, sometimes pausing to dance as I describe in Chapter Eight. I used these forays to sense the physical environment in a deeper way and to clear my head and organize my thoughts. Often, I used this time to reflect on previous exchanges with Sondra and to plan for later ones. At other times, I visited the Moab Public Library, where I transcribed

recordings of my conversations with Sondra and conducted research on the human and geologic history of southern Utah.

When I was in St. George, I stayed with a family that provides low-cost “home stays.” Sondra and I met each day I was there, often organizing our meetings around a particular activity or trip to a local or regional site of interest. For example, we spent a morning in Snow Canyon and an afternoon at Pine Mountain, where we danced, explored, and talked. I describe these visits in detail in Part II. We also visited Circleville, where Sondra grew up, and Cedar Breaks, a state park near Cedar City, where she attended university. In St. George, we often met for a meal at a local diner or restaurant, or we met at her house. Sondra gave me several tours of St. George, including visiting a dinosaur museum and the local Latter-Day Saints Tabernacle. On three occasions, we went to Yoga Soul, a studio I rented where we danced together. I describe one of these mornings in Chapter Eight.

Throughout the summer, I gathered data by means of audio recording, video recording, photographing, note taking, sketching and journaling. I engaged in a phenomenological research methodology that emphasized listening (van Manen, *Researching*) and adapting to changing circumstances and subject matter while maintaining an orientation to the contextualizing framework of environmental crisis. The process was improvisational to the extent that I did not enter into it with a pre-determined set of questions. I allowed my questioning to emerge from the process, including Sondra’s and my reflections on our experiences of dancing in the selected indoor and outdoor locations. The fieldwork’s structure derived from the spatial and temporal constraints of our designated meeting times and places, similar to the way structure

derives from the spatial and temporal constraints of a rehearsal schedule. When I choreograph, I engage extensively with improvisational processes in rehearsals, whether or not the choreographic product is itself improvised or set. My artistic interest is emergent meaning, particularly what arises from unknowns and/or uncertainty, and I drew upon my choreographic background as I conducted the fieldwork-based interview.

Fieldwork Itinerary*

June 1, 2015 – arrive in Moab
Daily walks, meditation and/or dancing in Mill Creek Canyon

June 9-16 – St. George
Yoga Soul, Circleville, Snow Canyon
Home stay with local family

June 17 – 25 – Moab
Mill Creek Canyon, Lasal Mountains, Arches National Park, Film screening and public roundtable on creating Bears Ears National Monument

June 26 – July 3 – St. George
Yoga Soul, Pine Mountain, Cedar Breaks

July 4 – 12 (unrelated travel)

July 14-15 – Moab

July 16-17 – Boulder, UT

July 18-19 – Moab

July 20-24 – St. George
Yoga Soul, Dinosaur Museum and Ivins Reservoir (near Snow Canyon)

***Times spent with Sondra are in bold.**

Midgellow (“Improvisation”) identifies a shared sensibility within phenomenological and improvisational methods for entering unknowns and allowing experience itself to guide outcome. These methods are not passive, as they require acute attention to what emerges in consciousness. Both actively engage adaptive responses to changing and sometimes surprising circumstances while adhering to organizing structures, orientations and/or intentions. Yet even orienting structures may be modified to accommodate circumstances “on the ground,” as occurred when I shifted the dissertation’s direction away from biographical life story towards ecological philosophy.

This heuristic fieldwork process drew on my skills as an improviser to cull emergent meanings through self-awareness in relation to the investigative milieu, as I illustrate with examples later. Heuristic research, according to Moustakas, aims at “discovery through self-inquiry and dialog” (1), responding to the researcher’s curiosity and to emergent questions (11). Like some dance practices, including butoh (Fraleigh, *Butoh*), it is oriented towards transformation. Like phenomenology, heuristic research examines experience and, indeed, some phenomenological methods are identified as “heuristic” (Fraleigh, *Phenomenologies*). During the fieldwork and throughout dissertation writing, my practice has involved circling back to research materials (transcripts, photographs and videos, phenomenological descriptions), uncovering new meanings and questions in relation to the organizing thematic of environmental crisis. This process has been similar to the phenomenological spiral described by Sondra earlier.

According to Moustakas, the heuristic researcher creates a final product through creative synthesis of research materials:

The life experience of the heuristic researcher and research participants is not a text to be interpreted but a full story that is vividly portrayed and further elucidated through art and personal documents. ... The primary researcher...develops a creative synthesis from this material. (1)

This description recalls Pink's account of ethnographic representations that engage sensory knowing and artistic imagination (28), and aligns with Nixon's and Olsen's articulations of a need for stories that connect humans more closely to Earth and to the problem of environmental crisis. In keeping with these perspectives, I organized the dissertation around a central narrative, which tells the story, through text and images, of four particular days that I spent with Sondra. This narrative leads into theoretical reflections on body, consciousness, matter and time, which spiral back into the story in the manner of heuristic processes that move "from the feeling to the word and back to the feeling, from the experience to the concept and back to the experience" (Craig 57). While the central narrative is chronological, I incorporate into the theoretical reflections other lived experience descriptions that do not adhere to chronological ordering, including a spontaneous dance with a chair (Chapter Six) and fictional interview (Chapter Ten). I hope these choices facilitate, for the reader, creative engagement with notions of time, be it conceived as linear, circular, subjectively lived, objectively quantified, and relational to human and other than human beings. Might shifting notions of time facilitate shifting relations with Earth?

In Part I, I described the context and background literature supporting the fieldwork I conducted in Utah. In Part II, I account for meanings emerging from specific place-based interactions with Sondra. Most of the chapters open with a

phenomenological description that leads to theoretical reflection, producing a discursive spiral that passes through practice and theory and somatic and intellectual ways of knowing. The movement of the spiral is fueled by questions. How do we dance and think about dance in the Anthropocene? What does Earth mean to us when we dance?

PART II:
Dancing Red Earth

CHAPTER 5

RED DUST CANYON

I pick Sondra up in St. George en route to Ivins, a small town a few miles from Snow Canyon. We are heading to Xetava Café for *al fresco* breakfast on their outdoor patio. At 8 am, it is already hot, and the interior of the car feels like an oven. After we pass the strip malls and fast food chains lining the edge of St George, however, the heat mellows, becoming a balm slowing time and movement. We reach the café and, as we settle at our table, I feel the day stretching outward towards the cliff-lined horizon. Several minutes pass as we browse our menus, shaded under a tree in which a bird chirps amiably. We are settling more fully into desert time; our conversation will begin when it is ready. Moments glide by and then, in unison, we place down our menus, smiling. Unprompted, Sondra begins to speak. Several minutes pass before I realize I have forgotten to record, a mistake I will regret, months later, while transcribing.

Sondra: ...I wish I could put my finger on it, witnessing current neuroses of all kinds, overload. So much focus on the self, which Buddhists say ultimately doesn't exist... Take the notion of the self... I like reading Damasio, Self Comes to Mind, where we get to come to terms in human history with what a self can possibly be. Some people I feel so connected to...that I don't feel otherness, I therefore make the mistake probably of "overflow" [laughs], and too much empathy, too much connection. I don't have this with a lot of people, but some, I do think most of us have that, where there's not too much of a clear demarcation. But I've learned boundaries as a teacher. You've got to have them.

Robert: when you've had that experience, that dissolve of a demarcation, has dance been the conduit or an agent in that, a somatic...or has it been something else?

Sondra: Somatic resonance. I don't get that with everybody I dance with, just sometimes, well a lot of times, and dance can really facilitate it I think. It doesn't necessarily bring it, but it does facilitate it, that dissolving of boundaries – Oh! When I go to Snow Canyon with people, students, you can call them that, but they cease to be students, we're just all there together. The environment really holds us all, and the boundaries dissolve of their own accord, because people are truly relating to something bigger than self. I think that's one of the great benefits of dancing in natural environments, and even sometimes site specific works, though it might be a burnt-out trailer home...the environment, what we commonly call nature, maybe gorgeous opulent interesting places, but even desolate tragic ones: they call to you of something larger than yourself.

As we continue talking, the conversation drifts towards our diminishing desires to choreograph for indoor theatrical spaces. For me, this feels like a confession as I consider the implications for a future career in academia. In this moment, the spaces that Sondra and I inhabit seem very different, as she is retired from the academy and relishes the freedom to admit that her pursuit of dance, as aesthetic practice and basis for philosophy and healing, is motivated by love. Still, we are closely entangled in our common search for meaning outside institutional containers. This search will take us, after breakfast, to Snow Canyon, where we will brave the heat to dance for ourselves, each other, and the naked red landscape. We will apply no specific label to our process, though we agree to document it with photographs and video. Still, it is not clear if these images will be formalized later as art works. I am grateful for this ambiguity, as it will invite unself-conscious attention to sand and rock and provide time for the landscape to assimilate into our dances. Our pace picks up when we realize it is 9:30. The line of shade has moved halfway across the table, exposing our forearms to the sun. We pay up quickly and head for the canyon.



Illustration 2. Preparing to dance.

Ours is the only car in the parking lot. We walk into the canyon, removing our shoes when we hit the cool pink sand, our feet benefiting from its limited absorption of heat. We are carrying two large, plastic bags of costumes I have borrowed from a friend in Moab, which I selected according to Sondra’s request for “fanciful” dancewear. These include a red tutu, a futuristic form-fitting mask, a honey-colored beehive wig, creamy silk pajama bottoms, a knitted red wool shawl, and several other items. We settle on a tiered, curving section of the canyon, where a few scrubby bushes and patches of sand are scattered about.

At first, we move on our own, molding our bodies to the warm stone. I have chosen the edge of a terrace-like formation, where flat ground begins to slope downward towards a lower terrace. I arrange my body haphazardly and close my eyes, quickly entering a dream-like state. As I settle into the uneven ground, the world around me

begins to breathe, the sky, ground and cells in my body merging into a common medium of slow, wave-like patterns of heat and energy. I remain for a long time, feeling tissues responding to the horizontal plane and soft undulation of stone beneath my body. Soon these undulations grow into a rippling dance that spreads through my back and out into limbs; I picture pebbles dropping into a lake, one by one, from the water's perspective. The waves shift direction, as if a wind were forcing the liquid surface to bend towards shore. The rippling transforms into roll, and I become a snake sidewinding along the red earth. Several feet away, I pause and allow limbs to grow, finding myself on all fours.

Briefly, I back up onto two legs and rear upwards before melting back down to the ground, rolling to my back with arms splayed. The intensity of the sun against my lids causes my eyes to water; my cheeks burn. I partially open my eyes and roll my head, now a leaden weight, against the stone. Sondra, a few yards away, is trying on the shawl. How long have I been dancing? I pull my body off the ground, staggering slightly as I make my way down the slope. Minutes later, we are laughing and mugging for each other's cameras. I end up wearing the tutu over a billowing yellow taffeta skirt, which inspires me to begin another extended sequence of dancing. Sondra switches her camera to video mode, following my movement while offering periodic prompts and affirmations. When I watch an excerpt of the video months later, I see that I have discarded the skirt and tutu, which lie in a pile several feet from my dancing body. In the video, I appear on all fours, clad in the mask and black underwear, sliding my hand forward and backward along the sandstone. I am absorbed in the movement, but suddenly pause to ask, "Do you want me to come to standing"? I recollect my quickening awareness of being filmed and of the

possibility that my dancing may become a composition for other eyes; this moment of self-consciousness visibly rigidifies my body. Sondra replies gently,

Just keep going, you're doing great. And find a way to lose the mask at a certain point. Go where you want to go; let your body do what it wants to do. Feel the essence of...that petrified sandstone, the butterfly of it, the softness of it. Let it guide you. The place will do it.

Slowly, I peel off the mask, my elbow reaching upward towards the fathomless dome of sky.



Illustration 3. Reaching towards sky.

Fifteen minutes later, our roles reverse. Sondra, wearing the shawl and copper wig, is ambling slowly across an expanse of petrified dune. While I photograph, I observe her concentration and the detailed rhythm of her walk. She appears to be in conversation with the stone, feeling it out and responding to its curves and crevices through her feet.

Where the ground slopes more steeply downward, her walk becomes unsteady, without a trace of the kind of grounded, heroic gait I associate with modern dance techniques. I recall Eiko Otake's statement that "Sometimes it is not only about the human" (Yokobosky 27), feeling certain that Sondra's dance, too, is not only about herself as human but includes the larger milieu of ground and earth, seeming like a prayer or offering.

Several uneven steps later, she pauses and lowers herself slowly to the stone. She settles on her side, and my eyes water as I see her body forming a perfect echo of the dunes running along the horizon behind her; inexplicably, I think: *I am home*. Behind me, a woman with two children pass by, carrying the sound of a heated argument that fades quickly as they disappear over the next hillock. Sondra continues to move incrementally, her glacial pace not affected by their passage. I see that her hands are shaping themselves to the wig, which she gradually removes and presses away from her. Suddenly, I become aware that she is grimacing. A whole-bodied expression of grief amplifies as she drops the wig onto the ground, and then it quickly fades as she settles onto her back. I am reminded of the astonishing speed of the desert squalls I have witnessed, which rear up under miles-high stacks of dark clouds before vanishing into blue sky. Sondra becomes still. I lower myself to the ground to see her profile etched against the sky.



Illustration 4. Grief.



Illustration 5. Stillness.

Sondra and I are in Snow Canyon to feel the world in its immediacy.¹⁸ The world, according to Heidegger, is not a thing but a process of becoming, appearing in his writing in the verb form “worlding” (*Being*). Worlding includes our bodies. Through improvised dancing, Sondra and I allow the boundaries of self to dissolve, as Sondra described at breakfast, merging into the world’s worlding through the particularities of this place, assimilating fragments and textures of the desert ambiance into the pathways and rhythms of our movement. A light gust of wind might ripple through an arm, or a stretch of sandstone might be the anchor for reaching towards sky. As patterns of movement unfold, panoplies of further movement possibilities arise (LaMothe). Sondra’s and my task as dancers is to remain present to this process and to engage emerging movement possibilities, or allow them to pass by.

The reward for our commitment to attention is that the canyon becomes participatory, as if it, too, has chosen to join the dance through its vibrancy of colors, textures and other sensory qualities. Now everyday self-boundaries become fuzzy, if not fully-dissolved, in the face of something larger, as Sondra referred to at breakfast. While dancing, I felt the assemblage of shaped things, including my own body, melt into an underlying field of energy – an apparently boundless, vibrant continuum permeating body and environment. Something shifted in my consciousness during the act of dancing.

Earlier, as we pulled into the parking lot, I perceived the rocks, sky and junipers as external to my personal body, and the landscape registered as a “southern Utah desert” scene, only vaguely distinct from other locations in red rock country. Yet as I began to

¹⁸ Sondra confirmed in an email 1/9/17 that my description in this section is accurate to her experience as well as mine. Thus, I use first-person plural.

consciously participate (LaMothe) in the gross and subtle movements of my body, the environment vivified and particularized, clarifying its participation in the physical movements of my dancing, such as the stones' undulations translating into rippling movements through my body. Through the kinesthetic give-and-take of yielding into and pushing away from the ground, as well as a subtler, felt inter-resonance with the energies in the environment (Nagatomo), such as the wave-like patterns of heat moving through the whole ambiance, I experienced Earth's energy in my movement.

Later reflection awakened a feeling of love for the Earth and a sense of commitment to its well-being. Perhaps the fine-tuning of my perception to the "living ambiance" (Ibid.) elicited the feeling that "I am home," or the sense of home arose from what I would consider, in reflection, a sacred act of co-witnessing, with Sondra, the fragile contingency of our bodies held in the palm of a dizzyingly vast landscape. Sondra frequently references the feeling of being "held" by the canyon, as she did at breakfast, and by the canyon's beauty. In an article she wrote several months later, she describes the morning we danced together in Snow Canyon:

In dance of many kinds we learn how to pay attention, how to fall, how to get up, and how to stroll and stride... Now in advanced age, I take what I've learned into the fields and tall grasses, kneeling down, lying down, and breathing. Through this dance, I feel more about what happens in and around me. I listen to a mother cuss her child as they pass by our quiet dance in the canyon.... Meanwhile, the canyon suffers neglect, while I morph and try my best to attune to the beauty that holds me. I become present to the canyon, to others and myself, and I think about change and age. Doesn't the mountain die at last, the lake, and do not the canyons also morph? Tell me what to do to make this moment last ("Butoh" 71).

The suffering of this canyon has been part of Sondra's life story since childhood, as she references in the subsequent passage:

This canyon was dusted with nuclear fallout from the Nevada testing site at Frenchman's Flat about sixty-five years ago. And yet, I lie here in the suffering, consenting to have nothing but love in my life. (Ibid.)



Illustration 6. Nuclear weapons test in southern Nevada, 1951.

Beginning in the early 1950s, the U. S. Government began conducting what would eventually amount to around 1000 nuclear weapons tests, over four decades, at the Nevada Test Site north of Las Vegas. Of these tests, 100 were above-ground detonations, which took place from 1951-1962. Blasts were scheduled at times when the winds blew east, away from the population centers of Los Angeles and Las Vegas and towards the area of southern Nevada and Utah, deemed by the government as “virtually uninhabitable” (Ball). The explosions catapulted nuclear ash into the atmosphere, which later drifted down into the largely Mormon and Native American communities living in southwestern Utah and southeastern Nevada. Members of these communities were

assured repeatedly that the tests were harmless, and some were even encouraged to watch the mushroom clouds rise over the horizon, “a cheap date,” as one later called it (Carroll).

As transcripts de-classified in the late 1970s reveal, US government scientists knew that exposure to fission products could be deadly to humans and animals and that this information was not shared with the public—the assurances were a lie. In the decades following the start of the blasts, cancer rates in the region soared to levels as high as five times the “normal” rate, with residual health problems continuing to this day. While causality could never be proven definitively, the correlation between testing and cancer was unmistakable. In the early 1990s, Congress opted to set up a fund to provide compensation for “downwinders,” living or deceased, who became ill, as opposed to fighting ongoing lawsuits. The compensation process continues today (DOJ).

According to the Utah government website, “There are no southwestern Utah neighborhoods or communities that have not been touched by the tragedy of cancer or birth defects or lingering bitterness over human and financial losses” (Seegmiller). This includes Sondra’s own family and personal history, which she described during our conversations and wrote about in *Metaphysics in Motion*.

I remember standing on my back porch with my whole family to see the first flash, and how the government assured us there was no danger. We were to be part of a grand experiment, so they said in their leaflets. As it turned out, we were the 50,000 expendables of the southern Utah towns. (171)

Members of Sondra’s family suffered from health problems associated with nuclear fallout, including her mother who succumbed to cancer in her fifties. The Horton family were among those who received a settlement from the government several decades later.

