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Making Meaning in the Anthropocene: A Constructivist Grounded Theory Investigation of College Student Response to Planetary Ecological Crises

Kristen Nelson

Making Meaning in the Anthropocene:
A Constructivist Grounded Theory Investigation of College Student Response to
Planetary Ecological Crises

A Dissertation Presented

By

KRISTEN E. NELSON

Submitted to the Graduate School of the
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Education

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DEDICATION

In gratitude, I dedicate this study to two sets of conversational partners that have sustained me through writing this dissertation:

To the intellectual community, most of whom I've never met, that has fed me for many years through their articles, books, websites, podcasts, and newsletters.

And to the fourteen individuals who volunteered to be participants in this study. Since our first two-hour conversation, I've had the great pleasure of thinking with you, through your stories, artifacts, and musings.

ACKNOWLEDGMENTS

One strange byproduct of completing my dissertation during the Covid-19 global pandemic is that I was able to do my dissertation defense remotely. I was therefore able to invite all kinds of people to attend from near and far who are important to me and have cheered me on during the thirteen years of my doctoral program. (I am also able to count myself among the relatively few people, I imagine, who have defended their dissertations in their bare feet, a privilege that felt appropriate for a study in which *Being at Home on the Planet* is a core category.) My Zoom defense allowed me to share this experience with friends and family. It now occurs to me, in writing my acknowledgements, that one outcome of living on the planet for a long time is that the boundaries between the categories of "friend" and "family" become more blurred and irrelevant. Friends are family; family members are friends. First, I want to state my gratitude to every person who was there at my defense, and those there in spirit. Each of those individuals is important to me in their own unique way.

Thank you to my dissertation committee – Ryan Wells, Chrystal George Mwangi, and Brian Lickel – for your guidance and support. My dissertation topic has been simmering inside me for a long time. I had the right collection of people – smart and heartfelt – to help me bring it to completion. In particular, I want to thank my Chair and Advisor, Ryan Wells, for the many helpful conversations over the years as I continued to bring definition to my ideas, and to ultimately connect those ideas to a qualitative study.

ABSTRACT

MAKING MEANING IN THE ANTHROPOCENE:
A CONSTRUCTIVIST GROUNDED THEORY INVESTIGATION OF COLLEGE
STUDENT RESPONSE TO PLANETARY ECOLOGICAL CRISES

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Higher education, with its core purpose in the generation and transmission of knowledge, has a particular role to play in society's response to the global ecological crisis. Yet a key question is whether higher education is part of the problem or part of the solution. Sustainability educators insist that higher education, if it is to adequately address these challenges, must shift away from "mechanism" – a rationalist worldview that historically has shaped higher education's culture and practices – toward an integrative worldview and epistemology that will guide teaching and learning in the new millennium. Emergent pedagogies and student development theories that are situated in an integrative epistemology are two resources within higher education that can support college students as they grapple with the personal, academic, professional, and existential challenges of the climate crisis. However, current research on college student responses to climate change is typically not centered in an integrative framework. It therefore does not provide the kind of knowledge that can engage with these

emergent pedagogies and student development theories and practices to enhance their capacity to address the needs of college students within the context of the climate crisis.

Using a conceptual framework derived from integrative worldview perspectives, this qualitative study employs constructivist grounded theory to investigate how emerging adults are making meaning of their lives within the context of the existential threats related to planetary ecological degradation. Through exploring connections among young adults' feelings, thoughts and actions in their responses to the climate crisis, this study offers a conceptualization of identity, *Planetary Identity*, that is shaped by the reciprocal interrelationship of self and other, including the self in relationship with the other-than-human world. The study also engages in a preliminary exploration of possible connections between this conceptualization and integrative student development theories and integrative sustainability pedagogies. The aim of this exploration is to help initiate a conversation from both sides of higher education, academic affairs and student affairs, which seeks to fortify higher education's capacity to support students and lead with compassion and justice in its response to the mounting challenges of the planetary ecological crisis.

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OVERVIEW OF STUDY

<u>**Introduction**</u>

During the global pandemic that first swept across the world in the winter

and spring of 2020, the writer and activist Arundhati Roy characterized the systemic

societal inequalities made bare by the pandemic's devastating path as "the wreckage

of a train that has been careening down the track for years." According to her, the

idea that we needed to just get back to "normal" was a dangerous mistake, given

that we had already been riding in a "doomsday machine" we had constructed for

ourselves. In response, she named the choice presented by the pandemic:

> It is a portal, a gateway between one world and the next. We can choose to
> walk through it, dragging the carcasses of our prejudice and hatred, our
> avarice, our data banks and dead ideas, our dead rivers and smoky skies
> behind us. Or we can walk through lightly, with little luggage, ready to
> imagine another world. And ready to fight for it. (Roy, 2020)

Throughout the early weeks and months of the spread of the virus SARS-CoV-2

many links were identified between the existential threats of a global pandemic and

the existential threats of ecological degradation, another train that has been

careening down the tracks for decades. Commentaries that connected the dots

circulated in news publications (Osaka, 2020; Sengupta, 2020), podcasts (Atkin,

2020), and organizational publications (Batka, 2020; United Nations, 2020). These

analyses emphasized a range of perspectives, but they all echoed warnings that had

been issued for many years (Daily & Ehrlich, 1996; Letko et al., 2020) of the

connections between human health and the health of the non-human environment.

Then, on May 25th, the murder of George Floyd at the hands of Minneapolis police sparked gatherings across the country, and around the world, protesting the killing of Black people by police. While Floyd's murder took its place in a long line of well-documented and witnessed killings and violence committed against Blacks by police and Whites, it seemed that his murder awakened a new layer of consciousness within the public, most notably within the White public, that these murders could only be fully understood, and reckoned with, as part of the history of White supremacy and systemic racism the United States. At the very same time, data was being published and reported (Glenza, 2020; Eldeib et al., 2020) that documented variations along lines of race, ethnicity, and class in the degree of sickness and death caused by the pandemic, exposing systemic health disparities. The interconnections being discussed were not new news. However, the simultaneous surges in the spread of a virus as well as international anti-racism protests re-exposed in stark terms the interconnected impacts of a broad systemic failure (Packer, 2020).

In midsummer that year, *The Guardian* reported that climate activist Greta Thunberg and a group of climate scientists, including Michael Mann, author of *The Hockey Stick and the Climate Wars: Dispatches from the Front Lines*, sent a letter to the European Union demanding they treat the climate crisis with the same urgency exhibited in response to the pandemic. "It is now clearer than ever that the climate crisis has never once been treated as a crisis, neither from politicians, media, businesses nor finance," the letter read. Arguing that the EU's Green Deal target of net zero emissions by 2050 is "dangerously unambitious" and "equals surrender,"

the letter called on EU leaders to "make ecocide an international crime and establish annual, binding carbon budgets." In emphasizing the need for dramatic, immediate, and unprecedented action, the letter insisted that the response must include specific steps to address the "social and racial injustices and oppression that have laid the foundations of our modern world" (Taylor, 2020).

The global pandemic, the constellation of planetary ecological crises unfolding, and the systemic de-humanization of the objectified "other" within the human community are not separate issues, nor are the injustices that are brought to relief when each is allowed to run its course. All are interconnected outcomes of a worldview rooted in domination. Roy's choice can be applied not only to the pandemic but to the planetary ecological crisis as well: will the forces that perpetuate the destruction of life systems on the planet, a destruction that rides on the well-worn tracks of structural injustice, continue to dominate, or will another way of living on the planet, one that has persisted throughout human history, provide a path toward healing?

Higher education, with its core purpose in the generation and transmission of knowledge, has a particular role to play in society's response to the global ecological crisis. Yet, as is true throughout its history, a key question is whether higher education is part of the problem or part of the solution. Sustainability educators (Orr, 1994; Sameshima & Greenwood, 2015; Kagawa & Selby, 2010; Evans, 2012; O'Sullivan, 1999) insist that higher education, if it is to adequately address these challenges, must shift away from "mechanism" – a rationalist worldview that historically has shaped higher education's culture and practices –

toward an integrative worldview and epistemology that will guide teaching and learning in the new millennium. Emergent pedagogies and student development theories that are situated in an integrative epistemology are two resources within higher education that can support college students as they grapple with the personal, academic, professional, and existential challenges of the climate crisis. However, current research on college student responses to climate change is typically not centered in an integrative framework. It therefore does not provide the kind of knowledge that can engage with these emergent pedagogies and student development theories and practices to enhance their capacity to address the needs of college students within the context of the climate crisis.

Using a conceptual framework derived from integrative worldview perspectives, and ecofeminist (Warren, 1997; Harvester, 2010) and ecowomanist (Harris, 2010; Riley, 2003) theory, this qualitative study employs constructivist grounded theory (Charmaz, 2014) using visual methods (Kortegast et al., 2019) to address the following primary question: How are emerging adults making meaning of their lives within the context of the existential threats related to planetary ecological degradation? To address this question, this study is focused on the following research question:

- How do emerging adults experience and understand their affective, cognitive, and volitional responses to the challenges of planetary ecological crises?

Through investigating connections among young adults' feelings, thoughts and actions in their responses to the climate crisis, this study offers a conceptualization of identity that is planetary in scope and shaped by the reciprocal

interrelationship of self and other, including the self in relationship with the other-than-human world. Chapter Six provides a preliminary exploration of possible connections between this conceptualization – *Planetary Identity* – and integrative student development theories and integrative sustainability pedagogies. The aim of this exploration is to help initiate a conversation from both sides of higher education, academic affairs and student affairs, which seeks to fortify higher education's capacity to support students and lead with compassion and justice in its response to the mounting challenges of the planetary ecological crisis.

Background of this Study

The Planetary Ecological Crisis

"At present we face a crisis of hope that we can make a transition to a viable future for the Earth community" (Grim & Tucker, 2011, p. 92). These are the words of John Grim and Mary Evelyn Tucker, conveners of the Yale Forum on Religion and Ecology, now in its twenty-second year. If one pauses to let that sink in, it's a stunning statement. Is our current reality truly one in which we should have serious doubts about whether the Earth will continue to be a habitable home for ourselves and our fellow species? To those paying attention to reports from the Intergovernmental Panel on Climate Change (IPCC), the World Meteorological Organization (WMO), and related news articles, yes, that is our current reality. The news is frequent and shocking.

The 2018 World Meteorological Organization (WMO) summary of Key Climate Indicators reports 405.5 parts per million (ppm) of greenhouse gas emissions (World Meteorological Organization, 2018). To put this in perspective,

the organization 350.org, which focuses on full divestment from fossil fuel dependence, is named for what was, and still is, considered to be the highest safe level of carbon dioxide atmospheric concentration for life systems on the planet. In 2008 climate scientist James Hansen stated, "today's CO2, about 385, is already too high to maintain the climate to which humanity, wildlife, and the rest of the biosphere are adapted" (Hansen et al., 2008, p. 16). According to the 2016 Arctic Report Card, a peer-reviewed source issued annually since 2006, the "persistent warming trend and loss of sea ice are triggering extensive Arctic changes" (Menge, Overland, & Mathis, 2016, para.1). While a subsequent article explains the systemic significance of these accelerating changes, citing the Arctic's "potential role as a critical throttle on future planetary dynamics" (Vorosmarty & Hinzma, 2016, p. 92), the general public need only open the Science Section of the December 19, 2016, *Sunday New York Times* to see more accessible evidence: pictures of "climate refugee" polar bears wandering into Kaktovik, Alaska to find food on land due to the receding ice where they usually hunt.

Thus, what qualifies as "current events" in the first quarter of the twenty-first century are bulletins notifying us of increasing signs that the earth's biosphere, the relatively thin ecosystem comprised of land, water, and atmosphere, where we live our daily lives and that is home to all life forms, is under severe duress created by human activity. Humans are destroying the life systems of the planet. Scientists cannot fully predict how the impacts will unfold, although the scientific community is reporting acceleration in warming (Inside Climate News, 2017), even faster than originally predicted, due to feedback loops. Nor do we know if Homo sapiens,

characterized by Orr (1994) as the "spindly legged, upstart species whose intellect exceeds its wisdom" (p. 139), will be able to change its behavior in order to begin to move things in the other direction. What we do know is that there is a serious proposal within the scientific community to formerly recognize the "Anthropocene" as a new geological epoch within the Geological Time Scale, to follow the Holocene Epoch that began over 11,000 years ago. The new designation is in response to the marked human impact on the planet, effects that are significantly altering the planet since the Industrial Revolution and even more alarmingly since WWII, barely a blip on the screen in relation to geological time.

Worldview as Context for the Planetary Ecological Crisis

Many years before the 405.5 parts per million threshold was reached, Orr (1992) wrote:

> The effect of climate disruption now gathering momentum is a tsunami of change that will roll across every corner of the Earth, affect every sector of every society, and worsen problems of insecurity, hunger, poverty, and societal instability. We live now in the defining moment of our species that will determine whether we are smart enough, competent enough, and wise enough to escape from a global trap entirely of our own making. (p. 316)

Similarly, Grim and Tuckers' (2011) remarks also question whether humans will be able to navigate this transition, and what the fate will be of the ecosystem and its attendant life forms if we cannot. What Grim and Tucker and others in the field of religion and ecology bring to bear on the issue of the planetary environmental crisis is the emerging ecological voice of world religions, with the potential to provide "a unique synergy for rethinking sustainability and (the human) relationship to the rest of the natural world" (p. 92). This "rethinking" of how humans might live

sustainably on Earth is far-reaching, understanding sustainability in its "economic,

ecological, social, and spiritual" dimensions (p. 92).

The intertwined elements of this viewpoint come together in an internal core

of justice. As Ruether (2006) states, "One needs to see the interconnections between

the impoverishment of the earth and the impoverishment of human groups, even as

others are enriching themselves to excess….One must think of ecology and justice as

integral parts of one system" (p. 373). According to this perspective, to disconnect

the two domains of ecology and justice is to lose sight of the problem itself. Such a

view, signifying a perception of breadth and depth not only in the crisis but also in

potential paths forward, is characteristic of conversations, and related actions,

taking place throughout religious communities worldwide (Jenkins et al., 2017).

In concert with religious communities, likeminded conversations are taking

place in a range of secular settings as well, echoing these same analyses that the

issue of global climate change includes matters of justice at its core. As a result, the

way forward must be multifaceted in its approach. Author and climate activist

Naomi Klein describes at the beginning of her book *This Changes Everything:*

Capitalism vs. The Climate her dawning realization of the intersectional nature of the

crisis and thus possibilities for addressing it:

> I began to see all kinds of ways that climate change could become a
> catalyzing force for positive change….If these various connections were more
> widely understood, the urgency of the climate crisis could form the basis of a
> powerful mass movement, one that could weave all these seemingly
> disparate issues into a coherent narrative about how to protect humanity
> from the ravages of both a savagely unjust economic system and a
> destabilized climate system. (Klein, 2014, p. 8)

Hawken (2007), chronicling what he portrays as a decentralized yet deeply unified

global humanitarian movement that threads together environmental, social justice,

and indigenous activism and initiatives, emphasizes as well the power that exists at

the core of this intersection: "Two lenses will probably be central to how we frame

our history in the future - social justice and the human relationship to the earth.

Indigenous culture allows us to see these two separate movements as one….The

movement reaches back to the deep and still roots of our collective history for its

axle" (p. 22). Gottlieb (2015), echoing these viewpoints, outlines the all-

encompassing nature of the crisis: "The comprehensive environmental crisis…

reflects virtually all aspects of our civilization - capitalism, to be sure, but also

patriarchy, racial oppression, speciesism, consumerism, nationalism, the scientistic

reduction of nature, and the commodification of all life" (p. xii). From a range of

different perspectives that includes systems thinking (Macy & Brown, 2014; Wilber,

2001), integral ecology (Mickey, Kelly, Robbert, & Tucker, 2017), deep ecology

(Naess, 1998), indigenous knowledge (Cajete, 2000), food sovereignty (Shiva, 1993),

ecofeminism (Spretnak, 1997; Warren, 2000), Afrocentric Ecowomanism (Riley,

2003) and philosophy (Moore, 2017; Moore & Nelson, 2010), the environmental

crisis is understood to be more than an environmental crisis. Rather, it is a crisis

that takes place on a deep cultural level. Such analyses from both faith-based and

secular contexts make clear that climate change is a multidimensional problem that

not only has an impact on the physical environment but has moral and spiritual

implications as well.

This interrogation of the cultural root causes of climate change, one that inextricably links the destructive nature of the relationship between the human and other-than-human world with unjust relationships within the human community itself, implicates a worldview particular to Eurowestern culture. Analyses and descriptions of the origin, path and history of the dominant worldview within Eurowestern culture vary somewhat, according to the range of disciplines illuminating the course of history and ideas (Berry, 1999b; Horne, 2020; Mathews, 1991; Orr, 1992; E. O'Sullivan, 1999; Plumwood, 1993; Ruether, 2006; Tarnas, 1993). What these authors describe in common, however, is the dominance of a Eurowestern worldview defined by a dualistic and binary construction of reality. Eaton (2016), noting the impact of late 20th century feminist scholarship that uncovered the "interlocking ideologies (and) normative belief systems" (Spretnak, 1997) governed by this worldview, records the cascade of binary oppositions operating within dualistic thinking:

> Hierarchical dualisms and binary oppositions were exposed and critiqued: superior/inferior, male/female, heaven/Earth, culture/nature, spirit/matter, divine/demonic, order/chaos, mind/emotion, etc. These dualisms permeate the religious and philosophical history and development of Eurowestern intellectual traditions. Ecofeminists trace the entrenchment of dualistic thinking, and expose the tendencies to devalue and then oppress the inferior dyad. (p. 328)

An essential point in the analysis of this "network of dualisms" (Plumwood, 1993) is the oppression intrinsic to it. The pairing is not neutral. Rather, the binary exists in order to designate and normalize a hierarchy of value. Eaton (2016) states this clearly: "Systems of domination become naturalized and customary within a worldview structured with hierarchical dualisms" (p. 328). Unless the function of

this particular worldview is seen for what it is, it is virtually impossible to see the constructed nature of the system of values. The significance of worldview, therefore, is not the assertion that there are different ways of conceptualizing reality. Instead, the importance of worldview is that ideas shape reality and create a particular kind of world (Hedlund-de Witt, 2013).

In her research on the function of worldview in the project of confronting the planetary ecological crisis, Hedlund-de Witt (2014) outlines a typology of five intersecting elements within the concept of worldview (ontology, epistemology, axiology, anthropology, and societal vision). Building on the work of Taylor (2004), Hedlund-de Witt describes how these five worldview elements essentially serve as the vehicle through which ideas translate into the world we understand as "reality." These five elements can be traced through various narratives that describe the evolution of the Eurowestern worldview. For example, Tarnas (1993), as he unravels the long and fascinating story of the ideas that have shaped Western culture, pulls a thread that begins with Copernicus (where the human loses its central place within the cosmos), continues through Descartes (where the human exists as solitary doubter within the cosmos), and finally connects to Kant (where the human is isolated within its own projections onto the cosmos), revealing a picture of increasing human existential isolation: "The cosmological estrangement of modern consciousness initiated by Copernicus and the ontological estrangement initiated by Descartes were completed by the epistemological estrangement initiated by Kant: a threefold mutually enforced prison of modern alienation" (p. 419). While this is Tarnas' particular illumination of the unfolding of intellectual

events, and only one chapter in a long story, the alienation he identifies here is central to the story many tell. Orr (1992), emphasizing the "radical miscarriage of human purposes" (p. 12) rooted in this worldview, focuses on the culmination of alienation in the modern world: "Modern science has fundamentally misconceived the world by fragmenting reality, separating observer from observed, portraying the world as a mechanism, and dismissing nonobjective factors, all in the service of the domination of nature" (p. 12). In some sense, alienation is arguably the genetic material of the Eurowestern worldview, programmed in from the beginning of its philosophical and intellectual tradition, however it is that scholars begin that story (Berry, 1999b; Mathews, 1991; Orr, 1992; Plumwood, 1993).

In calculating the work that needs to be done in facing the challenges of climate destabilization, one can wonder whether it makes sense to spend time focusing on these matters of cultural and intellectual history. Acknowledging this skepticism, Scott (2007) explains why the evolution of ideas matters:

> We must remember that the ideas of philosophers and scientists from the 16th century onwards were also very esoteric, such as the work of Descartes; but they were incorporated into an approach to the universe and to reality that spread into all areas of knowledge and into the cultural behavior of the Western world. (p. 3)

Many argue that the era of modernity, itself carved out from the "cultural behavior of the Western world," has become a destructive influence on the planet, perhaps the primary destructive influence, that is now reaching a tipping point (Bai, 2012; Evans, 2012; Fassbinder, Nocella, & Kahn, 2012; Gidley, 2006; Orr, 2016; E. V. O'Sullivan, 1999; Scott, 2007). The call for a fundamental shift in worldview is urgent. Evans (2010) provides a comprehensive account that drives home the

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implications of a dualistic, binary construct in the context of the multidimensional

planetary ecological crisis:

> The modern Western consciousness abstracts humans from nature. The
> divide itself is not only a division into two, it is a tiered dualism: humans on
> top, nature acting in all supporting roles (as tool, as resource, as setting). The
> subjugated "other," first conceptualized as nature itself, is born with this
> divide. And there have been many "others" as systems of hierarchy have
> proliferated to encompass gender, "races," non-Western cultures, and more.
> Cultural systems of hierarchy in Western societies and the projection of a
> hierarchical worldview upon nature itself surely are among the keystone
> concepts upholding the house of cards that is the unsustainable, globalized,
> industrial world. (para. 21)

Griffin (1992) suggests that while humanity may not be a blank slate shaped by

exterior forces, modernity itself is moving humanity and the world in a treacherous

direction:

> The human proclivity to evil in general, and to conflictual competition and
> ecological destruction in particular, can be greatly exacerbated or greatly
> mitigated by a world order and its worldview. Modernity exacerbates it
> about as much as imaginable. We can therefore envision, without being
> naively utopian, a far better world order, with a far less dangerous trajectory,
> than the one we have now." (para. 12)

Clearly, such depictions of the Eurowestern worldview as having a singularly

pernicious influence on the survival of the planet would lack credibility if what is

presented is a one-sided picture. Modernity is not one thing. We live in a

complicated world shaped by advancements in science and medicine, for example,

that most of us probably can't imagine living without. Yet, built into the world we

know as modernity, is a ticking clock. O'Sullivan (1999) writes:

> Modernity, with all of its excellences and wonders, has reached the full
> fruition of its limitations. I believe we are living in the terminal stages of
> modern history and that we are experiencing the full force of the limitations
> of the rational-industrial mode which is now self-canceling….We are in need

of an evolutionary transformation that transcends the forces of modernism
and includes them at the same time. (p. 1)

Making a related point, Tarnas (1993), in his account of how a world of alienation

unfolded from the intellectual underpinnings of the Western intellectual tradition,

subsequently returns to the epistemological trap revealed by Kant. Tarnas suggests

there may be a reason for hope built into the dilemma of the modern world. To

explain, he reminds the reader that part of the source of alienation is a

conceptualized separation of the human from the rest of the world. He asserts that in

the center of that isolation is a possible way forward, for the isolation begins in the

human mind, not in the world itself.

But the lesson of Kant is that the locus of the communication problem - i.e.,
the problem of human knowledge of the world - must first be viewed as
centering in the human mind, not in the world as such. Therefore it is
theoretically possible that the human mind has more cards than it has been
playing. The pivot of the modern predicament is epistemological, and it is
here that we should look for an opening. (p. 422)

Here we see how epistemology lies at the core of the crisis. Plumwood (2009) flatly

states, "The struggle to think differently, to remake our reductionist culture, is a

basic survival project in our present context" (para. 48). This is the urgency - to

understand that ideas matter, how we think matters. Our ideas create the world we

live in. Therefore, for those of us who live each day in a world defined within the

Eurowestern dualistic worldview, the question surfaces: How do we change the way

we think on a cultural level? How do we do this in such a way that there is the

possibility of changing the treacherous course the planet is on?

Higher Education and an Alternative Epistemology

Many of the faith-based and secular analyses that recognize the multifaceted challenges of climate destabilization within a broader cultural framework are expressions of an alternative worldview that runs counter to this dominant paradigm. Characterizing this as a change that is moving toward an integrative, participatory, reciprocal and communal paradigm, scholars and activists are calling for a cultural transformation in response to climate destabilization, one that requires an epistemological and ontological shift (Bai, 2015; Cajete, 2000; Evans, 2012; Fassbinder et al., 2012; Gidley, 2006; Orr, 2011; E. V. O'Sullivan, 1999; Sameshima & Greenwood, 2015). O'Sullivan (1999), rooted in the work of cultural historian Thomas Berry (Berry, 1988, 1999b), characterizes the industrial revolution as a dream that "has lost the integrity of its meaning" (p. 3). With this loss of meaning, the dream has become a trap, a "cultural pathology" requiring "deep cultural therapy" (p. 3). Berry (1999b), asserting that we are already in the throes of this transition, what he calls the Ecozoic Era, writes: "The distorted dream of an industrial technological paradise is being replaced by the more viable dream of a mutually enhancing human presence within an ever-renewing organic-based Earth community" (p. 201). Tarnas (1993) notes the change as well:

> And why is there evident now such a widespread and constantly growing collective impetus in the Western mind to articulate a holistic and participatory worldview, visible in virtually every field? The collective psyche seems to be in the grip of a powerful archetypal dynamic in which the long-alienated modern mind is breaking through, out of the contraction of its birth process, out of what Blake called its 'mind-forg'd manacles,' to rediscover its intimate relationship with nature and the larger cosmos. (p. 439)

However, while these changes are taking place, even within academic

institutions, as Tarnas notes, higher education has both feet planted in the dominant

Western worldview. Rendon (2009) summarizes the elements of this dominant

cultural paradigm as seven agreements within the academy. "The agreement" to

privilege intellectual/rational knowing; of separation; of competition; of perfection;

of monoculturalism; to privilege outer work; and, to avoid self-examination (p. 26).

Thus, higher education is fully implicated in the planetary crisis in which we find

ourselves. Orr (1992) states:

> We have fragmented the world into bits and pieces called disciplines and
> subdisciplines, hermetically sealed from other such disciplines...most
> students graduate without any broad, integrated sense of the unity of
> things. The consequences for their personhood and for the planet are large.
> (p. 11)

Orr's comment reflects an understanding that the implications of this dominant

paradigm are felt at the most local and most far-reaching levels.

In her research on the relationship of worldview and sustainability, Hedlund-

de Witt (2013) makes clear that worldviews are constructed and do therefore

change. She points out the challenge and the opportunity implicit in this view. While

the understanding that our worldviews are mutable suggests a foundation of

creativity and power, she reminds us "there is a certain gravitas that opens up when

this insight is fully realized" (p.155). That is, there is not only an opportunity but

also a responsibility to catalyze this possibility of deep change. In its key

participation in the generation and construction of knowledge, higher education

plays a critical role in our society's capacity to meet the challenges of the ecological

crises we face. However, if the participation of higher education does not include

shifts in its underlying epistemology, it will not only be missing the cultural

foundations at the root of the problem, but it will be in danger of amplifying the

crises. Gidley (2006) states:

> If universities are not only to survive the complex political, economic, and
> social chaos that present trends suggest will occur in the coming decades, but
> also to be active in transformation, then they need to reflect critically on their
> underpinning worldview. (p. 30)

Palmer (1987) notes that these types of epistemological changes are currently

taking place within higher education, in the "fringe areas of the academy's work" (p.

4). There are resources within higher education from both the academic and student

development domains that reflect these changes. Within pedagogical theory and

practice, three pedagogical approaches – critical, contemplative, and community-

engaged – each embody an epistemological shift away from the dominant cultural

paradigm that Rendon describes. Sustainability educators are developing

integrative pedagogies that are fueled by these approaches to teaching and learning.

Many of these sustainability courses and programs are anchored in a student-

centered approach to teaching, and therefore incorporate an integrative approach

not only in what they teach but in how they teach as well.

Within the field of student development theory and research, there are

models that emphasize an integrative perspective (Abes, Jones, & McEwen, 2007;

Baxter Magolda, 2009; Jones, 2009; Kegan, 1982, 1994; Zaytoun, 2006). These

approaches emphasize a holistic approach to human development, recognizing the

interplay of internal and external influences and employing a constructivist

approach to understanding how college students make meaning. In addition,

increasingly there is research on the interior lives of young adults (Parks, 2000).

Astin et al. (2010) conducted a seven-year longitudinal study investigating how

college affects the development of students' spiritual and religious identities.

Quantitative and qualitative research on spiritual development in college students

has proliferated during the past twenty years (Bryant & Astin, 2008; Love, 2001;

Rockenbach & Mayhew, 2013; Tisdell, 2007; Tisdell & Tolliver, 2007). Thus, there

are elements within higher education focused on teaching and learning and on

student development that mirror the epistemological and worldview shift being

called for in our responses to climate change. These emergent theories and practices

are resources that need to be amplified in higher education's responses to climate

change.

Clearly this is a time of great danger and great opportunity in which higher

education has a central role and responsibility. David Scott, former Chancellor of the

University of Massachusetts Amherst and convener of the 2000 national conference

"Going Public with Spirituality in Work and Higher Education," emphasizes that to

make this kind of deep cultural change "education is a slowly moving process, but

it's the strongest process we've got" (D. Scott, personal communication, 4/14/11).

Greenwood (2012) presses the question: "Are college and university educators

taking sufficient notice of the times we are living in? If serious geologists are talking

about changing geological time scale to reflect the new realities, what is the

corresponding response within higher education" (p. 217)?

Statement of the Problem

Our collective response to the planetary ecological crisis requires a deep, cultural shift in our ideas about the world and our place in it; that is, a transformative shift in worldview. This is a shift from a dualistic, binary construction of reality rooted in domination towards a worldview that reflects an integrative, participatory, reciprocal and communal paradigm. While important steps are being taken within higher education to respond to climate change, academic culture operates from a worldview that has helped create, and perpetuates, the problem it is trying to address. Within this current paradigm, higher education may not be equipped to cultivate the level of transformation needed for humanity to address its relationship to the earth systems it inhabits with other beings. It is necessary to get at the core issues of the planetary crisis, rooted in our core ways of thinking, or we will continue to construct the same world.

Within both the academic and student affairs arenas of higher education, there are potential resources that can be mobilized for an effective response to the cultural and epistemological issues underlying the ecological crisis. Working from critical, contemplative, and community-engaged paradigms, integrative sustainability pedagogies are being developed as a counter-normative approach to sustainability education (Bai, 2012; Evans, 2012; Gruenewald, 2003). In addition, the field of college student development theory and practice has been strengthened by theories of development rooted in an integrative paradigm (Baxter Magolda, 2009; Abes, Jones, & Stewart, 2019; Zaytoun, 2006). These theories are equipped to

provide a theoretical home that resonates with a holistic view of college students as they grapple with the realities of climate change in their present and future lives.

However, research on college student response to climate change is primarily quantitative (Askit, 2017; Li, 2014; Sinatra, 2011; Wachholz, 2014) and not situated in an integrative epistemological framework. It is thus ill equipped to construct an in depth understanding of how students are responding to the mounting and intersecting ecological, social, economic and political challenges and to assess the kind of support required. Hiser and Lynch (2020) recently conducted a series of focus groups with college students focusing on what college students know, think, feel, and do about climate change. They made recommendations for cross-disciplinary teaching and learning, campus and community engagement, and further research into climate literacy. Markowitz (2012) conducted survey research with open-ended questions about college student perspectives on the moral implications of climate change. He identified the need for in-depth qualitative research, particularly on the "ethicists" identified in the study, which could provide "rich narratives and deep insights into individual's beliefs" (p. 42).

There is a need for qualitative research that can contribute to what could be a fruitful engagement among three areas: integrative approaches to sustainability education, integrative college student development theory, and qualitative research on college student responses to the climate crisis. If the body of research on college student response to ecological crises is anchored in a paradigm that emphasizes a collection of parts, and doesn't include a lens adjusted to bring into focus the whole, not only do we miss the chance to see students with a holistic view, but we also risk

replicating, in research and education, the same worldview assumptions that fostered the planetary crisis we are trying to address. Rather, as higher education continues to identify and operationalize its role in creating effective societal responses to climate destabilization, there is an urgent need to cultivate an integrative worldview within its essential mission of teaching and learning. To support this critical endeavor, research on college student responses to planetary ecological crises must include approaches that are grounded in an integrative epistemological approach that can then engage with existing pedagogical and student development resources to generate creative and effective responses within higher education.

Significance of the Study

The purpose of this study is to advance higher education's capacity to educate and energize college students to lead with hope and vision in responding to the social, political, and moral challenges of the planetary ecological crisis. The study asks how higher education can meet young people where they are developmentally, at the edge of moving into adulthood, and where they are existentially, at this juncture of human history on the planet? This study employed methods of constructivist grounded theory (Charmaz, 2014) to research how emerging adults are experiencing and making meaning from their feelings, thoughts and actions as they engage with the realities of a warming planet. In keeping with constructivist grounded theory, the study generated a theoretical conceptualization of young adult identity derived through the constant comparative analysis of codes and core categories constructed from participant interviews.

Matching the core purpose and topic of this investigation – to bring the need

for a civilizational worldview shift to bear on the context of higher education – the

study is situated in an integrative epistemological conceptual framework. This

framework is informed by the literature review in Chapter Two that contextualizes

the study within an integrative worldview perspective (Hedlund-de Witt, 2012). The

literature review draws from resources within the broad cultural conversation

addressing the planetary ecological crisis and the urgent need for a worldview shift.

This conceptual framework governs the overall methodological design of this study,

including research question, relevant literature, data gathering methods, analysis,

theorization, and write-up (Jones, et al., 2014). A full description of critical grounded

theory and the specific data gathering methods and analysis used in this study is

presented in Chapter Three.

While the context of the study – the real existential threat of planetary

ecological collapse and the intrinsic issues of justice linked to that – can be almost

paralyzing in its implications, the purpose and significance of this study is practical,

focused and, in keeping with the study's findings, grounded in a conviction of

possibility – politically, culturally and spiritually. This study offers the following

areas of potential significance:

- Addresses a gap in research on college student responses to climate change by conducting a qualitative study that incorporates an integrative epistemological conceptual framework.

- Constructs a theorization of young adult identity that recognizes the context of the existential threats of the climate crisis and therefore links the context of student development theory to investigation of how college students are responding to climate change.

- Engages both sides of higher education, academic affairs and student life, in exploring how higher education can better support college students as they face the increasing challenges of the climate crisis.

- Advances theorization within college student development that recognizes links between human-to-human and human to other-than-human contexts of "othering" as well as sources of resistance through integrative ontologies and epistemologies.

- Strengthens sustainability education by amplifying its emergent integrative approaches, particularly through exploring the critical, contemplative, and community-engaged foundations of this work.

- Supports higher education's contribution to addressing climate change through its core functions of teaching and learning.

Conclusion

The multiple crises that emerged in Spring 2020, in the United States and throughout the world, are eruptions that signal underlying systemic failures in human-to-human and human to other-than-human relations. There is need for a fundamental shift in a worldview that has dominated Eurowestern culture and, by extension, the world. Higher education with its core functions of teaching and learning is at the center of knowledge generation. It can either perpetuate a dominant worldview, increasing the chances that we will walk through the portal, as Roy (2020) describes, "dragging the carcasses of our prejudice and our hatred," or it can be bold, "ready to imagine another world." This study aims to make a small contribution toward realizing the second possibility. The following chapter will explore more deeply the origins and nature of the dominant worldview and point towards an alternative vision.

CHAPTER 2

LITERATURE REVIEW

The culture of a people is intimately connected with their type of thinking and system of knowledge. (Gidley, 2006, p. 29)

Our actions in the world emanate from *who we are*: the way we think, perceive, sense and feel. The landscape outside reflects our inner landscape, and environmental problems reflect the disorder of the human mind. (Bai, 2012, p. 312)

One striking finding through this global lens is that the collective wisdom of humanity is quite clear that we make our living realities through the conduct of our consciousness: our technology of mind. (Gangadean, 2006, p. 441)

Introduction

The following literature review provides an introduction to the concept of worldview, a selected review of several representative analyses of the development of the dominant Euro-Western worldview, a discussion of the implications of dualism in relation to planetary crises, and closes with a brief review of ecofeminist and ecowomanist theories.

Integrative Perspective and Worldview

Several notions captured in the three quotes at the beginning of this chapter are important to the following literature review. At the most fundamental level, the quotes imply an inescapable relationship between mind and reality. They suggest there is no absolute reality separate from the meaning we bring to it. The world we know as "reality," what *is*, is a constructed reality. The quotes also indicate that individuals do not do that meaning making entirely on their own; we make meaning from our individual contexts, yes, but humans are also social creatures engaged in collective meaning making. We do not *think* independently from the social

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creatures that we are. The world we live in, the one we understand as "reality," is a *particular* world shaped by specific prevailing cultural constructions of reality. The quotes indicate that this specific reality derives its existence from our culture's ideas and assumptions, its worldview. Therefore, ideas matter. How we think matters. It matters more than anything, because it shapes the world we live in.

However, a particular cultural construction is just that - a particular construction. No cultural construction of reality, no matter how dominant, exists alone. Rather, it is one of many possibilities of cultural expression and meaning making. Built into the social nature of perceived reality - that is, reality as derived from individuals in relationship with each other - is the possibility, and reality, of change. As self-evident and indisputable as our version of reality seems to be, what we know as reality is not a static entity but something always in formation. Therefore, because any reality is not a given but rather is mutable, because ideas do matter, these quotes also suggest change and movement is possible. There are openings.

In the case of the human relationship to the earth's living systems, other living beings, and our relationships with each other, this possibility for change is good news. Things are not going well here. As Bai's quote indicates, a disorder of the mind is at the root of the disorder of the world. Our inner and outer realities are not separate but part and parcel of each other. That connection matters. It creates our material reality. Healing within our external reality, the world we live in, involves healing inside, on an individual and cultural level - who we think we are, what thinking and feeling mean, the ideas we have of reality. Therefore, while the

connection between inner and outer indicates how deep-seated the disorder lies, it is also where change happens, an opening of hope.

This section of the literature review explores the idea that a particular way of conceptualizing reality, that is, a particular ontology, and a particular way of defining what counts as knowledge, the truth, of that reality, that is, a particular epistemology, underlie the planetary environmental crisis, with its related social and economic causes and manifestations. The particular ontology and epistemology under discussion is the conceptualization of reality dominant in the West that is shaped by a dualistic and binary construction rooted in two significant ideas: first, that there is only one legitimate version of reality; and second, that what is different, other, is inferior and subordinate. Where did that come from? Why is it dominant?

Worldview: An Introduction

Before embarking on a discussion of the possible genesis and contours of the Western worldview, it is necessary to first begin by outlining some elements of the concept of worldview itself. Mathews (1991) in building her argument that Western culture in the latter half of the 20th century is caught between an increasingly irrelevant atomistic depiction of the world derived from Newtonian science, and the peril of an uncertain replacement, considers how the relationships among *culture, cosmology, metaphysics, mythology* and *science* illuminate the current crisis. Briefly exploring her framing will help set the stage for the meaning of worldview as it will function in this literature review.

For the terms culture, cosmology, and metaphysics, one might think of concentric circles of meaning. According to Mathews (1991), humans are

"enculturated" creatures by their very nature (p. 156). That is, an essential aspect of

existence for humans is the act of representing the world to ourselves, the act of

meaning making. *Human culture* is that representation. A *cosmology* is the larger

meaning that provides the context for that cultural expression. Cosmology is the

story of human existence as it is connected to the story of the world in its entirety.

> A cosmology serves to orient a community to its world, in the sense that it
> defines, for the community in question, the place of humankind in the cosmic
> scheme of things. Such cosmic orientation tells the members of the
> community, in the broadest possible terms, who they are and where they
> stand in relation to the rest of creation. (p. 12)

While a cosmology has a vast purview, its concern is the world as it exists. This is

true even when this includes "forces, fields, minds, spirits, even deities" (p. 11), for

these entities are understood to be within the context of an actual world.

Importantly, the realm of the actual world, and therefore a cosmology's influence,

also includes "the normative tone of the community" (p. 12), which also influences

its aspirations and expectations. *Metaphysics* includes the actual world as well as

the domain of the abstract, ideal, and possible. "A metaphysic tells of the layering of

reality, where the actual may be only one of the layers, others being the abstract,

possible, perhaps even spiritual layers transcending the realm of the actual" (p. 11).

Culture, cosmology and metaphysics are thus part of a whole and reference each

other. A *worldview* can be considered synonymous with the concept of cosmology,

as it is conceived in the multilayered and intersecting meanings of culture,

cosmology, and metaphysics. An important point to take from these definitions is

the broad, cosmic scope of meaning making within which human culture, and the

norms attached to that culture, are housed.

Mathews asserts that the idea of cosmology lost currency as a social force,

citing the perspectives of Marxist materialist frameworks and norms of scientific

empiricism. She finds this interesting, given that science itself in the latter half of the

20th century has evolved in such a way that it has been reconnected to cosmological

implications. Mythology, like cosmology, also was pushed aside as obsolete. As

Mathews develops her argument regarding the function of cosmologies in human

culture and the implications for an ecological worldview, she reconfigures the

relationship of mythology to science and cosmology. Using Campbell's (1972)

treatment of the function of mythology in human psychology, meaning making and

culture as a reference, she asserts that while science superseded mythology as our

cosmology, cosmology, in fact, did not lose its mythological identity. As she says,

"mythology, in modern Western culture, is not extinct; it is alive and well, but

dressed in scientific garb. In such a guise…it tends to go unrecognized" (p. 46).

Again, for the purposes of this literature review, the primary significance of

Mathews' reconfiguration of cosmology, science and mythology is the depth this

brings to the human practice of meaning making and for the idea of worldview.

Hedlund-de Witt (2013) defines the concept of worldview in her project to

operationalize the concept of worldview as a framework for research on responses

to environmental challenges. Through this work, she has identified five categories

within worldview that interrelate and together hold the complexity of its meaning:

ontology, epistemology, axiology, anthropology, and societal vision. *Ontology* is the

study of being and refers to the understanding of what constitutes reality, the view

of what can be said to exist, what "is." Echoing Mathews' (1991) assertion that

human meaning making operates within a broader cosmological context, Hedlund-de Witt adds that an ontology is generally tied to a cosmogony, that is, a particular understanding of how the universe came into existence, its story of origin, in whatever capacity that might be described.

Epistemology is the understanding of what can be considered knowledge within that ontology. What kind of knowledge is valid? What are recognized means of acquiring that knowledge? Ontology and epistemology go hand in hand or work like a figure eight: what one considers to be the fundamental nature of existence determines what is considered to be valid knowledge within that reality; how and what knowledge is obtained provides us with a particular understanding of reality. *Axiology* represents the idea of value itself, the fundamental question of what is considered to have worth. This has implications for ethics, what is considered right or good, as well as for aesthetics, relating to the concepts of "beauty" and "harmony," and therefore underlies the conception of what is considered to be a "good life." Epistemology and axiology are also mutually reinforcing. As Palmer (1987) argues:

> The way we know has powerful implications for the way we live….Every epistemology tends to become an ethic and…every way of knowing tends to become a way of living….Every model of knowing contains its own moral trajectory, its own ethical direction and outcomes. (para.11)

According to Hedlund-de Witt, these first three concepts, ontology, epistemology, and axiology, are the most commonly identified in the body of literature focused on worldview.

Anthropology is included as the fourth item in Hedlund-de Witt's typology of worldview. Anthropology in relation to worldview is how the human is understood in relation to the ontological, epistemological and axiological assumptions. Who or what is the human being in relation to this universe that we comprehend around us? What is the role of the human in this universe? And last, *societal vision* refers to the understanding of the society as an entity itself. How does change take place within society? How should society be organized? How should societal problems be understood and addressed? What is the individual's relationship to society? Drawing from Taylor (2004), Hedlund-de Witt equates the idea of societal vision with Taylor's concept of social imaginary. In his exploration of the "self-understandings" that underlie Western modernity in *Modern Social Imaginaries*, Taylor makes the distinction between an individual activity and the immersive and collective nature of social imaginaries.

> By social imaginary, I mean something much broader and deeper than the intellectual schemes people may entertain when they think about social reality in a disengaged mode. I am thinking, rather, of the ways people imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations that are normally met, and the deeper normative notions and images that underlie these expectations. (p. 23)

Informed by these five domains, Hedlund-de Witt's (2013) resulting definition of worldview is as follows: "A worldview is thus a complex constellation of epistemic capacities, ontological presuppositions, and ethical and aesthetic values that converge to dynamically organize a synthetic appreciation or enactment of the world and one's experiences" (p. 159). Hedlund-de Witt points out that while these categories have distinct meanings, they also interconnect through their respective

meanings. Since her purpose in defining worldview is to harness the concept as an instrument for empirical research on attitudes about and responses to global environmental challenges, she argues that the compartmentalization enables the research process. However, in the end, these concepts "hang together as truly 'overarching systems'" (p. 159). This will be the functioning definition of worldview for this study and I will return to its components in Chapter Six.

As Taylor's understanding of social imaginary indicates, a key aspect of cosmology and worldview, as understood by both Mathews and Hedlund-de Witt, is that it is a collective, social phenomenon rather than an isolated, individual conception. In that sense, worldviews are unavoidable and historically based, for they are part of living in a societal and cultural context. Worldviews are "overarching systems of meaning and meaning making that to a substantial extent inform how humans interpret, enact, and co-create reality…(and) are profoundly historically and developmentally situated" (p. 133). Worldview and cosmologies cannot be separated from this historical reality; they are not "made up," fantastical or a-historical. As Mathews (1991) writes, "Cosmologies are not of course pulled out of the air to suit the convenience of the communities to which they are attached. They are conditioned by many and various historical, environmental, technological, psychological and social factors" (p. 13).

The Dominant Western Worldview

A fundamental idea in tracing the origins of the Western dualistic worldview is the separation of body from mind. From this conception of reality emerges a cascade of related constructions that have implications within the development of

Western thought and society. These include the development of a particular

understanding of the self and what it means to be human, gradations of inclusion

within that category of "human," and the nature of the relationship of the human

and other-than-human, or what is sometimes called the "more-than-human" in the

literature on sustainability. Historical and philosophical scholars depict the origins

of the dualistic conception of reality with varying emphases. However, an

abbreviated tour through several representative descriptions and analyses of its

historical development helps clarify key elements of the worldview that is particular

to Western culture, identifies implications for the planetary crisis, and points

toward the type of worldview shift that is needed.

Plumwood (1993) argues that in Plato's philosophy and writing a

fundamental relationship of domination and subjugation exists between human and

nature. Nature, in this case, does not only refer to the other-than-human world.

Instead, nature is a category within Plato's philosophy that denotes all that is not

associated with reason. For Plato, mind is the true reality. The body is an

encumbrance. Reason, the human act of abstract intellectual thought, is exalted as

the highest order of selfhood, a concept of personhood that excludes all forms of life

associated with material existence, with the earth, with nature. Thus, those in

Plato's time who are associated with the capacity for reason, the elite male

intellectual class, are superior and serve as rightful masters over all other inferior

forms of life.

This fundamental relationship of mastery is therefore not only the human

over the other-than-human, but is at the core of other manifestations of domination

and subjugation in society. Emphasizing that "racism, colonialism and sexism have drawn their conceptual strength" (p. 4) from the "other" framed as inferior, Plumwood (1993) writes:

> It is the identity and viewpoint of the master, framed in the context of class, race, gender and species domination, which is presupposed in the Platonic conception of reason and which has framed the central concepts in terms of which the west approaches the world. (p. 88)

Plumwood outlines several concepts in Plato's writing that are central to the construct of the superiority of mind over nature. Plato's philosophical worldview, Plumwood argues, involves a *radical exclusion* of the material body from the soul. This dualistic concept evolves throughout Plato's philosophy. In his earlier writing, dualism is the depiction of self and world - it characterizes the essential relationship of the self to the category of nature. In later writing, dualism plays out as an essential component of the self. In a sense the self is at war with itself, "produc(ing) conflict between the self and those desires or needs (the 'appetite' in Plato's term) which serve to maintain the body and to maintain the self's relations of affectional and material dependency on others and on the earth" (p. 91). This *denied relationship of dependency* allows the idea that the intellect, mind, the essential self, exists on its own and has absolutely nothing to do with earthly existence. It is superior and fundamentally separate.

Plato's exaltation of reason is linked with his valorization of death, according to Plumwood. Contextualizing Plato's thought within Greek culture's valorization of the warrior-hero and the need to both maintain territory and control slaves, Plumwood (1993) argues that reason, replacing honor, becomes a justification for

death, and therefore justifies the need for death in war, for through death one enters one's true essence in reason. The separation of the superior reasoning self from the inferior bodily self creates the condition of a true self that exists beyond death. Death is the entrance to the essence of reality in the world of Forms, the continuity of the true self through the death of the earthly body. In Plato's philosophy, "the meaning of death is that the meaning of life is elsewhere, not to be found in the earth or in human life as part of nature" (p. 100).

In her explication of the origins of Western dualism and its significance in relation to the human-nature relationship, Mathews (1991) takes up the story from here, initially with an emphasis on atomism, "that arch-metaphysic of disconnectedness" (p. 3) central to Western thought. Focusing on Newton's atomistic worldview, Mathews' overview illustrates that, as with any significant intellectual development, "atomism did not of course spring freshly formed from Newton's brow," (p. 14). Her account centers on philosophical developments during the 17th and early 18th centuries, moving through the influence of Democritus, Kepler, Galileo and Descartes toward the development of Newtonian atomism. As Berry (1999a) emphasizes, this period prior to the Enlightenment was the time "when the Western mind took on that critical keenness and reasoning process that made our scientific thought possible" (p. 9). Atomism, beginning in certain strains of Greek thought, is the idea that nature is fundamentally made up of aggregate parts. In early philosophical atomism, observable forms (that which we see around us) don't exist in themselves. These forms are only a collection of parts. There is no whole to which the parts belong. This position is therefore also characterized by the

worldview that reality is essentially a manifestation of mechanics. What exists is matter in motion, moving and affecting other matter; thus the metaphor of "the universe as a cosmic piece of clockwork" (Mathews, 1991, p. 16). According to Mathews, in the developments leading up to the Enlightenment, this previous atomistic mechanical view found footing in a *science* of mechanics, particularly through Galileo's thought and work, and subsequently manifested as an entire worldview by Descartes, a *philosophy* of mechanics.

The conception of the nature of matter that is intrinsic to this configuration is critical to our understanding of dualism and its influence on Western thought. As with the radical exclusion between reason and nature in Plato, in which reason holds ultimate meaning, in the atomistic and mechanistic worldview matter is completely inconsequential. "Matter is seen as 'dead' - as inert, passive, homogenous stuff endowed with no inner principle of action" (Mathews, 1991, p. 17). In this context, Descartes' version of radical exclusion in mind body dualism becomes apparent: "As Descartes sees it, mind and matter are distinct substances, logically and mutually independent: mind can exist in the absence of matter, and matter in the absence of mind" (p. 18), but never in relationship with each other. This dualistic construct, with its reverence for the abstract mind divorced from matter, is so entrenched in Western conceptions of reality that it is hard to see around it. Following Newton, Mathews argues, the atomistic and mechanistic worldview is taken up as the baseline for the scientific endeavor. This essentially is the world as we come to understand it, what Mathews calls "the firm entrenchment of this atomistic mechanism in 'common sense'" (p. 20).

Tarnas (1993) points out the irony of such a worldview:

> The human mind has abstracted from the whole all conscious intelligence and purpose and meaning, and claimed these exclusively for itself, and then projected onto the world a machine....This is the ultimate anthropomorphic projection: a man-made machine, something not in fact ever found in nature. From this perspective, it is the modern mind's own impersonal soullessness that has been projected from within onto the world - or, to be more precise, that has been projectively elicited from the world. (p. 432)

Certainly, when a depiction of reality is considered common sense, it is self-evident for the holder of that view. It is not particular, constructed or historical and it does not share the stage while it is dominant. It isn't a lens; it just is. Yet just as important, a particular construction of reality does not stay within the proscribed bounds of explaining nature or existence. Or rather, there are no bounds. A particular conception of reality is folded deeply into all aspects of human existence and shapes our understanding of our place in the world, our relationship to each other, who we are.

As Gangadean (2006) states in the introductory quote, "we make our living realities through the conduct of our consciousness" (p. 441). Therefore, when the question is asked, why does a history of western ideas of reality matter, Scott (2007) addresses this question:

> Many people, of course, will object that all of these philosophical approaches to reality have little to do with every day experience. But we must remember that the ideas of philosophers and scientists from the 16th century onwards were also very esoteric, such as the work of Descartes; but they were incorporated into an approach to the universe and to reality that spread into all areas of knowledge and into the cultural behavior of the Western world. (p. 3)

That is, the particular "common sense" view of reality that lies at the base of the Western worldview is manifested throughout human society and its relationship to

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the natural world. This understanding of the infusion of a particular way of conceptualizing reality, a particular worldview, throughout Western culture is critical to this study. It shapes all of our institutions, including higher education. A first step is to recognize that our knowledge systems are culturally bound, and then to see how these assumptions shape the world we live in. As we review the implications of a dualistic framework in the next section, we will see, as Plumwood, Mathews and others argue, that the mind/body reason/nature division and its built in nullification of the "other" is at the base of the crisis of the human/earth relationship. This perspective is key to understanding the ecological crises threatening the planet. Following the next section that reviews the implications of dualism, the alternative integrative worldview will be introduced. It is this worldview, and its epistemological assumptions, that emergent sustainability pedagogies are based on and are bringing into higher education. This study of young adults' feelings, thoughts, and actions in response to the climate crisis brings this integrative worldview into research that can interact with both these pedagogies and theorization about college student meaning making.

Implications of Dualism

As Plumwood (1993) and Mathews (1991) describe, core to the western dualistic worldview is the designation of meaning and non-meaning, a binary with a built in "other," all "others" linked within the category of lesser-than, meaningless, invisible, non-existent. In explaining the origin and nature of this construction, Plumwood seeks to unearth the stone beneath the last turned stone, the defining relationship that reflects the domination at the center of multiple manifestations of

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power in society. Therefore, her employment of a feminist lens keeps its sights on

the operation of power rather than on masculinity per se. Asserting the danger and

futility of a Marxist analysis that situates class above all other forms of domination,

she writes:

> My account suggests that it is not a masculine identity pure and simple, but
> the multiple, complex cultural identity of the master formed in the context of
> class, race, species and gender domination, which is at issue…The recognition
> of a more complex dominator identity is, I would argue, essential if feminism
> is not to repeat the mistakes of a reductionist program such as Marxism,
> which treats one form of domination as central and aims to reduce all others
> to subsidiary forms of it which will 'wither away' once the 'fundamental'
> form is overcome. (p. 5)

In explaining the nature and origins of an atomistic portrayal of reality,

Mathews also seeks to identify the ground level cosmology that defines Western

culture. Even as she contextualizes her depiction of cosmology within Campbell's

(Campbell & Moyers, 1988) description of the function of myth, she makes the point

that, unlike Campbell, she allows for the idea that a cosmology may be detrimental

rather than beneficial for culture. In the case of Western cosmology, the mechanistic

and atomistic worldview is a "bad" cosmology, not so much that it is negative, but

that it is not fulfilling its function in connecting the human world to the larger

cosmos. Rather, it is anchored in the idea of nature as completely disconnected

from the human.

> Newtonianism cut us adrift into the void. But the void was at least a place,
> even if an empty one; it was comprehensible. We are drifting now into sheer
> abstraction, a 'universe' which is unimaginable, a higher order mathematical
> phantasm. As a culture we need, as the psychologists say, to get 'grounded',
> we need to find our way back into a tangible reality. We stand radically in
> need of cosmological rehabilitation. (p. 46)

To understand in what ways the western dualistic cosmology and worldview is "bad," it is helpful to outline four intersecting areas introduced by Mathews (1991): view of the self; view of the human; view of the other; view of the world. First, the depiction of the self we have learned about through Plumwood's (1993) and Mathews' philosophical historical analyses is an isolated self, existing independently from other selves. This is necessarily a fictitious self, which cannot and does not exist. Echoing Plumwood's concept of denied relationship of dependency, Ruether (2005) argues, in a somewhat circular but logical fashion, that there is a need to "question a model of the self based on the isolated individual disconnected from relationships that ignores the actual support services that other humans and nature are providing to create this privileged appearance of the 'autonomous' self" (p. 123). The autonomous self is intrinsically a reflection of the dualistic worldview and the operation of power and domination. The autonomous self only exists through negation of the other. The core site of negation is matter and the body. Invoking the Cartesian mind body separation "a doctrine whose ramifications saturate every aspect of our western culture" (p. 18), Mathews writes:

> This is the message of the cogito: the individual self is essentially the mind; the body is contingent to selfhood, and hence to our identity. And given the mechanistic conception of matter, the body is a deadweight that shackles the mind, the cross that the human spirit is, unaccountably, condemned to bear….We ignore the impulse of our body toward fulfillment and well-being, substituting cognitive (ego goals) for bodily ones. (p. 34)

Mathews goes on to say that as with the body, so with nature: "Dualism with respect to body and mind then engenders just the same sort of controlling, exploitative and sometimes punitive attitude to the body as it does to Nature as a

whole" (p. 36). Ultimately, as Mathews brings this to the level of cosmology, we see

that the self, disconnected from the body and from nature, is a self-unmoored, lost in

"cosmological uncertainty" (p. 13). Writing long before digital devices fell into every

person's hand, she conjures up a world strangely reminiscent of today's lure of

social media: "With no cosmological foundation for their identity, they invent self-

pictures, self-stories, ego-images, but their sense of who they are is tenuous.

Metaphysically adrift, these individuals experience insecurity" (p. 13). Orr (1992)

also emphasizes that what we see in the self, the modern condition of being lost, not

"grounded," as Mathews says, is translated into the society we create and is deeply

connected to the death and destruction we bring to ourselves and the earth: "The

anomie, rootlessness, and alienation of the modern world are part of larger systems

of values, technologies, culture, and institutions which also produce acid rain,

climate change, toxic wastes, terrorism, and nuclear bombs." (p. 4)

The fiction of the self as autonomous, isolated and self-sufficient mirrors the

conception of the human in the dualistic framework, the second category. As we

have seen, dualism creates the diminished other, built into its hierarchy of

domination. In this view, all forms of life other than human do not have value in and

of themselves. As Berry (1999a) writes:

> The deepest cause of the present devastation is found in a mode of
> consciousness that has established a radical discontinuity between the
> human and other modes of being and the bestowal of all rights on the
> humans. The other-than-human modes of being are seen as having no
> rights. They have reality and value only through their use by the human.
> (p. 4)

Being in service to the human and having no value of its own, the other-than-human is exploited for human gain, for there is no moral imperative where something in essence does not exist. According to Berry (1999a) "an anthropocentric exaltation of the human" carries with it the message that "we don't really belong here. But while we're here - we'll use others as instruments" (p. 104). The human alone has value, seen as fundamentally disconnected from the other-than-human, and is alone in the universe.

Plumwood (2012) uses her own true story of experiencing a life and death struggle with a crocodile to spell out the denial that is built into this human exceptionalism. Having starkly experienced herself as "food" in "the eye of the crocodile," she articulates the deep skepticism she developed for the view of human exceptionalism:

> Being food confronts one very starkly with the realities of embodiment, with our inclusion in the animal order as food, as flesh, our kinship with those we eat, with being part of the feast and not just some sort of spectator of it, like a disembodied eye filming somebody else's feast. We are the feast. This is a humbling and very disruptive experience. (p. 15)

Plumwood points out the profound discomfort brought on by 19th century developments in science that re-situate humans as an entirely earthly creature:

> It is no trivial matter for a culture which locates human identity outside and in opposition to the earth, in a disembodied universe even beyond materiality itself, to receive the news Darwin brought, of our descent from other animals through evolution. (p. 14)

And yet, while Darwin's news was world-changing, according to Plumwood we are still grappling with its implications culturally and failing to progress beyond the former worldview: "Despite what we have learnt from Darwin, our culture has been

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a dismal failure at coming to terms with our inclusion in the animal and natural

order, and this is a major factor behind the environmental crisis" (p. 14). Again, the

worldview of a fundamental separation between humans and non-humans, as with

the mind body separation above, is cited as the core issue of the network of

environmental crises that are reaching a breaking point throughout the planet.

Yet, according to these authors, it is impossible to address the multiple

environmental crises without linking all forms of "othering" built into the Western

worldview of hierarchical relationships of domination and subjugation, the third

category, view of the other. Eaton (2016) makes clear that hierarchical dualism

shields systemic oppression by endorsing its legitimacy: "Systems of domination

become naturalized and customary within a worldview structured with hierarchical

dualisms" (p. 328). Hierarchical dualism and systemic oppression are two parts of

an interlocking system. "Forms of oppression from both the present and the past

have left their traces in Western culture as a network of dualisms, and the logical

structure of dualism forms a major basis for the connection between forms of

oppression" (Plumwood, 1993, p. 2). To move toward healing, Reuther (2005)

writes, requires that these fundamental connections are made:

> But if greater racial and gender equality is not to be mere tokenism which
> does not change the deep hierarchies of wealth and power of the few over
> the many, there must be both a major restructuring of the relations of human
> groups to each other and a transformation of the relations between humans
> and the nonhuman world. Humans need to recognize that they are one
> species among others within the ecosystems of earth. Humans need to
> embed their systems of production, consumption, and waste within the ways
> that nature sustains itself in a way that recognizes their intimate partnership
> with nonhuman communities. (p. 94)

To illustrate the fourth category, view of the world, we return to Plumwood's (2012) story of her struggle for her life. Part of her distillation of the meaning of the crocodile versus human encounter is her revelation that the human is not, in fact, at the center of the world's story. As Tarnas (1993) writes, "modern consciousness appropriated to itself all conscious intelligence in the universe" (p. 432). Plumwood, in that moment, viscerally and completely, steps outside of that illusion:

> In that flash, when my consciousness had to know the bitter certainty of its end, I glimpsed the world for the first time 'from the outside', from outside the narrative of self, where every sentence can start with an 'I'. That story actually entails a process of what Deborah Bird Rose calls 'denarrativisation', whereby Western culture ceased to regard the world as having its own story and started to look at the world as a storyless object. The old story, I now know, goes on, although it is no longer a story revolving exclusively around a human subject. (p. 28)

Her musings reveal a deeply embedded assumption that all stories begin and end with the human. This is the logical outcome of a worldview that eliminates value from matter, nature, and the body.

Within this framework, it seems almost impossible to imagine the body as having its own ends, or the earth as having its own story (Berry, 1999b). And, as we have seen, the degradation of the other-than-human and of matter is translated to relationships within the human community itself. The western worldview, through its negation of the "other," sets the stage not only for one dominant story, but simply one story. The possible reality of a multiplicity of stories, other cultures and other worldviews with their own integrity, does not fit. Thus, at least in part, the story of western progress and expansion itself rides on this fundamental binary of meaning and non-meaning. As Mathews (1991) explains, one necessarily creates the other:

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"The continual and cumulative overcoming of the domain of nature by reason

engenders the western concept of progress and development" (p. 3). The western

concept of progress and development is at its core one of "othering" and domination.

It should be no surprise that it has expanded, and continues to expand, through

domination, for this is how it is wired. Reuther (2005) writes:

> The destructive impact of a pattern of 'dominology,' based on top-down
> epistemology and a concept of the self and its relation to other humans and
> nature, is widely seen as the root of the evils of sexism, racism, and
> imperialism, with its ongoing expressions in neocolonial exploitation of third
> world societies and their natural resources. (p. 125)

This one story of Western expansion, seeing itself "as the envy of the ages…relieved

of superstition and in the highest realms of intellectual enlightenment" (Berry,

1999b, p. 46) has made its way across peoples and continents in many forms, from

cultural annihilation, to epistemic silencing, to the stealing of land and resources. It

crossed oceans in trading ships and made its way across the North American

continent, violently disappearing other established ways of life. Conjuring this

image, Berry (1999a) writes:

> The moment when the Europeans arrived on the North American continent
> could be considered as one of the more fateful moments in history, not only
> of this continent but of the entire planet. As we look back on this occasion it
> becomes increasingly clear that it was a moment of awesome significance,
> not only for indigenous peoples, but for all the various plants and animals of
> this continent. Every living being on this continent might have shuddered
> with foreboding when that first tiny sail appeared over the Atlantic horizon.
> (p. 40)

Conclusion

The ideas that frame this literature review are based in ecofeminist (Warren,

1997) and ecowomanist (Riley, 2003; Harris, 2016, 2017) perspectives, represented

by many of the scholars cited in this literature review, such as Ruether (2005, 2006), Plumwood (1993), and Mathews (1991). Harris (2017), defining ecowomanism as a "womanist spiritual ecological perspective" (p. 241), describes ecowomanism as "an approach to environmental ethics that centers the perspectives, theo-ethical analysis, and life experiences of women of color and specifically of women of African descent" (p. 241). Ecowomanism, as part of the womanist tradition rooted in the writings of Alice Walker, "highlights the necessity for race-class-gender intersectional analysis when examining the logic of domination" (Harris, 2016, p. 5). Warren (1997) writes that ecofeminism, while it has multiple variations and emphases, as does its feminist sources, represents "the position that there are important connections between how one treats women, people of color, and the underclass on the one hand and how one treats the nonhuman natural environment on the other" (p. xi). These theorizations provide the conceptual framework of this study, providing an analysis that links issues of social justice with environmental justice, and offering a philosophical framework that makes connections across multiple sites of domination.

CHAPTER 3

METHODOLOGY

<u>Introduction</u>

The methodological approach for this qualitative research study was constructivist grounded theory. According to Jones et al. (2014), "in qualitative research, the procedures themselves are not the criteria on which a study is deemed sound, but rather it is the congruency of the theoretical perspective, methodology, and methods" (p. 49). In this chapter I will contextualize this study within the qualitative research paradigm, addressing its theoretical perspectives, methodology, and methods of implementation. The chapter begins with background on grounded theory as a research method and then on my choice of constructivist grounded theory as the appropriate methodology. I then provide a description of the methods used to carry out the study, reviewing setting and participants, data collection and analysis, indicators of trustworthiness and validity, and a review of the study's limitations. In keeping with the understanding within qualitative research that "qualitative researchers are the instrument of analysis" (Jones, 2014, p. 39), the chapter closes with a statement describing my positionality as researcher.

<u>Grounded Theory</u>

Grounded theory is an inductive approach to research in which theory is derived through the systematic analysis of data. First introduced with the publication of *Discovering Grounded Theory: Strategies for Qualitative Research* (Glaser & Strauss, 1967), Glaser and Strauss wrote their classic text in order to provide a systematic approach to qualitative research that would counteract current

dominant trends in American sociological research that favored quantitative

paradigms and methods of knowledge acquisition. Charmaz (2012) describes the

dominant ideology of the time: "Beliefs in a unitary method of systematic

observation, replicable experiments, operational definitions of concepts, logically

deduced hypotheses, and confirmed evidence - often taken as *the* scientific method -

formed the assumptions upholding quantitative methods" (p. 6). The publication

was a response to a disconnect that had grown in the field between developing

abstract theory and conducting empirical research that would anchor theoretical

propositions (Charmaz, 2014; Dunne, 2011). The analytical practice of grounded

theory presented by Glaser and Strauss sought to address this gap by providing

guidelines for conducting qualitative research designed to directly and continually

link the development of theory with raw data in the field.

As Dunne (2011) points out, the introduction of grounded theory, therefore,

was not only a response to a dominant positivist ideology, but also to the need

within qualitative research itself to render visibly and accessibly the processes of

theory development. Thus, grounded theory offers a process through which

qualitative data, gathered through interviews, document review, observation, focus

groups, etc., are progressively analyzed, first parsed into coded units, which are then

combined into conceptual categories, and then related together into theory. The

result is typically 'substantive theory,' meaning theory that is closely linked to the

data from which it is generated. As Charmaz (2014) describes it on the most

fundamental level, "grounded theory serves as a way to learn about the worlds we

study and a method for developing theories to understand them" (p. 17).

Practitioners vary in what they consider to be the non-negotiable characteristics of grounded theory. Some consider the generation of the categories themselves as a feature of grounded theory, since it necessitates a conceptualization of data that is moving toward theorizing (Bowen, 2006). Others (Hood, 2011) believe it is necessary to emphasize the development of theory as the distinguishing feature. Distinguishing grounded theory from other types of qualitative research, Hood explains the distinction of the grounded theory intention: "The report is an analytical product rather than a purely descriptive account. Theory development is the goal" (p. 154). Charmaz (2006) emphasizes that in both cases deliberate movement from data, to coding, to development of theory is the key, regardless of the point where that process of theory building is understood to begin, for this feature distinguishes it from processes within qualitative research that are focused on developing themes and sorting data. According to Corbin and Strauss (2008): "If theory building is indeed the goal of a research project, then findings should be presented as a set of interrelated concepts, not just a listing of themes" (p. 145). To achieve this goal, the researcher pursues the development of increasing levels of conceptualization and theory generation through the process of constant comparison of the data both with new data and with the emergent conceptual categories that are developing within the analytical process.

Constructivist Grounded Theory

This study was centered in the constructivist paradigm of grounded theory (Charmaz, 2014). The distinction of the constructivist paradigm within grounded theory is rooted in foundational views of reality and knowledge. This relationship of

ontology and epistemology is essential to the methodology that underlies any

research endeavor. Making the distinction between methods and methodology,

Glesne (2006) explains, methodology "is a theoretical framework that guides how

we come to know what we know"(p. 6); method, on the other hand, is "a procedure,

tool, or technique used…to generate data, analyze data, or both" (Schwandt, 1997, as

cited in Glesne, 2006, p. 6). A methodology, therefore, roots the study within a

particular set of epistemological and ontological commitments or assumptions and

sets the larger stage on which the methods of the study are put to use.

Constructivist grounded theory, therefore, is rooted in particular

assumptions about the nature of knowledge and reality, and therefore about the

research process. The methods of grounded theory previously described are

integrated within this larger methodological framework. Key traits of a

constructivist approach to grounded theory research include: an understanding that

knowledge is constructed and context bound; a focus on the interpretations and

meanings that specific individuals bring to phenomena; and, an understanding of

the researcher as research instrument. These three principles are interrelated and

mutually reinforcing. A constructivist approach to the research process assumes

there is no given reality that we discover in doing research. We do not find what is

there. We construct an understanding of what is there, which is necessarily an

interpretation. However, the researcher is always an historical, context-bound

observer. As such, the particularity of the observer is not avoided but rather is made

explicit. Making the observer's standpoint explicit not only acknowledges the

specificity of the observer within a sociopolitical context; it also acknowledges that

there *is* an observer, that the research process itself is an exchange between the person observing and the person being observed. This evolution of the observer from neutral to contextualized is captured in the concept of reflexivity, an acknowledgement of "the human as instrument" (Jones, 2014, p. 45). Oleson (2015) asserts that while "reflexivity probably never can be fully attained" its primary power is that "it rejects reliance on value-free objectivity and foregrounds instead the relationship of researcher and participant in which the participant is seen as gazing back at the researcher" (p. 425).

Constructivist grounded theory not only assumes this epistemological and ontological stance but embraces it as well. Achieving objectivity is not the goal nor is it a standard for quality research. Rather, standards of quality research – reliability and validity – depend on a number of alternative criteria, redefined as trustworthiness and authenticity, which are intrinsic to the epistemological commitments of qualitative research. They also depend, as stated by Jones et al. (2014) at the opening of this chapter, on the way in which the various cornerstones of the research study interact. The standards of trustworthiness and authenticity will be specifically reviewed in a later section with implications for this study. However, a preliminary discussion of the interaction of certain key elements of constructivist grounded theory will first lay the groundwork for discussing the specific aspects of the research design and execution.

Memo writing, Literature Review, and Sensitizing Concepts

A key functional element in the process of coding data and moving data to the conceptual level is memo writing. Lempert (2015) describes memo writing as the

site of transforming data from the empirical to the conceptual: "Memo writing is the methodological link, the distillation process, through which the researcher transforms data into theory" (p. 245). While the practice of memo writing can be idiosyncratic in how it is executed, ranging from "fragmented phrases, weird diagrams (narrated in memos, of course), half sentences, or long treatises" (p. 249), it is this process of self-talk "that captures ideas in synergistic engagement with one another" (p. 249) and catalyzes the construction of theory. Understanding researcher as instrument is critical to the practice of memo writing. According to Lempert, it is during the memo writing process that the researcher is most visible. As a result, "knowledge about self and knowledge about subject are intertwined, partial, historical, local knowledges" (Richardson, as cited in Lempert, 2015, page 248). Therefore, the ideas and theories that are generated cannot be separated from the researcher as contextualized observer.

There are similar implications for the role of the literature review in constructivist grounded theory. While grounded theory began with an effort to derive theory from the data itself through an inductive process, and therefore to "ground" theory, it also developed within a positivist paradigm, bringing with it specific epistemological assumptions. One implication involves the place, or even existence, of a literature review in the research process. The effort to develop a research process unencumbered by existing theory, and the dominance of the objectivist paradigm, which held researcher neutrality as an ideal, influenced the proscribed place of the literature review. Through the constructivist shift that manifested in the work of subsequent generations of grounded theorists,

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particularly through the work of Charmaz (2014), the unavoidable context of the research act, both in terms of existing literature as well as the inclusion of the researcher herself, has been embraced.

Ramalho (2015) emphasizes the epistemological dimensions of this debate, including a reminder that the researcher is actively constructing a theory, not exhibiting "an active passivity that allows its emergence" (p.6). Therefore, to have contextual knowledge prior to a study is "neither avoidable nor undesirable" (p. 6). Lempert (2015) writes, "In order to participate in the current theoretical conversation, I need to understand it" (p. 254). She adds, however, that this previous theoretical conversation doesn't "define my research" (p. 254). In his review of the debate in grounded theory about the use and timing of a literature review, Giles (2103) acknowledges the tension between an inductive and deductive process. His review ultimately emphasizes the distinction between the effort to avoid the imposition of existing theories on the data versus beginning and continuing the data collection and analysis with a conscious acknowledgment, and cultivation, of theoretical sensitivity. As Giles states, "theoretical sensitivity, a major tenet of grounded theory, relates to the ability to have insight, to understand and give meaning to the data and to detach the relevant from the irrelevant" (p. E37).

The term "sensitizing concept" was introduced by sociologist Herbert Blumer to provide clarity around those concepts that do not have a direct link to empirical content and yet have a noteworthy relationship, one that he characterized as "guidance in approaching empirical instances" and "directions along which to look" (Blumer, 1954, as cited in Bowen, 2006, p. 2). Bowen explains how he used

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sensitizing concepts to inform the conceptual framework of his study, describing how his preliminary review of literature provided "theoretical ideas that (helped) to set the context and direction" (p. 4) of his study. In reviewing the utilization of sensitizing concepts in grounded theory research, he included that researchers can employ these sensitizing concepts at later stages of the research process to inform the development of thematic categories from substantive codes. Along these lines, Bowen cites Charmaz's endorsement of responsiveness to the relationship of a particular set of ideas to the concepts that are being generated: "Charmaz's constructivist view…appears to allow a preliminary literature review prior to the study, which is then put aside and 'allowed to lie fallow' until the researcher has begun to develop categories during analysis" (Bowen, 2006, p. E32).

These ideas around memo writing, literature review, and sensitizing concepts, and how they relate to researcher as instrument and reflexivity, provide a foundation for illuminating my process of how I moved from coding, to creating conceptual categories, to generating theory. With these considerations in mind, several mutually reinforcing factors played a role in the construction of the concepts that make up the findings of this study. First, the research process undertaken in this study included a preliminary literature review that described theoretical and philosophical analyses that link ecological degradation and forms of oppression within an overall context of a worldview structured through domination. While a range of resources was utilized to outline this particular depiction of the broader context of worldview and its implications, this analysis was largely informed by ideas that are central to ecofeminist (Warren, 1997) and ecowomanist (Harris,

2016, 2017) conceptualizations. This literature review provided sensitizing concepts related to an alternative worldview based in an integrative ontology and epistemology.

In addition, while a secondary literature review was not conducted during the data collection and analysis, I continued to develop my thinking about the fundamental ideas of this study through a number of avenues, including peer reviewed articles on sustainability education, climate change science, and climate change communication, as well as non-academic essays, blogs, podcasts, media reports, and webinars covering a range of perspectives related to cultural, political, economic, and ethical implications of the climate crisis. Additionally, prior to and during this study, I co-created the program *Talking Truth: Finding Your Voice Around the Climate Crisis*, which provided a context for students, faculty, and staff at my home university to engage with issues of climate change in a multidimensional way. This project led to my participation in a multi-session retreat with the *Council of the Uncertain Human Future*, an international project out of Clark University. Finally, midway through the process of analysis, I conducted a one-hour review of the data through providing quotes and images from the interviews with higher education practitioners who have expertise in the field of sustainability and/or teach college students in this field. These experiences provided opportunities for numerous conversations about college students' responses to climate change with higher education practitioners, and about climate change more generally with community activists, artists, friends and students. This ongoing context during the data collection and analysis continued to evolve my thinking as the "instrument" of the

research and inform the conceptual framework that underlies the methodology of this study.

Therefore, the sensitizing concepts developed through the literature review, as well as my ongoing engagement with the issue of climate change, combined to inform the analytic process and particularly my context as the research instrument, including my self-talk through memo writing. It is important to frame this interrelationship as the context for the distillation of codes into conceptual categories. In particular, the emergence of a core conceptual category within this study, *Interconnection*, noted in the process of analysis described below and which is the focus of Chapter Five, is a result of the way in which sensitizing concepts, data collection, analytic processes, and researcher as instrument function as a congruent whole within the underlying methodology. It is this congruency that interacts with the data. Clearly, it is then up to the researcher to provide the evidence that their interpretation of what is going on in the data and, in this case, in the meaning making processes of the participants, is credible. That step will be left to the findings described in Chapters Four and Five.