While southern Utah and bordering states were the main source of uranium used in the bombs, for Sondra the landscape was also a source of comfort. In a stirring passage in *Metaphysics in Motion*, from a section titled “The Land was our Bodies,” she describes the day her mother was buried:

A soft wind blew the sweet-scented pines. They had been planted there in the semiarid desert and needed periodic watering. The tumbleweeds had been cleared at the small cemetery in the foothills. Its patches of green shone like emeralds under the purple mountains. I was not sad on the way to town; the dusty grey of the velvet road comforted me. My mother’s quiet nature and sanity entered my bones. (244)

Utah’s nuclear past came up several times during conversations, usually in brief. Sondra did not wish to dwell on this history, though she did not refuse it as subject matter either. Indeed, our conversations often pivoted to the subject of suffering and to the transformative potentials of relating to suffering through somatic movement processes.

Dancing Suffering

During our interview, I asked Sondra if her affinity with butoh had anything to do with her personal history; butoh’s aesthetic of “descent into darkness” (Fraleigh, *Darkness*) has been linked, in part, to the trauma of atomic bombs dropped on Japan during WWII (Sanders). “No,” she replied, “I didn’t figure out that connection until I had written about it for a while.” In this as in other conversations, personal narratives of suffering shifted to discussion about the nature of suffering itself. We share an interest in dance’s potential to address suffering and explore its nature somatically. Suffering, held in somatic consciousness while dancing, may transform into something else, and the

healing capacity of somatic consciousness is increasingly acknowledged in psychology (Barrett).

Sondra has been interested in the healing potentials of butoh for decades. As we talk, she frequently references artists who orient their practices to healing, in particular Atsushi Takenouchi, whose environmental dances on glaciers, mountaintops and deserts speak to environmental destruction. Both Sondra and I have studied with butoh practitioners and our dancing is influenced by this training, yet neither of us identifies as a butoh artist. Sondra refers to her dances as “metamorphic dance,” union with change itself. Nonetheless, butoh holds considerable weight as a philosophical and aesthetic reference point in our conversations. One afternoon, driving down switchbacks on our way home from a brief visit to Cedar Breaks Park, cut short by a dramatic thunderstorm, Sondra asks me what I think attracts us to butoh.

Robert: Why don't you go first - this is something I wanted to ask.

Sondra: We have insatiable curiosity, we are willing to court the edges of improvisation and to learn from that; and the dark moments—we don't push those away. Just look at our depth movement dances: they don't care what they look like, if they're beautiful; they care if they are coming from a place that will promote transformation, that we can move out of that. Our bodies will have learned and changed. I think we're both troubled souls in the sense that, perhaps, everyone is troubled, existential trouble that's a part of being in the middle of this very complicated world and difficult life and part of suffering. We will admit it and will go there.

Sondra's response evokes “existential trouble” as a condition that butoh and the depth movement dances we have been sharing over the weeks meet head-on. This speaks to our shared interest in dancing past the provisional dualism of everyday consciousness

(Nagatomo) towards deeper somatic awareness, with an accepting attitude towards qualities of suffering stirred up in the soma.

Sondra refers to dance that exists for itself as “intrinsic dance” (*Metaphysics*) whose value is innate rather than tied to a product or outcome—artful choreography, intellectual understanding, psychological insight, and so forth. These may be unanticipated manifestations; still, the primary goal of intrinsic dance is present-centered consciousness as in Zen (see Chapter Nine). Intrinsic dances thus bracket agendas, exploring the dynamics of a referenceless space free of concern for future outcomes. By engaging in this practice together, we offered each other support and permission to traverse whatever somatic terrain our dances led us to. As noted above, Sondra identified our shared disposition of leaning into suffering and allowing for transformations, through the mysterious power of consciousness itself. Neither of us sees the possibility of a world free from suffering, but we have both experienced dance as a way to change the way we relate to it and have elaborated connections between our dance practices and Buddhist philosophy (see Chapter Eight).

For Sondra, healing is a process that is always already underway in the movement of body and nature, and dance is a way to participate in the process:

Healing is a miracle dance that body performs for us. We cannot make this happen, but we can send ourselves in that direction, attune to a healing process, and welcome change. ... I die and am reborn in the dance of this lifespan. Our deaths and dances should teach us how to live: they both can heal. (213)

In her view, nature includes the movement of suffering and healing, and dance is a practice of attuning to and participating in nature as movement. Does nature suffer? As

our dancing in Snow Canyon evoked a sense of nature as human-more than human continuum, the meaning of suffering dilated beyond the anthropocentric sense of suffering as a psychological condition confined to individual (human) bodies.

Sondra wrote later about our dance in the context of an article addressing nature's suffering ("Butoh"). Conceptualizing the suffering of nature – contemplating poisoned and clogged waterways, destroyed ocean and forest ecosystems, or the cratered remainders of nuclear blasts as expressions of suffering – requires a conceptual leap: suffering understood not only as an affective state contained within bodies of discrete living organisms, be they human or not, but more expansively as a phenomenon spreading across fields of relations that include humans, animals, plants, water, soil and sky.

This expanded view of suffering might be understood as earth system suffering, in reference to the totality of Earth's aquatic and terrestrial ecosystems from Great Barrier Reef to Arctic coastlines, which is under assault. In everyday living it is easy to forget that every breath taken, every bit of food eaten, every product purchased or thrown away represents movement within the field of Earthly relations – the bioweb (Brown and Toadvine) – and it is difficult to grasp how these patterns interact with larger patterns of earth system suffering. For example, the United States is responsible for 25% of all greenhouse gases emitted since the Industrial Revolution, and what is already in the atmosphere could continue warming the planet for hundreds of years even if fossil fuel burning were to end today (Kelly). This is the invisible backdrop to the America I have known my whole life, with vast shopping malls and big box stores; supermarkets lined with over 50,000 products; and, since the internet revolution, online emporiums.

The specific ecological origins of the vast majority of things lining physical and virtual shelves is mysterious to me, beyond “Made in China” tags and stickers on produce reading “Mexico,” “New Zealand,” “Brazil,” “USA,” etc. Furthering this condition of alienation, I cannot see the carbon and methane gathering sun’s energy in the skies above malls and supermarkets, preparing to rain “thing-power” (Bennett) mercilessly upon Earth in the Age of Humans. The fantasy of limitless consumption and eternal economic growth is so bright and seductive. Who would want to poison it with thoughts about suffering and culpability?

Yet denying suffering does not make it go away, even as the bright lights and elevator music at the mall offers cheery reprieve. In my exchange with Sondra, we discussed leaning towards suffering as a way of transforming it, opening a door to compassion for one’s self and for others who suffer too, including nonhuman others. My conceptual leap to Earth system suffering, or nature’s suffering, came first from somatic consciousness: receiving the felt qualities of earth and sensing its aliveness while questioning the wall separating me from it. As perceived and conceptual contours of my human body melted away, how could I conceive of “my” suffering as mine alone? How could I conceive of suffering as a quality inhabiting a fixed position in space, defined by the shape of a suffering body? “Allow Earth into your experience,” the dance seemed to say, “because Earth feels too. You are not alone.” Returning to the feeling of tissue enlivened with Earth’s dance evokes feelings of responsibility and concern. How long can the Earth, “our common home” (Francis) sustain biological life when one species takes so much more than it returns? There are too many of us now for this imbalanced relationship to be considered a viable path for the 21st century.

Patterns of extraction, consumption, and waste are forcing the dance of planet Earth towards the outer limits of biospheric rhythms that have sustained life for over a billion years, including hydrologic, carbon and nitrogen cycles and patterns of decay and regeneration. A relentless privileging of profit (abstraction) over the health of Earth's skies, soil and waterways has altered these rhythms (Klein), and the earth's very flesh is transforming as capitalism's toxic residues course through its veins. Visualizing this as a dance, I imagine Earth shackled to accelerating rhythms of capitalism with no opportunity to pause and recuperate life-affirming powers (I learned from a local farmer that soil, like humans, has to rest).

The growing human population – from one billion in 1800 to a projected 10 billion in 2050 – is a major factor, but not the only one. Economic growth and correlative increases in extraction, manufacture, transportation, utilization, and disposal of “things” is occurring at a rate that has far outpaced population growth for decades, with the gap between extreme wealth and poverty widening. The correlation between economic activity and the atmosphere's chemical composition was made vivid during the recent recession, when the rate of CO₂ emissions dropped measurably (Klein).



Illustration 7. Coal-fired power plant.

How might one respond in dance? When I asked Sondra recently about the title of her article, she replied, “I believe nature *is* suffering.” I remembered that she had suggested at other times that nature’s suffering is human suffering, as human and earth are interconnected at a deeply embodied level. For her, attention through body is an ethics and dance is a practice of paying attention. Somatic improvisations entail opening into a fluid somatic realm eliciting felt connections to the physical world beyond personal body. Dance is a way to experience directly, without the mediating presence of language

or representational thinking, the ways that suffering lives in body and, perhaps, permeates environment.

In reflecting on nature's suffering, I recall fragments of a poem by Rainer Maria Rilke:

Dear darkening ground,
You've endured so patiently the walls we've built
perhaps you'll give the cities one more hour
and grant the churches and cloisters two...
before...that hour of inconceivable terror
when you take back your name from all things. (*Book 125*)

I allow the words to settle. How does the ground feel my presence, the presence of my human kin, and the movements of my ancestors who territorialized North America, spreading the Good Word and European ideas of civilization, private property, and land as servant to profit? What was the feeling of bodies on Earth's skin before the time of money? When I pause to reflect on the movements of Snow Canyon and towering trees in the woods of Philadelphia, I feel Earth come alive as a being whose living energy reaches past the small horizon of the human experiment called "capitalism" towards geologic and cosmic time.

I return to the word "suffering" and think it inadequate if understood as a psychological state and thus anthropocentric, since psychology is generally associated with human experience. I seek alternative pathways of thinking that snake around anthropocentrism. Rilke offers the word "endured" which, in the contemporary context, could refer to the earth's enduring of walls, dams, drilling, mountain top removal, clear-cutting of forests, warfare and the perpetual drip of industrial poisons into its veins

(Murphy). His words lead me to an enduring Earth who is subject, not object waiting to be manipulated by humans. I pause to breathe with Earth and feel the continuity of our bodies.

In his ecological ethics, Edward Casey refers to environmental distress, such as a clear-cut mountain slope, as wounds or “tear[s] in the fabric” (197) of ecosystems. Bearing witness to this distress provides a “ready basis for...presentation of that which impels an ethics of the environment” (Ibid.). He does not go so far as to say that the Earth experiences suffering at the hands of humans. Still, in his view, the mountain’s existential trouble elicits a response within the human who opens perceptually to it. Might empathy, like suffering or enduring, live in particular attunements within in the dance of matter including humans and distressed mountains (or rivers or glaciers)? We might direct consciousness to our mattering selves and Earth to query the dance of everyday living. Can we better synchronize our movements? “Our bodies are Earth,” choreographer Merián Soto said to me recently,¹⁹ while Andrea Olsen writes, “what is out there is in us, and what is in us is out there” (xiii). Matter dances intra-actively throughout human, Earth and cosmic bodies, the vibrant patterns of carbon, nitrogen, phosphorus, hydrogen, oxygen, etc., linking “in us and out there” to an ongoing co-evolutionary story: Earth’s history. Beholding ruined earth is beholding a rupture in the intra-active field of ecological relations that has sustained biological life through geologic time. This moment is an opportunity to pay attention and to breathe and dance within the sorrow of its rupture.

¹⁹ While on a walk in the Wissahickon Park in winter 2017.

Splitting Atoms

“I have always been close to nature,” Sondra continues during our conversation driving down the switchbacks, stating that being one of the expendables made the interconnectedness of humans and their environment explicit for her. Raised middle class in East Coast American cities, I grew up taking breathable air and drinkable water for granted. While I recall swarms of white fish floating belly-up in Boston’s toxic Charles River, I was not among the humans in this country directly poisoned by the machinations of political power or corporate profit. Southern Utah, by contrast, was considered remote and poor mid-century. As Sondra recounted, “we were expendable because we were poor.” Perhaps her experience as a downwinder nourished, paradoxically, her capacity to feel a connection to the awesome and mysterious power of the natural world; unlike myself, she was not in a position to take its life-affirming power for granted. She had a front row seat to the possibility of its annihilation at the hands of strong men claiming to keep America safe.

How ironic. Uranium, in its native state in the southern Utah sandstone, as, indeed, throughout earth’s crust, is a non-threatening element whose thing-power warms the earth and moves tectonic plates, adding its energy to the planet’s geologic dance and to maintaining conditions favorable to biological life. Once extracted from the earth, enriched, and atomically fractured, uranium becomes an agent of ungraspably terrifying, destructive power, as captured by physicist Robert Oppenheimer’s famous recollection of seeing Trinity, the world’s first nuclear detonation, explode:

We knew the world would not be the same

A few people laughed
A few people cried
Most people were silent
I remembered the line from the Hindu scripture, the *Bhagvad Gita*
Vishnu is trying to persuade the prince that he should do his duty
And to impress him takes on his multi-armed form and says:
Now I am become death, the destroyer of worlds

I suppose we all thought that, one way or another.
(bhagavadgita4u 2009)



Illustration 8. Trinity, world's first nuclear weapons test, 1945.

The introduction of a nuclear era, one of the proposed starting points of the Anthropocene, dramatizes humanity's manipulation of thing-power in a most vivid and unimaginably extreme manner. Behind the immediacy of images of mushroom clouds and the horrors of Hiroshima and Nagasaki, however, an ongoing story of slow nuclear

violence continues to play out as one layer in the collision of human and earth history (a layer that exists materially in nuclear fallout distributed across the earth's surface during decades of weapons testing). In the U. S. southwest, downwinders' bodies and lives were altered by extracted and manipulated uranium, and a couple hundred miles to the east, thousands of uranium mines were blasted into Navajo land, exposing the local miners and their families to radioactive dust stirred up through the extraction process (Pasternak).

Like the downwinders, these citizens were told nothing about the known risks, and Navajo communities, like their western neighbors, experienced inflated cancer rates, which continues today. When uranium prices dropped in the 1980s, mining companies that had previously made fortunes cleared out without cleaning up their mess, leaving dangerous levels of radiation in soil and drinking water. Members of Navajo Nation struggle, with very limited success, for restitution and assistance from the U.S. government with clean-up (Voyles).

Meanwhile, uranium prices have risen again and a coterie of multinational corporations, the two Arizona senators, and financial backers including the Koch brothers are aligned in an effort to override past treaties and begin a new round of mining on nearby tribal lands, against fierce resistance (Millett; Wasser). Indigenous resisters with centuries-long ties to the land say that it is sacred, but what is its meaning to the powerful, those denizens of distant boardrooms and halls of the U. S. Senate multiple time zones away? From these distant perches, the land is known not in itself but in abstraction through its representation *on paper* whose value rises and falls according to that emblem of pure abstraction: the market.

Still, matter matters, and the Earth confirms its thing-power through the effects of its perturbation, those ripples of damage that spread through human and nonhuman communities, such as the cancer-causing Iodine-131 particles emitted during the nuclear blasts, which passed through the bodies of jackrabbits into the bodies of Western Shoshone downwinders who hunted them for food in southern Nevada (Russ et al). These perturbations co-exist with others in the region, such as the impending “mega-drought” caused by over-tapped water resources and global warming (Howard). Widening the view of “slow violence” to the scale of planet, one can imagine what climatologists refer to as the “cascading effects” of anthropogenic forcing, which interact with one another as they collectively usher in the climatologically chaotic Age of Humans (Klein). Anthropocentric patterns are becoming increasingly apparent in Earth’s dance including significant changes in weather, extinctions, and rising numbers of environmental refugees fleeing drought and flood-ravaged land.

Mechanical force is applied to Earth’s flesh in order to transform it into things with short term (in geologic time) benefits to some humans—uranium and petroleum, for example—with profits disproportionately benefiting a tiny bandwidth of political and economic interests. These beneficiaries enjoy the luxury of physical distance from ruined land and living beings who depend on the land’s health, and therefore the kind of ethical response that arises in face-to-face contact with environmental distress (Casey). The damage of violence, like the material and financial benefits, are disproportionate: are John McCain and uranium mining executives in Canada drinking uranium-tainted water? Reflecting on southwestern desert as matter-energy, following Bennett and Barad, reveals

a looping mattering history, in which the Cold War lives on, still actively dancing in soil, water and tissue even as a 21st century round of uranium prospecting begins.

(The story of uranium mining is far from limited to the areas mentioned. In Moab, 200 miles to the north, where I stayed while not interviewing Sondra, tailings from decades of uranium mining now live in a landfill-esque mound by the Colorado River, and the waste is steadily being removed, truckload by truckload, to a tomb thirty miles away, a process that will take until 2025 to complete. While river rafting is a popular activity in Moab, no one river rafts downstream from that spot. As a friend, a long-time resident told me, “downriver is where all the three-headed fish are.”)

Moving into Crisis

I dance and write my way closer to a planet in crisis and attempt to derive meaning through this somatic-intellectual project. It feels, sometimes, embarrassing to admit to feeling towards knowledge given the barrenness of somatic knowledge traditions in the WASP culture of my upbringing. Yet the Anthropocene is a new era that requires radical creativity. I turn to the ancient practice of dance, finding in it my own desire to bypass representations and go directly to the felt qualities of things in themselves (Brown and Toadvine), touching the intra-active field of relations and sensing and responding to its movements which are also my movements – the invisible energy permeating the ambiance. With perceptions tuned to the field of relations in which I find myself, I dance closer to its meanings. I feel a kinship with dancers whose practices include becoming animals or things (as I will discuss soon) tasting the world through nonhuman eyes and skin. I push aside my habituated relationship to earth as a backdrop to human knowledge

and experience and ask: what does this Earth mean to me? Just as the plausibility of its demise becomes more vivid, the need to ask the question, and ask more others to ask, becomes more real.

Matter and meaning are inextricably entangled (Barad, *Meeting*). Dancing and thinking are movements within the human-environmental field of relations made alive by the “inexhaustible, exuberant and prolific” dynamism of matter (170). The dance of Earth’s matter is changing, impelling humans to produce new labels consistent with its change. Holocene: 12,000 years old, climatologically stable former era, container for the dawn of agriculture and all written history. Anthropocene: present era, unstable and terrifying. Through dance, I clear the abstracting layer of thinking and habituated perceptions that render matter inert (Bennett) or “freeze” it in conceptuality (Abram, *Spell*), and I allow its dance to be felt directly. What thinking emerges? I share my thoughts here in this writing, but I also pose broader questions for the future: what thinking can arise from dancing in the Anthropocene? What dance-rooted theories can prosper as the shadow of ecological crisis lengthens? Dance is a way to mediate mattering world, body and thinking through the specificity of place, shifting through and integrating somatic and conceptual ways of meaning making. This may happen in a dance studio, woodland or canyon—or anywhere—and it may entail a basic structure for meaning making that I have encountered in improvisation jams, authentic movement sessions and rehearsals:

become a conscious agent in movement,
notice what arises in perception,
reflect on emergent knowledge.

Reflection can take the forms of discussion, writing, and “harvesting”—as contact improvisation pioneer Nancy Stark Smith calls post-dancing reflection,²⁰ and it can deepen with further moving and dancing. In cultivating and harvesting movement knowledge, singular, shared and divergent meanings may arise; a richly detailed, irreducible portrait of a particular place and time may emerge from bodies’ generous capacity to perceive, with attuned human animal senses, their given fields of relations. There is, as Sondra writes, an ethics to paying attention, to pausing within the forward rush and allowing the world’s vibrant materiality to communicate itself through sensuous portals of feet, eyes, skin and breath.

Anthropocene represents, pithily, the extent to which the rhythms of Earth’s bodily becoming have been altered by some humans, leading all biological life down an uncertain path. Is human epistemology matching human-altered ontology? Not if the normative world that appears in thought continues to exist, according to philosopher Timothy Morton (*Hyperobjects*), who writes that the world already ended twice: first, in 1784, when James Watt patented the steam engine (the pre-cursor to the industrial revolution) and again, in 1945, when Trinity was detonated, ushering in the era of “mutually assured annihilation” and a planet blanketed with nuclear debris, adding to the stratigraphic “signal” indicating the Age of Humans.

Surely, the world has not ended, as I perceive an existing world in the movements of my breathing and in the sunlight passing through the window as I write these words. What Morton suggests, then, is that the world commonly represented in thought is over:

²⁰ Harvesting is the reflection phase of Global Underscore, a long-form improvisation structure initiated by Nancy Stark Smith in 1990. (Stark Smith)

the world that the colonial mind aimed to conquer and subdue; the “inert and passive” world that is a mere backdrop to the (hu)man-centered histories and politics of the powerful; the ever-dependable workhorse that a disproportionate number of humans feel free to treat, as Joanna Macy says, “like a storehouse and sewer.” All of these worlds are over and a new one is rising with Earth’s swelling seas, angry storms and weeping glaciers. In order to think into this emerging world, to work with rather than on it, to reawaken a sense of curiosity and wonder, I look to dance as physical-intellectual-somatic access to the rhythms of physical Earth, via place, and to emerging understandings that can inform choices about how to be human in the age of humans.

CHAPTER 6
DANCING MATTER

For several minutes, I have been sitting down-slope from Sondra, observing her profile against the unbroken blue of sky. It is so peaceful to be here in stillness on the soft warm stone. Time dances in the ripples of heat emanating from the canyon floor. With an exhale, Sondra stirs into action, rolling over to her side and up to sitting. We face each other for a long while, smiling, our eyes soft. There is an unspoken agreement not to speak and, instead, to allow the energy of this moment to play within our tissues. Something in the tenor of the day has changed, downshifting into a slower temporal gear. I decide to ride the changed rhythm of air and ground, keeping it alive in movement.

I lie down and begin to roll unevenly across the terrace, eventually ending up on a bed of fine pink sand. My body spills outward, legs and head spiraling away from each other. I scan internally, feeling various pressures and torques across the landscape of tissue. Where does suffering reside in a body? I imagine it as a hot ball of energy that can be pushed and rolled into different corners of my anatomy, like a pinball in slow motion. In some places, the ball gets hotter and denser, in others it dissipates. I allow it to settle within the gnarled thicket of my solar plexus. For over two years, I have sensed that something is not right here. The feeling changes continually, morphing into qualities of density and bloat, like a restless creature that has made a home just below my heart. Six months ago, I sought medical attention, but nothing showed up in the X-rays and stress test. Sprawled out in the sand, I choose to assume a friendly attitude towards this mystery, meeting it on its own terms, without attachment or aversion (Chödrön).

My dance, centered within the perimeter of lower ribs, becomes ever more subtle and internal, distilling down to a feeling of long, even waves flowing through my cells, which somehow reminds me of meat falling off a bone: the freedom of it. I feel myself become matter in the first person: particle and wave, solid and not solid at once. The subtler my attunement, the more wavelike I imagine myself to be, an apparition floating in emptiness sculpted into the shape of canyon and sky.

According to quantum physics, as a material body, I am, just as this environment is, both particle and wave (Bohm). This presents an intellectual riddle. A particle occupies a defined position in space, while a wave is movement itself, unavailable to such definition. Matter is, mysteriously, both. Not only did physics reveal matter's irreducibility at the quantum level, it demonstrated that the apparatus²¹ of observation influence the behavior of observed quanta, suggesting that the apparatus and the observer – the entire context – must be considered part of the observed phenomenon. These and subsequent discoveries led physicist David Bohm to theorize, many decades after the first breakthroughs in quantum physics, the universe as “Undivided Whole in Flowing Movement” (11). All is related to all else in a web of interconnectedness, with the web itself irreducible and ceaselessly changing; this web is the world's worlding.

Surface appearances that suggest independent being thus deceive. While distinctions obviously exist among phenomena, identifiable in perception and representable in language and thought, underneath distinction is an integrative dance of flux from which differentiated phenomena emerge and back into which they dissolve. I am not the chair on which I am now sitting, yet the chair and I are interconnected within

²¹ Such as the two-slit apparatus described by Barad in *Meeting the Universe Halfway*.

a dance too subtle and mysterious to be represented, in full, by the labels “I” and “chair.”

When I dance with the chair, however, relationship emerges that unsettles everyday

deceptive appearances, as described in this account of a brief spontaneous dance:

On a hot summer morning in Philadelphia (2016), I put the Ikea chair in the middle of the empty dining room. The chair has a curved, blonde wood seat and back; its legs are metal. It is a light chair, though it makes a loud sound when placed on the hardwood floor. I fold my body towards the floor, then rotate as I spread out along my side, weight on one hand and forearm. I look under the seat, then visually scan all surfaces of the chair. I begin to allow the scan to pull my body with it, first scanning around the corner of the chair back while propelling myself with my legs along the floor. The sense of the chair’s negative space begins to crystallize, becoming palpable. The visual scanning transforms into a negative space dance, my head and limbs projecting themselves through the chair’s spatial architecture. After a couple of minutes, I pause, becoming aware of the spatiality of chair+my body. This creates tension: my movement, now slowed, includes these conjoined bodies. I feel myself pulling the negative space with me, stretching it away and wrapping it towards itself. No. I am not pulling it. It is pulling itself through the power of chair+my body.

Barad refers to the co-participation of distinct phenomena in the world’s worlding²² as intra-action, with “intra” indicating that, at the quantum level, phenomena are already aspects of a larger, interconnected field or whole. In this view, there is no pre-existing world within which interactions occur, but an unfixed, relational dance of ongoing intra-action “bring[ing] forth new worlds” (170).

The implication of a holistic, interdependent, let us now say “intra-dependent,” universe that emerged from quantum physics flew in the face of the view in classical physics of a mechanical, knowable world “composed of individual objects with individually determinate boundaries and properties” (107), and its companion, Cartesian dualism, which viewed mind, possessed only by humans, as existing on an abstract plane

²² I carry over the verb form “worlding” from earlier; Barad does not employ this term.

independent of the mechanical operations of body and universe.²³ Despite the onto-epistemological intervention of quantum physics and relativity (Bohm), the laws of classical physics were not invalidated, as they remained highly accurate in describing and predicting the behavior of gross objects; classic physics is useful for building bridges (Gilman 11). However, classical physics cannot capture subtle being, the quantum level of reality where dualistic notions of independent subject (such as observer) and object (such as observed) fall apart.

Perhaps the co-existence of gross (classic) and subtle (quantum) reality might be understood through analogy with matter itself, given its dual nature as particle and wave. Since the revolution of quantum physics, several physicists have drawn ethical conclusions from the behavior and nature of matter's quantum dimension, which implies a lively, interconnected whole. Some contemporary physicists argue that the thinking and practices of present-day science and of western civilization *in toto* have yet to catch up with the discoveries of quantum physics, even after 100 years (Laszlo). Robert Gilman writes,

Since most of the distinctive institutions of western civilization – materialistic science, market economics, our legal system, the Bill of Rights – are based on the assumption that the world is composed of discrete units, the idea of interconnectedness rattles the foundations of our whole society (11).

Drawing metaphorically on the wave-particle dual nature of matter, he continues:

²³ Descartes performed live dissections of dogs apparently without regard for their suffering; as nonhumans they must have been considered mere instinctive objects devoid of mind or spirit.

Might we humans also, in some mysterious way, have both particle-like individuality and a wave-like shared beingness and interconnectedness?... those of us from the West...need to stretch our ability to understand our more wave-like, interconnected qualities (Ibid.).

Perhaps attuning to subtle energies within and external to the body can elicit a sense of intra-connection with the enviroing world, a sense of body's reciprocity with air and earth expressed through breath and movement. I cannot breathe without the exhalation of trees and phytoplankton. I cannot dance without the support of ground and gravity. In the Anthropocene, dancing is the method I choose for thinking and feeling the earth as a field of reciprocal relations, allowing me to clear the dust of my own ignorance. Human is not the only beneficiary of earth's "resources" that matters.

Philosopher Yuasa (*Self Cultivation*) references ecological reciprocity in his theory of body, which integrates gross body (physiology) and subtle body (ki energy). According to this theory, which is grounded in a combination of Daoist and Buddhist philosophy and western philosophy, psychology and medicine, body is irreducible to a bounded, determinate biological system as conceived in western medicine and is, instead, an open system whose life-energy, ki, intermingles with the ki energy permeating the environment. Body-mind-environment and, ultimately, universe are unified within what Nagatomo calls the "invigorating activities of ki" (202). This conception of a human-environmental continuum enlivened with ki is associated with an ecological view of human that is, according to Yuasa, distinct from that which predominates in the west:

The view of human being espoused by... [East Asian] philosophy maintains that the human being is not a *homo faber* who conquers nature, but is an ecological, receptive being made alive by the invisible power working from beyond nature, for the human being is originally a being born out of nature (188).

While ki permeates human and other than human phenomena, it operates, Yuasa argues, at a deep, subtle level within the body, and perception of its activity is not available within everyday “provisionally dualistic” consciousness (Nagatomo).

Perception of ki requires the kind of finely tuned somatic awareness cultivated through integrative mindbody practices such as meditation and martial arts. Yuasa makes no mention of dance as a means of cultivating such perceptual acuity, nor does Nagatomo, who translates Yuasa’s work, which was written in Japanese. However, Nagatomo’s theory of attunement, which builds in part upon Yuasa’s work, extends the domain of somatic engagement beyond the specific self-cultivation activities identified by Yuasa towards a more expansive potential field of practices that may or may not be Asian in origin. He thereby suggests that a broad range of attunement practices are capable of eliciting experiences of oneness beyond subject-object dualism, experiences which he describes variously as oneness of perceiver and perceived and somatic or felt inter-resonance unifying body and living ambiance.

Nagatomo’s “living ambiance” suggests that any given environment possesses inherent vitality, regardless of the nature of its constitutive parts and of commonplace, biologically-based definitions of living and non-living. A quality of consciousness elicited by attunement through body can reveal the inter-resonance of body’s and environment’s vitality, in distinction from everyday consciousness, which splits body and environment in two. What might be called body listening in dance and somatics practices can, similarly, deepen a sense of felt interconnection with environment through attention to subtle, changing qualities in the total field of self-environment (Kloetzel).

Sondra's characterization, at breakfast, of dancing with students in Snow Canyon references a dissolution of dualistic consciousness: "the environment really holds us all and the boundaries just dissolve of their own accord. It's like...people are truly relating to something bigger than self." This representation bears resemblance to Nagatomo's notion of attunement:

[T]he emanation of an energy from the personal body...calls for a recognition of its pervasive presence in the living ambiance which embraces the personal body as a contingent being, for it shares the same "natural" elements which comprise the totality of physical nature (203).

By shared "natural" elements, he refers to traditional Buddhist philosophy, which holds that all phenomena, including human bodies, are comprised of the same constitutive elements of wind, water, fire, and earth.²⁴ Perceiving personal body's subtle energy elicits recognition of its continuity with energy permeating the ambiance. Such recognition may call forth vivid affective qualities.

In Sondra's earlier description of somatic attunement to the canyon and its suffering, she spoke to the capacity of dancing with earth to elicit an earth-centered love that transcends metaphysical privileging of a human self. This love is not a thing but a particular attunement within a field of relations, enacted through flesh sensing into itself and environment. According to Nishida, there is not an experience because there is a subject, there is a subject because there is an experience (*Inquiry*). Might this be said of love?

²⁴ His account of the elements does not include wood, as some Buddhist lineages do.

I should not be surprised, as I write, that I am asking questions about love. On the first day of my interview with Sondra, she said: “At this time in my life, what I want to write about is love and gratitude.” She laughed as she spoke, her eyes sparkling. We were outside her house on Oasis Drive, from where I could see, to our right, red sandstone cliffs lining the distant horizon. This was a nervous and exciting moment: we were about to spend weeks exploring dance as mediator of self and earth, and we did not know yet where this adventure would take us.

Interlude: The Day Love Failed

A year and a half later, I return to that moment on Oasis Drive. It is November 9, 2016, the morning after the election. Today love failed. Outside the window, quiet, dull rain brings my thoughts to stillness, bringing me back to the wide-open space of St. George, the distant cliffs and heat rising off asphalt in rippling waves. I need that moment, just as I need the simple messages of love that today pierce, like gleaming arrows, through darkening clouds of bitterness and grief. I need it as I get to the work of converting my own anger and fear into love. I need it as I remember to remember why I dance, and why I will remain doggedly committed to dancing in order to touch the wisdom of body, which is not, nor will it ever be, separate from the wisdom of earth. I need it as I think anew about how I might offer myself, in whatever humble way I am able, to the work of creating a world that is better than the one that produced the world today.



Illustration 9. Oasis Drive.

The Power of Things

In the nuclear era, matter's "thing-power" (Bennett) is on dramatic display as split atoms unleash latent forces that both light and level cities. In the generalized Anthropocene, its display is more diffusely spread across space and time, as the geophysical force known as "human activity" carries earth into the new geologic era. Bennett proposes that the way humans view matter may influence the way our species lives its existence on earth:

If I am right that an image of inert matter helps animate our current practice of aggressively wasteful consumption, then a materiality experienced as a lively force with agentic capacity could animate a more ecologically-sustainable public. (51)

In a recent email exchange with a physicist, he affirmed that matter is energy.²⁵ Matter-energy is not inert as it dances its rhythms of bodily becoming that emerge from the past and produce the future. The iPhone, sitting a few feet away on my desk as I write these words, traveled 160,000 miles from extraction sites through manufacture centers, both scattered across the globe, and onto shipping containers and railroads and trucks, eventually arriving at the store where I bought it (Humes). Its patterns of becoming are now intertwined with mine, traveling where I travel, getting smudged with fingerprints, wearing thin around the edges, imprinting its weight and spatial dimensions into my nervous system. Our duet will last for three years, perhaps, and then we will part ways. Where will the phone go then? Perhaps to an electronics junk yard in a remote city in China, where numbers of people, including children, will deconstruct the phone back into component parts which will be sold for pennies, while the phone's noncommodifiable materials, some toxic, will bleed into the ground and air, merging with the sum of all manufacturing and agricultural toxins gathering, and gathering force, within the earth's bloodstream. During the phone's many oceanic crisscrossings, it will ride one of the thousands of container ships plying the world's seas outside the reach of any nation's environmental laws; 160 of these pollute as much as all the cars on the planet (Humes).

All of this is invisible when I look at the iPhone, a handy and increasingly indispensable object among so many other objects that will dance into and out of my life and consciousness. "iPhone" conceptually freezes the journey of its materiality from

²⁵ I posed the question "is matter energy" at the *American Physical Society* website and received a reply from a physicist named Stephen on 3 February 2016.

extracted matter to human communication device to trash tossed into the world's waste stream. All of these phases of its life as matter-energy intermingle with Bohm's "Undivided Whole in Flowing Movement" (11), and yet it appears otherwise. This iPhone, like every object I see and buy and throw away, appears to exist discretely, perhaps negligibly, as its own separate entity. Instead, these lively anthropocentric materialities are tiny ripples within currents driving the world's transformation from Holocene to Anthropocene.

Jane Bennett asks her reader to crack open the façade of everyday, taken-for-granted materialities to see what lies underneath. She takes a special interest in trash, appropriate in the United States, which sends up to 50% of its food to the dump, while millions of its citizens live with food insecurity. How does this figure materially? Food is matter-energy upon which all biological life depends. In the cold logic of corporate capitalism, profit—an abstraction – is privileged over enfolded life, the dance of matter-energy. Food is a commodity, and it is evidently more profitable and expedient within the corporate food cycle to trash food than to find other uses for it, such as distributing it to people in need, converting it to bio-fuel, and returning its energy to Earth as compost.

The millions of tons that end up in landfill biodegrade anaerobically, producing methane, which flows through vents into the atmosphere. Methane, over twenty times more heat-trapping than carbon, is a major contributor to climate change; this gaseous matter merges into the atmosphere along with accumulating emissions from spent energy wasted on growing and transporting trashed food. Changes in the atmosphere's chemistry contribute to alterations in weather patterns and temperatures across the globe

in a process referred to as anthropogenic forcing. New, discernible patterns emerge, such as increasing temperatures and decreasing precipitation across large swaths of Earth.

Syria is but one example, being located in a region where droughts have become more intense and frequent in recent decades. From 2006-2010 Syria suffered its worst drought on record, resulting in the migration of over a million people from scorched farmland into crowded cities. Climate scientists conclude that the subsequent civil war and ensuing migration crisis are attributable, in part, to anthropogenic climate change (Wendle). Meanwhile, Pentagon officials refer to climate change as a “threat multiplier” – the “mother of all risks to national security,” as one official phrased it (Powers), while the International Organization for Migration prepares for an unprecedented migration crisis in coming decades, anticipating up to 200 million environmental refugees by 2050.²⁶ These general patterns suggest that events in Syria vis-à-vis climate change may be less an isolated case than a preview of what is to come.

Perhaps, following Bennett, matter-energy viewed as vibrant, rather than inert, might elicit a sense that the materialities one encounters in daily life are, with humans, participating in a shared, unfolding world and that those materialities continue to participate long after they are forgotten. Together, humans and nonhumans are producing the world of the future, their dance measured out in the ebb and flow of particlewaves. Why not insert a pause into thinking the world through the lens of possessing subjects and possessed objects, and allow tissue to receive, rather than act on, vibrant mattering Earth? What happens in the pause and how might the pause change the dance? Might other patterns, friendlier to sustaining life, emerge?