Setting and Participants

Data for this study was obtained through semi-structured interviews with fourteen college educated young adults ages 18 – 30. Participants were either currently in college, had finished college, or were just prior to attending college. Eleven of the participants attended a predominantly White state university in Northeast United States. Two of the participants attended a small liberal arts college, one in the Northeast and one in the Midwest. The remaining participant was

in the middle of a gap year when interviewed and planned to attend a private

university in the Northeast the following year.

Participants were recruited through flyers (see Appendix A) with my email

contact information distributed at sustainability-related events on the state

university campus where the majority of the participants attended college;

announcements at the *Talking Truth: Finding Your Voice Around the Climate Crisis*

and *Council for the Uncertain Human Future* events, previously described;

recommendations from sustainability educators and librarians; and, through a

process of "snowball or nominated" (Morse, 2011, p. 236) sampling. After

participants communicated their interest, I communicated with them by email (see

Appendices D and E) with more information about the study and with a link to fill

out the preliminary questionnaire with questions regarding involvement with issues

of sustainability, religious and political self-identification, and social identities (see

Appendix C for the questionnaire and data). All items on the questionnaire, except

for name and contact information, were designated as optional.

Morse (2011) writes about the need in grounded theory for "excellent

participants" (p. 231). "An excellent participant for grounded theory is one who has

been through, or observed, the experience under investigation" (p. 231). Because

the aim of this study was to understand how young adults were making meaning in

their lives in relation to their awareness of climate destabilization, a purposeful

sample at the most basic level required that participants had an awareness of and

some sort of engagement with the issue of climate change. Typically, but not

entirely, participants for this study were involved in curricular and co-curricular

sustainability-related activities, on and off campus. Such activities included a range of student clubs, political activism, and courses and programs that are conducted both in the classroom and through community-based learning. Some participants' primary activities emphasized other practices as well, such as non-violent communication and community organizing related to issues of social and economic justice.

In her discussion of "excellent participants," Morse (2011) emphasizes that "researchers seek the best example of whatever it is that they are researching" (p. 234). For the purposes of this study, I needed to interview young people who were not only aware of climate change and possibly involved in various kinds of sustainability-related education and activism; perhaps even more important, I needed to talk to young people who were thinking about it and wanted to talk about it. Morse elaborates: "Participants…must be willing to participate, and have the time to share the necessary information; and they must be reflective, willing, and able to speak articulately about the experience" (p. 231). While I believe the standard of "speak articulately" can be counter to the goals of qualitative interviewing if too narrowly defined, the study did require a sample of participants who were willing to speak about their feelings, thoughts and actions related to the issue. For example, this meant that while participants might have raised the issue of climate change denial during the interviews, both their own denial and at a societal level, doing so reflected that they had stepped outside of the phenomenon of denial enough to be able to see it and talk about it.

According to Morse (2011), this emphasis on purposeful sampling is directly connected to sample size and saturation. Morse argues that the "inherently biased" (p. 234) nature of good qualitative research, in part manifested in a targeted sample of informed participants, means that the goal of theoretical saturation – where no new information pertaining to the theory is being generated – is reached more quickly. This in turn enhances the reliability of the research. "Processes of saturation are essential in qualitative research inquiry; saturation ensures replication and validation of data; and it ensures that our data are valid and reliable" (p. 234). In this study, a purposeful sample with "excellent participants" (p. 234) to enhance the possibility for saturation of conceptual categories, provided a rich sample of data that enabled the closure of data gathering after interviewing fourteen participants.

Finally, Morse (2011) links the issue of saturation to the variable of diversity within a sample and contrasts the functions of quantitative and qualitative research regarding this matter. According to Morse, if a sample in qualitative research is selected according to quantitative measures related to a diverse pool, the variation is lost; due to the small sample size in qualitative research, sub-groups will be too small for saturation. While participants in this study were asked to reflect on their awareness of the interaction of their social identities in relation to the issue of climate change, and data from these reflections were integrated into the analysis, the study did not focus on comparing and contrasting sociological variation. This indicates a question that can be pursued in future research. Information about

participants' self-identified social identities was optionally provided in a pre-interview questionnaire (Appendix C).

While grounded theory typically utilizes a process of theoretical sampling (Charmaz, 2014) to achieve saturation of the theoretical construct being developed, this study did not incorporate a formal process of theoretical sampling in which subsequent interviews would have been conducted with new participants to refine the emergent theory. However, by first interviewing a strong informant (Morse, 2011) who had been identified through involvement in the *Talking Truth* series and doing initial coding and memo writing with this interview, I was able to clarify my parameters in seeking participants who were interested in engaging with their experiences on multiple levels related to their feelings, thoughts, and actions. Thus, I was able to research participants who provided rich data. While this was not a substitute for theoretical sampling, interviewing participants who were interested in participating in a multifaceted conversation about their awareness of and responses to climate change enhanced the process of theory saturation.

Data Collection

Data was collected through a single two-hour semi-structured interview with each participant (see Appendix F for interview protocol). Interviews were conducted as in-depth, open-ended, and "conversational" (van Enk, 2009) modes of data collection in which "both questions and responses are formulated, developed through, and shaped by the discourse between interviewers and respondents" (Mishler, 1986, p. 52). With the student's permission, interviews were audio recorded. Interviews were transcribed through a combined process of an outside

transcription service followed by additional transcribing by me. Students were provided with a consent form (see Appendix B) to review and sign before the interview. The form stated that they have the option to not be audio recorded, in which case I would take notes during the interview. No participants chose the option to not be recorded. The form was copied and a copy was given to the student before the interview.

The aim of this study was to understand the meaning making of college students and young adults related to the intrinsically difficult subject of climate destabilization, and to do this using an integrative methodology. Therefore, the research instrument was intentionally designed as one that provided opportunities for participants to explore and express their emotions, thoughts, and actions, and to hopefully do so in a context in which they felt at ease to share their reflections about this topic. To achieve this purpose, participant personal artifacts and a binder with reproduced visual images were incorporated as part of the method of data collection.

In the email confirming the interview appointment, participants were asked to bring personal artifacts from their lives that represent four categories: an artifact of personal meaning, an ecological artifact, a spiritual artifact, and a political artifact. The interpretation of these categories was left entirely to the participant. In the first half of the interview, at varying stages participants incorporated the artifacts into the course of the conversation. The pace and timing of introducing the artifacts took place idiosyncratically with each interview, sometimes more prominently providing the structure of the interview and other times being incorporated into the interview

protocol at various moments. Chapter Four begins with a short introduction to each participant through an excerpt in their own words describing one of their artifacts.

The binder consisted of 60 images of photographs and pieces of art that were found through an image search on Google that I conducted, generated through word searches. Examples of words used to search for images are: "change," "hands," "infinity," "community," "empathy," and "powerful." In the beginning of the second half of the interview, participants were asked to spend ten minutes or so reviewing the binder. While doing so they were to select nine images, three in each category, that reflect how they understand feelings, thoughts, and actions in relation to climate change. For the remaining time in the interview, participants presented and discussed their choices, and I followed up with clarifying questions.

In keeping with Denzin and Lincoln's (2005) message that "strategies of inquiry put paradigms of interpretation into motion" (p. 26) the binder of images and the artifacts were used to implement the integrative epistemological underpinnings of this study. This technique corresponds with methods of data collection that utilize visual methods (Kelly & Kortegast, 2018; Kortegast et al., 2019) and can be understood within the context of arts-based methodologies (Leavy, 2009). Tinkler (2013) asserts that arts-based methods have the capacity to "facilitate dialogue and generate useful data" (p. 174). "Photos stimulate people to talk about their thoughts, feelings, memories and experiences, to work things out and, sometimes, to discuss subjects that are difficult to broach in talk-alone interviews" (p. 178). Reflecting on what photo elicitation can bring to interviews, Harper (2002) suggests that this method "mines deeper shafts into a different part

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of human consciousness than do words-alone interviews" (p. 23). I often felt this was true for the role both the images and artifacts played during the interviews for this study. If the artifacts were actual objects, which typically they were but not always, they would sit on the table between us, sometimes for the duration of the interview, continuing to function as a reference point. The object was also a way in which "more" of the participant came into the room and ushered multiple aspects of their lives into the conversation.

One intention I had with incorporating images and artifacts into the interview was to provide ways for participants to think and communicate metaphorically, since they were being asked to access complex and perhaps hard to articulate feelings and thoughts. Coffey & Atkinson (1996) write how metaphorical thinking is part of the interview process.

> Metaphors can be thought of as rhetorical devices for the speaker. Analytic questions might then focus on what the speaker is trying to express, what info he or she is trying to impart, or how his or her interests are being served by the use of the metaphor. (p. 85)

In this case the authors are speaking about a metaphor that a participant may have used during the interview. With the images and artifacts, these elements themselves were the metaphor and the participant was charged with naming the meaning they derived from it. Eisner (2017) emphasizes that "it is not an algorithm that artistically oriented research seeks as much as a heuristic" (p. 8), that is, a tool for interpretation. "In its use of the everyday, localized, and personal language, and in its reliance on texts that are ambiguous and open to interpretation, arts-based research draws people into dialogue and opens the possibility for critical critique of

social structures." This was most clearly the case when participants discussed their political artifacts, but participant critical critique found its way into a range of images and artifacts. I believe that the meanings participants conveyed in articulating their choices of images from the binder and the stories and meanings they attached to their objects, explored within the context of an open-ended, conversational interview, enabled the participants to dig deep in accessing their thoughts and feelings related to climate change.

Data Analysis

Following grounded theory methods (Corbin & Strauss, 2008; Charmaz, 2014), interviews were analyzed through a process of initial coding of text at a granular level with open coding, moving progressively toward the creation of conceptual categories of codes. This then led to the conceptualization of a core category, *Being at Home on the Planet* and a proposed model of identity, *Planetary Identity*. NVIVO software was utilized at the initial stage of analysis to identify and label codes. Over two hundred codes were identified through the open coding phase, some of which were combined into nested codes early in the process of analysis and organization. For example, the nested code *Views of Nature* included such codes as "awe and wonder at nature," "grieving loss of nature," and "humility toward nature."

This process included an intermediate step of focused coding (Charmaz, 2014) in which selected longer excerpts of text were re-analyzed using certain emerging conceptual categories as a lens to further substantiate the properties and dimensions of the developing concepts. I engaged in memo writing throughout the duration of the coding process and theorization, and particularly while doing

focused coding, in which I systematically worked closely with larger segments of text to write and reflect on what I saw within the text and then was able to identify and explore common ground between interviews. This preliminary phase of coding generated the category *Planetary Identity*, which was created as an early theorization of a set of codes and smaller categories of codes revolving around a particular view of the self in relationship with others, both human and other-than-human. The exploration of *Planetary Identity* also led to the identification of what became a core category, *Interconnection*.

At a midpoint in the analysis, I reached a theoretical fork in the road. On the one hand, I felt I had a set of codes and concepts, although somewhat disorganized, that served the purpose of depicting the participants' array of feelings, thoughts and actions in response to climate change. On the other hand, the emerging concepts of *Ecological Identity* and *Interconnection* struck me as indicating a separate set of ideas, certainly related to the first set, and yet representing a different layer of conceptualization. At this point the function of the sensitizing concepts related to an integrative worldview, discussed earlier in this chapter, and their relationship to the ideas that were emerging in the data became more pronounced. Perhaps this is an example of Bowen's reference to Charmaz's suggestion that preliminary ideas can be "allowed to lie fallow" (Charmaz, 2006, as cited in Bowen, p. E32) until the process of analysis begins to engage emerging concepts with prior ideas.

To address this emerging interplay of sensitizing concepts and emerging concepts in the data, and to address this fork in the road, I created a matrix (see Appendix G). At the beginning of the coding process, in addition to open coding, I

had also tagged all text related to the images and artifacts. For the images I tagged text by the category the participant used when they chose the image from the binder, either feeling, thinking, or doing. For the artifacts I tagged text related to the specific category of artifact identified by the participant – artifact of meaning, ecological artifact, spiritual artifact or political artifact. This allowed me to focus in on one multilayered subset of interview text, that is, anything I had tagged as the participant speaking specifically in relationship to either an image or an artifact. I then focused on the text tagged to images first, which I organized and parsed within the matrix.

The left side column of the matrix was divided into three categories of rows – Feeling, Thinking, and Doing. Within each of those categories a row was created for each participant, totaling 42 rows. The top row of the matrix was divided into the following columns: Participant; Image Numbers; Simple Title of Image; Code/Idea Expressed; Emerging Concept and Level. Therefore, when the matrix was complete I had a plan for the writing process depicting the two phases, and levels, of analysis. As I continued with memo writing and early drafts of the findings, the categories and subcategories within each phase became clearer. I was then able to expand into other areas of data not directly linked to the images, such as text tagged to an artifact, stories being told, or reflections on ideas, which added substance and nuance to the concepts that were emerging. These two levels of analysis are covered in Chapters Four and Five, respectively.

Credibility and Trustworthiness

Jones et al. (2014) provide an annotated menu of criteria within the broad areas of credibility, reliability and relational competence, on which to assess the extent to which a research study meets "the obligations of high quality inquiry" (p. 29). In qualitative research, validity and reliability measures that are central to quantitative research translate to an alternative set of criteria that align with the methodological assumptions of qualitative inquiry. Following the guidelines outlined by Jones et al. as they integrate a range of resources, the following criteria provide a structure for evaluating the credibility, trustworthiness, and relational competence of this study.

Qualitative research requires a *prolonged engagement* with the research subject. The measure of whether there has been sufficient time in the field will vary according to a range of factors. However, Jones et al. (2014) emphasize that researchers should err on the side of gathering more than ample data from the field, arguing that, "researchers are obliged to collect data until there is more than sufficient coverage" (p. 37). As described earlier in this chapter, this study focused on a sample of participants who were able to reflect on and articulate a range of feelings, thoughts and actions related to the topic, thereby providing a rich collection of data suited to meet the aims of the study.

Related to the criteria of prolonged engagement is the need for "multilayered" (Morrow, 2005, cited by Jones et al., 2014, p. 36) data, otherwise known as thick description. Jones et al. elaborate that this type of data is necessary in order to provide "detailed, expressive, and explicit explanations of the

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phenomenon under study" (p. 36). The data collection methods outlined above, using semi-structured interviews combined with the inclusion of both personal artifacts and reflections on the images from the binder, were data collection strategies that elicited multilayered and thick description from the participants. The multiple types of data collection strategies within the interview process also provided a source of *triangulation* of data. In addition to the more common understanding of triangulation to mean multiple separate sources of data, such as mixed methods or document research combined with interviews, Creswell (2009) includes "different perspectives from participants" (p. 191) as meeting the criteria of triangulation. The combination of open-ended interviews and two different visual methods provided a number of avenues for participants to engage with the topic, eliciting from them critical analyses, emotional responses, and stories from their current lives as well as their childhoods. In addition, the multiple categories of the personal artifacts invited participants to engage with various dimensions of their identities, including how they understand themselves politically, spiritually and ecologically.

  Dependability and *confirmability* refer, respectively, to the transparency of the steps of inquiry and sufficient connections made between the findings and the data. The data collection process provided in this chapter outlines the specific steps that were taken to conduct this study. The following two chapters provide multiple examples to substantiate the range of findings explored and developed within the analysis.

A final criterion for credibility and trustworthiness within this study is the use of *peer experts* to provide input on the findings and analysis. Following the completion of the interviews and midway through the process of analysis, I provided a one-hour presentation of preliminary findings with five higher education practitioners who work with college students in the field of sustainability education in higher education. These practitioners were able to peruse a "gallery" of participant artifact images, binder images, and quotations from the interviews. Through a questionnaire the practitioners provided initial feedback on their impressions, ideas related to implications, and suggestions for possible further study.

An additional key area of trustworthiness and credibility defined by Jones et al. (2014) is *relational competence*. This criterion emphasizes the defining characteristic of qualitative research as an essentially relational endeavor. Qualitative research recognizes that there is no neutral position from which to conduct research. All research is situated in a sociocultural and historical context. Since in qualitative research the researcher is the instrument of the study, it is particularly important to provide contextual information, such as the researcher's relationship to the topic, their social identities, and relationship to the participants. This context increases the trustworthiness to the study in that it makes more transparent the interpretive lens through which the researcher is making sense of the data, allowing readers to engage with the findings with that contextual information. In addition to the information provided earlier in this chapter on my continued relationship to this topic throughout the research process, the segment at

the end of this chapter provides additional "autobiographical rendering" (Jones et al., 2014, p. 39) as context for my role as researcher of this study.

Limitations

Sample composition

The composition of the sample for this study is one area of limitation. There are two specific aspects of this limitation. First, this study focused on a core group of "excellent participants" (Morse, 2011, p. 234), in order to generate rich data for an in depth analysis of young adult responses to climate change. The sample focuses on a certain demographic of young people who are conscious of climate change and are motivated to integrate their awareness into their lives in various ways. While this decision was a strategic one, such a sample raises the question of whether, or to what extent, the findings of this study are applicable to a broad segment of the college population. In keeping with the priorities of qualitative research, the purpose of this study was not to generalize to a broad spectrum of college students. Instead, this research provides, through the experiences of one subset of college students, a starting point for developing a more comprehensive and holistic picture of how young people are responding to climate change. However, the particular relationship that these participants have to the topic potentially limits the transferability of the findings to a broader population.

The second area of limitation in regard to the sample is the lack of diversity of social identities of the participants. This is manifested in several ways. Within the sample of fourteen participants there is some variation of social identities based on race, religion, nationality, and ethnicity. Future research on college student

responses to climate change, even within small sample sizes typical of qualitative

research, should pursue research with a more varied representation of social

identities to gain a range of perspectives and experiences. In this study, participants

were invited to reflect on their own social identities that are salient to them, either

generally and/or in relation to ecological issues specifically. It would be beneficial to

investigate these insights from the perspective of young people with a range of

identities. In addition, this study was conducted with current, post and pre-college

students, which also constitutes a specific demographic of young people. In addition,

the young people in this study are currently living in the Northeast United States.

This is of particular significance to a study focused on planetary ecological collapse,

which is affecting communities and nations differently based on climate

vulnerability. The participants in this study speak from a position of distance from

the immediate affects of climate change. In that sense, both the researcher and

participants are situated in positions of privilege. These are topics that will be

explored more explicitly in the findings of the study, particularly in Chapter Five.

Lack of Theoretical Sampling

Grounded theory generally incorporates theoretical sampling, where the

researcher returns to the field to engage in purposeful sampling in order to refine

emergent concepts and theorizations. Due to a limited timeframe, I was not able to

include theoretical sampling in the process of analysis, which would have provided

the opportunity for further development of the emerging concepts. For example, the

study would have benefitted from more exploration of the initial findings in the first

phase of the study focused on participants' feelings, thoughts, and actions in

response to climate change, as well as in the second phase, where the focus is on the core categories of *Interconnection* and *Being at Home on the Planet*, both of which underlie the proposed model *Planetary Identity*.

Preliminary Nature of the Study

Methodologically, the intention of this study was to provide a research context through which young adults could reflect in depth about multidimensional ways in which they are responding to climate change. This is a topic that is rarely investigated with the depth provided by qualitative research. Furthermore, I designed the study with an integrative approach that would resonate with three areas: the philosophical underpinnings of an integrative worldview, represented through the discussion in Chapter Two and the theoretical perspectives of ecofeminism and ecowomanism; the integrative approaches to student development theory in higher education; and, the emergent integrative pedagogical approaches in higher education sustainability education. These are three areas that I will engage with further in Chapter Six in relation to the findings of the study. These choices, however, also lead to a limitation, in that the findings of this study are preliminary and do not directly build on previous research.

Researcher Context

My interest in the topic of this study began while I was pursuing a Master of Divinity degree at Harvard Divinity School thirty-five years ago when I was in my mid-twenties. I had become interested in the intersection of spiritual and political identities and motivations during my stint as a door-to-door canvasser and found myself in divinity school to pursue these questions. During that time I was becoming

increasing preoccupied with the health of the planet and attended one of the earliest

Despair and Empowerment workshops being developed by Joanna Macy. Many

years later when I arrived at UMass Amherst to pursue a doctorate in community-

based learning, I decided to combine my interests in integrative pedagogies in

higher education with my continued concern with what was increasingly being

understood as a climate crisis. Simply put, I wanted to understand what was going

on for young adult college students during this critical time in human and planetary

history and how higher education could fulfill a critical role in moving toward

transformative change.

As an educated White, middleclass, female from Protestant-Christian roots, I

come to these issues, and to this research project, from many positions of privilege.

Starting in divinity school, following the lead of liberation and feminist theologies, I

first began to explore what it means to work out of one's own cultural context, and I

have continued to be interested in what effective resistance must include to

counteract the homogenizing cultural forces in contemporary North American

society that often result in apathy, cynicism and a lack of imagination. It is these

identities, interests, and biases that I bring as a researcher to this topic, as well as to

my role as interviewer with the young people who participated in this study.

CHAPTER 4

FINDINGS

<u>**Introduction**</u>

The aim of this study is to support the effective response of higher education

to climate destabilization, centered within higher education's core function of

teaching and learning and focus on students. A primary question of this study is:

How are emerging adults making meaning of their lives within the context of the

existential threats related to planetary ecological degradation? To address this

question, this study is focused on the following research question:

- How do emerging adults experience and understand their affective, cognitive,

    and volitional responses to the challenges of planetary ecological crises? Put

    simply, how do they understand their feelings, thoughts, and actions in

    response to climate change?

To pursue this purpose, the study is centered in an integrative epistemological

conceptual frame, informed by ecofeminist and ecowomanist theories. As identified

in Chapter One and illustrated in the discussion of worldview in Chapter Two, this

conceptual framing is suitable to the task of understanding and unmasking the role

that the Western worldview plays in perpetuating the operation of dominance

within human to human and human to other-than-human relations. As described in

Chapter Three, the study utilized a constructivist grounded theory approach,

incorporating visual methods (Kortegast et al., 2019) for data gathering, to learn

from emerging adults how they experience and make meaning of their awareness

and responses to the climate crisis. Chapter Four and Five present the findings from that investigation.

The findings are presented in three parts. The first part, *Participant Profiles,* introduces each participant through one of the artifacts they brought to the interview. The profiles are in the participants' words. However, I have edited the verbatim excerpt from the interview to shape each profile. In this section, and throughout the findings, the participants' names have been substituted with their initials.

The themes presented in the next part of the findings, *Navigating Awareness and Response*, are grouped within three categories: *Feeling, Thinking, Doing*. This structure parallels the primary research question of the study as well as the categories the participants used to select and discuss the images from the binder, as described in Chapter Three. This initial treatment of the data constitutes a first layer of analysis. The function of this phase is to identify key themes raised by the participants as they discussed their emotions, analyses, and actions linked to the artifacts, selected images, and stories from their lives. At the conclusion of *Navigating Awareness and Response*, I frame the *Feeling*, *Thinking*, and *Doing* conceptual categories described in this first phase of analysis as ways in which the participants identify and secure internal and external sources of support that help them make meaning of and cope with their awareness of climate disruption. Appendix H is a visual representation of this first stage of the analysis.

Out of this initial analysis of the data, a second layer is presented in Chapter Five. Informed by the sensitizing concepts developed through the literature review

in Chapter Two, this segment of analysis introduces an ontological perspective

present at various moments throughout the participants' reflections that

emphasizes interconnection and reciprocity. To investigate this ontological thread,

Chapter Five elucidates the ways in which the data indicate the core category of

Interconnection. This analysis is presented through the categories of *Interconnected*

Self; *Human to Human Relations*; and, *Human to Other-than-Human Relations*. These

three enactments of interconnection lead to the core category *Being at Home on the*

Planet in which ideas related to belonging, responsibility, and possibility are central.

Appendix I is a visual representation of this second stage of analysis.

The core category of *Being at Home on the Planet*, and its central idea of

Interconnection, indicates a fundamental shift in conceptualizing identity in

relationship to the data in this study. Within this core category, selfhood is only

understood in the context of the self in reciprocal relationship to the other –

whether that is the other-than-human other or the human other. As illustrated in its

components, *Being at Home on the Planet* means belonging, which brings the joy of

both responsibility and possibility. As BS stated: "It's not a problem; it's a blessing."

At the close of Chapter Five *Planetary Identity* is proposed as a model to express an

emergent identity in the participants of this study. *Interconnection* is the core

mobilizing idea within *Planetary Identity* and this is illustrated through the three

areas of interconnection described above (self, human to human, and human to

other-than-human). The core category *Being at Home on the Planet*, informed by

ideas related to interconnection that have been elucidated, is the full expression of

Planetary Identity. Appendix J is a visual representation of this culminating phase of

analysis. In Chapter Six I will further explore *Planetary Identity*, and its core ideas, from the perspectives of three areas: one, the broad cultural conversation related to integrative worldview, connecting back to ideas from the literature review, as well as new resources; two, research and scholarship related to college student development and meaning making; and three, emergent integrative sustainability pedagogies.

Participant Profiles

In this section I introduce each participant through one of the artifacts they brought to the interview. The first half of the interview was focused on the artifacts, including the descriptions, stories and meanings that the participants attached to their chosen objects. However, in keeping with the open-ended and conversational interview process discussed in Chapter Three, rather than strictly structure this first half of the interview, I allowed the participants to integrate their artifacts into the overall discussion at a self-defined pace. In some cases they brought out their artifacts immediately and we structured the interview through a tour of each object. In other cases, a discussion of an artifact would lead to one of the sub-topics of the interview, such as an extended conversation about the participants' spiritual and political self-understanding, or the story of their ecologically oriented evolution from childhood to emerging adulthood. Therefore, the artifacts functioned throughout the interviews in multiple fashions: springboard, deep well, anchor, magnifying glass, telescope, and a reference point to return to throughout the interview.

The following profiles serve three purposes. In addition to the demographic information provided in Appendix C, it is hoped that the profiles bring each participant to life as an individual prior to the ensuing process of analysis wherein they will become part of the larger whole. Featuring the artifacts at the beginning of the findings also serves to accentuate the idea that the artifacts were physically present on the table throughout the two-hour interview while we were speaking. Finally, the short profiles that follow will be sources of data to return to during the later stages of analysis.

Participant One - BS

Figure 1: Participant #1 Artifact

This is something I brought back from my summer trip to Spain to visit my family. I went on a hike with my dad on a mountain there called Montserrat. It's an ancient place of worship and pilgrimage. There's a trail up to the top and it's the most mystical place I've ever been. The mountains are shaped like creatures. The rocks are rounded and they've been cut out naturally so they look like they have bodies and faces, like they're beings. Some of them are lined up like a procession of monks. When you're walking through this area, you feel like you're humbled, walking below these great beings, almost like you're being watched. It's such a physical presence.

At the same time, it's also the most sensual place I've ever been, which might sound strange, but everything there is rounded and feels and looks so human and bodily. It's an incredible place. I brought back this rock that is rounded. I guess this is more answering the spirituality question - an object with spiritual significance, because I believe in the life of all these places I go to. That was my most recent

experience of really encountering great power in nature. It's interesting because

both times I've been to Montserrat have been right after I've gotten my heart

broken. It's a real place of healing and grieving. But now I have a little bit for my

hand, too.

Participant Two - DC

Figure 2: Participant #2 Artifact

I'm a rock climber. I remember climbing one day with my belay partner and they were talking to me about whether I feel comfortable talking about falling down off a climb *while* I'm climbing. It was just a general conversation. And so there I was climbing up the wall, and we were talking, and it was a pretty easy, straightforward climb. I've climbed this climb, like hundreds of times would be an understatement. So, this rock was a hold in the wall I was using. It broke off the wall and I fell like eight feet and hit the ground. There were no rocks around me, just a tree I was able to push off of, so it was a safe fall. But it was my first big adrenalin rush while climbing.

The formation of rock there is mostly granite, but it's very stable rock. A huge chunk like this should not break off. I've held much more fragile, brittle pieces of holds climbing up there. But it had been raining a lot, there was that week of terrible rain in August. My guess would be, just the amount of rain and the cold that August might have weathered the structure behind it and made it brittle for it to pop

out that easily. I was going to bring this rock regardless, because this is something

precious to me, but when I was thinking about bringing an ecological object, I also

thought of this, because I don't think, with that amount of rain, that amount of

water, I don't think anything can remain stable over time.

Figure 3: Participant #3 Artifact

We had a family friend when I was growing up. I think she was the librarian at my parents' college. And then she ended up coming to a lot of our Thanksgivings and in the summer when I would visit my grandparents we'd always visit her. She would teach me how to draw and my brother would be there, too, and she would just talk to us and talk about her life. I always really admired her. We weren't even supposed to meet her because she had lung cancer and they said that she was gonna die like twelve years before she died. So we got to know her in the years that she wasn't even supposed to be around. I just felt really grateful that we did.

She passed away my freshman year of college and she left behind all these little things that she made with her hands, like this mug rug. This object, this story, this whole thing is connected to spiritual because I think it's similar to religion, like when people wake up in the morning and they find something to motivate themselves. Whenever I wake up in the morning I always think about how she would like me to live my life. Her memory is how I try to guide myself in my life, the

way that I think she would be really proud of. Even for mundane things, like I like to be artistic, to do crafts and stuff. She would always tell me it doesn't matter what you're doing, it's a really important outlet to keep nurturing. So even though I don't know if there's anything in the afterlife, it's something that guides me. I think that's also part of the reason why I've considered becoming a librarian. She has a lot of inspiration in my life still.

Participant Four - MM

Figure 4: Participant #4 Artifact

For spiritual I have these dhikr beads. In Arabic that means remembrance. What you do with these is you recite a word or a phrase that has religious significance and you just count it. This is a bead of a hundred. You do that however many times you wish. I do identify myself as a devout Muslim, although my practices may not agree with that. But this is something I never take off except when I'm using it or when it's in my hand. I haven't taken it off for about three years, even when I'm swimming.

I actually almost lost it a few times when I was swimming on a beach one day. The waves were crashing and they were constantly flipping me. My first reaction was I grabbed this because too many times it had been going up over my head. So I just like grabbed it and let the wave carry me, crash me, throw me in the sand. But I got this. I'm not losing this. After that, I got out and I was like okay, I need to change this. So I took it off and found just the right circumference of my skull where if I put

my hair in the right position, it will come off. If my hair is in any other orientation, the dhikr will not leave my body. So through that I've reduced the probability of it accidentally coming off. I shortened it but it still has the hundred beads on it.

I keep this on me to remind me of my faith, to remind me of my religion, and to remind me to always stay steadfast. When I'm going through tough times or even when I'm at moments of the purest form of ecstasy, like clean ecstasy, not by any substance I've put in my body but just by the experience I'm in, those are the moments when I usually take these off and go through them. I remind myself I am here because the law has placed me in this position and I should be thankful to the law.

Participant Five - NL
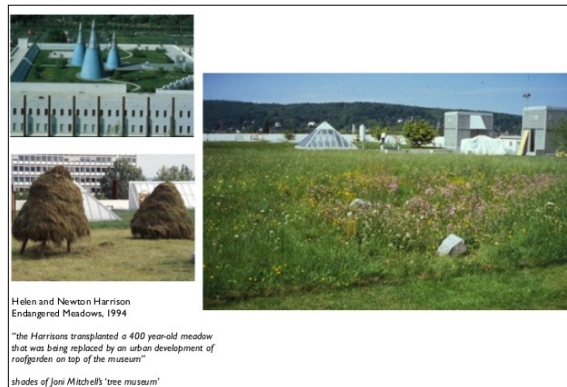
Figure 5: Participant #5 Artifact

I would definitely say that I have a lot of anxiety about climate change. I guess what helps me when I'm feeling most anxious is talking to my family or friends, because it's nice to know I'm not here alone. I actually have an artifact that plays into this. Recently I was enrolled in an art and climate change class and I had to do a presentation for the class. I did it on the artists Helen and Newton Harrison, so my artifact is showing you images of their art installations. What helps me feel supported is when other people validate my concerns by also admitting that they're afraid. That's what I love to hear. I know, that's kind of dark.

Finding Helen and Newton Harrison actually helped me a lot. They don't just do art. They do very physical work. One time they transplanted a meadow on top of the museum. Really cool things that just kind of make you look at it and see it for what it is. They also have this really cool style of writing that accompanies their work, that takes in all the science I've been learning and then makes it into almost poetry. I just find it so calming to see things stated as they are and see someone acknowledging what's happening and explaining it. They have one that starts with

"the news is bad and it's getting worse" and then it ends with "it's not about whether or not the news is good or bad, it's just that great changes are occurring." I guess the big change in perspective for me was: one, yes, it's happening; two, we don't have to worry about the horrors and dangers that are going to come. We just need to focus on adaptation and what we're going to do. And that's what life is anyway, facing problems and overcoming them. Whether or not we can overcome them, we don't know, but it's always been that way for everyone. And I find that really comforting.

Participant Six - KM

Figure 6: Participant #6 Artifact

This is a piece of dead coral. Don't tell anyone I took it because I know you're

not supposed to take it. But I went on a service trip in high school to the Dominican

and we spent eight days with a village up in the mountains. We were planting trees,

we made some birds nests for the endangered swallow, and we spent some time

with the children there, just playing and getting to know them. There were so many

experiences on this trip that I learned from that shaped me to where I am today.

One of the moments of the trip was a little excursion to an island beach on

the last day. It didn't make sense to me because when we took this one-day

excursion, we were vacationing literally on a burial ground of dead coral. You could

tell when we were scuba diving that it wasn't healthy and it was all falling apart.

Taking part in that experience made me really internalize the fact that I am a

contributor to this destruction in a place that's so far away from me. Because I was

swimming in it and we all had sunscreen on, and that was definitely doing

something to the coral. So I found this piece on the beach that was there and I took it

with me because I always wanted to be reminded of how beautiful and dead all that

coral was. To just have that reminder with me as a motivator to do something about it and to not just be a vacationer who's blind to the fact that everything that they're swimming in around them is dead and to actually do something about it.

Figure 7: Participant #7 Artifact

This is my political object. It was in my mom's car. She let me take it out. So, I'm transgender, trans male. That's a part of who I am, though it's not a huge part of who I am. I'm trans, but I'm much more than that. I'm a musician. Hiker. A photographer. All that. But it's one thing I'm really open about, and so if anyone has a question, I try to answer them and educate. Which is very important. I can keep other people's secrets, but I can't keep my own. A lot of people who are in the LGBT community, especially people who identify as transgender, when they don't want people to know that they're trans, they present as biologically male or biologically female, so no one knows that they're trans. They call that stealth. I respect that in them, but I couldn't do that, I couldn't hide. So, like, I'm trans. Just call me 'he him' and we can be friends.

I was born female. I was always a tomboy. I would always wear cargo pants, not a fan of dresses. I think back and remember when I was in elementary school in

Florida, I was praying on the bus. I was like, "God please make me a boy, please make me a boy tomorrow." Around 12, 13, is when I tried to fit in with my peers. I tried to look more girly. I tried to wear my hair a certain way. But it just wasn't fitting with me. It wasn't aligning with who I felt I was. And then I went through this period to figure out who I was, that was around the year 2012. I went through several different identities. And then, finally, I came across the term transgender, and I thought, if I have to put a label to it, that would be the one.

Also around this time is when I moved from Florida to Massachusetts where I started high school. So it was a big transitional period of my life. I was raised in a very conservative Christian area of Florida, so we never really had that experience of people who had different identities, in terms of like LGBT. Thankfully, moving up to Massachusetts, it was more progressive, and we started to have more experience with people who identified in the LGBT community. And that's also when I was figuring myself out. And then in my sophomore year in high school, I took testosterone injections, it's what causes the male changes, like lower voice, more facial hair, all of that. And then the summer before my junior year in high school, I got top surgery. And that has been my transition. My dad was actually the more supportive and accepting at first. And then my mom soon came around after going to an amazing doctor who specializes in transgender care. She was just so great and answered my mom's questions. I remember my mom said something like "I'm losing my daughter," and I'm like, "Mom, you never had a daughter." She said, "Wow. Yeah you're right." So now my mom and I are real close. She's my biggest supporter.
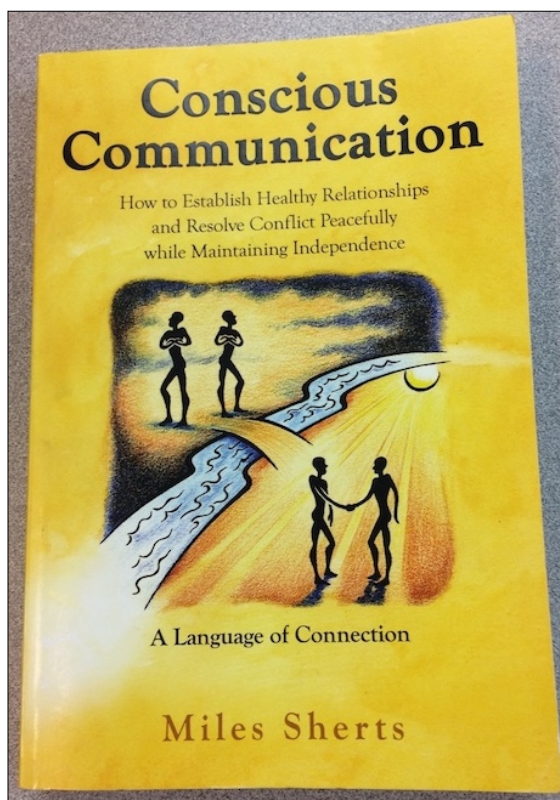
Figure 8: Participant #8 Artifact

I lived at a retreat center in Vermont as part of my gap year. The owner is Miles Sherts and he wrote this book called *Conscious Communication: How to Establish Healthy Relationships and Resolve Conflict*. So, a quick history of my political life starts in 2016 when Bernie Sanders is running for president. I was fifteen and I became super radicalized. Like, if you don't support Bernie Sanders then you're a fascist. I didn't say that but that was what I thought. I actually did some volunteering for his campaign and got to talk to people, so that was cool to actually get involved in that way. I just thought, he wants to get the money out of politics and he wants to get the US out of the Middle East and that just made so much sense to me. Plus single payer healthcare and free access to college. Then

Bernie Sanders lost and I got super disillusioned when Trump got elected. So then I thought, "Well, where do you go from here?" So I got involved with some local politics.

But I realized after Trump was elected that the polarization in society is maybe even more important than specific issues. After high school, I started living at the retreat center and doing this communication work. And I started realizing the importance of listening. I was so busy declaiming my opinions that I wasn't listening. Up in Vermont there was a lot of rural poverty and working class people. Like, "I worked at the furniture factory for 44 years." That was actually a neighbor who I got to know when I was up there. The sort of crowd who tend to support Trump. And it just seemed that it would be a lot more productive if I listened to their version of the truth and maybe don't say mine and then we can still be neighbors and talk to each other about other stuff and maybe we're better off that way somehow if we can learn to work around each other. So I put this book as my political artifact but it's actually kind of a bridge between political and spiritual.