²⁶ Other estimates put this number at 1 billion (Smith)

Dancing Trash

In Bohm's account, flow appears to permeate all cosmic being (14) yet is irreducible to a determinate substance and unavailable to final analysis. While escaping the mousetrap of analytic thought, matter's flow may be felt in one's dancing, just as it may be perceived in mountains of trash that are the leftovers of American consumption. Robert Sullivan describes the vibrancy of garbage mounds tucked out of sight of the skyline of New York City:

The...garbage hills are alive...there are billions of microscopic organisms thriving underground in the dark, oxygen free communities...after having ingested the tiniest a portion of leftover New Jersey or New York, these cells then exhale huge underground plumes of carbon dioxide and of warm moist methane, giant stillborn tropical winds that seep through the ground to feed the meadowlands fires, or creep up into the atmosphere, where they will eat away at the...ozone...One afternoon...I walked along the edge of a garbage Hill, a 40 foot drumlin of compacted trash that owed its topography to the waste of the city of Newark...there had been rain the night before, so it wasn't long before I found a little leachate seep, a black ooze trickling down the slope of the hill, an espresso of refuse. In a few hours, this stream would find its way down into the...groundwater of the Meadowlands; it would mingle with toxic streams...but in this moment, here at its birth...this little seep was pure pollution, a pristine stew of oil and grease, of cyanide and arsenic, of cadmium, chromium, copper, lead, nickel, silver, mercury, and zinc. I touched this fluid – my fingertip was a bluish caramel color – and it was warm and fresh. A few yards away, where the stream collected into a benzene scented pool, a mallard swam alone. (97)

Jane Bennett quotes the passage above in its entirety, portraying through vivid imagery the ethical implications of matter's vibrancy (6). The trash heap in Newark tells one particular story of matter's participation in the world's worlding, which shares a wider ecological context with countless other unfolding stories such as strengthening storms and wildfires, disappearing islands (Kennedy) and radiation leaking, over decades,

out of abandoned uranium mines. Story *telling* is essential for chronicling what Nixon calls the “slow violence” of environmental degradation, much of which is invisibilized in the forward rush of capitalism. This is not an easy task. In today’s media-saturated world that encourages states of “partial attention” (13), accounting for violence whose effects play out over decades and generations is challenged by a significant narrative burden: making it immediate and legible. Making it matter.

The “slow” in slow violence pertains to human temporality. From a human perspective, changes in planetary chemistry and climate that unfold over generations and decades, may seem slow, if they are noticed at all, to many in the world. Some of the most fast-moving aspects of climate change are happening in places with small human populations, including the Arctic, Antarctica, Greenland, and at very high elevations. Those who do live in and know these places, such as many Indigenous Alaskans, are witnessing the destruction of ecosystems and traditional ways of life at an alarming rate (Leschin-Hoar). Because of various feedback loops, such as light-reflecting ice and snow cover melting to become heat-absorbing water, which leads to more melting and heating, these cold locations are transforming far more quickly than other regions of Earth. How can stories capture the interconnections of patterns of drought in southern Africa, category five hurricanes, war in Syria, state violence at Standing Rock, supermarket dumpsters filled with food, and the election of a president who declared that climate change is a hoax?

Slow violence is difficult to reconcile with the kind of felt sense of urgency that might motivate change, as evidenced, for example, by the attitude “I’ll worry about climate change in 50 years” (Hochschild 4), or the “last in first out” political approach to

addressing long-term environmental crises including climate change and nuclear waste disposal (Nixon). When the effects of violence are meted out slowly over time, such as intergeneration health effects from industrial toxins, or species extinctions, the violence in these patterns is obscured. Nixon pushes against notions of violence as only acute, immediate events, like the tornadoes and plane crashes cited in the introduction, proposing a broader temporal view that examines long-term, unfolding patterns of violence in humanity's relationship with human and ecosystemic life and with the planet.

Referencing the extreme challenge of getting political traction around long-term environmental problems like climate change, President Obama states:

Climate change is almost perversely designed to be really hard to solve politically...there's no single hurricane or tornado or drought or forest fire that you can directly attribute to climate change...what you know is the hundred-year flood starts to happen every five years or two years. (Obama White House)

He goes on to say that the political system is not well-equipped to solve a problem whose most dire effects will be felt in the future, confirming Nixon's characterization of the widespread political habit of "outsourcing" environmental crisis to the future (22).

Human-caused environmental crisis is temporally perverse, muddling human and earth scales of time. The hundred-year flood becomes the two-year flood, or past crises return, such as century-old frozen Anthrax reawakening in melting Siberian permafrost (Eremenko), a recent event that could be the subject of science fiction²⁷. From a geologic standpoint, the sometimes bizarre patterns of slow violence occur at lightning speed. In the 4.5-billion-year dance of the planet, a few decades or couple of centuries is but an

²⁷ This incident raises the specter of re-awakening disease from further in the past, like bubonic plague, released from thawing permafrost (Doucleff).

instant, a rapid change in the rhythms of its bodily becoming, brought on with the violent jolt of petro-capitalism.



Illustration 10. Dancing red dust.

CHAPTER 7
EARTH'S BONES

My mind scrambles to capture this moment as I lie here in the pink desert sand. I am thinking: trying in vain to formulate a clear thought around this moment's meaning. But as I fall deeper into the resonant thrum of land, body and sky, the possibility of intellectual capture evaporates into the blue. There is only change. All of a sudden, a hawk cuts across the otherwise unbroken blue of sky; the field uniting sky, ground and body immediately shifts. I begin to roll again along the hot canyon floor, a physical recognition of the relationality of all to all else. Around me, the rocks continue their slow dissolve into sand, which, in time, will grow into soil feeding the sweet-acrid scented junipers.

My roll ends in stillness. I begin to snake my arms outwards, feeling the sand's soft caress with my fingertips. The desert's hot, slow ontology is urging me to pass beyond human temporality into a geologic history that vibrates in molecules of sand and bones. Accounting for such a passage requires a shift from "the language of epistemology to that of ontology," to things in themselves, infused with the evolutionary story of Earth (Bennett 3). Bone itself is an emergent phenomenon of Earth, whose history can be traced to a shift in its planetary dance:

Soft tissue (gels and aerosols, muscle and nerve) reigned supreme until 500 million years ago. At that point, some of the conglomerations of fleshy matter-energy that made up life underwent a sudden *mineralization*, and a new material for constructing living creatures emerged: bone. It is almost as if the mineral world that had served as a substratum for the emergence of biological creatures was reasserting itself. (Manuel de Landa, qtd. in Bennett 11)

Here in the desert, the mineral world's assertiveness is nakedly displayed in the monoclines, those huge, diagonal slabs of earth that look like frozen ocean breakers, and in the laccolithic mountains that tore through the earth's surface over the course of millions of years. I try to harmonize, through my fingertips, with this slow ontology, whose solid appearance belies the desert's liquid-like morphology that spans multiple geologic epochs. My leg turns inward, initiating a meandering sequence of movement that passes across the topography of my ribs and spine. My head lands on its side, a heavy boulder coming to rest. Suddenly, I recall another boulder I saw recently, a chunk of rock that had fallen from the mid-section of a three-hundred-foot cliff just south of Moab. The gash in the cliff wall looked fresh, perhaps the loosening of cracked sandstone following a recent downpour. Desert squalls, though infrequent, can be ferocious, very different from storms back east. I have been warned numerous times by locals to steer clear of dry river beds whenever there is the threat of a downpour. When these occur, water accumulates rapidly in the multiply-merging channels, sometimes carrying boulders and other debris, and an innocent-looking dry bed can become a raging river in minutes.

Seeing the bit of collapsed wall, I walked towards the cliff to get a better look. From nearer by, I began to see patterns in the boulder, which, like many of the red cliff walls in this area, was partially covered by a charcoal-colored patina. Moments later, the patterns clarified into a dense, multi-layered display of thousand-year-old petroglyphs interspersed with scratched-out names and dates from the early 1900s. For a split second, I experienced a dizzying temporal dysphoria, a physical sense of human history from the

perspective of geologic time. The seemingly fresh collapse of the wall must have occurred thousands, maybe even tens of thousands, of years ago. There was an intimacy to the well-preserved marks, as if they, too, were recent, perhaps chiseled into the wall just days or weeks earlier.

To the right, a large, bone-dry length of wood was propped up against the eight-foot tall boulder. I followed the beam with my gaze, noticing more petroglyphs above. It was now clear that this was a makeshift ladder of indeterminate age. I climbed to the top of the boulder. The dizzy feeling returned as I saw an even larger display of snakes, horned animals, geometric patterns and early 20th century graffiti. Different dimensions of time and history competed with each other on and around this massive stone, which was, itself, an expression of agency issued forth by “recent” geologic processes. I felt my species’ infancy, an uncanny, bodily recognition that humanity’s entire 200,000-year history on earth is little more than a geologic blink of an eye. Yet, within a fraction of this blink—a minute tremor in space-time—the dominant patterns of this species have fused human with earth’s geology, transforming humanity into a geophysical force while reducing vibrant Earth to commodity-generating resource.



Illustration 11. Petroglyphs.

My mind returns to Snow Canyon, memories of the petroglyphs fading into blue. Opening my eyes, I look out over wavy stones towards the distant cliffs. Stillness reigns here, but not absolutely; “stillness” belies the micro-rhythms of this lifeworld, which hums in the dunes’ swells and striations and the soft thoomp thoomp of blood coursing through my veins. I take this in through inclusive seeing (Olsen), inner and outer flesh melting into the slow dance of ground and air.

Inclusive seeing. I hear the words again in my head, twice, three times, and then they re-compose themselves, drawing me into their embrace: Seeing that includes me seeing. Suddenly other words arrive, following their journey from a dusty book I read last fall, originally published in 1912, which I retrieved from a remote corner of the Temple University library. A century later, they brush to the side a curtain that I didn’t even know was there. “There is not an experience because there is an individual, there is an individual because there is an experience” (Nishida xv). Being that includes me being.

Inclusive becoming. “I” dissolve into a wave dancing invisibly along the skin of Earth. The ball of suffering evaporates into red soil. I begin to turn my head, slowly scanning the horizon. Sondra appears at the edge of my field of vision, bouncing lightly across the stone. She is holding a large ball of costumes; the fabric’s reds and yellows flash against the wavy dunes. Here, on dusted land just east of Frenchman’s Flat, a celebration of life is afoot. I peel myself away from the rock and brush the pink sand off my skin. It is time to leave.

We stuff the costumes into their bags and head back towards the car. Halfway there, I pause and turn around. I need to see the canyon one more time, a quick moment of resolution and thanks. Once in the car, we talk about marionettes and statues:

Sondra...In his story, Heinrich von Kleist asks, why human beings can’t be as graceful as marionettes. He believes it is because the marionette has no consciousness, and the human is conscious, or more to the point, “self-conscious.” Do we, then, fall out of grace, when we’re aware of ourselves? Well, even in awareness, humans might be beautiful. Where does beauty and consciousness lie, and what does it mean to be conscious of “self”? This is a really good story for dancers because we’re asked to be interesting, expressive, beautiful, ugly, all those things. And darned if we don’t work at it! ... So there is this little vignette in the story about a statue – where the young man is plucking a thorn from his foot. He’s just doing that, and in that moment he’s so beautiful and somebody notices it and tells him. Then suddenly he’s trying, admiring himself in the mirror, and he can’t “get it” back ever again. It’s an interesting story about spontaneous grace and consciousness, especially self-consciousness and reflexivity.

Sondra has referenced von Kleist’s essay “On the Marionette Theater,” with which I am unfamiliar. As she talks, I take the narrative at face value—as a cautionary tale about the tension between body-self experienced pre-reflectively and body-self objectified in thought and language, and how the latter can produce a distressing feeling of self-consciousness. This tension may also manifest a phenomenological dualism, which

perhaps reinforces a Cartesian metaphysical dualism, if having thoughts *about* my body leads me to believe that a thinking “I” is something or somewhere other than a whole body thinking (did Descartes pay attention to the thinking of his feet, hands, bones, heartbeat, breath, spine, skull?). Perhaps a body’s “falling out of grace” might be viewed not as a matter of beauty relative to a witnessing audience, but as a first-person experience of falling from oneness into a fractured condition of being.

Dancing, with or without an audience, provides an opportunity to venture across a field of consciousness from a self lived pre-reflectively to one projected in thinking, with both selves (and, perhaps many more) living concurrently (Damasio) within the rhythms of bodily becoming. When I transcribe our conversation months later, other meanings emerge related to the vibrancy of things beyond human semiotics, including consideration of the marionette and statue beyond their status as stand-ins for human concerns; these meanings tangle with my thoughts about thingness and *becoming thing* in dance. André Lepecki writes about thingness in *Singularities: Dance in the Age of Performance*, highlighting a range of contemporary performing artists who interrogate objecthood by shifting the source of their movement from self to thing, allowing things to be agents of change. Like Bennett, he differentiates object and thing, writing, “...the relationship to subordination is what turns things into objects. An object is self-willing manipulative humanity” (33).

The work of the artists Lepecki cites offers reflections on thing-agency, whether the things in question are exploding bubbles or sleeping pills, and they challenge the subordination of things at the hands of humans, a subordination that is, at the same time, a superordination of human subjecthood: “The more we let things be things, the less

heroic we need to be, stepping out of cliché that is humanity” (36). By allowing things to be things and to show themselves as themselves, in Heideggerian terms (Moran 218), these artists topple the cliché of self-assured, masterful humans who control themselves and the things around them, including their meanings. In these performances, focus shifts to the agency of things in the performers’ midst or, in the case of the sleeping pills, within their tissues. For Lepecki, the foregrounding of thing-agency represents a “modesty [that] goes against the cliché of narcissistic presence in western theatrical dance” (36), and it represents, further, a critique of the pressure, in contemporary neo-liberal capitalism, to perform a confident, successful self who is in control: “who would bet on...an insecure Self?!” (13).

Lepecki’s use of the word “cliché” seems significant, suggesting that he does not equate western theatrical dance categorically with narcissistic presence, but instead acknowledges that exceptionalist expectations – beauty, talent, charisma – hang in the midst of its studios and theaters. I know this first-hand, and I relate Lepecki’s references to narcissism and heroism to Sondra’s comment about the kinds of expectations placed on dancers. Yet dancers mount challenges to these, as Lepecki describes, and as I witnessed during our morning at Snow Canyon. Sondra’s traversal of the canyon floor was a poignant antidote to dancerly exceptionalism, as she allowed the stone’s idiosyncratic shape to ripple through her body and flower into a stumbling walk. If, as Lepecki writes, the contemporary reality of neoliberal capitalism demands a relentlessly striving, confident and ever-improving self, a performance practice of letting things be things or, as Ishmael Houston-Jones once said during an improvisation class, “trying to

not try,” is a significant challenge to this ethos. And it may also be a relief, if, as Eiko states, “it is a relief sometimes not to be confined to the human” (Lepecki 51).

Collectively, these artists seem to say: try laying down the mantle of human exceptionalism and allowing oneself to be a living thing among things. If human exceptionalism, as a stance or habit, is soil feeding non-reciprocal relations with earth reduced to a composite of “resources,” it may also be soil feeding non-reciprocal relations with one’s own body as it strives to live up to the cliché of exceptionalism. Might dance, as direct engagement with the rhythms of bodily becoming, be among the most potent sites of active challenge to the burden—borne by human and nonhuman—of the exceptional human?

As we drive down the windy road out of the canyon, I think: *knowledge lives in flesh and things*, and in this moment my body surrenders into the whirring of the car’s engine and our gentle descent towards the valley below. It is a mistake to believe that knowledge is contained within a human brain, or even a body. This flesh is entangled with the world’s. Matter and meaning are entangled (Barad, *Meeting*); knowledge is woven through the world’s ontological dance of becoming. Human thinking, and human brain, are not the bank vaults of knowledge. Husserl’s call to “return to the things themselves” in *Logical Investigations* continues to offer an alternative to privileging humans as the center of the universe of knowledge and significance; it requires setting aside (human) representations *of* things long enough to touch things, with open senses, and to feel the nature of their power. This basic tenet of phenomenology impels me to take time to listen to the world, transforming the way I relate to it, and this, in turn, casts blissful doubt on my assumptions about where power and knowledge reside. In this

moment of forgetting what I think I know, the world emerges as a *dancing* world. Now forgetting becomes remembering, and this is a moment of great relief.

Dancing Transparency

Several months later, in Philadelphia, I review the video I took in Snow Canyon, taking notes:

Fifteen yards away, Sondra's stumbling walk channels the canyon's dance of gravity and time, tasting the bitterness of its history. Watching, I feel no ego pulling my eye, like gravity, towards Sondra as the central figure in the landscape; instead, she is a window allowing me to see the living ambiance in its fullness and to wonder about its past.

The idea of a "window" carries my thoughts to Eiko and Koma's performance of *River* (1995), which occurred on a stretch of the Delaware River north of Philadelphia. I learned about the dance reading *Site Dance* (Kloetzal). In the dance, as Eiko describes, the performers are a "window" onto the lifeworld of that patch of river, including the slow-moving water, geese, and a fishing boat. Finding a video online, I see Eiko and Koma drifting flotsam-like downstream, their minimal movement doing little to draw attention to themselves as the subjects of the dance. I imagine myself sitting by the river, feeling cool grass and hearing the slow murmur of water. I am there and I am here in a chair with afternoon sun falling through the blinds.

What a relief to let things be things and surrender to their movements. To lay down the mantle of human exceptionalism and drop into the "tender, wounded heart" (Chōdrōn) that aches for things and beings destroyed in the name of human privilege. This is a bittersweet moment. It is painful to sit with the knowledge that Earth's rivers,

forests and oceans sustaining biological life have no rights, while the corporations that destroy them do. And to know that these corporations are the invisible arm holding up the comforts of modern life, where taking aggressively from Earth and returning to it pollution and trash is the norm. This American life, where “growing the economy” ceaselessly, as if it were a plant that will never die, is as far as the political imagination will ever get (Klein).

How far do we go in admitting our complicity and pain? Olsen writes:

Our daily dose of television news and images about the escalating environmental crisis can require that we protect ourselves by shutting down sensory pathways... Although “shutting down” is healthy, even lifesaving in response to specific situations, it is limiting, even dangerous as a constant state. (59)

Olsen’s stance is one of compassion rather than blame: she acknowledges the difficulty of facing environmental crisis and its call for radical change. Still, she warns of the cost of shutting down as habitual state, with consequences on the level of sentient body denied time and space to process pain or worry, and on the level of a planet whose crisis deepens as people look away. How does a personal body relate to crisis and find ways to adapt and change, without becoming overwhelmed? Philosopher and environmental activist Joanna Macy draws on Buddhist teachings, saying:

[I]f we can be fearless to stay with our pain, it changes, it turns to reveal its other face. The other face of our pain for the world is our love for the world, our absolutely inseparable connection with all life... The biggest gift you can give is to be absolutely present... finding the capacity to love the world. That is what’s going to unleash our solidarity for the healing of the world.

She speaks of relating to one's heartbreak and its other face, love, though without specific reference to how this may be done on the level of practice.

Olsen engages and teaches somatic practices as a way of knowing the relationship of oneself and one's physical environment, such as the neighborhood, town, city, or bioregion in which one lives (*Body*). Physical, affective, aesthetic and/or spiritual dimensions can be explored simultaneously in practice and processed intellectually in reflection. My research in the Wissahickon Park engaged in such a process, integrating a "phenomenology of the woods" with reflection on the nature of crisis and my capacity to change. Through my dancing, I discovered an array of responses to that lifeworld and its particular denizens, including grief, joy, boredom and healing as I shed habits of taking Earth for granted in my day-to-day living (forthcoming).