Participant Nine - LD

Figure 9: Participant #9 Artifact

I immediately was called to bring my phone as a political object. Politics is

almost like a trigger word for me. When I think of politics, I first think of

bipartisanship or the idea of teams. I don't really identify too much with the concept

of "the other," or that there are these people there and that's "them" and then

there's "us." So in my life I've had a lot of cognitive dissonance with my phone. When

I was growing up, cell phones were just coming into being. I didn't get my first cell

phone till I was in 7ᵗʰ grade, and apparently kids are getting them way earlier these days, but it's kind of always been there. For me, subconsciously or unconsciously, at first it created that sense of the "other" because it's not human communication, I'm just talking to the image of that person I have in my mind. Back then a lot of it was texting arguments that would go on for so long and then end abruptly. Eventually we'd all realize that it wasn't real.

For tons of my life I've been like, "I just wanna get rid of my phone." I just want to throw it away. But that's kind of like trying to throw away all the things I see bad in other people, when what we see bad in other people is what we think is bad in ourselves, we just recognize it in other people. So I'm growing to view my phone as something I like. The phone is actually an unbelievably powerful tool of communication and I've had to resolve that I'm stronger than it. I can use it for good and I can learn moderation with it and I can use it in a political way. Because I think being able to reach out to somebody far away to start working on an idea is good. That means you're working, you're getting up to speed in this crazy culture. The metaphor that comes to mind is mycelium, how in the forest, trees all seem like they're just popping up and are individual trees. But underneath all of it, there are these strands of incredibly fine hair-like things that are connecting and facilitating communication. So the trees are part of the forest, the forest is part of the whole of the planet, and the planet is part of the whole universe. So I guess choosing a political object made me think, what is being political? Is being political necessarily bad, or is it just reaching out?

Participant Ten - OO
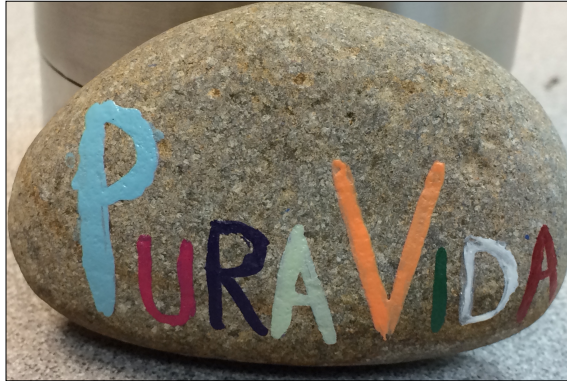
Figure 10: Participant #10 Artifact

This rock I actually found in a stream in Costa Rica. The summer before my high school senior year I went to Costa Rica with my Spanish teacher and some kids in my Spanish program. It truly was an absolutely life changing experience. I will say that it ties into every aspect that we have touched today, because this ties into politics, this ties into spirituality, this ties into everything I'm connected to. So I found this rock and then I painted "Pura Vida" on it. In Costa Rica, when you meet, when you say hi to somebody, you don't say "Hola," you say, "Pura Vida." Everyone said that on the streets of Costa Rica. At first we thought it was so funny, because we're like, "What does this mean? Is that just a slogan?" And by the end of those two weeks I was like, wow, this is crazy, what this saying means to so many people.

I guess I would say like Pura Vida is a lifestyle that incorporates peace, respect, love within yourself, love within your life and within the world. Everything that I learned on that trip about myself, about the world, really impacted my life in so many ways. At that point in time I was definitely struggling with a lot of things within myself and understanding who I was trying to be. Is there anything out

there? Is there a greater power that can help me? I feel like Pura Vida connects to

every facet of life. That's why I brought this object for my views on climate change.

Just how much respect the people had for the earth, for its creatures, and how the

people coexisted with everything else. That's so different from what we see here. In

places like New York City, where's the land, where's the earth? It's all been taken

over by humans and selfishness. In Costa Rica it was so much about selflessness,

finding your own little niche and making a difference, realizing that you influence

people, and then those people will be inspired and then continuing to build off of

that. It did affect me spiritually, understanding those basic principles of fixing

problems within yourself, understanding yourself, your place in society, and

becoming harmonious with the world. That was a huge thing in Costa Rica. I learned

so much from the culture.

Participant Eleven - BT

Figure 11: Participant #11 Artifact

My first object is just a couple of pieces of sea glass which I took from a larger jar that was originally my grandparents' collection, on my mom's side. It's been interesting to learn more of that family story through my mom's lens, as the youngest daughter and then two other boys in the family who went in very different tracks. One uncle served in the Vietnam War and the other was a student at Rhode Island School of Design and kind of like a hippie.

I've learned a lot through that family history of the different ways people experienced those time periods. Learning it through the lens of how different people in my family, my mom especially, experienced that, I think has resurfaced for me a much more familial connection than I previously had. I think it resonates with the work that I want to do, learning more deeply the place and people that I come from, connecting with that family history in relation to the epochs of the last century. Thinking about my grandparents in the 30s into the 40s and 50s, my grandfather serving in the war and, on my dad's side, my grandmother was 14 years old when the Great Depression happened. And then how that molded into a conservative era

that was then ruptured in the 60s and 70s. My two uncles kind of symbolize that, one a war resister and another a soldier. As anyone who's experienced war knows, that's a very destructive and difficult life experience, so it's not out of any spite to my uncle, but just really connecting with that family history and how all of these systems and structures are still present.

I consider myself someone working to change those structures, so that has relevance and I can connect to it through my own family. This sea glass is just a way, in a sense, for me to symbolize my grandparents and my process of seeking out that knowledge about my family. They were really special people. And they were a part of my own love for the ocean, which is a sort of ecological connection to myself and my family and my history. The ocean is where I'm from, a coastal community, that's where I have roots. I spent a lot of time in the ocean and by the ocean and have grown to appreciate it more and more and recognize my connection to the ocean and the land. I think we feel that visceral connection to water, land, when we are experiencing harm or environmental damage, but I also feel like I'm most jubilant and joyful when I'm, say, in the water, or by the water. That is also an empowering relationship I have to the ocean; it's not just saddening.

Participant Twelve - AL

Figure 12: Participant #12 Artifact

These are my plants. This one's the main guy. At first I just got them because, you know, people are weirdly attracted to plants. I have problems with the current fetishization of plants and commodification of plant lives. I think that the flippant way people treat plants these days makes it similar to the factory farming industry and that we're using their bodies for this weird thing that we like, but we're not really acknowledging the beings inside of them. We're not acknowledging them as the souls inside of them. I hear so many people, "I'm going to kill this plant." Why are you buying it? You wouldn't buy a baby that you were going to kill. You know what I mean? So at first I was also pretty flippant about it. "Oh, it's cute, I like it." But as I see them grow and change, I had the realization that they react to their environments and they're very alive. I've seen them grow and I've seen them reach for the sun. I have to take care of them. I can sort of hear when I don't take care of them. I took them into my responsibility and I have to make sure that they have good lives. So now my attitude towards them has changed from just using them for

their cuteness to actually realizing the responsibility that comes with housing their

bodies.

So that's my own personal growth. And sitting next to my plants, looking at

them, they also have been something to project my curiosities onto. Sometimes I

think about how can I be true to myself, I have trouble choosing things, I don't know

what I want. Plants are so unselfconscious. They're not wondering if that branch

that they just grew reflects who they truly are and if they really wanted that. And

I'm like, how do you have that confidence? And then I look at my plants and I

wonder where's that impulse for growth, that impulse for life? What do you push

against to grow outwards? Like, where did I come from? So my plants are special to

me because they open up new things for me.

Participant Thirteen - JF

Figure 13: Participant #13 Artifact

This is a porcupine skull that I harvested when I was on my three-month meditation retreat. It had been hit by a car and then kind of dragged off by the vultures a little ways down a private road. I had been in a relationship with a native woman and she was in the practice of receiving animals, like if they showed up, in terms of what their medicine was and really honoring their presence. Also for me, I pass a lot of dead squirrels and it's just moving them off the roads so they have a place to rest and not being driven over. This past summer we found two raccoons and we processed them together and just kind of gave them back to the earth. So on the retreat I found this porcupine but I didn't have any of the tools, like sharp knives, salt, just ways to clean it. So I kind of let it go and just used the decaying body as kind of a death contemplation, which is a big part of the meditation practice. I would go and visit it and watch it decay and the flies and the maggots and over the course of several weeks see this thing go from this freshly killed being to this heap of bones and skin. The smell is really powerful.

And then one day I was there and I saw the teeth and I just kind of tugged on them lightly and the skull kind of moved out and I just thought, I'm gonna receive this. I got some cleaning supplies and a butter knife. It's a totally wacky thing to do under a tree. I also cleaned some of it in my sink but it decomposed so thoroughly that there wasn't much to do. The brain had been picked out really skillfully. The vultures just figured that's where some of the tasty stuff was. Just knowing that each animal carries a particular medicine and shows up for a particular reason, I was really curious and just sat with it for a while. I came to find out later that porcupines are thought to be the guardians of joy and innocence. To me this connects so deeply to the heart of what environmentalism is, to really create a community, because part of my fascination and love for being with these animals is because these are also our relatives. And just to see Porcupine showing up and having this wisdom of joy and innocence in the midst of so much fear and anger. This is something that I've definitely experienced in my years of activism and anti-oppression education, that the joy can be one of the first things to go. I lost my joy for a significant chunk of my college career. And yet joy is a tremendously powerful, deeply overlooked component of what it means to actually be a radical activist.
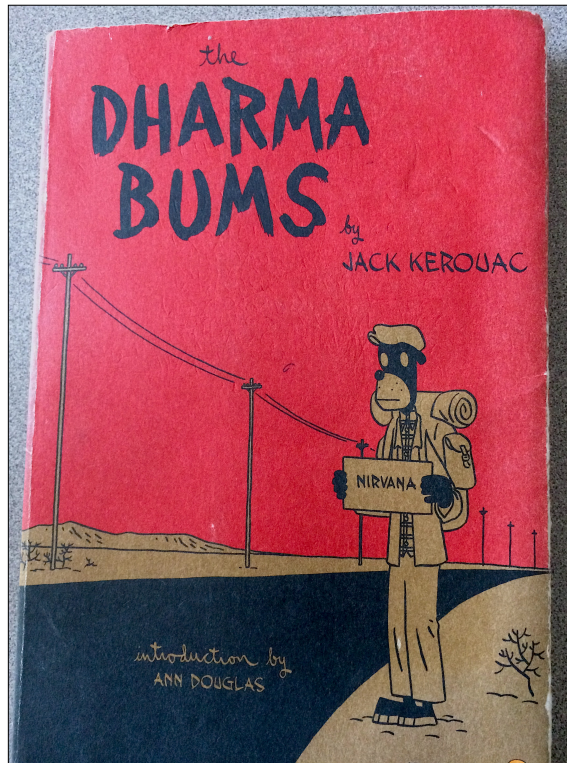
Figure 14: Participant #14 Artifact

I found this book, *Dharma Bums*, by Jack Kerouac, when I was like twenty-one or twenty-two. I had just graduated college and I found this book and it was one of those books that just spoke to me. I can't explain why. The way he writes, he rants in a very beautiful way, and maybe I needed that freedom of just not being the way you're supposed to be. Writing is not supposed to be like Kerouak, right? You're supposed to have short sentences and pauses and full stops. But this guy writes pages without punctuation. I liked that veering off of being normal and kind of standing out and still having his own voice and finding his own space in the world, all while being extremely vulnerable. I mean, multiple times even with this book he's

sitting there crying. He'll say, I'm looking at the stars and I cried, or he's on a mountain top and he's crying.

So here was this bizarre author who was incredibly vulnerable but also constantly talked about kindness and compassion. His book is his engagement with Buddhism. There's a lot of talk about the ways he's engaged in Buddhism and about kindness and compassion. And that's where I was. I looked at meditation and was like, holy cow, I need to bring this into my life. Even though I grew up in Nepal and I grew up learning about Buddha and his stories, and Hinduism has a lot of traditions with mindfulness and meditation as well. But that was not something that was prevalent within my family or in the middle class life that I lived.

<u>Navigating Awareness and Response</u>

The main research question of this study is focused on how participants feel, think, and act in response to their awareness of the climate crisis. As explained in Chapter Three, to pursue this question directly, participants were asked to select nine images from a binder of 61 images total, dividing their choices into the three areas: feeling, thinking, and doing. The directions were to consider these categories as they relate to their own responses to climate change and that would also facilitate their broader understanding of how feeling, thinking, and doing relate to the issue of climate destabilization. From data within these segments of the interviews, themes were constructed within the domains of feeling, thinking, and doing. While these themes were primarily derived from participant responses during the discussion of the images, once the themes were identified, additional data were added from all parts of the interview to further substantiate the themes. This initial exploration of themes serves as an introduction to what is taking place for these emerging adults in relation to their awareness of climate change on an affective, cognitive, and volitional level.

Throughout the analysis, the images that the students are discussing are indicated by number in the text. The numbered images are provided in Appendix K. Appendix K only includes the images that the fourteen participants selected from the binder.

Feeling

Three themes construct the participants' *Feeling* responses in relation to climate change: *Awareness Brings Strong Feeling*; *Managing Difficult Emotions;* and,

Moving from Despair Toward the Middle. This section begins with an introduction to

the range of difficult emotions participants associated with their responses to

climate change, identified through their discussions of the images they selected and

through discussing the artifacts they brought in. The analysis then explores a second

layer of emotional response, that is, how participants step back from and address

the emotions they are experiencing. The third part, *Moving from Despair Toward the*

Middle, describes one particular direction of emotional adjustment observed in the

participant responses. A unifying characteristic of all three themes is the perpetual

state of flux of the emotions identified and described.

Awareness Brings Strong Feeling

A crucial dimension of the study participants' awareness of the climate crisis

was their emotional responses. Through discussing their artifacts, reflecting on the

images they selected from the binder, and telling stories from their lives, they

expressed and articulated a range of emotions. Participants either explicitly named

or conveyed feelings of fear, anxiety, sadness, grief, loss, being overwhelmed, anger,

frustration, feeling stuck or frozen, sickness, being out of control, a sense of

meaninglessness, shame, and existential despair. Two initial points can be made

from this list. First, these participants, already aware of the climate crisis, harbor

varying and potent feelings as part of that awareness. Second, clearly this list

represents one end of the spectrum of emotional states, what might be

characterized as challenging or difficult emotions. In Chapter Five a different set of

emotions will come into play, more closely linked to feelings of love. For the present,

this analysis will focus on the range of difficult emotions participants expressed.

The following sample of short quotes serves as a brief window into the emotional terrain of the participants' reflections.

"I feel like I'm protecting myself from the grief of so much loss."

"It makes me feel sad and worried. I feel like I want to cry, like I can literally feel my eyes welling up."

"I was going down through my news feed and said to my roommates, 'This world is falling apart.' I was kidding, but it was true."

"I feel like we're running against a clock."

"It scares the crap out of me, thinking what could come."

"I'd be listening to people, doing the regular things that people do, and thinking, 'Does it matter? Does any of this matter?'"

"I feel like I want to run, but then I can't do 'flight,' and I'm not a 'fighter,' so I just 'freeze.'"

"It's mind-boggling."

In addition to reflecting a number of different emotions from the list above, these quotes also indicate the participants' awareness of their emotional responses. One participant uses the typology of acute stress response, or fight-flight-freeze, as she illustrates what happens for her physically when her emotions regarding climate change are at their strongest. Another participant recognizes that at the same time she is feeling grief she is also trying to fend off the feeling, "protecting" herself. A different form of self-protection is humor, as the participant describes joking about the world "falling apart," while he also recognizes the gravity of the situation. Another participant is trying to understand her emotional response

amidst the ordinary routines of social life all around her. And, finally, two

participants raise the factor of time and the future when they describe the fear of

"what could come," and "running against a clock." In simple terms, it's possible to

consider these reflections as a secondary layer of emotional response, the emotions

that come *after* the initial emotions. As I explore these responses further, not only

will the emotions participants described be relevant, but their responses to their

own feelings will also become part of the developing story.

In numerous ways, study participants expressed feelings of grief and loss as

they articulated their emotional experiences related to climate change. One image

from the binder proved central to this expression. Image #8 is a photograph taken

by Billy Voo, a Detroit urban photographer, of the tag painted on a broken concrete

and steel wall in the city's abandoned Packard plant in 2010 by British graffiti artist,

Banksy. In the graffiti, a child dressed in black holds a can of red paint and a

paintbrush, and has painted on the wall, "I remember when all this was trees". The

child is looking directly at the viewer.

KM, after selecting the picture, took time to reflect on her feelings in

response to the image.

> This is how I feel a lot of the time, just looking around me and seeing cement.
> I don't remember when it was all trees because I wasn't there, but I wish I
> could see it and experience it. I have this feeling of grief, like a sickness
> almost, when I look around at the shape of the land, hopefully imagining
> what it could be, grieving what it was, and also fearing what it might look
> like.

In this comment, KM identified with the child in the picture and, in gazing

back at the child, used that connection to describe her own emotional response to

the effects of ecological crises. There is a temporal dimension evident in her expression of loss. The child in the picture indicates that they can remember a time when there were trees. In using the picture to describe her own emotions, KM moved backward and forward in time. She began with an acknowledgement that she herself never saw this lot when "it was all trees," but the absence of trees in the painting created the desire in her for what she is missing. In looking at the painting, she expressed grief for what the world once was ("grieving what it was") and fear for what the world might become ("fearing what it might look like"). Yet, KM also used that shadow memory to imagine what the world could potentially be ("hopefully imagining what it could be"), a world with an abundance of trees.

In this mini emotional journey back and forth through time while talking about this image, KM experienced grief for what has been lost while at the same time envisioned the possibility for a better world toward which we could be moving. This introduces two conceptual categories that will remain active throughout the theoretical analysis and will be picked up more directly later in the analysis: first, the relationship between feeling the difficult emotions brought on by climate change awareness and turning one's attention in the direction of possibility; and second, the role of time in expressions of emotional response to ecological devastation.

Shifting to another image, BT, who grew up near the ocean, as he talked about in his profile, chose the picture of a coral reef in decline (Image #28). Similarly, this image elicits an expression of loss in relation to time, in this case in relation to his future unborn child. "This (picture) brings up family for me. If I were to ever have children, the thought of having to explain something like coral, in the

past tense, to my potential kid would be such a saddening thing." He then expanded

his scope more broadly and even deeper in time.

> And that's just coral. What about certain kinds of trees, or insects, butterflies, dragonflies. It just brings up a sadness for me of what we might lose. It's also a sobering reminder of the natural world. This is billions of years, from stardust, of biodiversity and rich life that we're killing.

Again, time is an essential factor in the expression of loss. As BT viewed the image of

the blanched coral reef, first he looked into a possible future where he has to explain

what a coral reef was, a part of the natural world that he has always known to exist;

and, in the next breath, in order to express the enormous loss involved, he traveled

back in time to the beginnings of life on the planet. Identifying and expressing the

emotions participants feel in relation to the loss of life and biodiversity on the planet

involves traveling through time to get at the depth of the experience.

AL, who chose Image #8, the child with the red paint, also, like BT, used the

painting to press the question of what it means for humans to let the biosphere die.

> What makes me sad is the possibility of the loss of organic material. That's what really feels like a tragedy. We're going to lose something incredibly valuable and unique in the whole universe. The fact that a tree exists is so rare. It doesn't exist in the rest of the universe. The main thing that would make me optimistic is if we didn't kill everything that was organic, if we were able to preserve that cyclical continuation, that ability to regenerate, Mother Nature.

Through AL's eyes, a tree is no ordinary thing and not to be taken for granted. She is

able to see the existence of a tree within the larger context of the cosmos, and to

point out its existence as singular and unique. When trees disappear from the earth,

they disappear completely. Therefore, because of this acute recognition of the loss,

AL linked her own emotional state, her possible optimism, to the continued existence of organic material on the planet.

These reflections reveal that an honest and clear-eyed grappling with the feelings of loss that come with recognizing threats to the biosphere can be coupled with recognizing possibility. Perception of what is possible is on the heels of perception of what is being lost. There is also an intimacy with other living things that is expressed in these feelings. The intimacy with the biosphere operates both on a level of connecting to one specific life form, a coral reef or a tree, and it is also reflected in an awareness of deep time and space. In later analyses, these elements of time, place, and possibility will continue to play a role in the theorization of how these young adults are making meaning for their lives within climate change.

Like BT, other participants brought up time and the future in relation to their feelings. When asked what his feelings are in relation to climate change, JB answered flatly:

> I'm terrified. It's like this really big shadow on the future. Like, after 2040, all bets are off. And that's when I'm 40. I was born in 1999, so that's not far into my life…I honestly don't think we're going to come out unscathed at all.

When asked to clarify "we're," he added, "the planet." AL used her reflection on Image #8 to directly address the issue of time. In doing so she linked her response to the focus of the study itself.

> Why would you interview young people? It's because they're the ones who have to imagine their own future and they're imagining farther into the future than perhaps are people who are 70.

Here AL echoed JB's calculation of how old he will be in 2040, one sample of the

future decades he hears about in repeated predictions of increasing climate crises.

AL continued:

> So when I think about the future, I literally think about this sort of Mad Max
> Matrix hybrid. I picked this picture out because I wanted to talk about my
> very apocalyptic view of the future. I tend to be cynical anyways. Maybe mine
> is worse than other people's. But I also think it is maybe more realistic.

In this comment, AL exhibited self-awareness that perhaps her natural inclinations

lean toward a darker vision of the future. However, she also ventured that this

darker vision may not only be a personality trait. It also reflects a willingness to look

unflinchingly at the reality of the situation. Her insistence that her apocalyptic views

might not simply be her own tendencies, but a more accurate reflection of the reality

of the moment, is another illustration of the primary conceptual category of this

section, *Awareness Brings Strong Feeling*. For this participant, a picture of an

abandoned lot and a child's message painted on a wall is an opening for her to

express the apocalyptic views that she carries around inside, due to her awareness

of the situation.

<u>Managing Difficult Emotions</u>

A key aspect of the strong emotions expressed by the participants is the

range of difficult and fluctuating emotions they identified, and sometimes expressed

directly, within a short period of reflection. One factor that seemed to influence the

range of fluctuating emotions is the gap between the enormity of the problem and

the lack of adequate societal response. While acutely attuned to the threats of

climate change, BT described his own difficulty with conceptualizing the scope of

the threat.

> I don't think people are really in touch with what's at stake and I don't even
> know how much I am. Everything coming out now is talking about how
> everything is unprecedented. What they thought was the truth five years ago,
> the mainstream narratives or commissions on climate change, have proven
> to be grossly underestimated. I'm saddened to say that I think what's coming
> out even now is still grossly underestimating what's truly at stake.

In this case, BT's self-declared responses of pessimism and sadness are a result of

the discrepancy he sees between the nature of the problem at hand, the efforts

within the scientific community to comprehend and keep up with the unfolding

data, and the difficult job of conveying the nature and gravity of the problem to the

general public.

A close reading of JB's reflections about the perils posed by climate change

and the inadequate societal response demonstrates the tendency to swing back and

forth in expressing one's views. After previously speaking about how old he will be

in 2040 after which "all bets are off," JB continued in his analysis of the threats

posed by climate change. "The classic report is saying don't pass two degrees

Celsius. Otherwise we're in deep shit. And we're not even putting the brakes on yet."

He continued describing his frustration with the lack of sufficient response,

commenting that the Paris Accord, which had recently taken place in November

2018, "was just more talking about how to put the brakes on...obviously it's starting

to happen, but I believe it's too little too late." JB then continued with an extended

analysis of the complexity of interlocking ecological and societal crises and

considers where to place himself in that complexity.

You read all these reports that are coming out, right? It's like all the cities in the world are going to flood and all cropland is going to be destroyed and we're going to get billions of refugees. When I hear that, that's what 'not making it' means to me. But in reality there's a whole spectrum of what happens and doesn't happen. It's not a quantized thing. It's not like we either have ecological destruction or we don't. Maybe the temperature rises three degrees but not four degrees. If climate change ended today we'd still have thousands of sustainability issues. There's tangible stuff that could be done. I really believe in the cause and just because I don't have high hopes doesn't mean I'm going to abandon it. That's no reason to just give up and get drunk or whatever. I'm not going to quit just because it's hopeless.

In this series of comments, JB began with "I'm terrified" and contextualized his own lifespan within the reports he is reading. After expressing concern about the insufficient societal response, particularly within international institutional structures, he then engaged in an analysis that recognizes an expansive range of possible effects from climate change. This is far from a minimization of the threats involved; his list is daunting. Rather, he recited the list of possible effects in order to indicate the equally expansive list of actions that can be taken. His analysis leaves him in a place of acknowledging fully the devastation that he sees coming, but insisting that this is no reason to pull away. JB's persistence, despite his negative assessment of the possibilities, is a theme that will emerge more fully in the *Doing* section focused on participant reflections on their actions in response to climate change awareness.

As participants described their emotional responses, they exhibited a range of ways in which they managed their difficult emotions. BS discussed how she had been in a period of closing herself off from her feelings because they were so strong. However, closing herself off then raised concerns about her possible "betrayal" of nature and a sense of shame for not doing nature justice. "I'm realizing that my grief

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for the earth is so incomprehensible to me. It's so enormous that I don't really know how to fully tap into that love and fully identify with what I believe and feel for the earth." Along with feeling shame for her cautious relationship to nature, BS also admitted the ways in which she feels out of step with her peers due to her strong feelings.

> There is a stigma. There is a taboo of loving nature to such a degree. It's hard to share that with people because a lot of people aren't really available to feel those feelings or share those emotions with you. At least a lot of my peers and people my age. So, I keep it to myself. And then keeping it to yourself perpetuates the cycle of having it locked up inside.

NL used Image #46, Norwegian Expressionist artist Edvard Munch's *The Scream of Nature*, or more popularly known simply as *The Scream*, to describe her sense of feeling different from others in her strong response to the realities of climate change. In the painting a lone figure walks on a bridge in the foreground, with two dark figures in the background. The sky is a swirling orange and red as the lone figure holds its hands to its ears, the face depicting what has become commonly described as a representation of the anxiety of the modern human condition. In this case, the painting allowed NL a moment to step back and laugh at herself.

> I think it's kind of a funny picture. There's so much raw chaos and it's so overly, "Ahhh!" Sometimes that's the way I feel. So, I can laugh at it. This is me when I say things out loud (about climate change), and then I can't believe I just said that out loud.

Her response to the painting was to see humor in the figure portrayed, and to use that as an opportunity to gain perspective on her own emotional response. However, part of that reaction was to step back to see herself through her friends' eyes. Therefore, while it may be beneficial to gain perspective on her own emotions,

there is also an element of censoring her responses, therefore adding the emotions of shame and embarrassment for expressing strong feelings in relation to the threats of climate change.

RS questioned the sufficiency of her own response, echoing BS's concern that she has betrayed nature. For RS the concern is that her level of commitment will never reach the level of what is needed, several times urgently asking these questions of herself: "I never feel like I am doing enough." "Am I working on the right stuff right now?" She continued to explain, articulating a struggle with finding balance within herself: "I don't know how you find the balance between feeling anxious and urgent enough to make changes to protect the future, while at the same time not getting totally broken and lost." Her characterization of this as a feat of balance indicates the depth of emotions that are felt by young people taking in the realities of the climate crisis. If one is truly opening to the realities, strong emotions will come into play, emotions that can be strong enough to leave one incapacitated. These reflections on the intensity of the emotions will link to the later discussion in Chapter Five, *Interconnection*, where the conceptualizations reach to a deeper level of analysis and reflection on the role of emotions in relation to the climate crisis.

In describing the process of managing their emotions, participants would also tell stories from their lives that described significant transformations in their attitude and approaches to the troubling realities of the climate crisis. Having experienced significant periods of environmental despair, BS spoke about her process of learning how to take care of herself, including trainings with "The Work That Reconnects," developed in relation to the work of Joanna Macy, scholar of

Buddhism, systems thinking, and deep ecology, that focuses on helping people to find their voice out of their ecological despair.

> You have to take care of yourself before you take care of others. People say that all the time. You have to be in a good place. I think I am in a good place now to open back up to that broader mission.

NL talked about how she had taken several specific steps in order to address her climate change anxiety. She was developing healthier habits, such as exercising, eating, and getting more sleep. "I've never prioritized that before in my life, and now I am. And it's all coming together and I feel good. I'm less angry and less anxious about the whole thing." In addition, she also took a creative writing class focused on climate change that allowed her to write about her climate anxiety. "It doesn't mean that I'm not thinking about it all the time still, because I am. I guess now I'm facing reality in a way that I view as a healthier way."

AL also related the evolution of her process for dealing with her concerns about climate change, connecting her transformation to what she characterized as her "spiritual awakening" in connection with becoming involved with Native American spiritual practices through her college. Even prior to her awareness of climate change, which happened in relation to the community she became a part of through the Native American rituals, she described a period in her life during her sophomore year in which she was very unhappy. "I was like, 'If I have to live another thirty years, that sounds kind of unbearable. I was not happy with myself. I was not happy with anybody else." She mused that if she had been fully aware of climate change at that time, it would have made her "completely fatalistic, like what is even the point." She described the transformation that had taken place in her since then:

In the past couple of years I've just become a happier person. Through a lot of work on myself, a lot of reading, a lot of meditation, a lot of just spending time with myself and changing my mindset, I've had moments where I'm really thankful to be alive. I really enjoy this. I really love being in my body.

The reflections of the participants about their emotions, and their responses to their emotions, reflect a dynamic quality to these responses. Whether they are grappling with balancing the reality with their own responses, or moving through significant shifts in how they are managing their emotions, there is movement. The next section describes one particular type of movement evident in the participants' descriptions.

Moving From Despair Toward the Middle

In addition to the difficult emotions that have shifted and fluctuated, there is a theme within *Awareness Brings Strong Feeling* that characterizes a shift that can take place within participants over time. *Moving from Despair Toward the Middle*, the name derived from the reflections of one participant, describes how the young adults in this study experienced and articulated a modification in the intensity of their emotional responses and in their relationship to those emotions. RS discussed the evolution of her thoughts and her feelings.

I think a couple of years ago I thought that we could do more. But I'm understanding that you can't do all of it. It's sort of like coming to a point of acceptance. I'm not going to fix everything. So what is there that's salvageable, that's still worth working on?

She continues to make her point by telling a story about a broken teacup.

I was looking at a teacup today that my friend had broken when it fell off her porch. It had smashed into pieces. I took it home and put it together and then she let me keep it. And it's still beautiful. Like, it's the same way that it was, but it's different. You can't drink out of it anymore. Yeah, so things are going to be different in the future. It's not going to be the same as it always was. It is going to change and we need to adapt to it.

This instance of *Moving from Despair Toward the Middle* illustrates how participants find a way to stay in and continue to engage the issue of climate change, rather than finding an escape to get out. It is a reflection of how participants adapt to their strong feelings as well as how they adapt to their discouragement with the lack of effective action as described by BT and JB.

However, at the same time that RS acknowledges these changes, and works to incorporate them into a new philosophical outlook, within a short span of time in the interview she also questions this evolution in her thinking. "Maybe as I've gotten older my relationship with the environmental crisis has become, I don't know, am I settling by accepting that there are certain things that we can't change in the future?" We can compare RS's musings to AL's earlier in this section. AL placed herself at the far end of a continuum in recognizing the seriousness of the situation, characterizing herself as having an "apocalyptic view" that is, she believes, more realistic than other perspectives. RS, it seems, is finding her place along that continuum, constructing a place where she can maintain a clear-eyed and steady gaze at the enormity of the crisis, not back down from its implications but instead make accommodations for the changes she sees as inevitable. And yet, she wonders if she has lost something important in the process. Is this an acceptable transition, she asks?

The expansive view of geological time, which was called up earlier as participants expressed the depth of ecological loss at stake, also functions to help participants move along the continuum of emotional response to climate change. As we saw in NL's description of the artwork of Helen and Newton Harrison, which she

discussed in her profile, NL found solace in conjuring the expanse of deep time,

noting, "We are in intermittent glacial stages." As a Biology major at the time of the

interview, the perspective of geological time was not a new concept for NL.

However, in this instance the framework of deep time served as a lifeline for her. As

compromised a solution as this might be, she is not using deep time as an escape,

but as a way to help her grapple with her awareness. Her efforts and internal

changes are less about entering denial than they are about coping with what she

can't deny. As she commented at another point in the interview, she sometimes

envied people who were able to remain in denial.

In describing the changes he had experienced in his emotions about climate

change, MM commented that his previous emotional state had been "apathetic

despair." Through several years of activism in the fossil fuel divestment movement,

he explained the shift in his outlook. "I'm pretty sad about the situation, but I'm also

pretty hopeful about what we could do. Right now I would say I see myself right in

the middle." He continued to explain that what is keeping him at that 50% point is

the problems versus the possibilities. "It's like, I'm seeing what's being done, but I'm

also seeing what isn't being done." Like BT and JB, MM is continually balancing his

awareness of the extent of the problem with what he sees taking place in response.

The conceptual categories in this section, *Awareness Brings Strong Feeling,*

Managing Difficult Emotions, and *Moving from Despair Toward the Middle*, each

illustrate the dynamic quality of the broad conceptual category of *Navigating*

Awareness and Response. Participant responses to climate destabilization are

characterized by perpetual change. Responding to climate change does not have a

resting point, nor is its movement linear. It is more accurately described as a swirl of

intersecting responses. As I further investigate the participants' responses through

looking at their analyses and actions, this dynamic quality will continue to be

apparent.

Thinking

This section of *Navigating Awareness and Response* focuses on themes that

emerged from participants' analyses of some of the underlying issues related to the

societal response to climate change. A key theme in this section is how participants

reflected on the nature and function of denial. The discussion begins with how the

participants grapple with their own denial as well as how they make sense of what

they see as denial in others and factors that they perceive as leading to a more

general societal denial. The section then shifts away from focusing on denial and

shifts to the participants' inclusion of a critique of capitalism as part of the issue of

climate change, and also the role of consumerism as part of capitalism. The final

section of *Thinking* is focused on the participants' reflections on the college

experience, particularly focused on resources and approaches they believe would be

helpful for college students grappling with a range of challenging pressures, of

which responding to climate change is one part.

Grappling with Denial

As was discussed in the *Feeling* section, the participants in the study

expressed a range of strong emotions in response to their awareness of the climate

crisis. In addition to expressing the emotions they experienced directly, the

participants also expressed the ways in which they respond to their emotions. The

conceptual categories *Managing Emotions* and *Moving from Despair Toward the Middle* demonstrated some of the ways that the participants understand their emotions and how their responses have changed over time.

A close cousin of these two categories is another category, *Grappling with Denial*. It is difficult to fully distinguish these categories from each other. In the two *Feeling* sections above I highlighted the ways in which the participants described their changing views and understandings over time, and ways that they tried to understand their own emotional responses in relation to their own social context. In *Grappling with Denial* participants focus on their own tendency toward denial of the realities of climate change and make observations about the denial of others, individually and societally. However, there is a gray area between the two categories described above in *Feeling* and *Grappling with Denial* in *Thinking*. When a participant decides to laugh at their own level of anxiety, or if they've "moved more toward the middle," or if they are hesitant to "look weird" in their daily concern about climate change, it is difficult to separate out the forces of a broader societal denial that are at play in those personal shifts. That is, while a young adult may take in the gravity of danger to the biosphere, and perhaps looks at it unflinchingly in certain moments, they will be hard pressed to find significant, consistent, or skilled support for this honest appraisal. Therefore, to what extent do young adults who are trying to fathom this reality moderate their responses in order to stay in step with their peers or the adults in their lives? This line between managing emotions and grappling with denial is difficult to locate.

While the phenomenon of denial in relation to climate change is complex, and it is not the purpose of this analysis to attempt to deconstruct how it operates in individuals or society at large, a strong theme in the participants' reflections about their awareness of and responses to climate change involved the function of denial. There were several instances in the interviews when participants made direct comments about their own tendency toward denial. RS's employment is focused on supervising sustainability programs on a college campus. After speaking at length about her feelings that she is not doing enough in response to climate change, she pointed to one of her selected images, Image #33, a photograph of a person sitting in a chair with a paper bag over their head. She explained why she pulled this picture out of the binder as part of her set:

> Sometimes when I learn about too many crises at once, I definitely feel very overwhelmed. I've got to be honest, sometimes I do just put a paper bag over my head and shut it all out. I know that's not the appropriate response, but it's something you have to fight to break through.

AL chose Image #4, a picture of a man in a business suit kneeling down with his head submerged in the sand, to convey a similar struggle with her own tendency toward denial.

> This one I picked, because that's a man "ostrich-ing." This is what I feel like I'm doing and this is what I feel like everybody else I know is doing. It is a coping mechanism for the incredibly sad things that are happening that are our fault.

In AL's analysis, "ostriching," putting your head in the sand, is a coping mechanism for realities that are difficult to absorb. As she continues to reflect on the tendency toward denial, she goes on to describe the disjuncture between an awareness of the realities, particularly through images in social media of animals suffering, such as

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"turtles dying or starving polar bears," and, alongside this awareness, not knowing how to respond effectively. "You can't do anything about it, so it's easier to just close your eyes to it, because otherwise you feel impotent and that's even more upsetting."

Like RS, while AL exhibits an understanding of the tendency toward denial, and does not exclude herself from her critique, she also emphasizes that a lack of self-awareness is part of the problem. "This is an impulse that we have to fight, but also something that you have to be aware of so that you can see when it's happening." Without that self-awareness, she adds, the information is overwhelming and as a result people "throw their hands up and say, 'Well, we're going to hell in a hand basket anyway, why not enjoy the ride?'" In AL's view, this is not an inevitability, but a choice point. It is possible to "see when it is happening," so that one can "fight" the impulse to push away the reality.

NW chose Image #47, a sculpture of the "Three Wise Monkeys," depicting the principle of hear no evil, see no evil, and speak no evil, to aid him in expressing his thoughts about the function of societal denial.

> This is humans. We don't want to hear the truth about climate change. We don't want to hear what people are telling us that we are doing wrong. We don't want to see the result of the destruction that is the result of our actions. And since we're not listening, we're putting up a block, we're not going to say anything.

Like AL, NW is clear that in allowing denial to take over, humans are not only denying the destruction that is taking place but, more to the point, they are denying the role of humans in creating the destruction. He itemizes what he sees as elements of denial: refusing to listen (to the facts about climate change), refusing to look (at

the effects, such as the social media images AL describes), and therefore, completing

the circle of denial, refusing to speak up.

As noted at the beginning of this section, participants sometimes feel isolated

in their awareness of and feelings about the climate crisis. However, despite this

perceived difference, they attribute the same tendencies toward avoidance and

denial in themselves as well as in others. KM used Image #61 to reflect on the

struggle to take action in the face of overwhelming feelings conjured up when

thinking about the climate crisis. The image is a drawing of a woman with her head

bowed down on folded arms. Above her head is a thought bubble and inside the

bubble a dense, dark scribble.

> I empathize with the way this person is right now because there's so much
> happening in their head that it hinders them from actually doing anything. I
> think that a lot of people can relate to that as far as the climate crisis goes.
> There's just this feeling of overwhelming loss of control and wondering
> whether the decisions and impacts that someone can have as an individual
> even matter. That's what actually worries them.

According to KM, the bubble that holds a dark scribble instead of speech or thought

is an image that conveys "overwhelming loss of control." KM's association with the

muddled speech bubble conveys the same impotence that AL describes in relation to

people who stick their head in the sand. It also echoes the chain of denial that NW

points out among seeing, hearing, and speaking, ultimately ending in silence, the

speechless speech bubble. Therefore, in the participants' reflections a strong link

exists between denial and silence.

Like NL did in *Managing Emotions*, NW also chose Edvard Munch's *The

Scream*, Image #46, in this case to reflect on the setting surrounding the isolated

figure on the bridge to consider his own sense of isolation within the realities of climate change. Here silence also plays a role.

> If you look at the painting, everything seems tranquil and people are walking on the boardwalk, and they aren't alarmed. So it's not a scream out loud, it's an inner scream. That's how I feel in relation to climate change. All this crazy stuff is happening, people are without water, and not just climate change, but inequality with all sorts of things. I want people to want to change and see these problems. I want to do something to change, but I feel like I'm stuck. I feel like just screaming inside because of the atrocity of it all.

NW's own reaction, his "inner scream," is not only at the harm he knows is occurring, but also equally at the fact that life moves on around him as if nothing is out of the ordinary. His thoughts about the painting in relation to climate change denial raise one of its most insidious features: the sense of isolation one can have in awareness of the existential threat involved. Yet, both RS and AL emphasize that the threat of denial is always there. It takes vigilance and self-awareness to not succumb.

Critiquing Capitalism and Consumerism

Of the fourteen participants in the study, nine chose one or more of the following images for their reflections on the climate crisis: Image #25, a photograph of a man bowing down to money; Image #23, a cartoon drawing of the classic corporate boss sitting on top of a pile of people, counting money; Image #2, a button with the saying "I shop therefore I am"; and Image #5, a print depicting a line of people waiting to buy a 'Destroy Capitalism' T-shirt. With those images in hand, comments ranged from the simple and direct to the nuanced and sophisticated in articulating a common critique and indictment of capitalism, and a culture focused on consumerism, as a root cause of the environmental crisis. NW, observing Image

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#25, is specific about the connections between capitalism and ecological

destruction.

> Money is ruling everything we do, these little pieces of paper. It's what runs
> the world and ecologically it's encouraging destruction. Because a lot of
> what's destroying the earth is pipelines for oil, coal mining, a lot of big
> businesses wanting land to make more money. That's what capitalism is.

AL provided a summary comment regarding the construction of consumerism

within a capitalist system to demonstrate what she views as the intrinsic

destructiveness of an economy rooted in capitalism.

> The way (capitalism) perpetuates itself is through manufacturing goods and
> getting people to buy them, right? Every company is legally obliged to make
> money for its shareholders, for the investors. And through that mandate,
> you've suddenly put the key in the ignition and turned it on, and boom! 'Now
> go and do this one thing; make money through whatever means possible.'
> And that ends up being through shoving things in your face that you don't
> need and convincing you that you need them.

Another image that accompanied an analysis of the connections between capitalism,

consumerism, and the environment is Image #5. Image #5 is a print that depicts

young people waiting in line at a booth selling T-shirts. The T-Shirt hanging on the

booth says "Destroy Capitalism," and there's a $30 sign beside it. The young people

in the line have Mohawk haircuts, bare feet, and other signs of casual dress. NL

linked this image with Image #2, a picture of a button that says "I Shop Therefore I

Am," to convey the inherent contradiction between consumerism and doing

activism work to promote sustainable human practices. "I think a lot of people try to

fix issues by buying something to fix the issue and that is not the way to go about

this." She goes on to explain, however, that she does not see this as human nature,

but rather a constructed response within a marketing strategy: "That's the way I

think about a lot of current responses to climate change. There are a lot of people

taking advantage of marketing strategies that can be targeted at people who care."

AL provided an example she had just encountered to illustrate how she perceives a

dangerous absurdity built into the capitalist logic.

> Oh my God, I saw this advertisement for an egg cooker. It said, 'Do you want
> to bring a hardboiled egg to work but peeling it sucks? Crack an egg into this
> plastic egg-shaped thing and then boil it in the egg-shaped thing and then
> take the egg-shaped thing to work and then unscrew it.' What did you just
> do? You took the concept of an eggshell and made it into plastic.

AL offers this example in order to illustrate how, in her estimation, an economic

system in which the only value is growth ("go make money through whatever means

possible," from her earlier quote) leads to absurdity ("you took the concept of an

eggshell and made it into plastic").

KM made a slightly different point using the same image, Image #2. In this

case, she used the joke within the phrase "I Shop Therefore I Am" to grapple with

the serious material consequences of our choices.

> It's easy for people to acknowledge, "I'm thinking, therefore I exist." But with
> "I shop therefore I am," people forget to accept responsibility for the fact that
> we are part of this planet and that our decisions have impacts. If you buy
> something, you are part of all the energy that went into creating,
> transporting, using, and then getting rid of that. I really like the way (the
> phrase "I Shop Therefore I Am") connects thought to the physical world and
> the way it connects our human interaction with the natural world.

Similar to the other participants' reflections on the implications that consumerism

has in relation to the interaction of the human and other-than-human world, KM's

comment connects specific individual behavior with larger systemic issues.

In her critique of capitalism in relation to the climate crisis, AL also, like KM

and NL, alludes to the larger systemic structures that are the context for individual

consumerist behavior.

> I think that shopping is such a huge part of why we have global warming. If we're going to address global warming, we have to look it in the eye and say, 'Why are we shopping so much? Why are we being marketed things so much? What are the effects of this on the environment? Who gets power from the system being as big as it is?

This final question in AL's series of questions raises another question that underlies

all of them: where does the root of the problem lie, in the system or the individual?

This is an issue that participants circled around in numerous ways. JB addressed

this question directly as he reflected on Image #5 of the young people standing in

line to buy anti-capitalist t-shirts.

> A lot of people in my generation are against capitalism, and I also started off like that. But I'm starting to feel like that is misdirected, and that money is just a tool to create change, good or bad. It's not the money that's the problem. So I guess this picture made me think about my political journey and that I started off with "destroy capitalism." I'm realizing that that is like solving an individual problem, but that won't make things like human greed go away.

KM also raised the question of where the source of the problem of ecological

degradation and unsustainable lifestyles lies, in the individual or in the larger

system.

> We want to live sustainably and then we continue to make unsustainable decisions. I don't think the problem is capitalism because it's just a system and can be used in any way that we use it. The problem is people and how we use those systems.

On the other hand RS, addressing the practice of carrying reusable water bottles, takes issue with an individual practice that seems, on first glance, to be simply well intentioned.

> Who came up with a narrative like, "Oh, let's all just use our reusable water bottles"? Like it's up to the individuals to change it. I don't think it's right to blame just individual people. Collectively we did contribute to the problem, but how did we do that? What systems were in place to enable that?

As with the fluctuation of emotional responses in the *Feeling* section, the participants in this section land in varying places on the continuum of root causes of what they see as an unsustainable relationship between humans and the planet. Similar to the complex and related issue of climate change denial, their articulations illuminate some of the fundamental questions with which human society is grappling in relation to the climate crisis, and their comments intersect with longstanding questions within political, philosophical, and social psychological analyses of how social change takes place.

To conclude this section and point toward the conceptualizations that will be developed in Chapter Five, I will close with BS's thoughts addressing the relationship between capitalism and ecological issues. BS chose Image #23, the drawing of a businessman maniacally counting money while sitting on a pile of people underneath.

> Yes, the corporate big boss sitting on top of people, with bags of money all around him. I think a lot of the social structures, the cultural structures, and the beliefs that we are holding have been put in place because of profit. The obsession with money is probably at the core of the destruction the earth is undergoing, particularly because of the extractive world we live in.

There is more than one layer to BS's reflection on the role of capitalism in the climate crisis. At first, through her matter of fact description of the image, she indicates that the depiction of the corporate boss sitting on top of people is almost a cliché. However, BS's phrasing conveys something particular about her view of the role of capitalism. She points to the cultural and social structures and beliefs that underlie an economic system and keep it in place. Her statement reflects the view that the implications of the extraction model she names are not limited solely to sources of energy, such as coal mining, digging for rare minerals for batteries, or hydraulic fracking. For BS, "extraction" represents an entire cultural way of being. Her comment flags a characteristic of the relationship between the human and other-than-human world, one that BS and others perceive as critical in understanding the relationship of capitalism to the unfolding threats of climate change. That is, from their perspective a relationship of extraction requires objectification. As a reference, one can consider the definition of the term "fracking" from one source: "the process of injecting liquid at high pressure into subterranean rocks…so as to force open existing fissures and extract oil or gas" ("Hydraulic Fracking," n.d.). This understanding of extraction as a pervasive cultural way of being, with social, political, economic, and even spiritual implications, is a view of the climate crisis that I will turn to in Chapter Five.

Analyzing the Context of College

At various times throughout the interviews participants would reflect on the context of higher education in relation to the broader societal issue of climate change. NL, identified earlier as a Biology major at the time of the interview, offered

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a view into some of the cognitive dissonance she experienced as a college student

learning about the realities of climate destabilization. Her analyses were pointed yet

heartfelt. In this section I have included longer versions of the excerpts in order to

capture the essence of the participants' voices in describing their experiences in and

visions for higher education.

One of NL's critiques of the college environment was the absence of support

to help students process the information they are taking in about climate change.

She emphasized that this absence reflects a neglect of where college students are in

the early stages of their lives, as opposed to the life situations of the adults teaching

them.

> Last year my teacher talked about mass extinction, and she was hitting us
> with the heavy stuff: climate change is a big deal. You're listening and you're
> thinking, I've got my whole life ahead of me and you're telling me this is going
> to happen? And now what? Especially when the people who are lecturing you
> have lived out a good chunk of their lives in complete normalcy and have a
> pretty good chance of living to old age with normalcy.

In several comments NL indicated that she felt that even though she was receiving

the information in some of her classes, there was still a larger context of the campus

that seemed to be in denial of the implications.

> We're still operating on the assumption that things are going to be exactly the
> same 10 years down the road, 20 years down the road. Everyone is doing
> that. People are still assuming that you're going to graduate, go to either
> graduate school, medical school, law school or into industry. You're going to
> work, you're going to have a family, you're going to have a house, and you're
> going to retire in your 60s or 70s. But I don't think we should be preparing
> for the future based on the assumption that it's going to look the same as it
> used to.

In continuing to make this point, NL told the story of meeting with her academic

advisor who, in order to convince her of the merits of a particular academic

decision, had emphasized the short-term length of college in relation to the whole expanse of her life. While NL remained silent at this declaration of her advisor, her inner thoughts were focused on the survival of the planet and became existential. She added that "no trusted adult in my life seems to be talking about this," leaving her on her own to make the connections between her academic and career decisions and what she is learning about the climate crisis. She described her fantasy of a more useful advising session: "The fantasy would be something like, 'It's really important that we work towards sustainability, so here are ways that your skills directly translate to this issue." Her fantasy of this advising session takes place within the context of the entire university integrating the issue of climate change and sustainability into young people's education.

NW's comments about the higher education context echoed NL's concerns. He asserted that students are grappling with understanding their lives within the context of what they are learning about climate change, but "they are never asked." He added that he had one class where the teacher was explicit about inviting the students to think about themselves in relation to what they were learning: "The teacher asked us, 'How do you connect with this? Where do you come from in relation to this?' She's bringing that to the forefront of our minds, because it's in the back, but nobody's asking." NN emphasized that these questions belong in the classroom.

> Those emotions need to find a way into our conversations about the world and the kind of world that we're trying to create. What does a better world look like? What is your idea of a better world? Where do we talk about respect for the planet? Not in a tokenistic way but really sitting down and

asking what does it mean to respect the planet? And what are you doing
about it?

RS, recently graduated and working in her campus sustainability program, also
talked about the need for a space where students "have the ability to question things
and have time to seek answers to those questions." She added that in many
undergraduate courses, "you don't always have the chance to ask your own
questions."

Like NL did with advising, several other participants stepped back to imagine
what the campus might look like if it was fully acknowledging the implications of the
climate crisis. One way, according to JF, is to "explicitly work it into the curriculum
and acknowledge that these things are stressful and hard." Testing his belief in his
own fantasy, he continued with a description of an expanded teaching role:

> It would mean having teachers versed in holding a classroom space in a way
> that is engaging and nourishing and understanding where students are
> coming from. The stretch for me would be having people who are versed in a
> basic language of trauma, how it exists, how it manifests and maybe some
> mental health training which, in my mind, like, that'll never happen, but just
> recognizing that these years, 18 to 24, are some of the most dangerous times
> in terms of when psychological disorders develop.

NN felt he was straddling two ends of the college campus, physically, conceptually,
and politically, as he studied both conservation in the natural sciences and
environmental issues within a social science context. "I'm trying to pick the best I
can from both worlds and see where that takes me." However, as we will hear more
in Chapter Five, he struggled with the traditional approach within the conservation
field and gravitated toward the framework of the social sciences.

> (In the social sciences) the conversation starts going towards colonization,
> industrialization, racism. You don't just talk about energy efficiency and fossil

fuels. Let's talk about why are you are using fossil fuels. What led to it? We need to know our history; we need to know how we ended up here. We're not being innovative enough if we keep repeating patterns over and over again.

In his analysis of how the university can evolve, BT also was compelled to center a political framework.

In a dream university, first generation, students of color, or students from working class backgrounds would be the ones not only at the table, but making the decisions about access to resources. That already does exist on some level, but better funded and supported, not fighting each other for every little bit of university dollars that trickles down.

JF echoed these same views.

If higher education is to return to this place of being a light and a place where people can become educated, let's make that a way more comprehensive, inclusive, supportive environment. Let's make this a place where people can thrive on so many levels that they are resourced.

The participants in this study represent a subset of young adults, either currently in college or pre-and post-college, who are processing the realities of climate change, often with information they learn through their courses and majors. They are able to identity certain experiences where a course is designed in such a way that they can incorporate their range of responses to climate change into their academic work. Yet, these are isolated moments in their college career. For the most part, these participants report an absence of support for processing the information they are receiving in their classes. In addition, NL spoke specifically about the cognitive dissonance she experiences as a student who is being educated about the realities of climate change and yet, as she reports, "no trusted adult" is helping her to make the connections between what she is learning about and her personal, academic, and professional responses.

At the same time, the participants are able to articulate their visions of a college environment that can support students on multiple levels. Importantly, their visions assume a coordinated response across the campus, so that students have access to support from multiple sources on campus, within both the academic and student affairs domains. As NN states, this would need to involve deeper engagement that encourages students to not only to engage personally with the topic, but also to ask critical questions about root causes. As BT points out, a coordinated response such as this also necessarily includes the authentic inclusion of marginalized students' perspectives. These are informal recommendations gathered during the interviews that will be incorporated into recommendations discussed in Chapter Six.

For these participants, thinking about climate change involves an analysis of societal factors that are part of the larger picture of climate destabilization, as well as reflecting on how one personally intersects with those factors. Participants reflected on the role of denial on a societal as well as personal level; the role of capitalism and consumerism as key aspects of the economic and political context of planetary ecological crises; and, the role of higher education within that larger context. As with the *Feelings* section, participants are not in a fixed place in navigating these issues. There is continual movement. Harkening back to the last comment in the list of emotion responses: "It's mind boggling." The sample of deliberations within this section is a window into their efforts to make sense of a mind-boggling problem.

Doing

The following section focuses on the category *Doing*, that is, ways in which participants discussed actions they take in response to their awareness of climate change. Three areas are addressed: *Connecting with People*; *Being with Nature*; and, *Taking Action Because You Have To*. The section on *Connecting with People* addresses not only ways in which the participants connect with other people, but their observations about the factors in society that contribute to social isolation: what it looks like, where it comes from, how it operates as a feature of our contemporary society, and how it connects to climate change.

Connecting With People

As participants reflected on grappling with their emotions and thoughts in relation to climate change, they often spoke about the power of staying connected to other people. For some, maintaining connection to family and friends served as part of how they coped with the strong feelings brought on by their awareness of climate change. In narrating the images she chose from the binder, NL spoke several times about the role that supportive relationships play in her life.

> I guess what helps me when I'm feeling most anxious is talking to my family or friends, because it's nice to know I'm not here alone. We're all going through the exact same thing. Whatever happens to me is going to happen to us, because we're all here on earth. So that really helps me, knowing that I'm here with my family, I'm here with my friends, it's not all bad.

NL's reflection demonstrates how she finds comfort, but not simply by being close to people she is close to. Knowing she can connect with other people also helps her to re-frame her sense of isolation from individually facing climate change to recognizing it as a collective reality. Similarly, in the view of several of the

participants, connecting with other people serves to counteract a culture marked by separation and individualism. LD chose Image #3, a painting of a group of people laughing together, but first deliberated about what category to put it in. At first he wanted the image to convey *Feeling* for him, but then decided it belonged in the category of *Doing*.

> This is the power of people experiencing joy together, or just simply experiencing anything together. I think it's an incredible action that diverts from the consumer lifestyle, because you're fulfilled. They're fulfilled in that moment and they don't need anything else besides what they are experiencing.

In this case, LD explicitly associates connecting with others as an antidote to the prevalence of consumerism discussed in the *Thinking* section. While the joyful experience of collective laughter involves a feeling, for LD the power of that experience in fact indicates an alternative way of being in the world, a fundamentally different kind of relationship between people.

Participants also emphasized the value of connecting with other people through their efforts to address ecological issues. RS selected Image #16, a photograph of a bronze-colored sculpture depicting an image of two figures embracing, to convey her thoughts about her need for relationships in doing her work on sustainability.

> I need the support of other people to do this kind of work. I feel so much more connected to my work and I feel like I can do more when my friends are there, too. Like, when you have a team. You can't do it by yourself. It makes your fears all go away. Doesn't seem as dark. We know that this work is meaningful and we're doing it together.

Echoing the views of both NL and RS, BS spoke about the ecological artifact she

brought in, the book *The Spell of the Sensuous*, by David Abram, as extending her

awareness of solidarity with likeminded others.

> Reading this book by David Abram made me remember this is not a solo
> journey, this is a world journey. It has to be global. And there are other
> people out there who can totally get on my level in doing that with me.

OO continues in this vein, also using the image of the hugging statues to illustrate

the relationship between the collective nature of the problem and the collective

nature of the solution as well.

> This (image of hugging statues) is taking action, coming together and
> learning to accept each other. Because we're never going to be able to solve
> this ecological crisis, which in the end has the power to end everyone and
> everything, no matter who you are, no matter what religion you are. We
> need to come together as one to fix this.

In these examples, connecting with other people in relation to one's awareness of

the climate crisis can provide the solace for one's feelings of anxiety, and it can also

be the seed of working in community to address the issue.

In speaking about the power of connecting with other people, participants

also brought in the opposite experience in order to make the same point. Many

raised the image of the isolated self within society as a prevalent and troubling

cultural norm in contemporary mainstream American society. JB reflected on Image

#44 to speak about this issue. The image is a wire sculpture depicting two adult

figures crouching back to back. Each figure encases within it a depiction of a young

child, its warm coloration distinguishing it from the metal wire framing of the adult

figures. The children face each other through the backs of the larger figures and

reach through the wire figures to touch. Relating this to a past romantic

relationship, JB spoke about how easily a breakdown in communication can occur,

even when you love someone.

> We would get into arguments and here's this person whom I love so much
> and had spent so much time with, but at this moment we're trying to
> communicate, but she's saying words and I'm saying words and the
> connection is just not happening. That's such an interesting thing, how at the
> drop of a dime relationships can turn like that. So seeing that image brought
> that up for me.

However, JB continues, reflecting on the two children reaching to touch each other:

> That made me think that connection is still possible, and what we really want
> to be doing is connecting. So I guess the action that I associate with this is
> working on communication and listening skills. It's really difficult stuff, but a
> little progress can go a long way.

Through this image JB continued to reflect on social isolation, this time connecting it

with the prevalence of digital communication, and echoing JF's thoughts about the

mental health of young people today and his hopes that the college environment

could be better able to provide innovative support.

> You've probably read about the After-Millennial generation, my generation
> and younger. The mental health scene is so bad. So many kids in high school
> are depressed and anxious. I really think it's because we are forgetting how
> to be with people. We're so within our little boxes and then phones came out
> ten years ago and so now we can be in our little box looking at our little
> screen. I guess that's called the loneliness epidemic.

When I spoke to JB he was in the middle of a gap year before going to college. As his

profile described, during the 2016 Presidential campaign he had gotten involved in

political work campaigning for Bernie Sanders. When we spoke he had just returned

from the first half of his gap year, spending several months at a retreat center

focused on communal living, developing communication skills, and practicing

meditation. Given the most recent influences in his life, his reflections continuously

circled around exploring what issues, attitudes and actions he felt most drawn to in

addressing his observations and concerns. He concluded after one such musing:

"Those are the two big issues that I'm aware of, the environment and loneliness.

They seem to be issues that are getting worse with time." He paused for a moment.

"It's an interesting time to be alive." JB's identification of "the environment and

loneliness" as two prominent and intersecting issues, framed within the assertion

that "it's an interesting time to be alive," indicates interrelationships among the

range of issues being discussed throughout this section, *Navigating Awareness and*

Response, interrelationships that will be explored in more depth in Chapter Five,

Interconnection.

Returning to Image #8 in *Feeling*, the image of the mural of the child painting

on the wall, "I remember when all this was trees," AL also linked her analysis of

climate change to a world focused on digital screens.

> Another aspect (of this picture) is the technological. "I remember when this
> was all trees" is this sort of abandoning of living in and maintaining this
> physical world and just sort of escaping into one where we don't really have
> to think about how our bodies feel. I already do this. You watch Netflix for
> eight hours a day. Your body is like, "What are you doing?" but you're not
> paying attention to it because you're so focused on the screen in front of you.

AL's continued reflection on the picture, which began with comments about her

feelings in response to the climate crisis, offers the beginning of a deeper analysis as

well, similar to JB's comments. She makes a connection between a world dominated

by technology, the way that technology disassociates us from our bodily existence,

and how this disassociation contributes to our lack of caring for the natural

environment. She goes on to make a direct link between a compulsive connection to

digital realities and coping psychologically with the threats of climate change. "It just seems like these are the coping mechanisms that we've chosen and I can only imagine us burying ourselves further and further into them." NW also referred to Image #44, the wire sculpture of the crouching figures with the children inside, to speak about the disassociation he observes taking place within and between people. "I feel like in general we forget that we're human and that we all have feelings, and pain and happiness and jealousy and anger. And people try to hide that, they put on a superficial face, superficial conversations and interactions." He continues to talk about the image, relating it to climate denial.

> I'll say broadly that I think people realize there's a problem, even those who deny climate change. But people turn their back to it and they don't bring it up in a conversation because it's awkward. It's kind of like turning your back to each other when you're talking to someone, you're not recognizing that you both realize something, because it's easier not to. It's kind of like you're a prisoner of society and you can't acknowledge how you truly feel.

Here we see an interconnection of feeling, thinking, and doing depicted in NW's reflections on the sculpture. He establishes that there is a need to connect with other people, but there is also the phenomenon of social isolation in which people "turn your back to each other." This act of social isolation prevents individuals from sharing something collectively that they know. The result is that the individual is a prisoner rather than a member of society. In addition, they are alienated from their own feelings. Again, such connections that participants make, while looking at the images of photographs and art, point toward the shift in perception that is brought into focus by the idea of interconnection, the focus of Chapter Five.

NN invited a different way of thinking about connecting to people. In order to respond to the enormity of the problem of climate change, he had chosen to shift his present focus to the small world of people who are closest to him. I coded this viewpoint in vivo, *Focusing on My World Close to Me*, from his description of this position. For NN this perspective and practice emerged from a course he took based in feminist theory and its relationship to environmentalism. "I think I stopped trying to do anything big. I brought down my scale of work very close to me." In describing this change, he talked about focusing on the "three or four people around me in the space that I inhabit." However, he made sure to frame this not as a form of individualism but rather as a way to make connections between his own behavior in his small sphere to larger global issues.

> That scaling down, what it has inherently done is put a magnifying lens on my own behavior. So now I have become the object of my scrutiny. I hold myself accountable in terms of my own actions and how that contributes to the world.

With this current focus, he expects there will be a time when he broadens his sphere of influence. "When I can get to a place when I can maybe bring my scale to a higher level, I will worry about that, at that spatial scale."

Maintaining sustainable habits is another way that participants explored the implications of one's personal habits for the larger whole. NL spoke about how visible she felt when she would bring her own dishware for college events where they were using disposable dishes.

> For a while I was bringing a glass bowl and my cup with me, and everyone was like, 'Wow, that's such a great thing to do.' I was, like, 'Yeah, it is.' And I have yet to see anybody else ever do it. Like ever.

For his ecological artifact, JB brought in a red cloth napkin to represent his practice

of bringing his own napkin and utensils when he goes out.

> I really don't like when you get a plastic fork and paper napkin when you go
> out to eat. So I try to carry reusable stuff around with me when I can. It's so
> unusual, especially to carry a napkin around. It's kind of funny when people
> are, like, "What are you doing?"

JB also contributed to the conceptualization of the in vivo code *Focusing on My*

World Close to Me by explicitly naming the relationship between the political and the

personal in his actions and choices.

> I'm realizing that a lot of the problems in the U.S., of course there's poverty
> and all kinds of needless suffering, but I'm realizing there's so much money to
> go around and people still aren't all that happy. And I'm realizing that my
> personal action can be political action, as far as building community, and
> making people feel listened to. That might be like the most powerful thing I
> can do right now.

NW reflected a similar sensibility when he articulated the interrelationship between

interpersonal behavior and one's relationship to the environment.

> I think it's all connected. The way you interact with other people in society
> also reflects on the way you interact with other parts of your surroundings in
> the environment. The way you interact with people is the same way you
> interact with anything else.

AL highlighted the role of caring as she made a similar connection between one's

personal responses and one's political action. One of the pictures she pulled from

the binder of images was Image #1, a photograph of children facing the camera with

their hands out in a gesture of asking for money or food.

> Seeing children who need something triggers a feeling in me, maybe a feeling
> of care or wanting to spend my energy to help somebody else. It triggers in
> me that feeling that drives all my other long-term goals. It's been a constant
> throughout history that people have been in situations where they don't have
> anything and they need help from other people. I think a larger percent of the
> population will be in this situation because of global warming.

The focus of this section is on connecting with people. It began with the consolation of connecting with people to relieve anxiety related to emotions connected to climate change, and then moved to addressing the opposite of connection – social isolation – and the relationships that participants identified among social isolation, personal loneliness, and awareness of and communication about ecological degradation. The section then transitioned to connecting with people within a smaller sphere, not as a way to isolate, but as a way to focus in on a world to which you can be accountable. Maintaining sustainable habits was addressed as one manifestation of focusing on the immediate sphere. This section ended with AL bringing forth the concept of caring as one that comes out of a personal, emotional response but has far-reaching and political implications. As indicated above, in Chapter Five I will look more in depth at the intertwining of immediate and expansive spheres.

Being with Nature

Many of the images that participants pulled from the binder were pictures of the natural world. While the images were used by the participants to express a range of feelings and thoughts about the sustenance they derive from the natural world, what they drew from in speaking about this connection was their actual experience of *being in* the natural world. Hence, the conceptual category *Being with Nature* is placed in the *Doing* section of this analysis; it is an action they take.

To be with the natural world was described by the participants as providing solace, perspective and guidance. NL chose Image #45, a painting of the ocean with a

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man sitting on a rock, to express her simple appreciation for the natural world amidst her concerns about climate change. "What I'm trying to do is just appreciate the earth the way it is now. Because it's so beautiful and there's so much out there. I just really want to appreciate it, because it's amazing." We can understand this statement within the context of NL's training as a Biology major and her awareness of the ecological threats to the planet. There is deliberateness to her appreciation, a sense of urgency that it is important to see the earth "the way it is now," and to not take it for granted. Her statement echoes KM's thoughts when she spoke about Image #8 in the *Feeling* section, the graffiti message "I remember when all this was trees," commenting on her mixed and related responses of "grieving what it was" while "hopefully imagining what it could be."

BS's choice of Image #45, described above with NL's reflection, was an opportunity for her to continue to express the tension between her desire to connect to nature even while feeling resistance to that connection due to the depth of her concern. "This is just the serenity I do feel when I'm able to connect to nature in the way that I long for. It resonates with the feeling of true peace I can feel." Indicating the man sitting on the rocks, she continues: "That is his place. That's something I really wish for everyone, not just myself, to be able to access that feeling of serenity." In this quote we can hear the struggle BS described earlier in *Managing Difficult Emotions*, where she felt that she had removed herself from nature due to her feelings of grief and fear. The picture of the man on the rocks looking at the ocean reminds her that she does have the ability to feel that connection. But that's not all. She also expresses her understanding of a significant connection between

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the man and his natural surroundings. "That is his place," she states. The picture is an opportunity for BS to return to her conviction that this feeling of connection to nature is not frivolous. The serenity and sense of belonging that one can feel in nature is a crucial experience.

Being in nature also offers a way to maintain perspective. KM chose Image #60, a painting of a woman standing on the beach looking at the ocean, to describe how the ocean helps her to be in relationship with herself in a different way.

> This one I could relate to because I grew up on the ocean. When I'm overthinking to the point where that overthinking is hindering my actions, I feel a lot freer and less cluttered when I go to the ocean. The breathing of the tides and the fresh salty air and just that grounding of feeling, like you're on the edge of the earth, is a reminder of all the things that exist out there that are way bigger than me and my problems.

In this reflection on what the ocean offers, KM returns to a theme she raised throughout the interview, the interrelationship of feeling and thinking. When she is lost in "overthinking," it's the physical elements of the natural world, the ocean, the air and the tides, that return her to herself through a "grounding of feeling." In addition, putting herself "on the edge of the earth" helps her understand herself in relationship to the larger world, simply from the sheer expanse of the horizon.

Such reflections from individuals about their feelings of connection to the natural world are vulnerable to a reductive interpretation, something along the lines of, "I like nature." However, in these comments we can also see signs of a relationship with the natural world that carries more substance than simply liking to be there. While NL experiences solace from being in the natural world, her appreciation is also forthright and deliberate, essentially communicating, "I see

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you," similar to how AL spoke about her plants in her profile. She has a need to feel and communicate that recognition. When BS looks at the painting of the man on the rocks, what she sees is an experience of belonging, a human who is not simply looking at nature, but is intrinsically part of the planet. KM's image of herself, "on the edge of the earth," intermingles her inner world with the external elements, a description that seems to almost call into question the existence of a boundary between internal and external. Therefore, the communion with the natural world as discussed in these reflections signals a relationship with more depth than "liking" to be in nature, something more akin to love. As promised at the start of the section *Awareness Brings Strong Feeling*, where "difficult emotions" were the focus, we will return to the presence of love as a key element of the core category *Being at Home on the Planet* in Chapter Five.

Taking Action Because You Have To

The section to this point has covered *Connecting with People* and *Being with Nature* as two responses. One final aspect of the participants' reflections on *Doing* is their identification of the necessity of action, even within dire circumstances that do not promise hoped for results. Already we've seen JB, in the *Feeling* section, declare, after listing the litany of societal upheavals which are predicted, finish by saying: "I'm not going to quit just because it's hopeless." Where JB lands at the end of this reflection is one example within the conceptual category, *Taking Action Because You Have To*. This category captures a variety of ways in which participants indicate their full awareness of the threats of climate change and yet, for a variety of reasons, continue to move forward.

JB put together two images from the binder, Image #49 of the earth and its ocean currents and Image #15, a photo of hands holding fists of dirt and plants, in order to address balancing the enormity of the problem with how to step forward with action.

> If I'm looking at this earth, this whole earth image here, and I'm kind of baffled as to what action I take from looking at this, then I look at this one with the green plants and I'm like, OK, well, this is how it starts. This is what we can do, what I can do, right here, right now.

This is reminiscent of RS's dilemma about balance in *Managing Difficult Emotions* where she wanted to feel the urgency but also not lose herself in that immersion and concern. For JB, the picture taken from space showing Earth's swirling ocean currents represents the scope of the problem, the threat to the survival of the biosphere out of which humans evolved and on which humans depend. From there he zooms in, down to the earth and, more to the point, into the dirt with other willing hands. The specific action is important, hands in the dirt planting plants. However, it seems that the scale of the action is more his point: find something you can do and do it. DC expressed similar reasoning, likening the issue of climate change to the death of a family member or friend.

> Climate change is the equivalent of someone dying. You have to grieve. You have to take time off and think about the problem. But it's also one of those things where you need someone to bring you back. It's terrible, but it's happened. Can I just think about this person not being here anymore? Can I just think about the good earth, good planet, not being here anymore? Or can I do something about it?

NL and NN made the same point in looking at Images #13 and #12, respectively, both focused on non-violent protest. In looking at the photograph of the Pacific Climate Warriors with the sign "We Are Not Drowning, We Are Fighting," NL said,

"You can either try and deal with it or not. We have to try, because what else can you do?" NN discussed the definition of the word "Perseverance" captioned in the Image #12 photograph of the Freedom Riders' burned bus during the civil rights movement: "Persevere, despite the odds being against you. I mean, what choice do you have? If you don't persevere, what else are you going to do?" Looking at Image #17 of the girl posing in a Super Girl costume, OO also balanced a comprehension of the scope of the problem of climate change with a sense of urgency and obligation to act. "I think this represents strength and integrity and perseverance, all in one. Even if it seems nearly impossible, everyone needs to find the superhero within themselves and stand up for what they believe in."

RS had already voiced her struggle balancing expectations and realities with the analogy of the broken and mended teacup, ending that story with, "It's not going to be the same as it always was." She continued on this theme with another analogy, bringing in a story often used to illustrate the phenomenon of bystander inaction.

> Anyone who has taken a college psychology class has learned about the Kitty Genovese case. This young woman was going home to her apartment and then she was attacked and all her neighbors listened to her being murdered outside and none of them called the police. It doesn't have to be murder. Something that's morally wrong, we need to take action on.

While an earlier section focused on how the participants grappled with their own tendency toward denial and their expressed need to counteract this tendency, *Taking Action Because You Have To* is the other side of that tendency, the conviction that once you are aware you can't completely shut it out. Taking action in this case is a way of coping with one's awareness. RS links directly to the question of morality in

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reflecting on whether or not to take action, a comment that resonates with the other participant reflections on this choice.

In speaking about what actions they take in response to climate change, the participants answers have implications within multiple spheres. Connecting with other people can mean finding comfort and it can also mean finding solidarity in action. Being in nature can provide solace, which can also be a reflection of a profound connection to the natural world. Taking action because you have to can involve big and small acts with varying levels of influence. In either case, it is a result of awareness, understanding the magnitude of the problem and proceeding with that knowledge.

<u>**Finding Internal and External Support**</u>

This first phase of analysis has focused on how participants have navigated their awareness of and responses to the climate crisis through their feelings, thoughts, and actions. In focusing on these three areas of response, participants discussed a range of difficult emotions they experience, as well as how they manage those feelings. In particular, a process of "moving toward the middle" was identified as a significant aspect of shifts that have taken place in their emotional realities. In articulating their emotional responses, the dimension of time was engaged by several participants as they contemplated futures with both trepidation and a sense of possibility and expressed an appreciation for evolutionary processes that extend into geological deep time.

Grappling with denial, how it manifests on an individual and societal level, was central to their reflections in relation to thinking about climate change, as well

as invoking an analysis of how capitalism and consumerism are intricately connected to the climate crisis, although there was variation in their summations of whether the individual or the systemic factor is at the root of the issue. Participant responses in the realm of thinking also included analyses of the gaps they have observed and experienced within the college environment in supporting students emotionally, academically, and professionally within the realities of present and future climate disruption.

In reflecting on actions in response to climate change, participants highlighted connecting with other people. This was expressed both as an awareness of connecting with people on an individual level, that is, connecting to alleviate anxiety, and also on a community level, experiencing a sense of togetherness when one's values and actions are aligned with others. Being in the natural world also provided a valued experience of connection for solace, perspective and guidance. The descriptions of the experience with the natural world indicated a relationship that reflects not only a preference for where they want to be; it also helps them have an internal sense of connection with themselves.

These reflections on feeling, thinking, and doing can be understood as ways in which the participants find and create internal and external sources of support as they make meaning in their lives in relationship to the climate crisis (see Appendix H for a diagram of this phase of analysis). While discussing their experiences in college comprised one section in this chapter, the overall frame of finding internal and external sources of support can also be understood in relation to the support participants feel they do and don't find in college. The context of college is not

separate from the ideas discussed throughout this chapter, but is intrinsic to them. It intersects with whether the participants find support for their emotional responses to climate change, the manifestations of societal denial and social isolation they discussed, and the broader economic and political contexts they analyze. Chapter Six will return to the role of higher education in responding to the climate crisis, in particular within its core functions of teaching and learning.

The final core theme within *Doing*, *Taking Action Because You Have To*, is an appropriate place to land at the closure of reflecting on these emotions, thoughts and actions. As revealed in this chapter, being awake to the realities of climate change, and responding through forms of feeling, thinking, and doing, is not an orientation that invites a resting point. It is not in the nature of this unfathomable reality for there to be a resting point. There are always shifts in emotions and shifts in managing emotions; evolving ways of making sense scientifically, politically, economically, morally, and spiritually of the many implications of planetary climate disruption; and, different ways of taking care of oneself within one's awareness. Thus, one project of young adults in navigating their awareness and response is finding their place in this swirl. Yet, in finding and re-finding that shifting place, participants emphasized at least one constant: the insufficiency of inaction even within the realities of the uncertainties. One question this raises is whether within this swirl of adjustments there is a balance point to be found between looking at what one sees as the facts about a probable future and, at the same time, staying focused on working toward what might be possible. The tension participants experience between different visions of the future, the relationship between what is

"probable" and what is perceived as "possible," foreshadows the core conceptual

category, *Being at Home on the Planet*, to be discussed in the next chapter.

CHAPTER 5

INTERCONNECTION

<u>**Introduction**</u>

As participants discussed how they feel, think and act in response climate change, their reflections indicated a common thread that runs throughout the interviews. This thread is the idea of interconnection, a conceptualization that centers interrelationship and reciprocity as essential features of the perceived world. In this sense, interconnection is an ontological stance, asserting that the various elements and parts of what we perceive as reality are most accurately understood as an integrated whole. For example, as BS discussed and read aloud from her ecological artifact, the book *The Spell of the Sensuous*, by David Abram, she asserted, "we need to remember the intricately complex and unbelievable way in which all life, down to the atom, depends on and interacts with everything else." When NL chose to step back and summarize her views she began with: "It all comes down to interconnection."