Somatic processes are a way of coming to know habit on the level of movement patterning. The practitioner is given an opportunity to feel one's patterns of movement and to ask if there are other ways of moving. My research in the Wissahickon Park takes this basic premise and extends it to patterns of living which are, themselves, movement. Are there ways of moving that place less strain on the life-affirming movements of Earth? Somatic practices may give rise to the realization that one can change. Trusting the human capacity to change is a significant step in working towards the kind of change that will ensure the possibility of life multiple generations from now. Fostering intimate knowledge of one's interconnectedness with the world on the level of tissue may be a powerful resource in finding strength and love for motivating change.

Sondra, like Olsen, engages somatic movement processes for exploring self-in-environment, including in the context of site specific choreography such as *Plant Us*

Butoh (2012) and *Flowing Live Present* (2015). Other site specific choreographers, such as Leah Stein, employ dance as a way to connect sensuously with the selected sites in which they dance (Kloetzel). Dancing that highlights the relationship of humans—dancers, and if present, audiences—and the places they inhabit, are variously referred to as environmental dance, site dance, place dance, and ritual dance. Such practices aim to wake up sensory pathways that make the human-environment relationship vivid. Eco-phenomenology shares this aim, translating sensuous experience into written philosophical reflection.

Yet moments of connection can happen at any time, not just in the context of dancing, like Bennett's altered vision of a Baltimore street corner and Casey's encounter with a denuded mountain slope described earlier. Arguably, any aesthetic practice will move the practitioner towards deeper sensuous connection with some aspect of the world. The practice of paying attention in dancing may sow seeds of attention to the changing world of one's living. The planet gives us our lives; what can we offer in return? Is attention itself an act of reciprocity in a world that shrouds the sources of our food, energy, and commodities in mystery? Can dance connect us with the Earthly roots of our living? How will I act if I remember to remember these roots?

CHAPTER 8

DANCING MONSTERS SINGING FLESH

I strain to rise to standing. My feet press down with rocket-like force, but my movement is hampered by the feeling of a heavy, viscous slime covering my body and the ground around me. I shake with the effort, and this gives birth to a moan that soon becomes a howl. The full release of breath from my lungs brings a terrible joy to the feeling of this moment. I begin to howl continuously, tossing the pitch up and down like a ship in a storm, and I become lighter as a new body rips through the slime. My legs lengthen, as a beastly power surges upward through my spine. My arms start to curl at my sides as my body tilts forward. Step. Step. All of a sudden, a raging fire blisters up from my gut and flares out of my mouth. It is a white-hot beam destroying all in its path. I step into the agonizing power of a body newly shorn from the skin of earth. I am become Godzilla.

A few minutes go by before I open my eyes. I look at Sondra, who has an expression on her face that I have not seen before. My body is trembling, and I have the uncanny feeling that I can see, nearby, a ghostly replica of my own face, pupils dilated, skin reddened. A minute passes before Sondra says, in a low voice, “Wow, that was scary.”

We are at Yoga Soul, a clean, dimly lit studio off St. George’s main street where Sondra teaches weekly classes. It is quiet and private here, the air-conditioned interior a welcome relief from the afternoon sun burning outside. We come here two or three times during fieldwork to practice authentic movement (Pallaro), which Sondra sometimes

refers to as depth movement dance in our conversations.²⁸ One of us moves with eyes closed, freely following movement impulses, while the other witnesses. The intention for both is to suspend interpretations and judgments while becoming present to moment-to-moment experience. After the mover completes their dance, we discuss the experiences of mover and witness.

Sondra describes what she has just witnessed, saying, “I saw a side of you that I do not see when we are talking.” A latent body potential, normally dormant within my flesh, was activated; such is the possibility of dancing. Sondra often describes the awakening of potentials in somatic processes, the flesh saying “yes” to and within movement. After a short pause, I speak next, describing my experience of traveling backwards through evolutionary time and returning to animal being, feeling wild-eyed and full of fear until a new self emerges who consents to the beauty and pain of the world’s flesh. Describing this, I am surprised by this dance, including its literality: Godzilla, the icon of nuclear anxiety forged in the horrors of WWII in Japan. I wonder if my body has gone there in an effort to assimilate the history of southern Utah, which has hovered on the edges of my consciousness since the interview began several weeks ago.

That history is new to me, but not entirely, as it is part of a larger history that includes me at a distance. As an American child growing up on the U. S.’s east coast, I recall the specter of nuclear annihilation as a vague shadow that advanced and retreated, never shaping itself into a definitive physical being with which I could form a relationship. I remember seeing nuclear fallout signs in old buildings, the dull-orange

²⁸ She prefers the adjective “depth” to “authentic” in reference to the practice’s experiential quality.

and black pattern brightening shabby walls, and recall the corresponding, incomprehensible terminology: mutually-assured destruction, nuclear winter. Now, I sit with these memories in St. George, safe in a comfortable room with tea-green walls. My body thinks: *That is all in the past now. The Cold War is over.* And then I think again: *The past is alive in the movement of this moment. Feel it flicker in your bones.*

It is a rare privilege to have time for conversation to arise and disappear, and for thoughts to drift. When I listen to the recording months later, I hear a sigh echo through the space, and light, swishing sounds as we stretch and roll along the floor. We begin to talk again, this time about butoh's philosophy of metamorphosis, enacted in somatic transformations through animals, things, and states of being. Sondra describes her fascination with Hijikata's image of a "pillar of ash," recalling a butoh festival in New York where she once asked Waguri, a former Hijikata dancer, if he might perform the image. "He said, 'It would be the hardest thing to do, just on the spot, but I can explain: it is like a pillar of ash and a knife comes and cuts it down, like the atomic bomb.'"

As noted earlier, butoh's corporealizing embrace of nuclear ash, mud, illness, caged chickens and other rejected, marginal or grotesque aspects of self and world is rooted in compassion, according to Sondra's account in *Butoh: Metamorphic Dance* and to scholar and butoh dancer Juliette Crump. Butoh, Crump writes, endeavors to take on suffering in the world and transform it within the activity of embodied consciousness, something it has in common with Buddhist practices ("Cries"). Its processes of conscious participation in the internal experience of bodily becoming is ultimately about dissolving ego and merging with the ocean of change itself, sharing this journey with audiences if one is performing. Crump suggests that to dissolve ego is to dissolve

human: “To eliminate the possibility that someone might find an individual subject (another ego), butoh artists metamorphose continuously, changing into various characters, animals, things...” (65). Passing ongoingly through animals and things prevents ego from solidifying, revealing other selves that may dance in kinship with the more than human world.

Becoming animals and things allows for feeling and seeing the world through the skin and eyes of beings that have not rained destruction on earth. At a basic level, shedding human means waking up: “If we could see things from the perspective of animal, insect, the road trodden is alive...” (Hijikata, qtd. in Viala and Masson-Sekine 65). I test this out, allowing a future self with wings and delicate feet to bloom in my imagination and onto the page:

Tomorrow
I may become an insect
feel blades of grass come alive
dancing
I may forget the human who,
minutes ago,
stormed across a field lost in thought
who could have lived his whole life somewhere
other than here
who minutes ago
paused
waited
while the song of the world arose
and sang itself through his grasshopper body.

Swish. Swish. Swish. Pause. Swish. It is Sondra’s turn to dance and she begins on her back, arms floating up infant-like. Swish. Like a knife, movement slices through her body and she is on her feet, building towards a fluid, rhythmic dance involving

mobile hips, stepping feet and vocal sounds. The mood in Yoga Soul brightens considerably in comparison to the time of my dance. When Sondra is finished, we talk, our voices and laughter pelting the walls, creating overlapping echoes that muddy the recording.

Robert: There was something that felt strong and fluid, and I had this sense of an inner pulse that was moving through your body, through the whole experience. It started on ground, strong and fluid, it came up, and then when it got into your voice, it had this feeling of going to a vocal edge. My body started moving while I was watching. I felt like the tensile quality of your voice was moving your whole body and you were following the thread of your voice, a sort of sighing and moaning that built into more sustained sounds. ... Then it dropped down into the pelvis, and your voice changed – I almost couldn't hear it, it was a kind of drone.

Sondra: There was a lot of variety in there, wasn't there? And then POP! I thought, Let yourself go!! Have fun with it! [laughter] Well, I wouldn't say it was fun, it was the feeling of the power of my voice and why not? When I was small, my father would say to me: "Sondra can do anything except sing." He kept me out.

Robert: How old were you?

Sondra: Six or seven. He was to be the singer. I was not to be competing with him...I had to teach myself that I had a voice.

I think of the living past, memories becoming silent, deep sea creatures moving through bodies, which may rise to the surface or may not. Dancing stirs these, it seems, and calls upon their power. Sondra and I both released sound from our bodies and drove its energy into our enfolded pasts, recalibrating the present. On the recording, I hear our voices becoming clear and strong like sturdy bells. I remember these bells a year-and-a-half later on November 10, 2016, a day after the results of an election that has called on people to find their power. Feeling unsteady, I take Rilke's outstretched hand and find my footing.

From “Let This Darkness Be a Bell Tower”

Quiet friend who has come so far,
feel how your breathing makes more space around you.
Let this darkness be a bell tower
and you the bell. As you ring,

what batters you becomes your strength...

Risking Animal

It is a week after dancing at Yoga Soul, and I am back in Moab, taking a long, mid-morning walk through Mill Creek Canyon. The water and bright swath of green surrounding it offers relief from the 100+ degree day; still, it is hot. I spot a large cottonwood next to the creek and drop to the ground, taking shelter in its shade. I settle into the pink sand, listening to the soft trickling of the creek; sunlight dances along its currents. I look into the water and am startled to see that the floor is moving. A dozen or more large crayfish, almost perfectly camouflaged against the rocky, grey bottom, are in motion.

I stand up and begin to dance, performing simple movements: a circling arm, roll of a shoulder, a weight shift, stillness. I change directions, letting my spine bend and twist in response to the forms around me: grasses, trees, stone. I end up facing the cottonwood and begin a stepping pattern that sends an upward pulse through my pelvis, ribs and head. The tempo increases and, as it does, my movement intensifies. I begin to see the tree more fully. Something in the shape of its trunk exudes intelligence, authority and time; I nearly weep at how vividly present it is. My eyes climb upwards towards the

spray of branches above. I feel the rhythm of my movement, which grounds me, but in my mind I am up there with the leaves, reaching out to the sun.

All of a sudden, a phrase forms in my head: “developing affective entanglement with place.” I continue dancing, but my experience has split in two, the words a thought bubble floating in the midst of body and tree. I want to save these words arising like sharp crystals from the hazy nimbus of somatic consciousness (Gendlin). I do not have my phone this morning, so there is no way to record. I grab a stick and begin to write in the sand. *Dancing. Developing affective entanglement with place.* The movement of this writing becomes another section of today’s dance, which helps me commit words to memory. Still, it is over a mile back to the house. Will I forget the words as an unruly torrent of new thoughts rushes in? Soon I am running home, repeating the line, in rhythm, with footfall. *Developing affective entanglement with place. Developing affective entanglement with place.* Sometimes I sing the line, feeling the ground pushing the words from my lungs, and I invite the redolent sage and junipers to join in my absurd performance.

A creeping joy spreads into my lungs as the words, repeated again and again, dissolve into meaninglessness: just sounds, small rhythmic puffs dissipating in the air. My breathing deepens, sucking in more of the bracing scent of junipers. The words jostle and shift: *Developing affective entanglement with place. Developing somatic entanglement with place. Place. Entanglement. Affect.* And then: *Developing affective entanglement with Earth.* This semantic slip comes with a feeling of wholeness, there for a flash and then gone. *Sentient Earth. Gaia.* There and then gone. I continue running. Merleau-Ponty joins the race: “[B]ody is in the world just as the heart is in the

organism” (*Phenomenology* xxxi). Body. Heart. World. Footfall on pavement. Breath. Gravity. Sunlight burning into skin. A swerve to avoid a dead snake, which, overnight, will disappear without a trace.

I commit memory to words, a year later, heart racing. Now, under pressure to prove my mettle as a scholar (which I could only be as a human)²⁹ I feel that I must explain “affective entanglement with place.” Cannot experience be trusted to do that on its own? Cannot the senses, enlivened in their dance with the world, be acknowledged as knowledge, prior to bending to the will of explanations and reasoning arguments? Through opening senses, I think into the Anthropocene without abandoning Earth’s and my bodies to abstraction. I become unreasonable, refusing to forget an animal self in order to think theoretical thoughts that reinforce my exceptional position as a reasoning *human* animal. For the moment, I take a risk, allowing the lack of explanation stand as an argument.

I return to vibrant matter, senses open. I notice, first, the chair that I am on, which is on wheels, angled slightly away from a desk. The desk is draped with two cloths, one atop the other, the lower a gift from a friend purchased at a 99c store, the upper a long, narrow batik fabric I bought in Java in 1990. The latter is faded now, its browns and yellows bleached by time. I pay attention to these details, and, as the details become vivid, I notice myself changing, my mind quieting; I become present to the vibrant ambiance. Now, intertwining memories of my friend, a 99c store in Rochester, NY, and

²⁹ Desmond (“Species Line”) has written about nonhuman animal artists, but I am not aware of nonhuman animal scholars. I am questioning the relationship of anthropocentrism and notions about what constitutes “scholarly” thinking. Do the training and practices of scholarship inadvertently (or not) alienate scholars from their animal bodies and sense of kinship with other animals?

humid Javan air hang loosely in the milieu of my body and the covered desk. The fabrics themselves begin to change, the wavy, parallel lines on the batik coming alive, the wrinkles of fleshy fabric becoming tiny mountain ranges. Some region of my body says “yes” to this dance of cloth, which has shifted from background to foreground of consciousness; I feel “molecules of emotion” (Pert), memory and imagination stirring to life.

I visually scan the desk: the half-burned candles, the bowl with an etched face, the lamp with a burlap shade. I trace the lamp’s story backward in my imagination, beyond our chance meeting at a mall several years ago, watching the lamp travel in reverse across oceans, its removal from a box, and disassembling in a factory; now its burlap shade separates from the base, unravels and glides backwards in time, passing through hands and machines, riding on more ships and trucks, passing through other hands; finally, a machete sparkles in sunlight as it swings through the air in reverse, somewhere in Mexico. I land in loamy soil and rest under a cloudless sky, countless rows of spiky sisal racing out towards the horizon. I could go further back in time, through thousands of night-times, rain showers and chemical sprays, and I could follow the ceaseless circlings of the moon. But I like being here in this moment, rooted in solid Earth.

Bennett’s philosophy asks me to awaken subtler fibers of perception in order to attune to the world’s vibrant matter. I don’t have to go anywhere; it is this body and this environment. I become respectful of things in my midst when I pay attention to them, “experience[ing] the sensuous world...by rendering [myself] vulnerable to that world” (Abram, *Animal* 58). As a sensuous connection deepens, my imagination begins to dance

with the candle and the lamp, which collaborate in the creation of a story. The story arises from a shared field of relations rather than a single human intelligence, and I must remember to remember this if I am to liberate myself from human exceptionalism.

Is the lampshade made of jute, not sisal? Factual precision isn't the primary concern; the point is following the story back to animate Earth as the source of life. Dancing with Earth, through movements of body and thinking, is a way to remember the other-than-human world and to alter habits of marginalizing Earth in the universe of human significances. My dance with the lampshade could have launched forward in time, too, or it could have sailed the winds of imagination to other lifeworlds filled with other lamps, tables, or cloths, perhaps the memories of decades past now dancing into dust in a landfill. What are the stories of those entombed beings, which emerged originally from organic Earth? I yearn to know and to hold in consciousness, if just for a moment, the vibrant materiality of trashed things that have been ejected from human consciousness yet continue to dissolve into the bloodstream of a planet into which future beings will be born. The universe of "things themselves" is alive, not cursed with forgetting. The Earth will remember our time here, which together we archive in its flesh. This is the meaning of the Anthropocene: humanity immortalized as a strange layer of Earth's skin.

Bennett proposes that probing the world's vibrant materiality may create the conditions for a more sustainable public. Senses are the means for receiving and, perhaps, becoming vulnerable to the sorrow of Earth's plight. She offers no method, however, for how to perceive things with more fullness and subtlety. Perhaps the arts, and dance in particular, have an ecological role in training consciousness to the vibrant

qualities of things within and outside the hot klieg lights of human significances. We can try to understand the nature of things in order to understand the nature of things, beyond the latticework of semiotics. Perhaps we can find kinetic synergy with things, allowing ourselves to surrender to their agencies and to find new ways of relating, thinking and moving with things as expressed in the manner of their becoming. We might ask how to collaborate with the more than human world, transforming our dance into one whose rhythms are more sustainable, affirming *all* life, and accountable to future beings.

Contemporary dance artists such as Bruno Caverna and Jennifer Monson traverse the divide between human and non- in order to re-shape and –imagine it. Caverna, a Brazilian choreographer based in Berlin, teaches a movement workshop entitled “Becoming Animal,” which leads students towards states of not-knowing as the root of knowledge:

In this workshop the conceptual mind will be aimed [sic] to deconstruct its dominance over the primordial instinctual intelligence that lies dormant inside most of us. The thinking-process shall be used as a means to retrieve heightened states of utter sensitivity that stand *beyond the limits of the intellectual aspect of the mind*. This is an invitation to dwell into a constant state of not-knowing...Although not-knowing is the "source" of knowing and of all creativity, it remains a virtually unrecognised principle in our culture.

Shedding the armor of human knowing, which can be a weapon reducing Earth to exploitable object, is an invitation to recover one’s animal body and senses and to see the world through animal eyes. For Caverna, this serves purposes within and beyond choreographic processes: his workshops are not limited to self-identified dance professionals, creating room for anyone interested in transforming themselves vis-à-vis perceptions of their own bodies and of the world. This is a powerful antidote to Cartesian

dualism and Enlightenment perspectives positioning (hu)man as master of Earth, because it offers the possibility of first-person, non-rationalistic affirmation of humans' ecological kinship with nonhuman animal beings.

Jennifer Monson's choreographic research attends to ways that humans and nonhumans interact with land, air and water in both urban and non-urban settings. This research centers on the connection of movement and environment, which she explores through kinesthetic tracings of phenomena such as aquifers and long-distance bird migration routes. These investigations "provide the means to unearth and inquire into choreographic and embodied ways of knowing and re-imagine our relationship to the environments and spaces humans/all beings inhabit" (*iLand*). In the multi-year project *Bird Brain*, for example, she and a small group of dancers traveled the routes of particular migrating birds, such as geese and ospreys, through North, Central and South America. Along the way, they employed improvised dancing as a means of archiving specific land formations, while also interacting with ecologists and local residents living in the areas they traveled through. An important aspect of the work was sensing into physical processes enlivening the migratory paths: the movement and sound of waves crashing on a shoreline, or a hawk soaring upwards on a thermal (Walker).