The core idea of interconnection introduces a new area of analysis and presents a different lens through which to view previous themes. In this chapter I will explore the idea of interconnection through three domains: self, human-to-human, and human to other-than-human. Within each area, ideas that were addressed in the first phase of analysis take on a new level of meaning and significance in light of this ontological stance. This exploration of manifestations of an interconnected view prevalent within the data will inform and lead to the core

category, *Being at Home on the Planet* and the corresponding conceptualization of a proposed model of identity, *Planetary Identity*.

Interconnected Self

This initial segment of analysis investigates how ideas related to interconnection manifest in the participants' conceptualizations of the self. The first section of *Navigating Awareness and Response* focused on the emotional responses that the participants described in relation to their awareness of climate change. In that section, the emphasis was on the emotional states participants described themselves experiencing in response to climate change; the dynamic character of those emotions as they fluctuated over both short and more extended periods of time; and, the ways in which the participants responded to and managed their emotional responses. In that initial exploration the focus was on the experience of the emotions themselves.

This analysis also begins with emotions, but from a different vantage point. Throughout the interviews, while participants did identify their own emotional states, as described in the *Feeling* section, they also frequently took a step back from the experience of emotions in order to reflect on the role of emotions in responding to climate change, on both an individual and societal level. Participants' assertion of the essential role of the emotions in responding to climate change demonstrates a view of the self that recognizes a full integration of the emotions as a source of information and knowledge. Furthermore, the purpose of feeling the feelings is not to simply feel them, but to be moved to action, introducing a relationship between

emotions and actions explored by the participants. I have named this aspect of self *Emotional Knowledge*.

Additionally, two other areas emerged as useful in understanding the self within the context of an interconnected orientation. First, in reflecting on the topics of the interview, some participants integrated into their answers various aspects of their creative self-expression, presenting these expressions as one way in which they understand and experience themselves. Second, while taking action was emphasized as a critical step in one's range of responses to the climate crisis, its counterpoint, stillness, was also emphasized in several instances, described by participants in several contexts such as meditation and connecting to nature. These three areas, *Emotional Knowledge*, *Creative Expression* and *Stillness* comprise this first segment of exploring ideas of interconnection as evidenced in participants' reflections.

Emotional knowledge

As participants identified and expressed their emotions in response to ecological threats to the planet, some coupled this with an emphasis on the important role that emotions play in first grappling with the realities of these threats and then subsequently taking action. The participants acknowledged that the emotions that come up are extremely difficult to let in and they expressed an understanding of the resistance that will rise up to protect oneself from those emotions. However, they also asserted that if people do not feel the emotions that are inevitably connected to one's awareness of threats to the life systems of the planet, whether the focus of awareness is on threats to human existence, the

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existence of fellow species, or the biosphere itself, then there is a fundamental

disconnect not only from the severity of the threat but a disconnect within the self

as well.

A theme that developed in their articulation of this necessity is the role that

an aversion to discomfort plays in blocking feeling and ultimately action. KM chose

the image of *The Scream*, Image #46, not only to discuss the extent to which people

feel out of control in relation to climate change, as NW and NL related in the

Thinking section, but to emphasize the importance of feeling that anxiety, as

unpleasant as that is.

> I picked this one out because it is a great visualization of anxiety and feeling
> like things are out of your control. But it's important to feel that anxiety and
> that worry and not shove it down as not necessary, because those are what's
> fueling me to the decisions I'm making.

In this case, KM is reflecting on *The Scream* to explore a relationship she sees

between feeling and action. In her characterization, feelings are a source of

information. If they are blocked off, we are unable to respond appropriately to the

level that the situation requires. Denying feelings, therefore, is part of how denial

functions and leads to inaction.

KM continued her comments with a discussion of the role of comfort and

discomfort in responding appropriately to the realities that climate change

portends. In this case she referenced the discomfort of experiencing challenging

emotions. "It's beneficial for people to acknowledge their discomforts instead of

acting like they don't exist, because that's the only way they're going to change." BS,

too, frames a key question for her about taking action on climate change in relation

to the power of comfort or lack of comfort in people's lives. She asks: "How do you

communicate it to people who are not already willing to sacrifice their comfort, like

emotional and mental comfort, for the earth? Nobody wants to sign up for that." She

chose Image #53 to aid her in expressing the role of emotions in connecting with the

realities of climate change. In Image #53 a woman stands in profile, head tilted back,

mouth open wide, eyes closed. A flock of swallows is flying from her chest.

> It feels very much like this is a primal scream that a lot of people need to
> have to just be able to tap into repressed feelings, thoughts, and experiences
> about the destruction of many different kinds of home and life. But the fact
> that they are swallows says there is inherent grace there. The process can be
> painful, but it's bringing beautiful things into the world.

In discussing the role of comfort and discomfort it is clear that both of the

above quotes are in reference to individuals and communities who are not bearing

the immediate impacts of climate change. The individuals and communities they

invoke are not aware of a threat to their own physical survival. The threat, at this

point, is to their emotional comfort. As the analysis develops in the next section,

Interconnected Human to Human, the broader issues of environmental justice will

emerge in the participants' comments. In that context, current threats to climate-

vulnerable communities will become more pronounced, connecting to broader

issues of race, gender, class, colonialism and geopolitical relationships. These

broader underlying issues of justice, however, begin at the individual level, with

something as seemingly benign as one's sense of comfort or discomfort and the

willingness to push against those boundaries. KM concludes her discussion of the

painting *The Scream* by reflecting that she wants to help people "funnel that anxiety

to a place of productivity and motivation," and "use that negative feeling as fuel,

rather than letting it stew." In KM's and BS's analyses, it is important to face up to the imperative of feeling discomfort if the worst scenarios of climate change forecasts can be interrupted.

In addition to discussing how people either avoid or allow discomfort, some participants also were explicit about the function of emotional vulnerability in being able to respond effectively to the challenges of the climate crisis. As referenced earlier, BS spoke about her training with "The Work That Reconnects," developed by Joanna Macy, and the role of emotional vulnerability in addressing the realities of climate change and other threats.

> It's so important to feel your pain for the earth and be vulnerable with it. This vulnerability practice is something I want other people to feel with me. I want to say to people, 'Hey, you're going to have to feel some hard, bad, sad, angry things.

Part of what BS emphasizes is the idea that as humans we experience the suffering of the planet and life forms around us, even on an unconscious level. If we do not admit that pain and recognize it for what it is, then we are in a sense cut off not only from the world external to us but we are cut off from ourselves as well. Therefore, there is a connection between our internal and external realities.

> If everything around me is suffering, that affects people so much on such a deep existential level. The inability or the unwillingness to feel that pain is, I think, really stunting a lot of work that could be done for the earth.

JF expressed a similar conviction. "I don't think we're going to get anywhere without really feeling things. Without really feeling the pain, the loss, the sense of despair." To express the need for vulnerability, he discussed Image #44, the wire sculpture of the back-to-back human figures and the children inside touching.

Referring first to his interpretation of the back-to-back figures, he stated: "There is a lot of societal wounding that breaks down to deep inner wounding that is like mourning, the sense of grief that collectively needs to take place." He then shifted to the children inside: "How do we bear witness to this child in us that longs to be cared for and to be safe, that longs to be nourished? Once that gets nourished, (there's a) preparedness to move and be less fragmented." Again, as with KM's and BS's analyses, attending to one's response to climate change on a feeling level can lead to a level of action that is anchored in a more integrated place from within.

Creative Expression

The idea of interconnection and how it manifests within the self was also conveyed at the moments in which participants spoke about the role of artistic expression in their lives. OO's concern about waste extended to her practice of re-purposing books as material for making art, using them as paper for drawing instead of buying paper. Characterizing this as a "de-stressor" for her, she brought in several examples as her ecological artifact. For NL, her discussion of creative expression was directly linked to her struggle with her feelings about climate change. During a time when she was feeling most preoccupied with climate change, she decided to take two different classes that allowed her to channel her feelings into art. One of the courses connected her to the artists she talked about in her profile; the other was a creative writing course focused on climate change. She explained: "Now I'm not going to seize up every time I think about it. I can really explore it. I'm actually writing about it and to me it's really interesting." She spoke about an article she had read where the author asked, "What do we do now that

climate change is upon us?" She was impressed with his answer: "Love people, make art, and listen to music." Hearing that, she responded, "You know what, that's kind of nice. I do want to make more art."

KM and LD both chose Image #27 to talk about the importance of dancing as part of who they are. KM chose the picture as one of her *Feeling* pictures, saying, "This one I picked because it makes me feel happy and free, like when I'm dancing. But I don't really think much when I look at this, because thinking can override feelings." LD spoke about the release of dancing after being in school or work all day:

> Sometimes I get home from a day of work or school and I just feel so rigid, because I've been in my mind space and just holding my body so that my mind can keep doing the work it needs to do. Dancing to me is like almost a step beyond playing music, because it's completely free of any tools. However your body's energy wants to go, that's where it can go, if you really let it.

Both LD and KM also included music in their modes of expression. KM brought in her ukulele as her spiritual artifact, and spoke about how playing her ukulele under a tree allows her to "hear the messages that nature is sending me, and be mindful of what's around me." LD brought in a small set of speakers to the interview as his spiritual object. He spoke about playing music in relation to the challenge of communicating with people about ecological crises.

> I can convince people to come to my side of things only so much. Music is the most tangible way that I have to confront an ecological crisis that seems very comprehensive, to have a tool in my hand or my voice that I can be using.

The way that the participants speak about these forms of expression indicates the ways that the arts allow them to access another dimension of their identity. In some cases participants see these art forms as their most truthful form of self expression.

Stillness

Another source from within that was described as a way to fully connect with

oneself was the simple act of being still, often through the practice of meditation. JB,

who began meditating while in high school, talked about the man meditating on the

mountain, Image #2, in relation to the pressures of climate change.

> The whole idea is that everything is in flux and everything is changing and you're going to have this (he points to the meditator) and then you'll not have it the next moment. But the one thing that you can always keep coming back to is your breath and your body. So I guess whether climate change is happening or not, this guy is at peace with himself. He's not thinking the world's going to end in twenty-three years.

LD also emphasized stillness as having value in relation to responding to climate

change.

> I saw some pictures in the binder of people looking really, really sad. It's not that I'm not OK with experiencing that, but I like to meditate on why I'm experiencing what I'm experiencing. And oftentimes that requires times of stillness and times for reverence for just being alive.

LD used Image #21, a painting of a woman with bowed head and an image of a bird

above her head, to further explore his interior world. In contemplating the picture,

he spoke about how she looked as though she was "between worlds." He went on to

speak about the evolution of his spiritual self-understanding and how this relates to

stillness and action:

> I grew up considering myself an atheist, but I've found recently my emotional response to a lot of things has been more like, "Okay, I'm just going to surrender right now and sit with how I'm feeling and maybe just speak to my own spirit, or to the universe." So I think stillness is important, as well as action.

He continued to explain how he integrates inaction with taking action, making

reference to Buddhist philosophy and practice.

> What you're not doing is pretty important as well. (It's about) trusting the earth to be taking care of things. Doing your work, planting the seeds, being content with experiences and not being like, "Oh my god, if I don't do this, things aren't going to be okay."

NN made the point that often people have a misunderstanding about

meditation. Referring to Image #2, he commented, "I sometimes have issues with

how meditating is depicted. You don't sit on top of a hill looking at a dying sunset

with the skies LSD-laced. You sit down and it's not that amazing all the time." Again,

similarly to the other participants, NN shifted to the action that comes out of

stillness. "Meditating provides me with this incredible clarity about the world and

with an acceptance of the world the way it is, rather than the way I want it to be. To

me, that is living."

JF compared two pictures to talk about stillness and joy as resources to

access in difficult times. He took obvious pleasure in looking at Image #3 of a group

of children laughing together: "Oh man, these children are in such deep joy, just

bubbling and giddy. I can't imagine what they'd be looking at, but how do we feel

that type of joy and excitement?" He then reflected on the picture next to it on the

table, Image #7, of the spider web with dew. "It's like Indra's web. One part of the

web reflects the whole. It feels like a cliché, but interconnectedness, that's a

beautiful concept." However, he emphasized that rather than think about the

concept of interconnection intellectually, he was drawn to "a more beautiful felt

sense" of the concept. He suggested that experiencing this felt sense of

interconnection, represented through the spider web, and also through the children laughing, starts to remedy the idea of individualism in our culture that he sees as problematic. He then poses the question: "How do I feel all of that and care about it? How do I notice everything that comes up and care about it all?" He answers the question himself: "I need stillness to be able to do that. Without that I'm not able to get to this joy," pointing back to the picture of the children. "I think we live in times where we need to privilege joy, not as some defense mechanism against despair, but as an earnest recognition of the way things are."

Making room for emotions and integrating them with other dimensions of the self; creative self-expression through the arts; the expansiveness of the self that can result from sitting in stillness: these are three of the ways that participants put words on their experiences of having and nurturing an internal world. The richness and health of that internal world provides a reservoir for experiencing themselves most fully, and it is out of this experience of the self that grounded external action can take place.

Interconnected Human-to-Human

The three areas addressed in this section are *Justice*, *Collective Action* and *Social Identities.* In the same way that emotions took on a new level of significance in the context of *Interconnected Self*, this section builds on ideas presented in *Connecting with People* in the *Doing* section of Chapter Four. In that section, the focus was on how connecting with others can address a personal need to find support and then moved into relating "connection" on a micro and macro scale. This section expands further into the macro scale, exploring the core idea of connecting

with other people within the larger context of social justice, collective action, and the role of social identities in relation to the climate crisis.

These are three intertwined topics. In articulating matters of justice within the issue of climate change, participants also grapple with finding their place within a network of identities, perspectives, lived experience, histories, and relationships of power. Therefore, while this discussion of the implications of interconnection within the context of human-to-human relations is divided into three sections, I consider these three areas to be interconnected. Throughout the interviews, participants treated them as both separate and as a whole at various points when they were discussing matters of justice, identity, and action.

Justice

One primary issue of justice raised by several participants is the implication of extreme economic disparities in the context of the challenges brought on by the climate crisis. The issue of emotional discomfort was raised in the *Emotional Knowledge* section, and was focused on individuals or communities that are not necessarily facing, yet, physical harm. In contrast, the effects of climate disruption discussed by participants in this section are those that directly affect communities' prospects for physical survival.

In various ways, participants pointed out what they considered to be likely links between economic resources and survival. NL reflected on the discrepancy she sees there: "Obviously I can't see into the future, but we know that people who are worse off financially are going to be faced with the brunt of the worst." She continued to elaborate on the gradations of threats that will emerge in the coming

decades for different communities, "depending on how drastic (the crisis) is," but stated "the millionaires are probably already generating escape routes." While at certain points in the interview AL reflected on future consequences of climate change, she also emphasized that the effects are not limited to the future.

> We think about the future, but it's already happening. The rich are dying less because of climate change-related disasters than the non-rich people. They're already having better lives because of their money. They always have, but now it's related to climate change.

It was in this part of the interview that AL raised the example of a Mad Max reality, referenced earlier in the analysis, in which humans objectify and use other humans. However, as noted before, her point in raising the specter of this depiction is to link it to current realities: "We already have this willingness to use other people for our own benefit." As she had reflected in earlier comments about social isolation, what concerns her in the context of climate change is that "these are coping mechanisms that we've chosen, and I can only imagine us burying ourselves further and further into them."

A repeated context of justice raised by participants was the imbalance of power that exists between countries in the global North and South. BT raised the issue of migration, questioning, as AL did, what the response will be of countries that are in positions of economic power. "What will prove to be a major question for humankind is how we respond to climate migration. More and more parts of the planet are going to be increasingly inhospitable." Like AL, BT raised the possibility of a response that would amplify existing oppressive practices within the context of climate change. He asked, "Will we have reactionary, right wing, authoritative

violence, with borders, and detentions and deportations?" Several participants

reflected on Image #13, the Pacific Islanders holding the sign "We are Not

Drowning, We Are Fighting" to discuss this dynamic. In looking at the photo, BT said

he is "reminded of the importance of recognizing how climate change is already here

and impacting particularly frontline communities and communities in the global

South." The picture reminded BS of another image she had seen during a public

presentation by writer and activist Bill McKibben. "It was just a couple of kids

standing in the street with water up to their knees, holding a sign that says, 'Your

actions affect us. Connect the dots.'" She added: "It struck me so deeply that the

people who are making the most environmental impact are the ones who are going

to feel it last."

In reflecting on the relationship of the global North and South, NN, who is

Nepalese, added nuance to the idea that human activity has affected the health of the

planet.

> When we're talking about climate change and assigning blame, we say people
> are messing up the world. But "people" is a giant category. The means you
> are equating everybody: a person who lives a lavish lifestyle in New York City
> and a poor person in Nepal who's making ends meet are the same thing.

NN also confronted the concept of sustainability within this geopolitical context.

Reflecting on his previous work with local communities as part of a non-

governmental organization in Nepal, he stated: "In that place, the idea of

sustainability doesn't even exist, because they've always been sustainable, they've

grown off the land, the waste just goes back to the land." Like BS, NN redirects the

conversation back to the global North: "You're messing things up there, but all of a

sudden we have to do things to solve this issue. As a Nepalese, I was like, 'No, no, no. Look at yourself." RS also challenged the definition of sustainability, linking systemic oppression within human-to-human relations with the issue of environmental degradation. "My definition of sustainability is more than just protecting the natural environment. I think people are very much connected to that, too." Referencing a recent racial incident that took place on her campus, she added: "That means our campus is not sustainable, because it's not a campus that everyone is able to feel safe and enjoy themselves."

The nuance with which participants addressed matters of justice in relation to climate change varied among the interviews. Yet, to varying degrees, each of the participants raised the issue of the discrepancies that are emerging, and will emerge, in how climate change affects different communities. Some participants contextualized this within an analysis of the geopolitical context, connecting climate disruption to broad issues of oppression along lines of race, class, gender, and within the context of colonialism.

However, in addition to these explicit discussions of climate justice, matters of justice were threaded throughout the conversations, including the points when the specific topic of climate justice was not identified as the context. For example, KM's critique in the *Thinking* section of a consumer-focused society that enables individuals to buy, use, and throw away products without recognizing their own involvement and responsibility within that process, is connected to the systemic inequalities intrinsic to the relationship of the global North and South discussed above. Similarly, the matter that BS, AL, JF and others raised regarding the tendency

to avoid the emotional discomfort of recognizing climate change is itself connected

to broad issues of justice. The connection to justice in both cases is related to the

underlying idea of interconnection that is central to this chapter and which is being

elucidated in this section within the context of human-to-human relations. For it is

within the orientation of interconnection that the dots are connected. The idea of

interconnection makes clear that the choice of whether or not to feel emotional

discomfort around climate change is a privilege connected to unequal power

dynamics on a global level. Disconnect from the products we use, both the

environmental and human impacts, is the result of a cultural construction grounded

in a dualistic worldview where separation is the defining characteristic. Justice,

therefore, is rooted in the perspective of interconnection and is intrinsic to an

alternative worldview in which interconnection is the defining trait. The link

between the core idea interconnection and an integrative worldview will be further

explored in Chapter Six, building on the literature review in Chapter Two.

Collective Action

Underlying the progression of ideas in the *Doing* section of *Navigating*

Awareness and Response, which in part focused on the need to connect with other

people, is another broad category, *Collective Action*. To some extent participants, like

NL, discussed the need to connect with people as a way to alleviate their own sense

of anxiety about the climate crisis. However, as RS and BS's quotes demonstrate in

Connecting with Other People, there is also a need to connect with other people as a

form of sustenance for taking action. BS stated, "this is not a solo journey, this is a

world journey, and there are other people out there who can get on my level in

doing that with me." RS ends her statement about the importance of connection with, "We know that this work is meaningful and we're doing it together." The impulse for maintaining sustainable habits or focusing on the world close to oneself, also discussed in the *Doing* section, finds meaning not in individual actions, but in how these actions derive their meaning and purpose as they contribute to the collective whole. NL, JB and OO are willing to stand out as unusual in their sustainable behaviors because they are trying to live according to the principle that their actions represent the whole, and possibly influencing the whole begins with a single person. AL expressed her feeling of care for the children in Image #1 not just for the individual children, but because "it drives all of (her) other long term goals," making the point that throughout history there have always been people "who need help from other people." Each of these expressions of connecting with other people is nested within a broader context of concern and action.

Several participants spoke directly about the need for collective action in addressing climate change. As discussed previously in relation to the critiques of capitalism in relation to climate change, MM began with Image #23, the cartoon drawing of the corporate boss counting money and sitting on top of people. He continued with two other images. One was Image #13, the photograph of Pacific Islanders engaged in climate resistance, holding the sign "We Are Not Drowning, We Are Fighting." The second picture was Image #51, a series of drawings depicting two donkeys, at first pulling in opposite directions and then eventually joining together to reach the food. He talked about all three pictures in relation to each other.

This one (Image #13) is how I see us actually able to fight and eventually defeat and work against this little guy over there (Image #23). For it to be successful it has to be all of us working together, all of us fighting for the same common cause. And this one (Image #51) is how to work together. If you keep fighting each other to achieve the same goal, nothing is going to happen.

MM goes on to talk about how thinking in this way keeps him going, particularly in aspects of activism that he finds emotionally draining or uninspiring.

When I'm tired and exhausted and in long organizing meetings or meetings with administrators, sometimes I feel like I hate being in this place. But I know what it's doing, and what it's moving me and the rest of society closer towards, and that makes me feel fulfilled, which is why I keep putting myself in those situations.

In addition to protest, OO raised the act of voting as another manifestation of collective action, speaking about her frustration with her peers' attitudes about participation.

I hear all the time my friends saying, 'Voting's not my thing.' And I'm like, 'Voting isn't anyone's thing. Nobody *loves* voting. It's not a passion; it's not a hobby. It's our responsibility; it's what we should be doing. It's our duty. And if that's the attitude that you're going to have, nothing is going to change.

OO's insistence about the importance of voting, and her critique of her peers who treat it as optional, represents the same principle that motivates her individual sustainable practices referred to above. Within the framework of interconnection the individual is not a separate entity, but part of a larger whole.

BT looked to the natural world for guidance on this matter as he reflected on Image #7, the spider web with dew.

This web of water molecules is a pretty amazing image. This makes me think what it would mean for us as people to be really connected. Look at its ability to stay connected when it's facing all sorts of pressures. Water is very good at that. How could we learn from water to be connected in these kinds of ways?

In this quote, BT uses an example from nature to illustrate what he thinks could take place within the human community. He sees water as resilient and while there are separate droplets, they are connected. The quote is one example of a way in which the participants looked to the natural world for guidance in their visions of possibility for the human community, a topic that will be addressed as part of the core category *Being at Home on the Planet*.

Social Identities

Appendix C provides an overview of the demographics of the participants, documented in optional questions within the pre-interview questionnaire that each participant completed. In addition to that documentation, participants were also invited to reflect on their social identities within the context of the interview. The nature of the relationship between their social identities and the topic of climate change varied. Sometimes when they discussed an identity, they either did not see any correlation to their responses to climate change when asked, or did not volunteer a conceptual link. At other times participants stated a direct correlation between their reflections about their identities and the topic of climate change.

Therefore, while the participants were at various stages of understanding how power functions in relationship to identity, and exhibited varying levels of sophistication in understanding the context of systemic oppression, there was a common practice of looking at their own particular identities and beginning the work of translating what they are learning about themselves onto a bigger societal stage. In some cases their experiences of crossing the boundaries of societal norms, and therefore seeing societal norms from the outside, not only enabled them to

come to a better understanding of who they want to be; it also contributed to an outlook that allows for and values multiple ways of being in the world.

OO, who grew up with two brothers, spoke about feeling silenced as a young girl in her family. "For so long when I was young I was kind of silenced by my parents. I really learned to make my voice heard and make my words count." She talked about how this influenced her views about the categories of gender defined by society. Her experience as a female, where there was dissonance between her outspoken, morally-driven nature and the silencing she experienced, influenced her to question the normative binary of male and female characteristics. She recognized that her insistence on expressing herself fully enabled her to appreciate this need in others. "I understand that I want to be able to express myself how I want to, so everyone else should have that right, too." This also enabled her to reflect on her identity as heterosexual and able-bodied, and to appreciate the aspects of those identities she couldn't understand from firsthand experience.

As a transsexual male, NW also challenged a binary conceptualization of gender identity.

> I can't see things from the perspective of biological women or who presents as that. I can't see the perspective through biological male, even though I have some of that experience. So it's a whole different perspective I'm seeing through.

NW described his process of searching for the type of male identity that felt right to him after transitioning. "How do men act? I was trying to fit myself into this box." This process of self-discovery involved aligning his values with how he wanted to be

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a man, finally telling himself, "You can be your own man, your own person." He

added, "I'm still learning to express myself fully, not just one side."

AL's father is Russian and her mother is Korean. As a child she spent time in

both the Soviet Union and Korea, and then in Australia for much of her childhood.

She attributes this background to her broadened perspective of what is possible in

society.

> It does help me to almost remove myself from American and Western culture
> a little bit, and see it for what it is. I'm able to see things that other people are
> blind to because they grew up like that their whole lives and don't know that
> you could live differently.

MM spoke about decisions he gradually made in college related to his identity as a

Muslim. Reflecting on the deeper meaning that being in the woods and hiking has

for him, he would sometimes think that he was experiencing something that for him

was religious while it wasn't for others.

> For a while people didn't know I was I was Muslim because I was introducing
> myself with my nickname and then people would be like, "Oh I didn't know
> you're a Muslim." So it's kind of an identity I'm trying to take on by calling
> myself (by my full name). While (my nickname) is very much something that
> I still connect to my heart.

NL identifies as Half-North African American. Early in college she tried bring the

issue of climate change to the attention of students in the Arab American Student

Association at her college – a geographical area she recognized will be hard hit – and

was surprised by the resistance she found to even beginning to broach the topic. In

the *Analyzing the Context of College* section, NL described the pressures she

experienced to prepare academically in college for a life that seemed deceptively

predictable in the context of climate change. This description in large part reflected

not only what she saw as the college's expectations, but her father's as well. As an Arab American who moved to the United States as an adult, he had fairly delineated, culturally related definitions of professional success. Therefore, like all students, NL brings a particular array of identities and meanings to her experience of grappling with the role of climate change in her life, particularly within the context of college.

All of these stories demonstrate ways in which identity is not static but rather is a process of transformation. The experience of challenging a limiting social identity, transitioning to a new identity, and being rooted in multiple national and cultural identities opens up possibilities and creates limits. In both OO and NW's stories, there is a process of coming to full expression of what they understand as their selfhood, pressing against the constraints of societal norms. In particular, this involved being able to see through and around a binary structure as they experienced their social identities. This harkens back to the analysis in the literature review in which scholars identified a collection of hierarchical dualisms as the spine of the Western worldview. OO and NW's process of exploring their social identities involved seeing that binary and counteracting it in constructing their own understandings of who they are. AL believes that growing up within multiple cultural contexts gives her perspective on cultural norms that others might see as givens. MM knows that hiking has a religious meaning for him and made deliberate decisions in the use of his formal and informal names to make that aspect of his identity more visible. NL did not succeed in connecting meaningfully with others when she tried to connect her identity as Half-North African American to her preoccupation with climate change, and also experienced particular family

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pressures to succeed professionally, even when she was filled with uncertainties about the future.

Here we can see the idea of interconnection in play. These young people are exploring their identities within a broader cultural context, one that can be limiting in its conceptualizations of what is acceptable or possible. In that process they are coming up against and sometimes stepping outside of their cultural context in order to come to a better understanding of themselves. In turn, that experience fosters an appreciation of difference and often a tolerance for others to defy cultural norms as well.

More directly related to the issue of climate change, BT raised the issue of grappling with privilege across multiple aspects of his identity and linked this to the issue of environmental and climate justice. These raised questions for him not only in relation to the problems themselves but related to his role in working for change. He asked, "Where is my place in all of that? How am I situated and what is my experience of these things?" This question can serve as a common one for the participants as they grapple with their various privileged identities. One theme that emerged as participants discussed their privilege was the desire to give back to society, an impulse rooted in reflecting on their own identities. LD spoke about his privilege as a white, upper middle-class male: "I've had a lot of thoughts about my privilege. I don't feel like I need to give everything away, but I feel like I need to give what I can." BT also pondered the choices presented by class privilege. He pointed out the ways in which colleges emphasize an erasure of class, while still maintaining power relationships. Since he had finished college he had been trying to think more

directly about class and his own identity and role in relation to class privilege. In this context he discussed the organization *Resource Generation* that helps "young, wealthy people to shift money and power to frontline communities," and in that sense to provide "reparation to historical harm." In contrast to the function of class as he saw it within the higher education context, he viewed *Resource Generation's* work as "leveraging class privilege instead of erasing it."

From a different perspective of social identity, MM also spoke about giving back, in this case as part of his religious identity as a Muslim. In describing the meaning of the spiritual artifact he brought in, the dhikr beads described in his profile, he explained: "A portion of Islam is about giving back to the community." For MM, his religious identity and his identity as someone who works for environmental sustainability are both related and distinct. "Not directly through my religion, but side by side, I found that the work I can do on environmental sustainability can be very religious work for me."

NN and JB spoke about their identities as heterosexual and male, coming from Buddhist/Nepalese and Jewish/North American contexts, respectively. JB commented that, "I'm in the category that's gotten the longer end of the stick," and spoke about how grappling with these identities is part of what led to his interest in spiritual matters. "I hit a couple of existential walls in high school." As a high school student from a middleclass community, he recognized that most if not all of his material needs were met, but then found he was wondering why he was "disgruntled and grumpy." "It's almost like my awareness of my privilege got me

into spiritual stuff." This prompted him to begin practicing meditation and to explore training in non-violent communication strategies.

NN, as an upper middle-class, heterosexual male in Nepal, talked about grappling with the assignments of feminine and masculine qualities, "softness, tenderness, gentleness and compassion versus the strong, brusque, war-like, Spartan thing." Similar and yet different from NW, who transitioned from female to male, NN talked about how finding his own identity within these categories required "a lot of unlearning." This comment depicts in different terms a similar process of defying a binary construction. For NN, who identifies as a South Asian upper caste middle class male, counteracting cultural norms required "unlearning" definitions of masculinity. NN connected this process of redefinition to his critical understanding of environmental issues within a cultural and geopolitical context. As he discussed in *Connecting with Other People*, focusing on a smaller sphere made him examine himself and the ethics of his interpersonal relationships more acutely. It was this context that harbored his reexamination of his gender identity.

As with the other aspects of social identity, participants' awareness and articulation of the context of race, while present in many interviews, varied in its depth of analysis. Seven participants indicated social identities as either other than White or "mixed." I've described some of the reflections they shared of navigating their racial, ethnic, religious and national identities. Their stories depict a particular version of insider outsider status based on race, ethnicity, religion, and nationality. In this final section on social identities, I will focus on participants who identified as

White and look at some of the issues they raised regarding the broader cultural context of climate change.

JB introduced the topic by stating: "Well, there's the whole white male thing. I'm probably one of the most privileged people in the most privileged country in the world." As a result, he said he has to "watch out for that," by which he meant, "I've got to be careful about telling other people how they should live their lives because I lack perspective that other people might have." He noted that part of the antidote is learning how to listen. NW had become more aware of the concept of white privilege since coming to college. When interviewed he said he was still in an early stage of grasping the historical context of Whiteness and "where this has stemmed from." He added: "White people have hurt all sorts of things, both the environment and people. We've colonized everywhere, trying to rule over other people as if they were a different species." He talked about enjoying being in college and hearing other people's perspectives on this, but was grappling with how to acknowledge White privilege and separate himself from it at the same time.

BT posed this question somewhat differently: "As someone who is White on colonized land, what I've been reflecting on is how do I work with White people to transform our histories of violence?" JF focused attention on this question in reflecting on his political artifact, an image of the American flag as redesigned by Mark Twain positioning it upside down. JF first contextualized Whiteness within the binary construction that has been a theme throughout this section. "Whiteness is this whole cosmology that's built around a sense of self that relies on the other. I am this because you are that." He keeps the upside down flag as a reminder of "the state

of turmoil" and as a way of "acknowledging all of the things that created the substantial amount of national wealth, which allowed this country to become the world power it is today." He adds:

> I wouldn't say this to a broader audience because I think it can be wildly misinterpreted and doesn't create much of a bridge, which is what I really want to do. But whiteness is a death culture and it's killing everything and everyone.

He went on to ponder the question also raised by JB, NW and BT: "How do I hold that and not hate it? How do I hold it and not hate myself? Because I exist today, and my family has wealth, because so much death took place." One reason JF keeps the flag close by is to remind himself of the "work of White men, but also just anyone who's White, in resistance and protest" as another reference point "acknowledging always where I come from."

This section elaborated further on the implications of an interconnected orientation, focusing on the realm of human-to-human relations. The three areas explored to illuminate this idea were *Justice*, *Collective Action*, and *Social Identities*. In this section we see how ideas that were explored in the first phase of analysis take on a more expansive meaning with the lens of interconnection. Being able to avoid uncomfortable feelings about the threats of climate change while living in a global North context is directly related to issues of justice related to physical and cultural survival in the broader geopolitical context. Connecting to people, discussed in the *Doing* section, is the seed of collective action. And, as the participants discussed in the section above, social identities are connected to systemic issues of privilege, oppression, and power, in all cases, including climate change.

Interconnected Human to Other-Than-Human

In the same way that the categories of emotions and connecting with people are brought to a new level of understanding in the context of interconnection, there are two levels on which the participants' views of the natural world are discussed as well. The *Being with Nature* section of *Doing* focused on the meaning that participants derive from their connections to the natural world. That section covered the ways in which participants viewed nature as providing solace, perspective, and a source of guidance. In this third aspect of an interconnected perspective, focusing on the relationship of the human to the other-than-human world, while there is still a focus on the human-nature relationship, the emphasis has shifted from a personal to a philosophical reflection on the nature of that relationship.

Human as Part of the Earth

One key idea is a fundamental shift in understanding the human being not as separate from other life forms but a creature that has evolved through its essential relationship within the constellation of life forms on the planet. BS explained the significance of this concept for her as she discussed her ecological artifact, Abram's book *The Spell of the Sensuous*. "(The book) influenced how I look at humans as this species completely interconnected with the rest of the universe…We're dependent on millions of years of growth with the rest of the world." NL also expressed this view of humans as an integral part of the life on the planet. In her discussion of plant-based eating, she emphasized the synergy that exists between humans and the rest of life. It taught her that "what's good for us is also good for the planet," a

statement that reveals a view of humans as an intrinsic part of life on the planet. KM expressed this perception by putting it in terms of a recurrent theme in her comments, the over emphasis on thinking as part of human identity. "We've become such thinking organisms that we live in a whole other thought reality instead of living in the physical world where we are just organisms." Each of these examples demonstrates a view of the human as an integral part of life systems on the planet.

Insignificance of the Human

Following this key idea - the intimate connection between the human and all life - is the matter of the shift in status. Often in the literature that discusses the relationship of the human to the other-than-human world, the term "more-than-human" is used to steer away from a human-centric construct. If we understand the human as one part of a larger whole, then the human must also take its place alongside other creatures. Being "just organisms," as KM states in the previous section, then "takes us down from this pedestal," as BS suggests, "that we put ourselves on as completely separate from nature."

This raises the second key point that emerged from participants' reflections, the insignificance of the human and the introduction of humility as an appropriate response. Looking at Image #35 of the galaxy, NN mused, "I don't think we think about our insignificance enough. And I think that matters because the self-importance goes away." He continued with this line of reflection when he spoke about another image he chose, Image #57, showing a boy kneeling and reading to a crouching elephant before him. "He's on his knees. He's on the same level; they are both on their knees. There's a conversation that's happening. That to me is humility,

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some reverence of relationship." NN's observations about the image describe a different kind of relationship between the human and other forms of life. He points out that they are on the same level and, in fact, both are on their knees, a mutual position of supplication. However, as NN points out, understanding the human in proportion to its place in the evolutionary expanse is not a diminishment, but a discovery of a different kind of significance, one that has meaning within relationship.

> By saying that I'm nothing in this world, when I stand in front of a mountain, I'm nothing. A strong wind could kill me. On a peak I could fall. (Knowing) how frail my existence is has allowed me to find my significance in a different way.

This position of humility also extends to the status of the human as the sole holder of knowledge. KM raises the point: "There is a reality so much larger than our understanding of what is the truth, that knows what it is doing and has been able to perpetuate its existence much longer than we have." Like the "conversation" that NN sees between the boy and the elephant, KM believes that a position of humility creates the possibility of paying attention to other sources of knowledge. "Swallowing our pride a little bit and accepting that we know less than we think we do, allows people to listen more to what's around them."

Animism and Kinship

Listening and conversation are key elements of animism and kinship, the third feature of participants' reflections on the human to other-than-human relationship. Only one participant, JF, referred to the idea of animism directly, commenting that he "loved the language of animacy, of things being alive." However,

on numerous occasions participants allowed for the idea that we are surrounded by openings for connection and communication with the other-than-human world. KM pointed out that while she is "very interested in interspecies communication and the way that plants and fungi communicate," this is something that is available to humans as well. "I feel like I've heard messages from the world around us. Not in a language way, but a feeling way. I feel like humans are experiencing the communication all the time, but we are shutting ourselves off from it." BS's artifact of meaning, featured in her profile, was the smooth stone she brought back from Montserrat in Spain where she regularly visits with family. As described in the profile, she described how the gigantic stone formations on the mountain seem like benevolent beings. "Those beings felt very powerful and present and like guardians. I feel like somebody is watching over me." However, BS extended the feeling beyond her personal experience to suggest a consciousness that surrounds what we think of as solitary human consciousness. "There is a lot of life on this planet. And all of life is trying to stay alive and to survive. It's not just humans who are aware of the changes." In keeping with how she described her relationships to her plants in her profile, AL also described a similar sensitivity to the consciousness of a tree. She had tried to capture her awareness of this consciousness in a poem she wrote and brought in as one of her artifacts. Discussing the idea of her poem, she said: "If you feel the space between your fingers, when your fingers touch each other, think about the spaces in between the tree branches when the breeze rustles all the leaves in a tree. Think about how much feeling that tree has."

The word that was operative for NN in this area of discussion was kinship. The boy kneeling with the elephant "in reverence of relationship," is a form of kinship across species. NN asked why it is okay for him to talk to his dog, but not okay to talk to the wind. He also longed for a deeper link of communication across species, a skill he believes humans once knew. "I want to feel a kinship with the more-than-human world. I feel hopeful and in some ways nostalgic, because I think we used to talk to animals. Maybe we can get there."

JF, too, raised the idea of kinship as representing a paradigm new to and different from Western culture, but foundational to indigenous ways. As described in the section on White identity, in recent years JF had developed lasting friendships while living, protesting, and working with indigenous communities. As a part of that experience he had engaged in extended and serious questioning of White culture and his own identities and responsibilities within that context. The deterioration of the porcupine carcass that he witnessed, what he described as a death meditation as part of his three-month retreat, and then received and cleaned signifies this different understanding of relationship between humans and other creatures.