Following migratory pathways of birds and sensing their world subverts the "natural attitude" (Husserl, *Ideas*) of knowing earth's topography in terms of political borders, oculocentric representations on maps and photographs, notions of private property, concepts differentiating urban and rural, etc. Nonhuman ecological phenomena, including migrating animals, waterways, geologic processes, and meteorological patterns, do not share these human conceptual filters, yet they are

subjected to human behaviors premised on them. Their perspectives are not considered, at least not by the most powerful among our species.³⁰

It is easy to default to considering only the perspective of humans, such as accepting without question the notion of private ownership of land or the rights of corporations. In the short term, these notions appear to advance (some) humans' interests, but even the privileged will be affected by a dying planet, if not in their lifetimes than in the lifetimes of their offspring. Native American activist and writer Winona LaDuke says, in reference to the "water protectors" gathered at Standing Rock, "We have found ourselves in a situation where [predatory multinational] corporations have rights, and the Missouri River [the longest river in the US, upon which millions of beings depend] has no rights" ("Endangered"). At demonstrations I attended in Philadelphia in support of the water protectors, the slogans and chants were simple: Water is life. You can't drink oil. Lying down during a die-in in front of Wells Fargo, a major investor in the Dakota Access Pipeline, I had a sense of time running out on our planet. Will our species, en masse, prioritize life fundamentals over profit before it is too late?

The issue of climate change aside, fears of the pipe bursting and destroying waterways is founded, especially in North Dakota, a state that explicitly protects oil transport companies from making spills public. An investigative report conducted by *USA Today* revealed that in less than two years there were over 300 spills ("100s"). Water is the defining feature of biological life, which is why there is a search for water on

³⁰ How might this change if nonhuman biological life participated in capitalism?

Mars: if there is water, there could have been life. Yet the profit of a few trumps (pun intended) the substance defining life.

How might our world appear to the birds whose migrations Monson followed? Birds know where water is located because they know their life depends on it. This is not an abstract concept like money. For artists such as Monson and Caverna, dance is a means of integrating human-nonhuman animal through conscious participation in the shared world's worlding, making the movement of life vivid. The nature of knowing-in-movement needs to be better understood in the Anthropocene, as a means of connecting in an immediate, full-bodied way with the nature and history of things and beings that have lived on earth far longer than humans without threatening all biological life. Movement is a condition humans share with all beings and with all phenomena in the universe. We can get in touch with this and think from the perspective of our kinship. Why not? The urgency of our planetary challenges requires risking what we believe we know and thinking in unfamiliar ways.



Illustration 12. *Bird Brain* (ca. 2005)

According to many scholars in the emerging interdisciplinary field of environmental humanities, the urgency of environmental crisis requires epistemological re-alignments that do not follow the traditional fault lines of arts, humanities and sciences (Davis and Turpin). The website for *An Ecotopian Toolkit*, a conference at University of Pennsylvania at which I presented recently (“Improvising”) describes the need for an epistemologically integrated response to the Anthropocene: “Looking toward the future, we ask how utopian scenarios might prompt the kinds of integrated knowledge production Anthropocene entanglements require.” In dance, choreographers such as Monson, Sigman, and Hardenbergh have engaged in interdisciplinary projects with

scientists, social scientists and the public to bring collective focus to the social and environmental dimensions of relationships between humans and place. Hardenbergh's *One Mississippi River* (2006) brought attention to water (Kloetzel), where Monson's interdisciplinary laboratory *iLand* and Sigman's community project *Weed Heart* (2016) attend to human-nature relations in the urban landscape of New York City.

Given its emphasis on physical and somatic ways of knowing, dance has a critical role to play in connecting people with ecological processes that they influence and upon which they depend. The disconnect can be profound, particularly for the more than 50% of the world's population now living in urban environments and for privileged communities living at a distance from the most visible and palpable effects of pollution, environmental damage, and climate change. How many people can identify the ecosystems producing the food and liquid they consume, the clothes they wear and the materials constituting their furniture, phones and laptops? Dancing, as the cited artists demonstrate, is a way to respond to and reflect on a crisis that is human *and* more than human. Within a single human lifetime, 50% of all plant and animal species may become extinct (UCSB) This scale of death is a challenge to any ethics that does not take the nonhuman world into consideration.



Illustration 13. Landfill.

According to Yuasa and Nagatomo, traditional western philosophy, which we might associate with the *previous* geologic epoch, the Holocene, privileged theory over practice and intellectual over somatic knowing. The hierarchical placement of (abstract) reasoning mind over (concretely felt) sensuous body contrasts Asian philosophies, including Zen Buddhism, that are grounded in self-cultivation practices like meditation, yoga, and martial arts. Nagatomo’s description of felt inter-resonance corresponds with the traditional Buddhist view noted earlier that a human body is constituted by the same basic elements as all other phenomena and their associated qualities of firmness, fluidity, body-heat and mobility (82). His theory of attunement cites Japanese philosophers dating back to the 12th century, suggesting a philosophical continuity that survived developments in the imperializing west, including the Eurocentric-anthropocentric relationship to land and Earth referenced in Part I.

If the contemporary “non-human” turn highlighting non-human agency, intelligence and subjectivity is presented as a “new” intellectual development in the

academy, this characterization should clarify that “newness” is relative to the thinking of only some of the world’s population. As Ghosh writes in *The Great Derangement*, “[O]nly in one, very brief era, lasting less than three centuries, did a significant number of...[human] kind believe that planets and asteroids are inert” (3). Even then, not all humans held this view of reality, and many do not hold this view today. Ghosh references Indigenous communities in the Yukon and in Bengal, as well as Indian and Japanese philosophers, who view glaciers, animals, and other nonhuman natural phenomena as animate and intelligent (see also Watts; Todd 2015). Still, such worldviews are marginalized, erased or “primitivized” in the context of Western and corporate imperialism treating Earth as territory to be privatized, pillaged, and excavated for profit. Like Ghosh and Plumwood, Robin Wall Kimmerer views ecocidal anthropocentrism as a problem with European origins, critiquing in particular colonial language and scientific assumptions that rob ecological beings and systems of subjectivity even as they also inflict cultural and physical violence on Indigenous peoples (*Braiding*).

A member of the Citizen Potawatami Nation and plant biologist who specializes in moss, Kimmerer distinguishes assumptions of science and the English language from Native American philosophies and languages. While the latter recognizes four ways of knowing – physical, intellectual, emotional and spiritual – science, which is a lens for scrutinizing the structures and mechanics of physical phenomena, “polishes the gift of seeing” (48) yet is always incomplete as a way of knowing insofar as its methodologies for studying phenomena eliminate emotional, aesthetic and spiritual responses and ways of knowing. There is an ethical cost to this disengagement, she argues, which enables an

exploitative relationship with a living Earth conflated with its reduction to object in science.

The English language, which was forced upon Indigenous Americans through assimilation policies, is inherently problematic as inanimacy is encoded in the language. English is 70% nouns, whereas the Potawatami language is 70% verbs. Kimmerer references the latter's "grammar of animacy" (48). For example, while English applies the pronoun "it" indiscriminately to nonhumans—tree, bird, body of water, mountain—Potawatami applies the equivalent of "it" only to human-constructed objects, such as dining tables, whose materiality, though derived from Earth, has been transformed to serve human ends. Non-constructed phenomena are referred to with the pronoun "ki," which signifies animacy within a language structured around animate and inanimate cases. In "Nature Needs a New Pronoun," she writes:

Objectification of the natural world reinforces the notion that our species is somehow more deserving of the gifts of the world than the other 8.7 million species with whom we share the planet. Using "it" absolves us of moral responsibility and opens the door to exploitation.

While science is problematic in its reduction of Earth beings and systems to mechanics, it is also a powerful tool for becoming knowledgeable about the world, including its state of crisis. Kimmerer honors the precision of science, despite its limitations (*Braiding* 48). She offers a humorous lived experience account of telling her professors, as a first-year undergraduate botany student, that she had entered the discipline wanting to know why the combination of goldenrod and aster, which are often seen growing next to each other in nature, is so beautiful. That is not a scientific concern,

her professors responded. “If you are interested in beauty, go to art school”

(“Intelligence”). She quickly learned that in science, plants are regarded as objects:

What was supposedly important about them was the mechanism by which they worked, not what their gifts were, not what their capacities were. They were really thought of as objects, whereas I thought of them as subjects... We [had] to analyze them as if they were just pure material, and not matter and spirit together.

Still, Kimmerer remained in the program, later discovering the scientific answer to her initial question:

[A]s it turns out, there’s a very good biophysical explanation for why those plants grow together, so it’s a matter of aesthetics and it’s a matter of ecology. Those complimentary colors of purple and gold together, being opposites on the color wheel, they’re so vivid, they actually attract far more pollinators than if those two grew apart from one another.

This story, which is one among several in her writings and interviews, illustrates her commitment to integrating aesthetic and scientific ways of knowing. Kimmerer demonstrates that the two need not be conceived as incompatible even as academic institutions habitually separate them. She describes her efforts to Indigenize science education as founding director of the Center for Native Peoples and the Environment, both through introducing Indigenous ways of knowing into her teaching and scholarship and through working to increase the representation of Indigenous people in science.

While she does not employ the term “de-colonization” to describe these efforts, her books *Gathering Moss* and *Braiding Sweetgrass* are the first two entries on *Wikiversity’s* reading list titled “Decolonizing Science.”

If science de-animates nonhuman Earthly phenomena through their reduction to the object status, it also reveals the animacy of the cosmos. Like Kimmerer, physicist David Bohm critiques what he refers to as the “modern languages” for promoting a view of inanimacy through objectifying words and sentence structures. In the second chapter of *Wholeness and the Implicate Order*, he writes:

...divisions in thought are given disproportionate importance, as if they were a widespread and pervasive structure of independently existent actual breaks in ‘what is’, rather than merely convenient features of description and analysis. (34)

He argues that even as the study of matter in quantum physics yielded a picture of the universe as a holistic, non-dualistic phenomenon, language, as an idiosyncratically fragmented representation of the world, continually reproduces the illusion of fragmentation, such as through its separation of subject, verb, and object. As a method of critique, Bohm experiments with creating a verb-centered mode of language.

[W]e customarily say, ‘One elementary particle acts on another’ but...each particle is only an abstraction of a relatively invariant form of movement in the whole field of the universe. So it would be more appropriate to say, ‘Elementary particles are on-going movements that are mutually dependent because ultimately they merge and interpenetrate.’ However, the same sort of description holds also on the larger-scale level. Thus, instead of saying, ‘An observer looks at an object’, we can more appropriately say, ‘Observation is going on, in an undivided movement involving those abstractions customarily called “the human being” and “the object he is looking at.”’ (29)

Like Merleau-Ponty, Bohm focuses, in the latter example, on perceptual fields or fields of relations, rather than discrete perceiving subjects and perceived objects, as a means of suspending subject-object dualism embedded in the structure of language.

Given that the field of relations is, ultimately, a world of movement, Bohm asks “Is it not possible for the syntax and grammatical form of language to be changed so as to give a basic role to the verb rather than to the noun?” (37). He identifies ancient Hebrew as a language that gives primacy to verbs, evidently unaware of the grammar of animacy of the Potawatomi and related Anishinaabe languages spoken today. (Modern Hebrew, in contrast to its ancient form, privileges nouns, like English.) Starting with his presupposition of conceptual stasis and fragmentation in modern language, Bohm attempts to create a mode of language, called “rheomode” (after the Greek word for flow) “in which movement is to be taken as primary in our thinking” (38). While poetry and other variants in language usage challenge the fragmenting nature of the ‘ordinary mode’ of subject-verb-object fragmentation, the latter dominates in everyday discourse. The rheomode is intended as another option, besides poetry, for accommodating animacy in language. In his experiment, Bohm seeks out the verb roots of non-verb words, such as “relevant” and “video,” then produces new words that maintain a trace of the animate root: “relevate,” “ir-relevation,” “vidate,” “irre-vidation.” His aim is to create a mode of language that accommodates the findings of quantum physics:

Thus, the ‘atomistic’ attitude to words has been dropped and instead our point of view is rather similar to that of field theory in physics, in which ‘particles’ are only convenient abstractions from the whole movement...the word ceases to be taken as an ‘indivisible atom of meaning’ and instead it is seen as no more than a convenient marker in the whole movement of language. (52)

Bohm’s problematization of language and thinking in representing the world’s animacy echoes David Abram (*Spell*), though the latter, a phenomenologist, focuses not on inventing a new, verb-based mode of language but on perception and sensuously rich

language that flows directly from felt experience. Kimmerer, Bohm and Abram raise intriguing questions for a somatic philosophy that seeks to account for the felt sense of inter-animacy awakened in dancing and other somatic practices. Might practice give rise to philosophical language that helps dissolve views of Earth as mindless object?

As I write this dissertation, I follow Abram's lead in turning to felt experience, rather than etymology, to arrive at descriptive language that accommodates the world, including body and thinking, as ceaseless movement. Like Kimmerer and Abram, who describe concrete interactions with nonhuman nature, I account for moments when my senses open to the more than human world through dancing, and I become a receptive student of the movements of nature. My methodology is improvisation, which teaches me how to pay attention through my whole body and to enter into movement dialog with the environment. I seek to synergize dancing and language as a way to challenge de-animating, de-spiritualizing, or de-aestheticizing representations of nonhuman Earth in science and "ordinary mode[s]" of language by describing direct, unmediated experience of moving with living beings and things within a shared unfolding field of energy.

Quantum physics describes the animacy of phenomena at their minutest level, even as the methodological assumptions of science remove the aesthetic and spiritual aspects and implications of such animacy. Nishida's epistemological account of "pure experience...free from the fabrications of thinking" (47) points, like Bohm, to a potential mode of knowing cleared of fragmenting patterns of thought. Identifying pure or direct experience as a mode of knowing distinct from knowledge filtered through scientific theory or other representational structures in thinking and language can serve as a way to clarify a space for practices that cultivate other-than-intellectual knowing, whether

labeled “direct experience,” “somatic knowing,” “intuitive knowing,” “spiritual knowing,” etc. Incorporating other-than-intellectual ways of knowing in the academic milieu can furthermore function as a critique of intellecto-centric traditions of thought that may inadvertently reinforce human’s superior status as the “thinking” or rational animal. Dance and somatic practices, as ways of knowing, offer a means of connecting to Anthropocene issues not only intellectually but also physically, aesthetically, emotionally and spiritually and responding to them holistically through the continuum of mind-body-spirit; dancing is a space for feeling into the Anthropocene even as one also views it from the perspective of intellectual distance. I align my research with practitioners, such as those cited in Chapters Three and Eight, for whom dance functions as a mode of connection with the nonhuman natural world and/or means of responding to environmental crisis.

Quantum physics, Buddhism, ecology and other fields of knowledge verify the ever-changing nature of the world, yet conscious participation in the rhythms of the world’s worlding, through dance, offers distinctly creative and kinetic pathways to knowing beyond intellecto-centric frames. Dancing in Snow Canyon and tapping into the animate feeling of ground, I enabled my embodied imagination to pass into geologic time and to think anthropogenic change in fast motion: fossil fuels drawn from earth’s skin like blood and then burned, its gaseous residue pouring out into atmosphere and oceans. Now, in subsequent reflection, I envision a planetary fever in fast motion, accelerating over decades and centuries, feeling the movements of my body as I visualize Earth’s organs collapsing, the Great Barrier Reef bleaching and the lungs of the Amazon struggling to restore Gaia to health. The body of living Earth trying to heal through its

movements emerges as a thought brought on by the feeling of my own body in motion, here on a small patch of open floor by my desk.



Illustration 14. Alberta tar sands region.

Seated once again at my writing desk, I spiral to the left, letting my arm float upwards. My head sinks backward and hovers in place, as if at the top of a roller coaster. I feel the charged moment of equipoise, when two opposing forces kiss before parting ways. Entering the world-as-movement is becoming a way to segue into non-rational thinking that spins out metaphors and trespasses temporalities (human, Earth), where the rise and fall of breathing ribs elicits the advance and retreat of glaciers and a slow roll along the ground sketches out the emergence and dissolution of mountains ranges: geologic thinking in movement. Rational thought on its own, alienated from a whole body thinking, threatens to occlude Earth's thinking in movement that has sustained

biological life for over a billion years. Earth is thinking matter. Cartesian dualism produces instrumental human thinking that convincingly masquerades as a sphere of activity separate from land and Earth. This “independent” thinking is excellent at classifying and ordering Earth’s chemistries or tracking and manipulating corporate earnings, meanwhile ignoring the continuum of thinking in movement of which the instrumentally thinking human is a part.

While I spiral downwards into the Earth, something different (though not separate) from rational thought blooms: a deep trust in Earth’s mysterious paradigm of reason, expressed in its gravity, rotation, and ceaseless cycles of change. For a moment, I breathe into the uncanny feeling of living in a regime that conceives of corporations as people but has insufficient imagination to conceive of Earth as an entity inherently worthy of rights. The absence of *legal* consequences for destroying planetary systems does not equal the absence of consequences, which appear to be outside the concern of those who make laws. And so in large numbers, we kick the proverbial can down the road, outsourcing consequences to the future and to those beings now in the shadows of power.

CHAPTER 9
DANCING MOUNTAIN

A week after our morning at Yoga Soul, we are at Pine Mountain, an hour north of St. George. The contrast provided by the change of elevation, relative to the desert below, is striking: here a thick evergreen forest is blanketed with a layer of rust-colored needles; an ice-cold stream cuts through the forest, tickling the air with the sound of running water. The smell is different, too, the sweet-acrid scent of juniper in the desert giving way to the earthy richness of sappy pine. We pause at the stream and I immediately begin to dance, crawling along the stones scattered throughout the riverbed. I find myself thinking, trying in vain to make something out of this moment, while Sondra snaps photographs from the stream's edge. I finish the dance quickly.



Illustration 15. River crawl.

We head to a clearing where Sondra will dance. She looks around for a spot, settling on a massive pine in the center of the clearing. She jumps right into the dance, stabbing the air around quickly her with her arms. Her focus jumps across the space, following the various pathways of her hands and fingertips. Eventually she skitters around the circumference of the tree, her back to the wide trunk, and then she walks away. She arrives at a large, grey stone and sits down slowly, becoming nearly still. Her face is illuminated by a shaft of sunlight that passes through the branches overhead. The air comes to life with sound: a fly buzzes through the space between us, immortalized in the video I am taking; a bird sings, is quiet, then sings again. I become aware of the rusty hue of the ground, covered by a skin of pine needles. Sondra looks up towards the light, then down, then to the side, before a quick flurry of tassel-like movements passes through her torso and arms. The flurry travels upwards along spine to head; she squeezes her face and puckers, as if chewing on a lemon. The tape ends.

Half an hour later, we settle into another clearing in the forest to eat lunch. A new conversation begins as we spread food out on a tree trunk table.

Robert: I think that dance does something internally when you dance, that there's internal transformation.

Sondra: We could write in that area, and you and I might have a different side of that, because I say dancing is doing nothing and going nowhere.