As described in his profile that featured the porcupine skull as one of his artifacts, JF spoke about learning the particular powers attributed to Porcupine in indigenous knowledge and spirituality. His reflections on the power of Porcupine became a thread through much of the interview. The story of his relationship with the porcupine, however, is the backdrop for his thoughts about the human to other-than-human relationship. In his on-going learning and connection to the ways of indigenous cultures, he had come to view animals as relatives.

Part of my fascination and love for being with these animals is because these are our relatives. And that language mirrors the tens of thousands of years that North American indigenous culture has always had this reference point that we are animals amongst other animals and these are our relatives.

A view of the human as interconnected with the other-than-human world, as explored in the above sections, essentially redefines who the human being is. Within the interconnected view, the human being is an integral part of the earth and evolved with the earth. The interconnected orientation also reduces the status of the human being within the context of an expansive view of planetary life. At the same time it provides a source of connection with the rest of life on the planet through the idea of kinship. To think about the implications of this, BS stepped back from the interview for a moment and tried to put all of her ideas into, as she said, "a snappy couple of lines:"

I believe that an extremely important part of living as a human on planet earth is to be a part of this web of life and recognize our role within the whole. The presence of profit and emphasis on profit and pressure to succeed in a way of life that has long ago abandoned interconnection is stunting human growth and human happiness and also destroying the web of life that we are still a part of. Despite us doing our best to forget about it.

NL also connected the lack of an understanding of interconnection on a cultural level with how the ecological crisis is understood as well as misguided attempts to address it. "Everything is so interconnected and that's how things have worked for so long and it's also how we've gotten ourselves into this mess. If you snip a piece over here, you can't just treat that as an individual issue." These three layers of interconnection – self, human-to-human, and human to other-than-human – outline key elements of an integrative worldview, as discussed in Chapter Two. In the final section below, I will introduce and describe the core category, *Being at Home on the*

Planet, and its three dimensions: belonging, responsibility, and possibility.

Interconnection, with its interrelationship of the self, human-to-human, and human

to other-than-human relations, is the defining feature of this core category. The

proposed model, *Planetary Identity*, brings all of these features together. These will

be discussed in the final section below before transitioning to Chapter Six in which

the *Planetary Identity* model will be discussed in relation to three areas: the

conceptualization of the need for an integrative worldview as reviewed in the

literature review; integrative approaches to theorizing college student

development; and, the emergence of sustainability pedagogies that are rooted in an

integrative epistemological paradigm.

Being at Home on the Planet

The young adults in this study who are awake to the existential threats of

climate destabilization make meaning in their lives in this challenging context

through understanding the earth as home. The core category *Being at Home on the*

Planet functions as a vessel of self-understanding that situates the self in an

essential relationship of trust, humility, and compassion with all of life, including

other species, other humans, and with the self. The construct of *Being at Home on*

the Planet also offers something different than finding support and coping with

climate change, which was how the first phase of the analysis was framed. The

orientation of interconnection puts the emphasis on a recognition of wholeness

within the self that mirrors a wholeness that is essential to the life of the planet. To

be at home on the planet anchors an internal vitality which, paradoxically only

comes from taking one's place with humility and thriving through that place. In

relation to being aware of and living with climate change, this is different from perceiving a lack which needs to be propped up and is, at best, keeping a troubling reality at bay. Instead, being at home on the planet recognizes living with climate change as part of one's identity.

The orientation of interconnection threaded throughout the participants' reflections, and described in the previous section, is situated in the idea that a distinction between nature and culture is a false one, as many environmental philosophers and critical theorists assert (Mickey et al., 2017). The realities of climate change are not a threat that is coming to us from the outside and something with which we need to cope. If we think of the human being as a creature that "grew from the earth," as NL said, then what we are faced with, in recognizing climate change, is ourselves as part of the earth. The idea of earth as home can help humans to begin their work from a place of wholeness and connection, rather than deficit and separation.

Being at Home on the Planet will be explored through three ideas that are intrinsic to it: belonging, responsibility and possibility. The comments that will be explored in this section are examples of moments when the participants touched on being attuned to embracing and embodying their own appropriate place and role on the planet, as well as their views for the appropriate place and role for human beings in general. Belonging, responsibility and possibility as a triad together hold the ideas that are essential to the power, yet humility, intended through the theorization of *Being at Home on the Planet*. (See Appendix I for a diagram of the second phase of analysis described in Chapter Five.)

BS explicitly introduced the idea of belonging when she related to the man in Image #45 sitting on the rocks at the edge of the ocean. As stated in the *Interconnected Human to Other-than-Human* section, she made the statement about the figure in the painting: "That is his place. It resonates with the feeling of true peace and true belonging." When asked what "belonging" means to her, she elaborated: "Belonging on the earth. Belonging, like there is a reason I am here, and I'm part of this global system. I'm not just this isolated robot that is based off an executive function only. I'm part of something much bigger than myself." BS reveals much about her view of belonging in this statement. First, the word she chooses to use is "belonging" to name the feeling she has when she puts herself in the place of the figure in this artist's depiction. She elaborates that belonging is specifically about belonging on the earth. She goes on to explain that belonging, in this sense, is membership within something that is larger, and that it has organization to it, what she calls a global system. That membership, however, also instills a qualitatively different dimension of existence in her. To be a part of that larger whole is to breathe life into a mechanistic depiction of the human being, operating purely on brain and nerve synapses, what she terms an "isolated robot." Therefore, for BS belonging on the earth, as a member of a larger whole, is part of how she understands her identity, and even the nature of her existence, to have meaning.

An essential aspect of the idea of belonging is the presence of love. What enters here is an addition to the constellation of difficult emotions discussed in the *Awareness Brings Strong Feelings* section in Chapter Four. As the participants delved into articulating their emotional responses to climate change, they not only

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identified responses such as anxiety, grief, and a sense of meaninglessness. They also named feelings of love and joy that are part of their sense of connection to the earth. We first heard this from BT in his profile talking about the sea glass from his grandparents' collection. He made a point of saying that when a person is connected to a particular place, while they may have feelings of sadness in the face of ecological decline, these places also bring joy, as does the ocean for him.

One moment that prompted JF to discuss the presence of love was his contemplation of Image #35 of the galaxy. He spoke about how comprehending the earth within the expanse of deep time and space can lift some of the difficult emotions.

> Maybe there are entire world systems and civilizations that come and go, which is a way of liberating myself a little bit from this feeling of despair and deep state of existential tension around what if this planet doesn't make it?

Yet, he doesn't stop there. That moment of lifting those difficult emotions makes room for what he prefers to be leading him. Liberation from the despair and existential tension "is a helpful place for then acting in terms of what I love. Like, I love this planet." He then steps outside of himself and poses a question for a broader audience: "In terms of environmental work, how do we save something because we love it? Not from fear, but because we love it, and a deep sense of injustice that this is not okay?"

AL told a brief story that conveyed how her grief for the earth is channeled through her sense of belonging. While driving in a car together, she and a friend older than herself were teasing each other about their difference in age.

We were laughing. And then I said, "I don't even know if the world is going to be here." And it kind of got sad for a while in the car. But then I said, "I'm glad that I had the chance to open up to a relationship with Mother Nature at all. I'm glad I was able to touch heart to heart with her. It would have been so much more sad if she had ended without that, with one less recognition, one less relationship.

In this story AL owns her belonging by recognizing that her opening to a connection with the natural world, what she referred to with a wink as her "spiritual awakening," matters to the earth. This mattering, however, is not a reflection of her sense of her own self-importance. It is one of humility. It comes out of a place of love, being thankful that "Mother Nature," before ending, had been able to receive "one (more) recognition, one (more) relationship." This is a sense of belonging that only gets its meaning in the context of love.

Being at Home on the Planet as a theoretical concept also includes responsibility. A return to KM's discussion of individual consumer behavior captures the responsibility that is built into belonging on the planet. In *Critiquing Capitalism and Consumerism*, KM provided an analysis of Image #2, the button with the slogan, "I Shop Therefore I Am." In her analysis she described the unrecognized relationship people can have with a product, from the energy that created it through to its disposal. She argued that when we buy something we are necessarily part of that continuum. She added that there is a responsibility attached to participating in that process. "Humans need to internalize the fact that we are part of a much larger organism than just our daily lives. Our identity isn't just what we say we are. Actions and physical things are who we are as well." KM's outlook emphasizes that identity is manifested through the material consequences of our choices and actions. These

are part of who we are because, in her view, we are already part of a larger

organism. Any notion of separation is an illusion about our identity. She then

continued in this light to make a connection between humans and ecological

destruction. "Humans need to take responsibility for all that we've done to the

planet. I didn't leak that oil in the ocean, but I am responsible as a human who is

part of all these systems."

KM used the artifact she "brought in," her glasses she was wearing in the

interview, to illustrate the double edge of this interconnection. Saying she would be

"useless" without her glasses, she pointed out that, on the one hand, technology has

degraded the environment, but she also recognized that without technology she

"probably wouldn't have existed as long as (she has)." This fundamental

interconnection within the human community, illustrated through the symbolism of

her glasses, also has bearing on the role of responsibility in relation to the human-

to-human scale. Referring to the 2016 election when Trump was elected, she

reflected on the fear of chaos that some of her friends experienced. Instead, KM said

she felt that some chaos might be needed.

> There are a lot of injustices around the world all the time. People let them
> continue because (they say) "it's not me making them experience those
> injustices." I think having some chaos would awaken people and internalize
> these problems as something they are part of.

Interconnections can be, and often are, hidden from daily consciousness. But that is

also a matter of ontology. We can live in a world that recognizes our fundamental

interconnection, or we can live in one that denies it and paints a different picture, an

ontological stance that is ultimately based in domination, as discussed in Chapter

Two. The fundamental interconnection of humans with the other-than-human

world, as well as within the human community, requires a sense of responsibility in

both instances.

LD felt that this sense of connection to the earth was motivating his future

aspiration to buy land with friends and to begin a farm based on sustainability

principles and carbon sequestration. This life goal is a reflection of his sense of

commitment to the planet, his belief in doing this in community, and as an

expression of his responsibility in relation to his social identities.

> I think because of my socioeconomic status and who I am in this body, I'm
> going to be able to get land later. I feel deeply, spiritually connected to the
> earth and part of my life's work will be to create a regenerative homestead. I
> think that's a huge thing I have to offer to the world.

The term that AL keyed in on to talk about responsibility is the word

"maintenance." For her, maintenance is not a simple term. To maintain something is

a sign of respect that recognizes participation in a larger whole. She reflected on

these thoughts while looking at Image #6, a photograph of two men cleaning a

statue of Mahatma Gandhi.

> They are taking a long term view of…what work we need to do to make sure
> he's the best possible and not covered in dirt and breaking down.
> Maintenance is the key word here. If you make messes in this world, you
> need to be aware of how you are affecting the space after you leave it.

The Gandhi statue, through AL's reflections about the importance of maintenance,

can be seen as a metaphor for the human relationship to the planet. What she sees in

this picture is something very mundane and straightforward, hosing down Gandhi,

and yet because of its mundaneness it is instilled with reverence at the same time.

An understanding of *Being at Home on the Planet* also creates the conditions for possibility. BS captured the essence of possibility when she flipped the idea of climate change as a "problem" by inserting the word "blessing" into the conversation. That small act took ownership of the issue and redefined it on her terms. "I want people to know that this is a whole-bodied, whole-existence problem. And it's the opposite of problem. A blessing. It's something we are responsible for and with, and also something we are blessed and gifted with." If earth is your home, if you actively feel a love for it, then your sense of responsibility and the actions you take are a gift, one that you not only extend outward but that you also receive back in the giving.

In such a paradigm, possibility takes on new life. Frequently the participants spoke about possibility when they explained their artifacts or looked at their selected images. Image #20, the painting of the Cornucopia horn with an array of colorful fruits and vegetables pouring from it, elicited several comments about a world that could be possible. LD, in looking at this image, stated: "I think it represents what's possible if we take action intentionally, as individuals and as a community." OO, when speaking about her writing, photography, and visual artwork, framed it as her way of "trying to show people what's really there and what could be." BT spoke about his work focused on solidarity economies. "What I've been drawn to is the way it advances another paradigm. If climate change and capitalism are what's bad, what would regenerative and reparative economies look like? Real alternatives that are holistic and get at the root." He also imagined a

response to migration based in love. "What would it look like to have open arms to people who are fleeing political, economic, and environmental violence?"

Even the emotion of grief can fuel possibility. KM talked about staring out the window when she was in high school, seeing pavement, and wondering what the world looked like before pavement. "That grief is almost what motivates me to believe that there's a different way we could be living with nature." JF, speaking from his Buddhist studies and experience as a meditator, opened the way for possibility while talking about the cartoon drawing of the banker counting money while sitting on top of a pile of people underneath, Image #23. Pointing out that even the medium of the picture, a simple line drawing, has an ephemeral quality, he observed:

> This is just a state of mind...I'm feeling a lot of excitement and faith in how fragile the wave is. It's built on a long and ingrained set of values. But I'm seeing how it's more and more possible to point out the absurdity of those values and ideological flaws. It just opens up the conversation all the more. We could try something different.

"We could try something different." That phrase, simple and straightforward, captures both the need for fundamental change expressed by the participants, as well the sense that making that change is within our capability. As Tarnas (1993) asserted in Chapter One, in his explication of the history of ideas in the Western world, in the center of the isolation that the human has created for itself is a possible way forward, for the isolation begins in the human mind, not in the world itself. This is what JF is referring to when he speaks about his excitement and faith in how fragile the wave is. To begin thinking of oneself as being at home on the planet encourages a sense of belonging that is not trivial or romantic. It is a recognition

that the human is a part of the planet and is therefore blessed with belonging, responsibility, and participation in possibility.

Planetary Identity

Planetary Identity is a proposed identity model for young adults who are making meaning of their lives within the context of the multidimensional challenges of climate disruption – cultural, economic, political, moral, and spiritual (see Appendix J for the *Planetary Identity* model). It is an understanding of identity that grounds the self on earth, in a mutually reciprocal relationship within the human-to-human realm as well as with other-than-human living beings, with a responsibility to live life in balance within these interrelationships. According to the principles of this model, identity cannot and should not be considered outside this multi-layered interrelationship. This understanding of identity represents an alternative worldview orientation that is in contrast to the dualistic worldview orientation described in the literature review in Chapter Two, and is resonant with the ecofeminist and ecowomanist theoretical orientations that informed the sensitizing concepts of this study.

As will be discussed in Chapter Six, particularly in the section focused on college student development theories, a potential contribution of *Planetary Identity* as a model is that it situates identity and identity development not only within the context of human relations, but within the context of the planet itself and with other beings. The data from this study is from a particular sample of young adults who brought a certain set of factors to the topic. These are young people who not only are aware of climate change, but are taking action in a variety of ways, in some cases

connecting those actions to other social justice issues. They are also individuals who

are interested in thinking about how their own social identities intersect with larger

issues. In addition, as discussed in Chapter Three in relation to purposeful sampling,

these are individuals who had already, in their own unique and multidimensional

ways, given a good deal of thought to what they believe are important issues to

consider in relation to planetary ecological crises. These factors helped bring to the

surface the core ideas that led to the construction of the model.

However, aside from the particular findings of this study with these

individuals as participants, the model has the potential to be applied more broadly.

What it offers is a conceptualization, within a single construct, of the interaction of

the self with external contexts that are often treated as separate spheres. This is

important for several reasons. First, it is an ontological shift that assumes

interconnection and not separation, an essential starting point if we, as a species,

are to move in a direction of healing and regeneration. Second, more research can be

done on college student responses to climate change with students from different

interests, backgrounds, and social identities, however beginning with the

assumption that identity includes the self in relationship with the human and other-

than-human world. Third, bringing these spheres into a single conceptualization of

identity may also foster conversations across areas of social justice concerns that

are often treated as separate silos. Like the analogy of mycelium that LD talked

about in his profile when considering how his phone can be used to make

connections for good work, perhaps the ideas within *Planetary Identity* can

encourage us to look for those hidden interconnections at the times when it is important to join in solidarity.

Conclusion

This chapter has explored *Interconnection* as a theme that was threaded throughout the participant interviews. Findings were explored in three main areas of interconnection: self, human-to-human, and human to other-than-human. The discussion of these areas provided the foundation for the core category of the study, *Being at Home on the Planet*, which is composed of the elements of belonging, responsibility, and possibility. *Planetary Identity* is a proposed model that conceptualizes the self as essentially connected to the human realm and the other-than-human realm.

In the following chapter I will engage the findings of this study in three conversations. First, I will return to the discussion in the Introduction and literature review in Chapter Two regarding the need for a shift in worldview and use the ideas within *Planetary Identity* to bring forward elements of an alternative integrative worldview. In the second conversation I will reflect on *Planetary Identity* in relation to theories of college student development. The third conversation will introduce points of resonance between emergent integrative sustainability pedagogies and *Planetary Identity*.

CHAPTER 6

DISCUSSION AND IMPLICATIONS

<u>Introduction</u>

This study began with the following guiding question: How are emerging

adults making meaning of their lives within the context of the existential threats

related to planetary ecological degradation? Situated within a conceptual

framework informed by integrative worldview perspectives, particularly

ecofeminist and ecowomanist, the study applied an integrative epistemological

methodology in order to provide a holistic view of how young adults are responding

to climate change. Two phases of data analysis and results were shared. Chapter

Four investigated the participants' feeling, thinking, and doing domains of

awareness and response. These were explored separately as a heuristic device,

while recognizing the interrelationship of these domains in lived experience. This

initial investigation synthesized the data from the participants into a construct that

portrayed their feeling, thinking, and doing responses as forms of creating and

accessing internal and external sources of support that help them make meaning of

and cope with their awareness of climate disruption.

In Chapter Five, the second phase of data analysis, *Interconnection* was

identified as a conceptual category and was explored through its subcategories:

Interconnected Self, *Interconnected Human-to-Human Relations*, and *Interconnected*

Human to Other-than-Human Relations. The manifestations of interconnection

explored within these three areas together formed the core category *Being at Home*

on the Planet, which brings with it implications for belonging, responsibility, and possibility. Concluding the second phase of the analysis, a model of *Planetary Identity* (Appendix J) was introduced as a way to illustrate how these young adults who are aware of climate change and who feel, think, and act in a range of ways that express a core conviction about the interconnected nature of existence. This conviction pertains to human-to-human as well as human to other-than-human relations, and in some cases includes forms of existence beyond life forms, suggesting an outlook related to animism. It is this underlying conviction that supports them in being at home on the planet with a sense of belonging, responsibility, and possibility. It was suggested that this model, with its assumption of the interrelationship of self, human-to-human, and human to other-than-human spheres, may be useful in further research on how college students are responding to climate change and as a conceptualization that can enhance alliances across areas of social justice activism.

This study set out to learn about young adult awareness of and responses to climate change from a holistic perspective, using a methodology that is in keeping with the cultural shift towards an integrative worldview that many scholars, educators, and activists argue is needed to address the climate crisis effectively (Berzonsky & Moser, 2017; Cajete, 2000; Eisenstein, 2018; Gidley, 2007; Kagawa & Selby, 2010). In addition, a guiding question of this study is how higher education can meet young people where they are developmentally, at the edge of moving into adulthood, and where they are existentially, at this juncture of human history on the planet. Therefore, one purpose of this study is to generate a theorization of college

student response to climate change that can seed a conversation with other sectors of higher education that also bring an integrative approach to teaching and learning.

This chapter will provide an initial foray into that conversation by exploring points of connection between two areas of higher education and the findings of this study: college student development and integrative sustainability pedagogies. My purpose in engaging a conversation with these two areas representing the student affairs and academic affairs sectors of higher education is to explore points of intersection and resonance in order to potentially expand possibilities for supporting college students in their process of awakening to the challenges of climate disruption. This chapter explores possible synergies among emergent pedagogies, student development theories, and research on young adult responses to the climate crisis that can be harnessed to create transformative responses within higher education's core function of teaching and learning. Through exploring links between these theories and practices and the findings of this study it is hoped that these areas can be amplified as resources and integrated into a broad conversation about higher education's capacity to engage students intellectually, emotionally, politically, and spiritually as they shape their life responses to the increasing realities of climate change.

The chapter will begin by briefly revisiting the literature review on worldview presented in Chapter Two. This review will identify points of intersection between the core findings of this study and the need for a deep cultural shift, as identified in the literature review, to address the challenges presented by the planetary ecological crisis and its related social, political, economic and moral

implications. The discussion will then turn to connecting the findings to the context

of higher education, first engaging theorizations of college student development

related to self-authorship (Baxter Magolda, 1999) and then highlighting emergent

integrative sustainability pedagogies that resonate with the core ideas of the

findings. I will close the chapter with initial recommendations and possible areas of

future research suggested by these findings and this preliminary discussion.

Planetary Identity and Integrative Worldview

The literature review in Chapter Two opened with three quotes that

emphasize the relationship between consciousness and culture. According to

Gangadean's (2006) statement, the external world is an expression of "our

technology of mind" (p. 441). Gidley (2006) asserts that culture "is intimately

connected" with a people's "type of thinking and system of knowledge," (p. 29), that

is, the epistemology that is foundational to their thinking. Linking internal and

external landscapes, Bai (2012) correlates what we see as environmental problems

with "the disorder of the human mind" (p. 312). The ideas represented in these

quotes set the stage for the literature review's excursion into the origins and

contours of a particular worldview marked by dualism, a hierarchy of binaries with

a diminished "other," that defines the mainstream western cultural tradition. This

exploration revealed that the expansion of this worldview across the planet is no

accident. The idea of progress itself is a necessary result of a worldview that negates

"the domain of nature by reason" (Mathews, 1991, p. 3), as well as the negation of a

long line of diminished "others" built into its logic.

This analysis provides a foundation from which to understand the interconnection of multiple manifestations of domination, both within human relations and within the human to other-than-human relationship. Ruether (2006) states, "One needs to see the interconnections between the impoverishment of the earth and the impoverishment of human groups, even as others are enriching themselves to excess....One must think of ecology and justice as integral parts of one system" (p. 373). Thus, it is through the analysis of the defining characteristics of a dualistic worldview, one that is defined by separation, that an alternative worldview emerges, one that is defined by interconnection.

Planetary Identity, the proposed model of emergent identity in young adults who are constructing meaning for their lives within the context of climate disruption, is an expression of an integrative worldview counter to the dominant Euro-western worldview. The core ideas of *Planetary Identity*, centered in interconnection and reciprocity, are resonant with other conceptualizations of identity that embody the need for worldview and ecological transformation (Cajete, 2000; Thomashow, 1996). A key trait of *Planetary Identity* is an understanding of the self in a mutually reciprocal relationship within human-to-human, as well as human to other-than-human, relations, with a responsibility to live life in balance within these interrelationships. The model, therefore, is a useful tool for elucidating core characteristics of the integrative worldview discussed in Chapter Two. To accomplish this I will return to Mathew's four "views" of dualism described in the literature review: view of the self, human, other, and world. Using key ideas of

Planetary Identity illustrated in the findings, I will contrast these with Mathews' four

views in order to highlight core features of an integrative worldview.

Mathews introduces the four views as a way to illustrate how the

mechanistic and atomistic worldview, the context of Western cosmology, in fact fails

in its function, which is to connect the human world to the larger cosmos. Instead,

this is a worldview defined by the idea that nature is fundamentally disconnected

from the human. The understanding of the self within this construct is an isolated

self, which, as Ruether (2005) points out, is simply a "privileged appearance of the

'autonomous' self" (p. 123) that ignores the actual dependency of the self on its

interrelationship with other humans and nature. This is the meaning of Plumwood's

(1993) concept of "denied relationship of dependency" (page 91), a self that can

only be conceived within a worldview of domination that necessitates the negation

of the other. Within the Cartesian worldview, "where the self is essentially the

mind," (Mathews, 1991, p. 34) the "other" is matter, the body, and nature. The

disservice of this cosmology is that it abandons the individuals who inhabit it.

Mathews writes:

> A culture deprived of any symbolic representation of the universe and of its
> own relation to it will be a culture of non-plussed, unmotivated individuals,
> set down inescapably in a world which makes no sense to them, and which
> accordingly baffles their agency. What are they to do in this world to which
> they do not belong? (P. 13)

It is here that Mathews' conjures the picture of individuals who "invent self-pictures,

self-stories, ego-images, but their sense of who they are is tenuous" (p. 13).

The understanding of the self that comes through the model of *Planetary*

Identity is a self defined by interconnection. This is true internally, in terms of the

expressed desire to integrate the mind and the body, emotions and thinking, as well as recognition of the essential, but often invisible, connection between the individual and the external world – whether that is the human-to-human or the human to other-than-human context. The participants in the study critique the cultural context of which they are a part, and indicate that they are taking steps in their lives to counteract that. For AL, Image #8, the mural "I remember when all this was trees," represents "this sort of abandoning of living in and maintaining this physical world and…escaping into one where we don't really have to think about how our bodies feel." Mathews' (1991) depiction of invented "self-pictures (and) self-stories" (p. 13) is reminiscent of JB's reference to the mental health of the "After-Millennial" generation, to which he belongs. He comments, "young people are forgetting how to be with people," and with the arrival of the cell phone "now we can be in our little box looking at our little screen." Both AL and JB have taken steps in their lives to move in a direction that cultivates an experience of authentic connection.

The section *Emotional Knowledge*, in Chapter Five, conveys the conviction on the part of the participants that emotions are an important source of information under any circumstances, and particularly in relation to connecting to the realities of climate change. BS speaks about how it's important for people to "feel (their) pain for the earth," and JF muses, "I don't think we're going to get anywhere without really feeling things." An emotional response to the current and predicted impacts of climate change is itself a reflection of being connected. These are painful, uncomfortable emotions, but a culture and worldview that allows these emotions to

exist is one that, in Mathews' (1991) terms, is not "metaphysically adrift" (p. 13) but

is "grounded" (p. 46) in the universe. Another dimension of *Emotional Knowledge*

reflected in JF's quote above, and in other participant responses cited in that section,

is the idea that effective actions to address climate change are rooted in feeling the

emotions of connection to the planet.

The recognition of connection is also present in KM's insistence that we need

to recognize the material consequences of our choices as consumers. From her

perspective, the interconnection is there – "we are part of a much larger organism

than just our daily lives" – but a culture of separation enables people to deny this

relationship and the responsibility that goes with it. This view of interconnection

conveys an idea in which the self that is not autonomous but one where, as KM says,

our "actions and physical things are who we are as well." It is this kind of thinking

that counteracts the "denied relationship of dependency" that Plumwood (1993),

Ruether (2006), and Mathews (1991) critique.

Moving to "view of the human," in the mechanistic, atomistic worldview

Mathews describes, only the human has value and significance. In that sense, the

human is alone in the universe. In Tarnas' (1993) words, "the human mind has

abstracted from the whole all conscious intelligence and purpose and meaning" (p.

432); the outcome is one of absolute isolation. In fact, in this view the human

conceives of itself as so foreign to other life forms that in essence it doesn't belong

on the planet. As Berry (1999a) describes it, "we don't really belong here. But while

we're here, we'll use others as instruments" (p. 104). From the perspective of

Planetary Identity, there is a demotion of status for the human in the scheme of the

planet as a whole. In this sense, the participants are engaging in a redefinition of what it means to be human. BS suggests that it "takes us down from this pedestal." As a result, something else emerges in place of the isolation of superiority, and it begins with humility. NN chose the picture of the boy reading to the elephant to talk about this: "They are both on their knees. That to me is humility, some reverence for relationship." What this different position of the human opens up is the possibility of communication. "There's a conversation that's happening," as NN says. Acknowledging that the human "grew from the earth," as NL put it, also brings forth a different kind of belonging, what some of the participants expressed as a feeling of love. As JF asked, "How do we save something not from fear, but because we love it?" AL's reflection that she was glad to touch heart to heart with Mother Nature reflects the view that her own small existence matters, but it also reflects a sense of proportion about the human's importance in the universe.

A key understanding in the integrative worldview is the analysis that recognizes a "tiered dualism" (Evans, 2020, para. 21) of binary oppositions, each with a diminished "other." This is akin to Mathews' (1991) "view of the other," the third category. As Plumwood (1993) argues, this analysis unmasks an ideology of domination that is a common denominator among systems of oppression. The core idea of interconnection that defines *Planetary Identity* embraces this analysis so that the silos of human forms of oppression and the false separation of the human and the other-than-human world can be understood in relationship with each other. While the participants in this study held varying oppressed and privileged identities, and conveyed varying levels of critical awareness of how their own identities

intersect with systems of oppression, when asked to reflect on their own social identities, they all demonstrated that they were in a process of orienting themselves within those systems of power.

At times there was an explicit connection made between their views of the human with the other-than-human relationship and relations of inequity and power within the human community. RS was clear that her definition of sustainability would not tolerate racial profiling. BT placed his own identities of privilege in the center of grappling with what should be his place within broad issues of climate and environmental justice. LD spoke about recognizing and using his privilege to work with land in ways that are regenerative. MM spoke about how his work on environmental issues was in part an expression of his Muslim religious identity. JF's analysis of Whiteness as "a whole cosmology…built around a sense of self that relies on the other" is linked to an expanded worldview in which non-human creatures are seen as relations. In embracing the interrelationship of tiered dualisms, *Planetary Identity* provides a conceptualization of identity where these relationships can be interrogated and explored.

The "view of the world" according to the mechanistic and atomistic cosmology, Mathews' fourth category, is that of a "storyless object," as Plumwood (2012) describes it when relating the story of being attacked by a crocodile. In that moment when she was "food," she saw the "the world for the first time 'from the outside'" (p. 15) and realized that the world had its own story separate from the insignificance of her own life. The participants in this study demonstrated moments when they were willing to consider the value of forms of existence that are typically

discounted within the dominant cultural view. AL had learned to respect the life force within her plants in her bedroom, and would contemplate their ways in order to learn from them. BS took from her experience amongst the stones on Montserrat a conviction that humans are not the only beings who are aware of the changes taking place on the planet. There is an allowance here that perhaps the Euro-Western cultural worldview is limited in its ability to comprehend stories beyond the human story. This also connects back to oppressive practices within the human community as well, where certain stories are valued over others and the existence of a multiplicity of stories, each with its inherent integrity, is not tolerated.

Planetary Identity embodies the principles of an integrative worldview. The data generated from the interviews, which coalesced into *Planetary Identity* through the process of analysis, reflect multiple instances where the participants express views that are consistent with critiques of the dominant Euro-Western cultural context identified by Ruether (2006), Mathews (1991), and Plumwood (1993) and others. *Planetary Identity*, therefore, can serve as one expression of the alternative integrative worldview scholars argue is needed for planetary transformation.

I will close this section on points of resonance between an integrative worldview and *Planetary Identity* by highlighting several cautions and guidelines from theological and sociological scholarship. Eaton (2017) provides an explication of the concepts "planetary" and "solidarity" as preliminary groundwork for her description of an Earth-Centric theological framing. She argues that the scientific context of evolution and the intrinsic connections between humans and other animals must be foundational to the idea of planetary. As a result, she cautions using

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the term "earth as home" in a facile manner. In her reasoning she argues that the

metaphor perpetuates a paradigm of separation between humans and other life

forms if it does not fully embrace an understanding of the human as intrinsically

part of planetary evolutionary processes.

> To persistently speak of humans and "the environment" as discontinuous or separate is absurd in the face of interrelated planetary dynamics. Yet, everyday language is replete with these demarcations. Consideration of evolution invites attentiveness to connection and continuity – that we, too, are planetary processes. (p. 24)

Planetary as home, she argues, must include the other life forms that "also emerged

from and belong to these immense, ingenious, and subtle planetary processes" (p.

26).

Eaton argues as well that the term "solidarity" in relation to issues of climate

justice and environmental protection brings with it a meaning that goes beyond the

anthropocentric implications typically advocated by these perspectives. Solidarity,

again, must be rooted in an understanding of the planetary evolutionary forces of

which we are intrinsically a part.

> Planetary solidarity requires a larger framework than rights, justice, and an equitable sharing of resources. It requires ecological and evolutionary literacy to inform the notion of solidarity, in a biospheric sense. (p. 28)

She adds that this perspective "incorporates and enlarges" the range of

injustices that need to be addressed to include those that take place within the

human community, as well as against other life forms with which we share the

planet. This means that our sense of alliance "shifts from personal and political

identity formations to planetary citizenship" (p. 28).

I believe that the model of *Planetary Identity* proposed in this study

resonates with Eaton's definitions. The model, generated from the data, is informed

by multiple perspectives from the participants voicing an understanding of the

human as an intrinsic part of the evolution of the planet. Many times the

participants bemoaned the fact that our modern day culture perpetuates a sense of

isolation from this fundamental connection. However, Eaton's (2017) arguments

also provide necessary cautions and guidelines for how *Planetary Identity* is

conceptualized. *Being at Home on the Planet*, the core category, is not a simplistic or

romantic notion of earth as home. As described in Chapter Five, the "belonging" part

of *Being at Home on the Planet* is a redefinition of what "human" means,

understanding the human as part of life's evolutionary processes. Likewise, "home"

connotes belonging with responsibility. It is only out of this understanding of

belonging and responsibility that the idea of "possibility" can emerge. These

convictions, central to *Planetary Identity*, are in keeping with Eaton's cautions

regarding her understanding of Planetary Solidarity.

A second inspiration and caution comes from sociology (Norgaard, 2011,

2019) and anthropology (Todd, 2016). Norgaard's work on responses to climate

change within both privileged communities in western Norway and the Karuk

people living in the Klamath River Basin in northern California provides a

compelling context for thinking about certain the ideas raised in the findings of this

study. On the one hand, referencing her earlier research of the privileged Norwegian

community, Norgaard (2019) identified "socially organized climate denial...wrought

from a sense of overwhelming powerlessness, guilt, and fear" (p.235). She contrasts

this with her later research of the Karuk community that lives in close connection to the land and river. This community has survived the harm caused by the historical onslaught from Euro-Western cultural and environmental destructive practices. She writes that the response to the threats of climate change to their local economies brought on by these intrusions does not include "handwringing or paralysis," (p. 235) but instead taking action with a sense of responsibility. She attributes the resilience of the Karuk to power that comes from connection to the earth and cites additional scholarship within the field of political ecology that documents "how this power to survive outright hostility, on the one hand, and daily survival, on the other, comes from the earth" (p. 233).

Norgaard's (2011, 2019) research with both communities provides interesting food for thought in considering the implications of *Planetary Identity*. How do the dynamics of "socially organized climate denial" and "power that comes from the earth" translate to a model of identity derived from individuals who primarily are situated in privilege and yet are aligning themselves with a worldview more in line with communities such as the Karuk? If *Being at Home on the Planet* translates sources of support and coping into living with climate change with a sense of connection to the earth, as described about the participants in Chapter Five, what more can be learned about the power that can come from this relationship? How does one pursue these parallels in a culturally responsible and respectful manner that does not perpetuate cultural appropriation? With this last question, I heed Todd's (2016) warning to the academic community to cease making claims to

intellectual advances that are, in fact, already deeply rooted in Indigenous

worldviews and are represented by contemporary, living Indigenous scholars.

> It is so important to think, deeply, about how the Ontological Turn – with its
> breathless "realizations" that animals, the climate, water, "atmospheres" and
> non-human presences like ancestors and spirits are *sentient* and *possess
> agency*, that "nature" and "culture," "human" and "animal" may not be so
> separate after all – is itself perpetuating the exploitation of Indigenous
> peoples. (P. 16)

I cite these resources as potential places for rich conversation and as guidance,

particularly to myself as a White researcher and educator, to pursue future

questions of theory and practice with respect.

Planetary Identity and College Student Meaning Making

In her Forward to Baxter Magolda's (2009) book, *Authoring Your Life:*

Developing an Internal Voice to Navigate Life's Challenges, Sharon Parks, author of

Big Questions, Worthy Dreams: Mentoring Young Adults in Their Search for Meaning,

Purpose, and Faith, writes:

> We live in a hinge time in history, a threshold time when societies and
> cultures are being recomposed. We are learning that the way life used to
> work - or the way we thought it should - doesn't work any longer. The
> 'twenty-something years' are among the primary hinge moments in the
> human lifespan, a time when a person may be recomposed" (P. xv)

Speaking directly to those "twenty-somethings," she adds that as one is moving from

childhood into adulthood, "it may become more and more apparent that life -

specifically your life - is not unfolding as you had imagined" (p. xv). Although in her

Forward, Parks provides only minimal context for the meaning of "hinge time,"

characterizing it as a "time of great cultural change," she elaborates further in

another text (2017), where she discusses the role of contemplative pedagogies in

sustainability education: "Our generations are being asked to live at one of those great "hinge points" in history, as cultures are being profoundly disturbed and reordered by environmental and social realities….Among these challenges, climate change and environmental degradation are primary" (p. 16). One of the core questions posed at the outset of this study is how to meet young people where they are developmentally, at the edge of moving into adulthood, and where they are, existentially, as young people at this juncture of human history on the planet. Thus in both Parks' framing and in this core question there is a similar juxtaposition of cultural and individual transformation. It is this juxtaposition that I will explore in the next section discussing college student development theory in relation to the findings of the study.

However, in employing Parks' term "hinge time," I want to again invoke Norgaard's (2019) observation that how we talk about climate change and its impending threats is culturally based, particularly around the context of privilege. As Norgaard states, it is important to be skeptical of "the world is about to end" discourse within climate change projections, when "the world as it was known has already ended" for some (p. 229). Parks' (2017) observation is correct: "Cultures are being profoundly disturbed and reordered by environmental and social realities" (p. 16). In that sense, many cultures have been deeply disrupted for a long time (Horne, 2020; Smith, 2012). Perhaps they are all currently being swept up today within this hinge time as well. However, the cultural shift that is occurring on the hinge, if it is indeed taking place, is specific to the Euro-western and global North context. Those communities that are most vulnerable to the impacts of climate change in many

cases are cultures that have sustained an intricately interconnected human-nature relationship and are in no need of a hinge moment themselves (Norgaard, 2019). In keeping with these differences among cultures, it's also true that young people intersect with this hinge time in culturally specific ways. It is with this caution that I explore the intersection of young adult development and the current moment in which climate change poses an existential threat.

In this section I will engage in an exploratory review of how the findings of this study intersect with several specific developments in college student identity theorization. Since its emergence in the 1970s (Torres et al., 2019), the field of college student development has provided the foundation for student affairs practice on college campuses. According to Evans et al. (1998), "knowledge of student development theory enables student affairs professionals to proactively identify and address student needs, design programs, develop policies, and create healthy college environments that encourage positive growth in students" (p. 5). Torres et al. emphasize both the benefits and the challenges of student affairs practice as a low-consensus field. One challenge is that the openness to expanding understandings of relevance can lead to critique, abandoning perceived "old" theories that still have enduring value. On the other hand, "new theories come from efforts to be more responsive to the realities of contemporary students and their experiences" (p. 650). Thus in this section I begin the discussion of implications for and application to the higher education context by connecting *Planetary Identity* to key theories in college student development. In the Recommendations section I will identify some possible initial steps to implement theory to practice.