Robert: but I still think doing nothing and going nowhere is doing something if it is transforming that actor.

Sondra: It's really the politics of immanence, doing nothing and going nowhere is valuable, like meditation, which is doing nothing and going nowhere also, but it is nevertheless a transformational activity. Do we do it for that reason? I think that I don't do it for that reason. I do it purely to be in the meditative place and purely in the sense also that Zen teaches: you don't do it because you expect something,

you do it because you do it. Dancing, we dance, we don't expect, and maybe we're not performing for others, or maybe we are.

There are so many places to think about dance in terms of our interface with nature, our understanding that we actually are nature. That when we dance, nature is dancing. We can take our dance out into non-human nature and dance with our nature, in that way, in terms of rocks and pine needles and avoiding the flies, just being there and being in nonhuman nature with our human nature, connecting. Or we can just as easily be moving in the studio with the consciousness that our own nature is unfolding, we can choose themes that have some ecological significance, though they don't have to be labeled that. I get a feeling from some dancers that their inner material is coming from their intersentience, their connectivity with something beyond themselves.

As we talk, I recall Eiko's comment about performing the dance *River*: "We were a window." Eiko and Koma's surrender to the movement of the water enacted a kind of transparency, a frame for the audience to experience the sensuous depths of a milieu that they might otherwise overlook. Sondra's comment moments earlier, "When we dance, nature is dancing," also suggests a kind of transparency, though she is speaking from the perspective of a dancing self who may or may not be witnessed by an audience. In this enactment of transparency, the wall separating "we" as human subjects and nature is annihilated, revealing the wall as a concept only, propagated by Enlightenment thinking (Plumwood). With this conceptual divide annihilated, Sondra might just as easily say that "when we dance, the universe is dancing," and nature might be understood as the movement of the cosmos. Isn't this simply a problem of semantics?

Beneath semantics a deeper significance flows, emerging from the moment when everyday dualism—the illusion of human apart from and above the rest of Earth's movement—is revealed; and in that intra-resonant moment, the universe reveals itself as dancing. In Pine Mountain, I did not fully absorb the sensuous depths of the clearing in the woods until my mind dissolved into the still center of Sondra's dance. In that

moment I recognized, in the still center of my own body, a broader lifeworld that included and extended far beyond me. The residue of the moment lingered in my tissues after the dance ended and we continued our journey through the pines. Noticing the rhythm and trajectory of our walk, I had the sense that Sondra and I were “guests” in the living ambiance.

Moving through the pines, the idea that this land, like most of Earth, is “owned” by humans (in this case by tax payers via the U. S. Forest Service³¹) momentarily evaporated. I felt us moving across ground that has received the weight of migrating beings for hundreds of millions of years. Sondra’s dancing was a moment of transparency, a gateway past Lepecki’s (*Singularities*) cliché of humanity wrapped up in ideas of ownership and exceptionalism, and onto the miracle of an inter-animate field supporting life for over a billion years.

³¹ Prior to Spanish and Mormon settlement, this area was part of the vast Paiute homeland that stretched across present-day California, Nevada, Arizona and Utah. (History: The Paiutes)



Illustration 16. Flurry.

Earth Consciousness

In *Why We Dance*, Kimerer LaMothe offers a perspective on dance as practice of ecological reciprocity. Describing an experience of dancing in a clearing in the woods near her home in upstate New York, she writes:

As I surrender to the impulses received by my practiced, opened bodily self, earth comes alive for me as an object of intense gratitude for which I owe my life...Am “I” dancing? Or is the earth dancing in the shape of me? (172)

Her dancing conjures up an Earth that is both an “it” represented in thought and the immediate lifeworld made vivid in the senses. This Earth is an ambiguous phenomenon, for “Earth” as an object in thought would seem categorically distinct from the sensuous lifeworld that is the physical context of her dancing. It does not seem logical for her to experience both-at-once – Earth according to two modes of consciousness – and yet her dancing conjures up, and makes vivid, this unified logic-defying phenomenon.

Nagatomo might identify the felt aspect of Earth as “feeling-judgment,” (252) which, in his theory of attunement, is somatic knowledge emerging through attunement practices. As everyday dualistic consciousness dissolves into oneness of perceiver and perceived, somatic knowing is foregrounded in consciousness, as it “appropriates” (Ibid.) the mode of consciousness occupied with representational thinking. LaMothe, however, writes, “I am aware of how the movements I am making as a bodily self, dancing and thinking, are expressing my relationship to the earth” (172). For her, Earth as an object of representational thought and as living being sensuously enlivened by her dancing co-exist, the two aspects folding into each other. Thinking about and feeling earth emerge holistically as patterns of movement passing through her bodily being as a knowing organism. Dancing enables this emergent, holistic knowledge:

Because of the dancing that is happening to me here, I can think about “it” [Earth] as some *thing* that I can perceive, honor and value as real – a *place* to which I will return again and again. (172, italics original)

Through somatic and intellectual modes of knowing, dancing enables her to grasp earth as the ground of life and as something worthy of deep gratitude and reverence. This suggests dance can be a special mode of practice integrating objective and subjective ways of knowing earth and its dilemmas. Revisiting the theoretical musing of physicist Gilman, one might consider somatic and intellectual ways of knowing as analogous to wave-particle duality, whereby the electron is both wave (movement) and particle (an entity definable in space). Cultivating somatic knowing may be a way to cultivate the wave-like aspect of a material self.

A holistic view is key. Rather than conceiving somatic and intellectual ways of knowing as separable either/or categories, a knowing subject (who is matter) might be understood in analogy to the way matter is understood, as both/and: a continuum of knowing. As a continuum or field of somatic and intellectual consciousness, a knowing subject may embody, given circumstances and intentions, more of one or the other, just as an electron embodies now the form of particle, then of wave.

A dance response to environmental crisis that is engaged through intellectual or somatic practice alone, without engaging and integrating both, may miss dance's full transformative potential as an arena for exploiting the gifts of both intellect and sensuous, knowing body. An "all hands on deck" response to environmental crisis could invest more fully in a both/and approach to theory and practice, simultaneously pursuing knowledge about planetary crisis through discourse and through a physical and somatic education in one's own everyday interconnectedness with the world and capacities for change.

As Martha Eddy notes,³² there are significant challenges to validating somatic knowledge and processes in the context of academic institutions. Perhaps this is part of the legacy of western philosophy's somatophobia (Barbour; Grosz). Still, dance has a special position in the academy in that, as a disciplinary container, it holds space for cultivating both aesthetic and intellectual ways of knowing. How far can it go in pursuing both in a holistic fashion at the highest levels? I suggest that dancing and thinking in the Anthropocene can be well-served by integrating multiple ways of knowing that can both objectify Earth's dilemmas in thought and make Earth intimate through practice, while cultivating epistemological agility in emphasizing one or the other according to preferences and circumstances. The capacity for abstract thought is a gift, but it makes diminishing sense to consider it evidence of human exceptionalism or superiority as our species alone fails the test of ecological sustainability. There is an opportunity for dance in the academy to be a space for revitalizing Earth and body knowledge as a way to adapt and respond to the Anthropocene.

Crisis and Creativity

When I conducted research in Utah and in the Wissahickon Park in Philadelphia, the phenomenological dance methods I employed created space for querying my relationship with Earth in a direct and personal way. This space made room for reflection on how I eat, use energy, discard things, and spend money. All of these patterns have implications for the planetary web of life. What harm might unreflected habitual patterns of daily living cause to other sentient beings? In the questioning space of dancing,

³² See Chapter Three

differentiated physical, spiritual, aesthetic and intellectual ways of relating to Earth collapsed into holistic experiences of becoming the patterns of movement I enacted in relation to a world comprised of movement. These were spaces for reflection on the extent, within the “forward spill” of my life, I am blinded to the intra-activity of the world’s worlding, in which laughter and lampshades and angry tides are always folding into each other. Do I miss, in this blindness, a material basis for an ethics built on interconnectivity? Is the dance of matter a guide towards an ethics for the Age of Humans? As population climbs towards 10 billion, there will not be enough for all if resources are not distributed more equitably. For the planet to survive, some will have to loosen their grip on privilege; when will those in power recognize this? For grips to loosen, the trees must be shaken, giving birth to radically different paradigms of thinking and action:

Ecological crises demand collaborative solutions across distant disciplines. New models for grappling with environmental disruption must account for the interaction of human and non-human systems—infrastructures that are both efficient and ethical, philosophies shaped by geological data, basic science that is informed by artistic expression...it is no longer sufficient for environmental scholarship to describe or explain our complex relationship to the natural world: it must—through visual modeling, storytelling, and public engagement—compel a response. (U. Penn, *Ecotopian*)

The Anthropocene represents, at once, a crisis in humanity’s relationship with the planet and fertile ground for a new era of immense, life-affirming creativity that brings together differing spheres of knowledge in pursuit of an ethical and sustainable future world. I hope that dance studies will contribute more of its creative and intellectual energy to this transdisciplinary movement.

CHAPTER 10

TEA FOR TWO: AN IMAGINARY INTERVIEW

It is another warm late-autumn day in Philadelphia, 2016. I am sitting on the kneeling chair, idly running my fingertip along the jute-shaded lamp to my right. This movement began moments ago while my thoughts were elsewhere, but now I am attentive. I hear a soft, grating sound and feel the tickle of the material. With my index finger, I begin describing loops that accelerate and decelerate, like a roller-coaster. Thirty seconds later, the ride is over.

In stillness, my imagination blooms, carrying me to another world. I find myself seated at a table, waiting to be interviewed. Someone whose face I cannot make out, seated across from me, will ask me about my research. As a person who likes interviews of all kinds—live, online, in magazines and books—I am looking forward to this. I like the personal voice and plain-spokenness that can emerge when people tell their stories, like the small, devastating gesture of Oppenheimer wiping an invisible tear as he quotes the *Bhagavad Gita* (Bhagavadgita4u). Or an interview with Judith Butler that I once read (Meijer and Prins), sensing a shift from “Judith Butler” iconic scholar to a fiercely intelligent, creative and curious flesh-and-blood human trying to make sense of, and make better, the world.

The interviewer with an unclear face is looking at me. We are in a restaurant with dark wood walls, low light, and checkered tablecloths. The room bustles with fast-moving servers, the humid air rich with the smell of mashed potatoes. The interviewer

and I both drink hot tea, which our server replenishes every few minutes. The questioning begins.

Q: This dissertation, which included your multi-week interview with Sondra Fraleigh, is exploring dance as a way of knowing in the context of environmental crisis, and it is proposing that dance is a way to respond to the crisis in order to...what? Adapt to it? Find meaning in it? Become a more sustainable citizen?

A: That is correct. I am using dance as a vehicle to think into the present and future, when environmental conditions are expected to deteriorate steadily, “deteriorate” being relative to which communities of humans and other species are considered. Canada geese seem to have adapted very well to proliferating golf courses, where they can hang out unperturbed on their trajectories north and south. But other species are unable to adapt to disappearing habitats, migration routes, changes in climate, etc. By the end of this century, 50% of species now on earth may no longer exist. But I am not coming from the perspective of science and statistics, rather art and philosophy. I want to figure out how to create meaning out of the state of the world, as well as my implicatedness in it. The second part of that statement is crucial: I do not want to treat the crisis as if it is something going on out there somewhere, but as something that is happening here, in my body and home and neighborhood and country. This is a way for me to take some share of responsibility and, I hope, to create change, even if only a little bit at a time. Dance helps me with this.

Q: How so?

A: For one thing, as a dance artist I have always been interested in transformation. This interest led me to certain practices such as butoh and durational performance that are, in my experience and understanding, about transformation first and foremost. In recent years, I have acquired a restlessness about shifting transformational processes outside the frame of art-making. A solo I created a few years ago, *Feeding the Ghosts* (2012), was a transitional moment in this; it was basically a ritual of confronting personal demons, which I performed publically. I put it in environments where people could stop to watch it or move on. It was about an hour-long performance, and I was blindfolded, so I could not see who was watching, or if anyone was watching at all, though I could sometimes sense the presence and movement of people. This pivotal work introduced me to dance as a way of meaning-making potentially without an audience.

I began to think about how dance might be a ritual I could bring into my living even when I'm not choreographing. Could it serve as an ethical or spiritual practice, or as a way to help me communicate ideas in language and writing? It's not that these concerns had been absent in my art-making, but when I make dances for performance, I can get caught up in aesthetic minutiae including my idiosyncratic likes and dislikes, and this pulls me away from some of the deeper questions that I am asking right now. A dancer-choreographer friend of mine recently said of herself, "my imagination is bigger than my ability as a dancer." I feel something akin to this in that the scale of my questions is larger than the frame of a choreographed dance.

Q: What questions are these?

A: I've posed some already. What does it mean to live in a time in both human and earth history in which geologic-scale changes are happening, and to know that much of what I

take for granted as a middle-class white American is contributing to that? How do I create an ethical compass for myself when issues like “climate change” and “global warming” are still politically marginal in this country? Am I able to bring future beings into the sphere of my ethical consideration?

Familiarizing myself with earth processes has been very productive, because I am developing a sense of ancient patterns, such as the geologic formations in Utah that are so vivid, as well as annual seasonal patterns of weather, temperature, leaves falling and decaying into the ground, water freezing and melting, green shoots in spring, etc. Dance has been my vehicle to intimacy with the earth. Structured practices in Utah and the Wissahickon Park here in Philadelphia forced me to stop the forward rush of daily living and pay attention.

Over the last two decades, I learned about the discipline of practice by studying with, collaborating with, or learning about artists like Sondra, Tehching Hsieh, Linda Montano, Deborah Hay, Laurel Jay Carpenter, Diego Pinon, Merián Soto, Bradley Maule...the list could go on and on. I also learned it from self-cultivation practices like yoga and meditation, but for some reason I am more disciplined when it comes to dance.

Q: Describe how dance became a mode of attention to Earth processes.

A: Haven't I done that already in the dissertation? But the focus of the dissertation is Utah and the research process that Sondra and I participated in. I engaged in a separate project, to which I referred earlier, that entailed daily dancing, photographing and removing trash in the Wissahickon Park for a year. Originally, I thought I would integrate the latter research into the dissertation, but I was unable to find a way to do so beyond occasional references. I did write about it, though, in a chapter for Karen Bond's

anthology *Dance and the Quality of Life* (forthcoming). While writing the dissertation, I made changes in my everyday patterns of living in relation to food and energy use. I learned how to grow vegetables and joined a community garden, as I mentioned before. So I was learning about sustainable urban farming and gardening, permaculture, the intersection of environmental and food justice, and so forth.

Q: Let's get into some of the theoretical issues you raised. You include Hiroshi Ichikawa's *The Body as Spirit* as theoretical background to this study, and at that point you refer forward to your discussion about wave-particle duality as revealed in quantum physics. Can you say more about that connection?

A: First of all, I have to make clear the obvious point that I am not a physicist. I am very interested, however, in the philosophical and ethical implications of quantum physics, as outlined by the physicist-philosophers I cite. I also want to make clear that in evoking issues of matter and spirit, my interest is dance as a means of conscious encounters with matter and spirit, rather than a theoretical proof that tries to make "matter" or "spirit" knowable as objects of intellectual thought. It feels more respectful and honest to say that I don't know what these things are about which I write. But I am curious and the world comes alive for me when I ask questions, and I am more motivated to defend a world that I can see is alive.

Here's what I am able to glean. Matter is both wave and particle and, according to David Bohm, is ultimately irreducible and unanalyzable: a mystery, but a mystery with reference points. My body and the couch I'm sitting on are matter, but when I pay attention I can feel that they're more than mere matter, being animate in some way. The cushions are warming up against my body; their electrons must be dancing differently

relative to when I was in the other room. Other things are influencing their dance as well: the temperature of the room and maybe even barometric pressure or humidity levels. But the couch is influencing me, too—the distribution of my body’s weight and the organization of my skeleton are relative to the couch’s shape and dimensions; and the aesthetic quality of the room is profoundly influenced by these things too. If I move the couch, the whole space changes. Everything seems to be relative and in flux.

Matter is also energy, as confirmed by the physicist I contacted, cited earlier. I had sent an email asking, “Is matter energy?” He gave a lengthy response that evoked the swirling eddies produced by a kayak paddle moving through water, followed by an image of the eddies solidifying. What it came down to is that matter is energy temporarily organized into “shaped things” (to borrow Nagatomo’s phrase). What I think the river was supposed to signify is that shaped things, while distinct like the eddies, are also interconnected, an understanding I received also from the other physicists cited in this dissertation: Karen Barad, David Bohm, and Robert Gilman.

As a dancer with lived experiences of body as energy, I want to bring quantum understandings to dance and the body. Being a body offers an opportunity to examine the nature of matter because body is matter that can be studied in the first person. If I accept what quantum physics tells me—that this body is a structure comprised of particles that are also waves, then I develop a curiosity about what this means in relation to other stories I’ve been told about what a body is.

I’m thinking of an intensive anatomy course I took a few years ago at Mt. Sinai Medical Center in New York, which was designed for movement professionals—dancers, yoga teachers, body workers, etc. The course was two or three full days long, with

lectures and visits to a laboratory to look at cadavers. Throughout the sessions, the prevailing metaphor for body was machine: levers, pulleys, networks, etc. I remember one of the lecturers saying that human bodies begin to deteriorate around age forty, suggesting that an older body is like an older machine that doesn't work as well as it used to; think of a dented Honda from the 1980s. Setting aside notions of resiliency, bodies' capacities to heal, change, and adapt, and somatic practices that can support these processes, this mechanistic model evoked an image of body as solid matter. The sense of body as solid matter is evoked, too, by the skeletons that live in a lot of dance studios. I love those skeletons: the body *is* solid matter, if particles are understood as solid, and the skeletons provide a clear roadmap for discovery of specific bodily structures and thus a fuller understanding of oneself as body.

Yet body is also not solid, and now I am interested in this other aspect: body as wave or as a field of energy or movement. I think at an earlier point in life, I had an idea that matter and energy were two different things: my material body would "have" more or less energy; energy was some separate phenomenon that flowed through and animated the material body, like electricity running through a wire. I had no conception that the wire itself might be energy. Husserl might say that my natural attitude is shifting. Part of my ability to understand matter as energy comes from Yuasa's account of ki energy in *The Body, Self-Cultivation and Ki-Energy* and in Nagatomo's *Attunement through the Body*. In these accounts, ki is all-permeating, not separate from anything; it is that which animates all cosmic phenomena. Perhaps ki is cosmic animacy itself.

But, again, I return to dance as a means of encountering the nature of matter, energy, wave, ki. I can't say I know what these things are, only that my belief in solid

matter, reinforced in contexts such as the anatomy class mentioned earlier, is falling by the wayside; how I think about the world and my place in it is changing. And this is a relief, frankly, because when I dance I often don't experience myself as solid – sometimes I experience myself as waves crashing onto shore and being sucked back out to sea, or I become transparent, like a crystal, or I grow into the body of a grasshopper waiting patiently on a blade of grass. These experiences of body-as-flux make me very curious about the wave-like aspects of matter and about how the world, which seems solid, is animated by invisible energies. I recently learned that some birds can detect activity in electromagnetic fields on the other side of the planet, a capacity that may allow migrating birds (and perhaps other animals) to navigate their way to specific locations thousands of miles away.

Do we have greater perceptual capacities as humans than some of us are led to believe, or than we generally employ? I think of dancing as a way to flex the muscles of perception, to sense into subtlety or to experience a vividness of body and environment that may be lost in the forward rush of life. As I'm writing this, I understand, in a new light, Kimerer LaMothe's assertion that dance is an ecological necessity. I see that it can be a way of tapping into a sense of wonder and openness towards the world. How could we not want to sustain such a world for future life?

Q: Will you say a little more about how dance has changed your view of the world?

A: The more I tap into a sense of the wave-like nature of matter, such as dancing the image of waves breathing along a beach, the more the world seems to be dancing. I don't mean dancing in an anthropocentric sense, viewing the world like a dancing human, but

another meaning of dance. Maybe that's what I'm really trying to get at. What is dance if we remove human from the central position within the universe of significance?

I'm reminded of the other day when I was looking out the window at the tops of trees lining the street where my apartment is located. A breeze was tossing the branches gently side to side and in circles. It's fall now, so leaves were continuously fluttering towards the ground. So many rhythms were happening in the frame of the window, and yet I could feel through my whole body the coherence of what I was looking at as a kind of grounding awareness. The weather is changing—we've had unusually high temperatures and a cold front is finally moving in; the sensuous world of trees, squirrels and birds is adapting and changing in response.

"The world is dancing" might sound like a cliché to some ears, yet I don't want to abandon it on those grounds. I want to understand it more fully and think about how dancing can be training for living and citizenship in an animate world that is under threat and worth caring for. But back to the issue of environmental crisis, which is the motivation for this dissertation. I'm still taken with Jane Bennett's proposal, to which I alluded to in Chapter One:

If I am right that an image of inert matter helps animate our current practice of aggressively wasteful and planet-endangering consumption, then a materiality experienced as a lively force with agentic capacity could animate a more ecologically-sustainable public. (51)

Matter is a bridge for me in thinking about the crisis in dance terms. If matter is not inert, something shifts and it seems like it is telling a story, whether it is the wood floors in my apartment, a plastic fork or a pigeon (I guess no one would call the pigeon inert matter,

though they might think of “it” (there’s that word) as a mechanical expression of animal instinct).

If the shaped things of the world are agentic in their myriad ways, living their stories, it becomes easier for me to consider how I might work with rather than on them—how I might enter a dance with things. Is this what Bennett and Lepecki are getting at when differentiating “object” and “thing?” The former is the latter reduced by the human. But Lepecki takes this idea into dance and performance as a frame for agency distributed among humans and things. In this dissertation, I am trying, in my own way, to take in the whole picture—the field of relations that includes humans and other than humans—and to see if there’s a way to effect change within the field. The frame might be highly contained, like the museum where the performer was blowing blood-red bubbles (Lepecki), or the whole world. I want to be able to shift from the particular to the whole in considering the question of how humans relate – working with or working on – to the more than human world.

While Bennett alludes to the role of perception in how matter is understood, she does not elaborate. She does say, as quoted earlier, that she hopes to “generate a subtler awareness of the complicated web of dissonant connections between bodies, and ... enable wiser interventions into that ecology” (4). How, specifically, might such awareness be generated? I hope this dissertation succeeds in proposing dance as a way of thinking and re-thinking Earth and our individual and collective relations with it.

Opening the senses is central to the practices of nearly every dance artist I have collaborated or trained with. I remember taking a workshop led by Headlong Dance Theater in Philadelphia in which we practiced being seen by a witnessing audience while

fully seeing what entered our field of vision, trying not to let our vision be shrouded by thoughts or interiority. Though we did not intellectualize this, I recall becoming more fully present in my dancing when I allowed my eyes to drink in the movement and energy of the studio; I thought I saw this in others too. The tagline for the summer festival Headlong hosted in the late 1990s was “consciousness is visible.”

This returns me to one of many possible ways that dance can respond to environmental crisis: as a laboratory for interrogating perceptual capacities and the ways that phenomena shift as qualities of perception shift. Maybe this is an elaborate way of saying “practicing paying attention,” which loops back to Sondra’s idea of attention as an ethics (“Improvising Nature” 2015). What view of the world, and what sense of distance from or intimacy with its existential trouble, can emerge from practice? I can’t answer for anyone else, but I can share my evolving understanding of a world that is interconnected and processual, which I can feel into the way I feel into a dance and try to make choices that serve its well-being. I’m talking about human-earth relations that can be practiced through analogy with an ensemble, be it an ensemble of improvising dancers or a soloist moving atop a rocky ledge in the desert. Can we find ways to extend the practice of dancing into the practice of living?

I am not interested in prescriptions for responding to crisis but in cultivating tools to support people in coming up with their own responses. This is where artistic practice can be especially powerful as a place for practicing creativity that can be applied to problem solving even beyond art-making if desired. In the environmental humanities, I have encountered the word “imagining” several times, for example, Murphy’s imagining an “alterlife in the aftermath” of industrial chemical violence, or *An Ecotopian Toolkit*,

the University of Pennsylvania's recent transdisciplinary conference dedicated to imagining an "eco-topia" that I mentioned earlier. Both draw on the visual arts and literature as inspiration and practice—though not on dance, so that's a door waiting to be opened.

Returning to Bennett's reference to change created through "subtle awareness" (4) like to imagine this as a challenge to be taken on by dance. Might we employ dance as a way of practicing more conscious participation in the "web of dissonant connections between bodies," and might this facilitate "wiser interventions into that ecology?" (4). Dance could be a way to enter a gap in her philosophical account, which is a gap in western philosophy generally according to Yuasa: the role of physical practice in creating theoretical knowledge. I have taken up the challenge of responding to these questions through practice. In my direct experience, such as that described in the section on quantum physics and ki energy (Chapter Six), paying attention to subtle energies in and surrounding my body has led me towards what I hope are wiser ecological interventions. By expanding my consciousness to include the ecological field of relations in which the movements of my living occur, I now think more about food, waste, commodities, energy usage, and my own body and movement in relation to these. My experience as an improvising dancer reminds me that I can ask if there are other ways to move, not just in the studio but in daily life.

Q: Unfortunately, we're going to have to end there. I have to be at another engagement.

Thank you for sharing those thoughts.

A: Thank you.

CHAPTER 11

ENDINGS

It is another scorching, cloudless day, and we are on our way to the studio to dance.

Sondra is driving this time, taking an indirect route to show me some of the new housing developments on the edge of St. George. “Mormon architecture,” she calls the style of houses that spring up atop cliff walls, like mushrooms, as the city’s population grows. These are large, formidable houses, some with fortress-like walls and patches of green grass that shine like emeralds in the red-earth desert. Off to our side, down a bright cul-de-sac, I see a sprinkler’s high arc, wondering where its source of water is. The western half of the country is experiencing an unprecedented drought, which intensifies as the region grows hotter and dryer and as populations in cities like Phoenix and St. George bloom.

Sitting at a traffic light, I remember to turn on the recording device, catching mid-stream our conversation, which is about difficulties we have faced with our families.

Sondra begins to describe family systems therapy, and this topic becomes a springboard for a discussion of intersubjectivity in dance, somatics, and phenomenological processes.

Robert: Is there a conceptual framework to family systems therapy?

Sondra: Yes. We have two main functions in growing a self and psyche and in maturing. These functions are to grow a self and to grow in relation to others, which we’re always doing, because self is always in relation. The thesis is, you’re not going to have very good relationships unless you have been concertededly growing a self. Self-identity is critical. It’s not about egotism, it’s about having a healthy self-concept. Then you are able to be in relation successfully. If you don’t have a healthy self-concept everything’s going to go bonkers.

Robert: That's interesting. It seems a little different from the way I think about somatic processes in terms of a self-concept. I think in somatics the concept arises from the felt sense of self, as opposed to being somehow independent of felt sense.

Sondra: I have very strong opinions about what you're saying. I think that the somatic field of study is off-base in its extreme focus on self. The phenomenological point of view is a healthier one, which is that self arises in relationship with others and with the world, we're in this not simply as a self, and our perceptions are colored by others. We carry others in us. Somatics just doesn't go there, it hasn't, it's been all about "these are my organs." Yes, building a healthy self-concept has been very important in somatics but it doesn't take that next step consciously, unless you're taking people out to dance together dance together in Snow Canyon or "Plant US Butoh" [a piece Sondra choreographed for community members], or bringing their attention directly to how we move together, which is so important. This is really what dance can offer the somatic world.

Robert: This is what you carried over from dance, which is the other, the witness, the shared experience...

Sondra: ...the ensemble, the dancing in the group, I've always said that I'd much rather dance in a group than dance solo. I've always said that. I've done solos, and they're ok. But to dance in a group and actually to improvise in a group has always been for me the pinnacle experience, because it takes you to places – here's the somatic point – the others take you in your dance to places you wouldn't find by yourself. Don't you think that's the somatic point?

This exchange vivifies the way Sondra conceives of dance, somatic and phenomenological processes as a continuum rather than as independent disciplines. For decades, through her teaching, creative and philosophical practices, she has committed to cross-fertilizing these epistemological fields. While they may, as research paradigms, typically culminate in different outcomes, such as written theory (phenomenology), choreography (dance), and greater sense of ease in one's movement (somatics), Sondra's philosophy and pedagogy creates a space where these categories may dissolve into structures for direct experiential inquiry through the body. In her community somatics

workshops, for example, students who do not identify as dancers may end up dancing and witnessing each other dancing, perhaps dissolving the notion “I cannot dance,” as one student shared with me. At the annual Eastwest Somatics Network conference, which she hosts in Zion, UT, scholars are encouraged to find ways of integrating somatic experience with research presentations and processes, such as leading workshop participants through movement experiences that segue into scholarly paper presentations.

For Sondra, the notion of “we-life” (a term she borrows from Husserl) always includes, in addition to human intersubjectivity, physical nature beyond the human. Her philosophical writing since the 1980s has insisted on referencing the wider ecological context that enables human life. She asserts that movement practices that vitalize this relationship benefit humans and Earth, as they can elicit a healing sense of kinship. This is one of the reasons she takes her workshops and choreographic processes outdoors to interact with local environments, with students verifying their connection to Earth and gravity through the sensory experience of movement. While Sondra critiques somatics for excessive focus on “my organs,” she contradicts this critique, to some extent, when she says “if you’re listening to your body, you’re listening to the environment.” This implies that in felt experience it never is only just body.

The “I” of one’s body becomes the “we” of body-in-environment as environment emerges more fully in consciousness; going inwards is also going outwards as the inner organs of perception open. Her critique of somatics, then, is not that its processes promote solipsistic experience, but that, pedagogically, somatics practices are framed disproportionately around individual, rather than collective or ensemble, experience. When they do not attend consciously to the intersubjective field (human and/or more than

human) as such, an opportunity may be lost to become vulnerable to and moved by another's experience or process. For Sondra, "another's experience" includes more-than-only-human others. Becoming vulnerable to the inclusive lifeworld is, I believe, key to her ecological ethics.

Gratitude

While Ghosh refers to humanity's abusive relationship with Earth as *The Great Derangement*, Kimmerer refers to a "great delusion" in which the drive for profit trumps human capacities for recognizing and reciprocating Earth's gifts:

For much of human's time on the planet, before the great delusion, we lived in cultures that understood the covenant of reciprocity, that for the Earth to stay in balance, for the gifts to continue to flow, we must give back in equal measure for what we take (19)...In the teachings of my Potawatomi ancestors, responsibilities and gifts are understood as two sides of the same coin. The possession of a gift is coupled with a duty to use it for the benefit of all. A thrush is given the gift of song—and so has a responsibility to greet the day with music. Salmon have the gift of travel, so they accept the duty of carrying food upriver. So when we ask ourselves, what is our responsibility to the Earth, we are also asking, "What is our gift?" ("Gift" 23)

Kimmerer's response to the question is gratitude, which acknowledges not only the gifts received from Earth – air, water, food, sunshine, song, movement – but the Earth itself as their source.

Reciprocity acknowledges that other beings that humans depend on have gifts that humans do not, such as the capacity to create energy through photosynthesis. Human exceptionalism denies or obscures the gifts of other beings, like some birds' capacity to migrate thousands of miles through their detection of Earth's magnetic fields. Often, the intelligence of animals is measured in terms of their degree of ability to think like

humans, as if human capacities could only ever be the standard of intelligence.³³ For Kimmerer, gratitude cuts through anthropocentrism, recognizing human vulnerability to the more-than-human world:

Gratitude propels the recognition of the personhood of all beings and challenges the fallacy of human exceptionalism—the idea that we are somehow better, more deserving of the wealth and services of the Earth than other species. (19)

But it is difficult to feel gratitude for something to which little or no attention is given. Like Sonda, Kimmerer advocates for sensuous engagement with the nonhuman natural world, such as acquainting oneself with the trees in one's neighborhood, whom she refers to as "neighbors" ("Intelligence"). Practices of opening senses to the more than human lifeworld creates room in consciousness for recognizing the planet's gifts and feeling gratitude. If I am in a situation where I am able to take more of something than I need, pausing within the "forward spill"³⁴ of my movements might create space for inhibiting or redirecting an impulse to grab, folding the impulse into a different kind of dance that returns me to what I already have such as life-sustaining breath.³⁵

Acknowledging the gifts that surround us creates a sense of satisfaction, a feeling of enough-ness which is an antidote to the societal messages that drill into our spirits telling us we must have more. Practicing contentment is a radical act in a consumption-driven society. ("Gift" 20)

³³ Animals' and plants' capacities for living sustainably on Earth are not considered as a measure of intelligence; if they were, humans would be revealed as highly unintelligent.

³⁴ This is how Sonda sometimes describes a mode of everyday experience in which one loses a felt connection with body, environment and intentions, reacting habitually to circumstances.

³⁵ Clean air is becoming increasingly scarce due to industrial activity, with seven million deaths per year related to air pollution, according to the World Health Organization (Whyte).

Opening the senses as an acknowledgement of Earth's gifts, whether through intrinsic dance (Chapter Two) or other practices, is radical precisely when it exists for itself, liberated from the purposes of monetization or future personal gain. How could one profit from an act of gratitude or reciprocity with Earth? If I plant a tree or return nutrients to the soil as compost, the tree and soil will pay me nothing for my efforts. The currency of their reciprocity is the food and oxygen that sustains my and other beings' lives and, perhaps, a reminder of our co-evolutionary relationship whose roots reach into geologic past far pre-dating the origins of capitalism.

 Kimmerer sounds a word of warning to a profit-driven world that fails to recognize Earth's gifts:

 Indigenous story traditions are full of cautionary tales about the failure of gratitude. When people forget to honor the gift, the consequences are always material as well as spiritual. The spring dries up, the corn doesn't grow, the animals do not return, and the legions of offended plants and animals and rivers rise up against the ones who neglected gratitude. The Western storytelling tradition is strangely silent on this matter, and so we find ourselves in an era when we are rightly afraid of the climate we have created. (20)

 The need to fill this silence with stories that cultivate more reciprocal relations with Earth and all of its inhabitants is increasing. If environmental crisis provokes fear, it is also an invitation to integrative thinking and radical creativity. The concept of the Anthropocene, which brings human and Earth into a single frame, has itself opened up collaborations across disciplines and ways of knowing, as noted earlier. In what new ways might dance theory participate in these movements? What are the cultural, historical, philosophical, aesthetic and spiritual implications of the crisis in relation to dance traditions, histories and practices?

In 1992, Nagatomo wrote of the dawning twenty-first century as a time to question the “hitherto accepted intellectual paradigm...in an effort to erect a new one most appropriate for the coming generations, so that they can enjoy a maximum sense of *eudaimonia* [sic] while dwelling on this beautiful planet, Earth” (xxiv). He described the need for an integrative paradigm that reaffirms interconnectedness of body, mind, human, Earth and cosmos. A quarter century later, the need continues to grow. It is time for new and renewed connections across disciplinary systems, epistemologies, practices and ways of knowing towards a common vision of an Earth that is alive and worthy of our gratitude. It is time to recommit to a world that is livable for future generations of beings.

I have written this dissertation as an act of commitment. I have endeavored to bring my whole self to this act, integrating the somatic and intellectual aspects of bodily becoming in order apply the knowledge of both to the challenge of environmental crisis. Through an integrated practice of scholarship, I have come to understand, in a more deeply embodied way, that body is continuous with Earth via a shared medium of vibrant dancing matter, whether classified as carbon, nitrogen, oxygen, water, phosphorus, etc. or as earth, wind, water and fire. This work asks how I – and we, if you will join me – might apply ourselves to advancing an embodied philosophy for the Anthropocene that seeks clues, through feeling its way into the dance of humans-with-Earth, for how to promote the sustained flourishing of life. What great powers for change reside in the act of dancing? I hope that in the Age of Humans, we discover a new recognition of the necessity of our dancing.

Closing Thoughts

I presented, through heuristic phenomenological inquiry, extensive interviewing, and research into aesthetic, scientific and philosophical discourse on crisis, dance as a way of knowing that can invite greater connection with the more than human world. I proposed that somatic knowledge may be fertile ground for an ethics of reciprocity with Earth. A person may grasp intellectually that trees' breathing is reciprocal with their own, but dancing into and through this shared reciprocal field of relations can awaken ecological knowledge at a deeply-enfleshed level, cutting through layers of intellectual distance. Dancing provides a space in life for personalizing one's relationship with material Earth and tapping its powers of renewal.

My aim in this dissertation is to open the discourse of academic dance scholarship to the issue of environmental crisis, on the one hand, and, on the other, to contribute to theoretical practices in dance studies that integrate and synergize intellectual and other embodied ways of knowing, be they framed as somatic, spiritual or otherwise. The crisis will get worse in the coming century. New paradigms of knowledge are needed, as established ones have yet to create change that is commensurate with the level of urgency. Our present circumstances invite radical and transformative thinking and action.

Citing the urgency of crisis is not meant to provoke fear or despair but courage. As I hope the perspectives represented in this dissertation have shown, there is a payoff, in the form of tapping into renewable body-mind-environmental energy, to laying down the mantle of human exceptionalism and thinking, through moving body, *with* rather than over the more-than-human environment. In our dancing, we might entertain the notion

that Earth strives for survival and strives to support our survival. We are, after all, Earth and nature ourselves, if nature is conceived not in opposition to culture but as the movement of the cosmos. The possibility of sustaining life fades as our species continues to treat Earth with hostility. Ultimately, does this not amount to treating ourselves as the enemy? May we burn through our delusion of independence from the Earth's deteriorating health. May we dance through its sorrow and not get stuck. May we find Earth-centered love within the cosmic history living in the waves and particles of our flesh and Earth's flesh. With the power of this love, may we begin again, with clear and bright mind, on our path towards a future that is generous, alive and thriving.

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