College student identity theories, like all theory, reflect the particular historical and social contexts out of which they emerge (Jones & Abes, 2011). In the history of the field of college student development, three considerations have played a prominent role in the trajectory of conceptualizations, although the meaning of each and its respective place of prominence, and even relevance, have shifted throughout that history. These three features are the conceptualization of how a person evolves over time; the understanding of identity as socially constructed; and, the role that context and environment play in that social construction. Jones and Stewart (2016) outline the history of college student development as taking place within first, second and third waves of perspectives. Their description follows a trajectory that begins with foundational theories in the first wave; the incorporation of social identities within the idea of social construction in the second wave, particularly marginalized identities, and a view of the intersectional nature of social identities; and, in the third wave, a recognition of the "inequitable power structures" that constrict the power and possibility that emerge with alternative conceptualizations of identity (p. 21).

A theme that runs throughout the exploration that follows is the way that *Planetary Identity* can be understood within the changing conceptualization of "social context" in these college student development theories. Torres, Jones and Renn (2019) cite both Lorde (1984) and Rooks (1989) to emphasize how new theorizations bring both populations and larger structures of inequality to the forefront, so that theorists are "writing themselves into existence" (Rooks, as cited by Torres et al., p. 651). While the initial conceptualization of *Planetary Identity*

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proposed in this study can, and should, be complicated with additional research that centers a range of social identities examined with a critical lens, my emphasis in this initial exercise is more on context. That is, I am interested in bringing the very real existential threat posed by climate destabilization, with its points of intersection with matters of survival and justice within both human-to-human and human-to-other-than-human relations, "into existence" in the work of higher education, and specifically in teaching and learning with college students. Torres, et al. (2019) write: "New theories come from efforts to be more responsive to the realities of contemporary students and their experiences, though they often stand on the shoulders of what has come before even in unacknowledged ways" (p. 650). It is in this spirit that I engage the findings of this study with key milestones in theorization about student development and meaning making.

This review maps onto the three waves of perspectives described above. *Planetary Identity*, as described in this study, is not a developmental theory depicting a process over time. It is a depiction of identity derived from my analysis of the participants' reflections about their feelings, thoughts, and actions in response to negative climate change. Therefore, this exploration does not intend to compare *Planetary Identity* with these models, nor critique them. Rather, this exploration follows the changes described in the first, second, and third waves and puts the findings in conversation with several key moments of those developments. I will begin with a review of cognitive developmental and psychosocial foundational theories and then engage with the ideas of self-authorship (Kegan, 1982, 1994; Baxter Magolda, 2004), the centering of social identities (Abes, 2012; Baxter

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Magolda, 2009), and end with Zaytoun's (2005) exploration of boundary crossing. At intervals I will pause to explore connections between the theories and the study's findings.

Foundational Theories

Cognitive-developmental theory is based in Piaget's (1950/2015) structural-developmental theory of learning in which individuals make meaning of their experience in increasingly complex ways (Baxter Magolda, 2009). Cognitive theory's focus is epistemological, exploring how we know things and how we perceive that knowing. Applying this construct to college students, Perry's (1981) research and theory characterized the progression of assumptions about knowledge as three primary stages, each with a set of sub-stages: *Dualism*, *Multiplicity*, and *Relativism*. These culminate in a fourth stage, *Commitment in Relativism*. Within the family of psychosocial theories (King & Kitchener, 1997; Belenky et al., 1986; Marcia, 2002) each of the cognitive developmental schemes indicate movement from a structure of thinking that sees knowledge as essentially a dichotomy between true and false, right and wrong; through phases in which absolute knowledge is in question and therefore often considered to be arbitrary; to an understanding that while knowledge can include uncertainty, knowledge claims are constructed within a particular context and can be supported with evidence. Through this progression the role of authority in relation to knowledge shifts. In the beginning stage, knowledge is considered absolute and held by authorities. The movement toward multiplicity, as described in Perry's theorization, indicates a new relationship that questions the knowledge claims of external authorities. Finally, in each scheme

there is movement toward the establishment of inner authority. This stage is characterized by an integration of the internal and external in which the individual's internal sense of authority can accommodate and incorporate external influences.

Chickering's seven vectors of development in psychosocial theory (Chickering and Reisser, 1993), was constructed to portray the development of young people during their college years. Building on Erikson's (1950/1993) psychosocial theory that frames individual development taking place within the context of social and historical environments (Evans et al., 2010), Chickering constructed the vectors as a tool to more effectively support and encourage the development of college students at this juncture in their lives (Reisser, 1995). The vectors are meant to describe the range of areas in which development takes place as young people interact with others, their environment, and are faced with life requirements and challenges. In Chickering's theory, as college students interact with their environments and are faced with challenges, they gradually form their identities. These vectors include learning how to think in more complex ways, establishing an identity that is formed by and exists within relationship, and incorporating awareness of family and historical context, as well as of one's social identities.

Thus, in both the cognitive-developmental and psychosocial theoretical frameworks human development involves a process through which there is an increasingly complex interrelationship of self and environment, one that involves a developmental progression in which there is a shift from external to internal authority. Intersections of epistemology, identity, and relationships are core aspects

of development in these theories. These core ideas reflect two intertwined and valued assumptions: identity formation is a process of development and it informs an increasingly stable core self.

Self-Authorship

The self-authorship (Baxter Magolda, 2004) phase of development is one era in Kegan's (1982, 1994) theorization of human evolution. Generally self-authorship develops as a post adolescent phase, representing the "fourth order of mind" in Kegan's conceptualization. Baxter Magolda conducted longitudinal research on the emergence of self-authorship, connecting the results of her research to teaching and learning practices within higher education. In her theorization of self-authorship Baxter Magolda describes a process of moving from reliance on external formulas, through a "crossroads" period in which there is a gradual shift toward listening to one's internal voice, culminating in several phases of self-authorship in which the internal voice becomes predominant and coordinates external influences.

Kegan's (1982) constructive-developmental theory of self-evolution builds on Piaget's principles of cognitive organization by extending the mental operation to include not only cognition but the affective and social relating realms as well (Baxter Magolda, 2009). According to Baxter Magolda, in doing this Kegan centers the human being's meaning making capacity as the context in which development takes place. In that sense, Kegan brings together the cognitive, psychological, and social domains that are part of the cognitive-development and psychosocial theories outlined above into a holistic model of development (Baxter Magolda, 2009).

The way we make meaning, in Kegan's theorization, connotes a shift in relationship from subject to object. When something is subject it is indistinguishable from how an individual experiences oneself. We are "embedded" (Kegan, 1994, p. 32) in it. When an element moves from subject to object it becomes something from which we have distance. In Kegan's (1994) shorthand, "we *have* objects; we *are* subjects" (p. 32). In this conceptualization, what is key to the "evolving self" is not so much about *what* we are thinking, feeling, or socially relating in any given era of our lives, but rather the increasing complexity that results as we shift elements we are "embedded" in to ones we can "reflect on…look at, (and) be responsible for" (p. 32).

As self-authorship, the fourth order of mind, develops there is a shift away from the third order of mind in which the individual is embedded in "mutuality and interpersonal concordance" (Kegan, 1994, p. 190). Baxter Magolda (1999) notes Kegan's characterization of the "triumph" and the "limit" of the third order: "The triumph is the ability to become part of society; the limit is the inability to stand apart from this co-construction to reflect and act upon it" (p. 55). In the fourth order, self-authorship, that embeddedness in multiplicity has become object and the self-authoring mind has become the internal authority. Baxter Magolda (2009) describes three phases of self-authorship as it develops: *Trusting the Internal Voice*, *Building an Internal Foundation*, and *Securing Internal Commitments*. A key trait of the first phase is the realization that while one is not in control of reality, one does have control of one's reaction to external realities. In the second phase individuals develop "a philosophy or framework – an internal foundation – to guide them in responding to reality…and (use) their internal authority to refine their beliefs,

identities, and relationships, and to make internal commitments to them" (p. 8). In the third phase of developing self-authorship, those internal commitments emerge as a way of life, described by some of Baxter Magolda's research participants as "the difference between having the commitments in their heads versus in their hearts" (p. 9).

The theorization of self-authorship can be a frame for understanding the participants' reflections about their responses to climate change. In both phases of analysis, Chapter Four and Chapter Five, the participants exhibit a number of ways in which they are defining themselves and their beliefs in opposition to a dominant cultural norm. There are several areas in which this is apparent. The *Thinking* section of the first phase of analysis includes multiple critiques of contemporary mainstream North American culture, including the consumer co-option of sustainability practices, the disconnect from the material consequences of the use and disposal of products, and the disassociation of emotions from thinking, particularly in relation to climate change. In relation to the findings in Chapter Five, with the focus on an orientation of interconnection, the inclination on the part of the participants to experience a connection with the other-than-human world, sometimes quite deeply, is a whole cloth deviation from the cultural norms of the dominant Euro-western worldview defined by dualism. These examples suggest that the participants can be seen to be in various stages in the development of self-authorship, gradually refining and securing internal commitments and, in some cases, perhaps moving toward the shift in which those commitments transition to a way of life.

At the same time, as discussed at the end of Chapter Four, taking in the realities of climate change is not a one dimensional, simple process. The participants discussed many fluctuations in their emotions, thoughts, and actions, what I referred to as a "swirl" with no resting place. This reality connects with Baxter Magolda's description of the "crossroads" experience in which previous "rules" and formulas are not working anymore, and yet one is still in process in finding a resolution. However, the issue of climate change may be a unique "context" in thinking about self-authorship; it is an all-encompassing challenge to fathom and there is no simple resolution. As BT said, "it's mind-boggling."

On the other hand, perhaps the shift toward an integrative worldview, embodied in *Planetary Identity*, can be understood as one way these participants are making sense of the world. In many cases they were making life decisions based on commitments of work they intend to do within the human-to-human and human to other-than-human worlds, such as LD's desire to live on a carbon sequestering farm, BT's work in solidarity economies, and JB's advice to come down from worrying about the big picture and put your hands in the dirt. Therefore, while the relationship of self-authorship to the process of young adults making meaning of climate change can be further explored, there are indications that these participants' feelings, thoughts, and actions map onto the emergence of self-authorship. In addition, the theme of interconnection as a meaning-making threshold for these participants is a finding that can be explored further in the context of self-authorship.

Since Baxter Magolda's initial research on self-authorship in young adults, there has been extensive research that further develops and complicates the theory. In some cases subsequent research critiques what is considered to be Western rationalist assumptions built into the theory (Okello, 2018). A key factor in expanding the understanding of context in theorizing about self-authorship has been to center social identities, and the broader systemic contexts of privilege and oppression surrounding those identities, in theorizing about young adult develop. The next section will explore this aspect of college student development theory in relation to the findings of the study.

Broadening the Context of Social Identities

The evolution of the field of college student development includes an increasing focus on the whole student (Wijeyesinghe & Jones, 2014). Cognitive developmental and psychosocial theories provided a theoretical foundation for understanding both the cognitive processes of development as well as an understanding of identity development as an intersection between the individual and their surrounding context. Kegan's (1982) and Baxter Magolda's (2004) theorizations integrated these perspectives to further conceptualize development as a holistic process of cognitive, intrapersonal and interpersonal processes. Wijeyesinghe and Jones point out that within the evolution of developmental theories that guide teaching, research, and student affairs practice, not only has the interpretation of "whole" student shifted over time, but the understanding of "context" has shifted as well. Accordingly, subsequent research on self-authorship (Abes and Jones, 2004; Pizzolato, 2003; Torres & Baxter Magolda, 2004; Torres &

Hernandez, 2007) has centered the particular social identities of college students, as well as the systems of oppression that are recognized as part of that context. This research has revealed that the movement toward an internal coordination of external elements in the process of development can have very different emphases based on these factors of identity and context.

Thus, the field of college student development has evolved to incorporate a much broader understanding of who the college student is and how external factors influence development. This has in turn influenced student affairs practice. As Jones (2009) states: "The complexities of identity development in a postmodern world are not fully captured without attention to multiple and intersecting identities and the sociocultural contexts in which identities are constructed and negotiated" (p. 287). Wijeyesinghe and Jones (2014) further explored the conceptual lens of intersectionality as a way to situate the development of individuals holding a range of social identities within the broad societal structures of inequality. They make clear that the emphasis of intersectionality is not on multiple identities per se, but on how these identities are connected to broader operations of power. "The task then becomes less about locating oneself within an intersectional framework and more so about using intersectionality to understand the experiences of others and the social structures that perpetuate privilege and oppression" (pp.16 – 17). Therefore, while the lens of intersectionality as an "awareness building tool" (p. 12) can include identities of privilege, this must be operationalized with those larger structures as the focus.

Intersectionality is a useful conceptual lens to bring to the *Planetary Identity*

model. *Planetary Identity* centers the core idea of interconnection within the

understanding of self, human-to-human relations, and human to other-than-human

relations. This triad of contexts for interconnection necessitates situating oneself,

and one's social identities, within societal operations of power. As described earlier,

the participants in the study were at varying developmental stages of understanding

their own identities in the context of broader structures of privilege and oppression.

Intersectionality has the capacity to recognize those multiple identities, which may

include identities of privilege, while continuing to center the realities of

marginalized identities. In turn, *Planetary Identity* can offer two contributions to this

evolution of understanding college student development, both in relation to the

broadening "sociocultural and historical contexts in which individuals develop"

(Jones, 2009, p. 287). First, *Planetary Identity* brings to the theorization of identity

the current historical context of the existential threat of climate change to life

systems on the planet. It is critical to understand young adult identity development

as currently taking place within this sociocultural and historical context, as well as

the particular social identities that young people hold within this broader context.

The second contribution that *Planetary Identity* offers is an expansion of the

boundary of what is assumed as "context." In investigating theories of college

student development, and human development generally, Zaytoun (2006) makes

the point that the consistent focus solely on the human environment as context is a

culturally laden assumption.

> Relational theories focus specifically on relationships between people and overlook other human relational capacities, such as connection to a variety of material, for example, animals, and non-material, for example, spiritual, entities. The existence, scope, and cultivation of such capacities vary widely according to cultural influence and expand possibilities for exploring human psychological abilities. (p. 55)

Zaytoun incorporates the writing of Anzaldua (2002), Gunn Allen (1995), and Collins (1998) to explore expanded notions of the self and the relationship of this to social consciousness within the context of adult psychological development. Of particular interest to this study is Zaytoun's exploration of Anzaldua's borderland epistemologies. The model of *Planetary Identity* as a tool for conceptualizing young adult awareness of and response to climate change resonates with Anzaldua's conceptualization of the seven stages of cononcimiento. Anzaldua writes:

> Through creative engagements, you embed your experiences in a larger frame of reference, connecting your personal struggles with those of other beings on the planet, with the struggles of the Earth itself....These conocimientos challenge official and conventional ways of looking at the world, ways set up by those benefitting from such constructions. (p. 542)

A central idea of *Planetary Identity* is the understanding of the self in relationship with both the human and the other-than-human realms. Anzaldua's stages of conocomiento, and Zaytoun's engagement with these ideas through four queries investigating the interrelationship of personal and political consciousness provide rich territory to further explore the dimensions of *Planetary Identity* and what it might offer to understandings of college student development.

This section has reviewed key developments in college student development theory and has explored how these theories may have relevance to the proposed model of *Planetary Identity*. Self-authorship provides a compelling framework for

understanding how the participants' meaning making in the context of climate change reflects a process of shifting from external to internal authority. The subsequent expansion of student development theories to include social identities and the contexts of power provide a theoretical home to further explore the role of social identities and power within the conceptualization of *Planetary Identity*. *Planetary Identity*, in turn, introduces the context of climate change to the field of college student development and student affairs practice. In addition, *Planetary Identity* expands the idea of context of the self to include the other-than-human world as well as the human social context. To move from theory to practice, recommendations for programmatic steps in student and academic affairs will be discussed in the final section of this chapter.

Planetary Identity and Integrative Pedagogies

The model of *Planetary Identity* aims to provide a conceptual home for theorizing young adult identity within the context of climate destabilization. Interconnection is the defining characteristic of the model, from the conceptualization of the self, to the self in relation to the human social world, and extends to the self in relation to the other-than-human world. As illustrated in Chapter Five, through the lenses of Interconnected Self, Interconnected Human-to-Human, and Interconnected Human to Other-than-Human realms, each of these areas demonstrate particular manifestations of the implications of interconnection.

In the realm of the self, as an illustration, we saw how the participants expressed the conviction that it is critical to connect to the realities of climate change on an emotional level. They emphasized the idea that if this is avoided then

there is a missing ingredient in our capacity to take action from a place of love. Within the human realm of interconnection, participants grappled with the relationship of their social identities in connection to the systemic inequalities that result in varying levels of cultural and physical survival. They also spoke of the need for collective action, including acts of resistance as well as creative and regenerative efforts to re-imagine and create a more sustainable world. Finally, interconnection with the other-than-human realm explored alternative conceptualizations of the human as an essential, but not central, part of the evolution of the earth. This re-thinking of the human opened the way for the participants to relate to the other-than-human world with more intimacy and respect. Thus, an integrative epistemology is infused throughout the multiple spheres of *Planetary Identity*, each sphere shaped by an understanding of self and other in a relationship of reciprocity.

Within the field of sustainability education in higher education, emergent pedagogies are being developed that are rooted in an integrative epistemological framework. These pedagogies bring three essential approaches to the project of sustainability education: critical, contemplative, and community-engaged pedagogies. Each of these educational approaches expresses the core idea of an integrative epistemology in a particular way. In the same way that the integrative college student development theories provide a rich theoretical home for the ideas within *Planetary Identity*, these pedagogies in combination provide a multifaceted educational context for supporting college students as they learn about and grapple with the challenges of climate change. The model of *Planetary Identity*, structured as it is through the integration of feeling, thinking, and doing as well as the self in

relationship with both the human and other-than-human world, can be effectively fostered through critical, contemplative, and community-engaged approaches to sustainability education. The following examples provide a brief window into integrative sustainability education projects and programs taking place in higher education that are rooted within an alternative epistemology.

Sustainability pedagogies that are grounded in critical analyses provide college students with the skills to unmask the ways in which power and domination operate. As an example, Evans (2010, 2012) incorporates critical social theory into her sustainability courses, asserting that this approach offers a "lens for both critiquing injustice and envisioning/creating a more just world" (para. 5). "Critical social theory is a particularly useful tool for recognizing the fragmenting contradictions in both our social world and our inner life that stem from domination and oppression" (para. 20). Bai (2015) incorporates contemplative practices into educational contexts in order to counteract the ontology based in dualism that, she asserts, is also linked to our ethical relationship with the earth. She argues for an animist relationship with the other-than-human world. "The fundamental understanding of animism is that the whole universe is alive, which includes rocks, air, water, and so on, and this aliveness is not just a belief statement, but a felt and lived reality" (p. 138). Eaton et al. (2017) make the case that integrating contemplative approaches into sustainability education cultivates a range of capacities, including deepening students' connections to the world around them and helping them to navigate the difficult emotions that can arise. Wright et al. (2018) make the case for building curricular partnerships between service-learning

community-engagement and sustainability in higher education courses. They argue that sustainability in higher education "could offer a broadened, planetary horizon of meaning for the concepts of partnerships, citizenship, democracy, empowerment, justice, and governing strategies" (p. 102). These three approaches offer skills, experiences, and habits of mind that complement and enhance the interrelationships that compose *Planetary Identity*. A coordination of these different approaches, or their integration within a single course focused on sustainability, makes it possible to bring all of their strengths to a higher education sustainability program.

Recommendations and Future Research

Recommendations

One purpose of this dissertation has been to bring foundational ideas about the critical need for a worldview shift in addressing ecological collapse, a conversation taking place across a range of contexts as outlined in Chapter One, into research on college student response to climate change, and to then connect that research to the two primary contexts in which higher education engages in teaching and learning on college campuses – the classroom and student life. Evans et al. (1998) cite Brown's 1972 monograph *Student Development in Tomorrow's Higher Education – A Return to the Academy*, in which Brown questions "whether student development can be nurtured without the support and influence of those in the academic domain" (p. 9). In the case of the challenges posed by climate change, and the need to support and educate students on multiple levels, the answer is no. The kind of support that college students need must come from multiple resources on

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the campus. Baxter Magolda writes: "The holistic journey of self-authorship requires a holistic approach to higher education. The traditional separation of cognition and affect that manifests in students experiencing college as two separate worlds – the curricular and the co-curricular – works against achieving this self-authorship" (p. 32). Unfortunately, currently there is inadequate attention being directed from either side of higher education to the impact climate change has, and will increasingly have, on college students' lives. Yet, just as is true for the need for a worldview shift, change is possible. There are openings.

In the context of higher education in the United States and its effective responses to climate change within its core functions of teaching and learning, the thrust of any collection of recommendations is essentially a study in counteracting denial. Norgaard (2011) references Zerubavel's (2006) use of the ideas of secrecy and silence in how denial is shaped and controlled.

> Blocking information from our own awareness and preventing it from entering others' awareness are functions that fit together. It is because of the combination of these socially shaped systems of thought, memory, and cognitive organization that denial feels so much like everyday life. (p. 212)

One of the most important changes that can take place on a college campus is to develop specific ways to counteract the culture of denial that allows a particular brand of silence to continue on college campuses, even while there is a proliferation of courses and sustainability activities. This silence can be heard within many of the participants' comments about their experiences in college. "No one asks," NW states. It manifests in the absence of any kind of coordinated support to help NL make connections between her professional aspirations, academic advising, and the

information she is receiving in her classes, where she comments that "no trusted adult" is raising the issue with her. It is evident in NN's need for a conversation that asks: "Why did we end up here? What does it mean to respect the planet? What are you doing about it?" It underlies RS's statement that college students need spaces in which they can "question things and have the time to seek answers to those questions." Those of us who work in higher education and who care about young people must continually remind ourselves that in the context of a college campus denial will feel very much like every day life. We need to actively work against falling prey to this reality.

In keeping with the structure of this study's core research question and the structure of Chapter Four, the following recommendations are loosely structured within the categories of feeling, thinking, and doing. However, staying true to one of the key features of *Planetary Identity*, these three areas are not disconnected. As discussed at the close of the section in Chapter Four on participants' experiences in and recommendations for colleges, a coordinated response across a college campus needs to provide opportunities to not only engage personally with the topic of climate change, but to ask critical questions about root causes, as well as address how social identities intersect with these larger systemic issues. This is the reminder built into the proposed model of *Planetary Identity*, echoing principles within feminist theory – the personal is political; the political is personal. This principle embodies the epistemological shift on which this study is founded, and it therefore manifests in the following list of recommendations as well.

- Recognize climate change as a reality that we face as humans, and begin there, as human beings. Therefore, provide opportunities for all personnel on campus to engage in programs that invite them to access a range of emotions, both difficult and restorative, which occur in response to awareness of ecological degradation.

- Employ multiple modes of expression within these opportunities. Bring in the arts and contemplative practices. For example, install a permanent labyrinth for the university and community to use.

- Maintain a continual, active critique to recognize and interrogate places of cultural appropriation when incorporating practices based in other worldviews.

- Provide training on how to facilitate these conversations for all staff, to be incorporated into classes as well as student life, including programs within Residential Life.

- Incorporate awareness of, and support around, the challenges of climate change into the conceptualization of and programming for wellness within the student body.

- Build on advising practices, such as Appreciative Advising, to incorporate approaches to climate change related conversations so advisors are better equipped to engage in these conversations with students.

- Create study groups on campus to explore the context of worldview in relation to sustainability education in higher education.

- Create a national / international clearinghouse of shared practices, syllabi, and pedagogical tools to build experience and knowledge of how to engage college students on multiple levels within and outside of the classroom.

- College students will be at different places in their awareness of and interest in discussing the issue of climate change. Design the approaches accordingly.

- Provide opportunities for leadership for students who have been acting on their awareness of climate change; support them in creating learning opportunities, tools, and new ideas.

- Advance courses and programs that bring a critical analysis to the issue of climate change.

- Integrate the topic of climate change into already existing courses that are focused on social justice issues and that support students in developing an understanding of their social identities, privileged and marginalized, within systemic operations of power.

- Develop new and existing opportunities for college students to participate in curricular and co-curricular community and campus-based engagement on sustainability issues, rooted in a critical approach that centers the work and knowledge within communities.

- Provide multiple opportunities for students to envision and work toward a just and sustainable existence within human-to-human and human to other-than-human relations.

Future Research

Several lines of research can be pursued to further develop and/or investigate and challenge the findings of this study, as well as to continue to research responses to climate change.

- Continue to conduct qualitative studies on college student responses to climate change, possibly incorporating the data gathering strategies used in this study.

- Conduct a study that incorporates theoretical sampling to further explore the initial concepts within *Planetary Identity*.

- Conduct a similar study with increased diversity in the sample, particularly focusing on marginalized identities.

- Conduct further research with privileged identities, building on Norgaard's research on a privileged community and theorizations on the social construction of denial.

- Conduct research on other constituents, such as K-12 students, faculty and staff, and members of the community beyond campus.

- Conduct research to further explore the relationship between self-authorship and the core concept of *Interconnection* as identified within the findings and discussed in the student development section of Chapter Six.

<u>Conclusion</u>

As stated in the review of the data in Chapter Four, often when the participants in this study would speak about their difficult feelings, another very different feeling would immediately follow. Perception of what is possible would

follow on the heels of perception of what is being lost. AL and RS both spoke about

choice points, moments when there is an inclination toward denial and the necessity

to resist that temptation. JF asked the question: how do we save something because

we love it? Not from fear, but because we love it, and have a deep sense of injustice

that this is not okay? The participants also indicated in multiple ways the

importance of cultivating a strong interior world, whether through stillness, being in

nature, creative expression, or other ways. They exhibited the importance of

connecting to nature in their lives, and working with like-minded people on issues

they care about. They emphasized the importance of finding work to do and

beginning it, as JB pointed out the importance of knowing when it is time to come

down from the galaxy and put your hands in the dirt with other hands. The

participants talked about developing communication skills, working for change even

with long odds, and the importance of laughing together and centering joy.

 While talking to young people about climate change could potentially be an

emotionally draining endeavor, the viewpoints above are examples of ways that the

participants continually brought life to the interviews. My hope is that I, as the

researcher, have been able to successfully translate that source of life they shared

into another artifact, the model of *Planetary Identity*, as a contribution toward the

crucial project of changing the way we think in order to create a different world. I

will end with a quote from David Orr (2004):

> The plain fact is that the planet does not need more successful people. But it
> does desperately need more peacemakers, healers, restorers, storytellers,
> and lovers of every kind. It needs people who live well in their places. It
> needs people of moral courage willing to join the fight to make the world

habitable and humane. And these qualities have little to do with success as our culture has defined it. (p. 12)

APPENDICES

Are you a young adult involved in education or activism related to sustainability, climate change, or environmental justice?

RESEARCH PARTICIPANTS NEEDED

Purpose of Study:
A dissertation research study to learn about how young adults are thinking, feeling, and acting in response to current global ecological crises.

Eligible participants:
Young adults ages 18-30 who are engaged with issues of sustainability, environmental and food justice, climate change education, divestment activism, etc.

Your involvement in these issues can include such activities as:
- College classes
- Campus-based clubs and activities
- Activism on and off campus

Requirement:
Participants will take part in a 2-hour interview.
Interviews can take place in person or remotely

Compensation:
$20 Gift Card

For more information, contact:
Principal Investigator: Kris Nelson, Doctoral Candidate, Education Policy, Research and Administration, UMass Amherst
kenelson@educ.umass.edu

CONSENT FORM

Consent Form for Participation in a Research Study
University of Massachusetts Amherst

Researcher(s):   Kris Nelson, Primary Researcher; Dr. Ryan Wells, Faculty Sponsor
Study Title: College Student Engagement in Sustainability Education and
Activism

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1. What is this form?
This form is called a Consent Form. It will give you information about the study so you can make an informed decision about participation in this research.

2. WHO IS ELIGIBLE TO PARTICIPATE?
Subjects in the study are current college students or recent college graduates between the ages of 18 – 25 who are or have been engaged in curricular and/or co-curricular sustainability related activities at UMass Amherst.

3. WHAT IS THE PURPOSE OF THIS STUDY?
The purpose of this research study is to investigate how college students who are engaged in curricular and co-curricular sustainability activities personally understand the relationship among three types of experience that are often considered separately within higher education: intellectual understanding and analysis, taking action, and finding meaning.

4. WHERE WILL THE STUDY TAKE PLACE AND HOW LONG WILL IT LAST?
The interview will take place on campus at UMass Amherst in a location to be determined. The interview will last 1.5 to 2 hours. It is possible that some participants will be invited to participate in a second interview.

5. WHAT WILL I BE ASKED TO DO?
If you agree to take part in this study, you will be asked to complete a short questionnaire and to participate in a 1.5 to 2 hour interview. On the questionnaire you will be asked to provide basic information about yourself and your involvement in sustainability activities. There are also two questions related to how you identify yourself politically and spiritually/religiously. In the interview, you will be asked questions that encourage you to describe your understanding of a topic (for example, "What does the word 'sustainability' mean to you?" or "What is an aspect of 'sustainability' that is important to your understanding of it?") or that encourage you to reflect on a life experience (for example, "Is there a specific moment or experience when your understanding of yourself politically shifted?"). In both the questionnaire and the interview you may skip any question.

6. What are my benefits of being in this study?
You may not directly benefit from this research; however, the goal of this study is to increase the effectiveness of sustainability education in higher education. In addition, we hope that your

participation in the study may offer an opportunity for you to reflect on yourself and your involvement in sustainability education in a way that is meaningful for you.

7. WHAT ARE my RISKS OF being in THIS STUDY?
We believe there are no known risks associated with this research study, however, a possible inconvenience may be the time it takes to complete the study. Additionally, in the interview we will discuss the issue of sustainability and climate change, which may bring up emotions. While your emotional response to these issues will be discussed and is a relevant dimension of this study, if you feel the need for further assistance, the following is contact information for psychological services at UMass: Center for Counseling and Psychological Health, http://www.umass.edu//counseling/ 545-2337 or 545-0333.

8. How will my personal information be protected?
The following procedures will be used to protect the confidentiality of your study records. Study records include audiotapes, audio transcripts, questionnaires, codes, and spreadsheets. The researcher will keep all study records in a locked filing cabinet. Research records will be labeled with a code. A master key that links names and codes will be maintained in a separate locked safe box. The master key and audiotapes will be destroyed 3 years after the close of the study. The computer with the database and spreadsheet files will have password protection to prevent access by unauthorized users. At the conclusion of this study, the researchers may publish their findings. Information will be presented in summary format and you will not be identified in any publications or presentations.

9. WILL I RECEIVE ANY PAYMENT FOR TAKING PART IN THE STUDY?
You will receive a $20 gift certificate for taking part in the study.

10. WHAT IF I HAVE QUESTIONS?
Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the researcher, Kris Nelson, at 413-695-6066. If you have any questions concerning your rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu.

11. CAN I STOP BEING IN THE STUDY?
You do not have to be in this study if you do not want to. If you agree to be in the study, but later change your mind, you may drop out at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate.

12.WHAT IF I AM INJURED?
The University of Massachusetts does not have a program for compensating subjects for injury or complications related to human subjects research, but the study personnel will assist you in getting treatment.

13. SUBJECT STATEMENT OF VOLUNTARY CONSENT
If completing this form on-line, when clicking "Submit" at the end of the Pre-Interview Questionnaire, I am agreeing to voluntarily enter this study. I have had a chance to read this consent form, and it was explained to me in a language which I use and understand. I have had the opportunity to ask questions and have received satisfactory answers. I understand that I can withdraw at any time. I understand that I will receive a signed copy of this Informed Consent Form.

_____   _____   _____
Participant Signature: Print Name: Date:

By signing below I indicate that the participant has read and, to the best of my knowledge, understands the details contained in this document and has been given a copy.

_____   _____   _____
Signature of Person   Print Name: Date:
Obtaining Consent

PRE-INTERVIEW QUESTIONNAIRE AND DATA

Introductory Text

Pre-Interview Questionnaire: You are receiving this questionnaire because you expressed interest in participating in the study I am conducting entitled, "College Student Engagement in Sustainability Education and Activism."

I am conducting this study in order to explore how college students who are active in sustainability-related courses and co-curricular activities understand themselves and their lives in relation to issues of sustainability and climate change.

If you are interested in participating in a two-hour interview for this study, please click the box at the end of the questionnaire.

While I hope to interview everyone who expresses interest, I may not be able to. I will contact you during the time period of the study if I am able to interview you. At that time, you will be able to choose whether or not you would like to participate. This study will continue through Fall 2018.

Aside from the Name, Email, Age, Expected Year of Graduation, and Interest in Being Interviewed, all Questions are Optional.

Informed Consent Form: The second section of this form is the Informed Consent Form. Review the form. If you have any questions you would like to address before submitting this form, please contact me. By clicking "Yes" and "Submit" at the end of the Informed Consent Form, you give your consent to the information in the form (i.e. this will substitute for your signature). I will provide you with a signed copy of the Consent Form for your records.

Data

Age of Participants

Age	#
18	2
19	1
20	2
21	3
22	1
23	2
24	2
30	1

Expected Year or Completed Year of Graduation from College

2016	1
2017	1
2018	1
2019	4
2020	3 (1-Masters Degree)
2021	1
2022	1
2023	1

Self-Identified Social Identities

White straight cis woman with chronic depression
Human race; European American; Female; bisexual; ADHD with a dash of depression/anxiety and the ability to laugh at life's atrocities
white/caucasian, celtic/native american, male, heterosexual, upper middle class, able-mind-and-bodied
mixed race, immigrant, straight, female, upper middle class
White middle class male, bi-sexual, able-bodied.
White, male, cis-gender, queer, upper-middle class, able bodied
White, Jewish, male, intellectual upper middle class, straight, able
NA
white/hispanic, female, middle class, straight, anxiety, umass employee/alumn, daughter/sister/friend
White, Irish/Italian, heterosexual, middle class, female
Half-North African American
white/european/caucasian. I identify as male, but am a transgender male.
South Asian upper caste middle class male

Religious or Spiritual Self-Identification

Agnostic
Agnostic- depends on the day, really. I wonder what created our universe and for what purpose, if any. Not really into the whole "man's image" b.s. though. I prefer talking to trees and other organisms because whether it is real or in my head, the Earth speaks back to me. If I had to pick a "religion" I would say I'm fairly into Spinozism.
universal spirituality. no religious affiliation
Spiritual but not religious
Spiritual but not Religious
Buddhist
SecularJewishBudddhistAgnostic
I am a devout Muslim.
spiritual but not religious
I was raised Roman Catholic
Agnostic, and more spiritual

I don't know
I am definitely spiritual, but not religious. I sometimes go back-and-forth between agnostic or atheist, but truly, no one really knows what's out there. I've found that what really matters is taking care of your current home, which is the Earth, so that is what is most on my mind. Humans can't survive well in outer space.
I am agnostic about the notion of spirituality.

Background in Sustainability Issues in College

In addition to my major, I've conducted research and produced papers on UMass' composting endeavors. I also facilitated a 2-credit course on campus that aims to engage students in a more hands-on experience with sustainability.
Talking Truth, Divest UMass, UMass Outing Club, Undersecretary of Sustainability
I run the Sustainability Organization Coalition, and I work on various sustainable initiatives through my position as an undersecretary to the SGA Secretary of Sustainability.
Past Programs: Eco-Rep, UMass Permaculture, EPA Gameday Challenge, New2U Past Classes: Eco-Rep, Environmental Decision Making & Communication, To be or not to bee colony collapse disorder freshman year seminar, independent study on environmental student activism in the human relations lab.
I started a club to advocate sustainability in high school, but sadly haven't done anything in college
umass permaculture initiative, food for all, gardenshare
I try to live my life with a sustainable mindset when making any decisions and I speak up when I observe unsustainable practices. I attempt to minimize my personal consumption habits and be environmentally conscious. Many of my courses are sustainability-related because I am studying Natural Resources Conservation major with a concentration in environmental conservation. Eco Club; Sustainability Projects Abroad; Talking Truth meetings... My current involvement with sustainability mainly involves focusing on myself in order to build myself into a productive human who can use the skills I am learning now to create a more sustainable and just future for all living things. I plan to gain experience managing various ecosystems and then use that knowledge to be an environmental educator or policy maker.
I have taken a course called Sustainable Living in the 21st Century. My major is Natural Resource Conservation, so sustainability is intertwined with much of what I learn. I also co-run and co-found the Sustainable Organization Coalition.
Operation Clean Sweep in Warwick, NY + Sustainability Projects Abroad
New Earth Council collaborative participant, spiritual ceremonies for mother earth
Was a member of Divest UMass, the UMass Alliance for Community Transformation, and an intern with the Wellspring Cooperative Corporation
UMass Divest, Sustainable UMass Action Coalition, Sugar Shack Alliance, Standing Rock
I am a graduate student in the Environmental Conservation department at UMass.
I knocked on doors for Bernie Sanders' 2016 presidential campaign. After he lost, I knocked on doors for Solomon Goldstein-Rose, a State Rep. candidate who built his platform on environmental issues. In the 2016-2017 school year, I worked on a campaign with the website imatter.com, which was encouraging the town of Amherst to make tighter environmental laws. In the fall of 2017, I did a semester long internship with Solomon Goldstein-Rose. After finishing high school, I spent four months in Vermont working at a retreat center that is also a small organic farm and homestead, learning to live with the land.

Sustainability-Related Activities Prior to College

No

Yes, at my boarding school - I founded an annual Earth Day festival, led the school to Divest from Fossil Fuels, and was the Sustainability Coordinator.
I was heavily invested in Environmental Management. Part of being involved were the number of volunteering opportunities- from beach clean-ups, re-purposing events and introducing more a sustainable environment in my high school.
If I was I can't remember, so no
no, I really learned about sustainability initiatives through my major
I have always held nature close to my heart and knew in the back of my head that I wanted to pursue science while growing up. I feel closely related to nature through nonverbal communication. Climate change has been a constant source of existential anxiety for me and I have always been bothered when I look around me at the way humankind interacts with other living things. I was strongly influenced by my teacher in high school. I took bio and AP environmental science with her, as well as traveled to the Dominican Republic village El Castillo as a service volunteer with her. Her passion for creating an environmentally conscious global society helped put me on the right path. I feel like I am right where I am supposed to be in life.
I'm on a gap year and haven't started college. See two questions above.
I was always interested in getting more involved in sustainability, and learning more about it. I often watched documentaries and docu-series focused on Mother Earth and animals and food, which all spoke on the sustainable aspect as well. I got my family involved in recycling correctly and consistently.
I always helped to clean up the trash in my town, I volunteered at Operation Clean Sweep since I was in middle school, and I have volunteered at several TreeCycle events in my town.
No
Volunteer with Nature Conservancy
Yes. I worked in environmental NGOs in Nepal and in the Philippines prior to my graduate degree here.

Political Leanings and/or Commitments
On a scale of 1 – 10 with 1 = Far Left and 10 = Far Right

# on Scale	# of Participants
1	4
2	1
3	5
4	2
5	2

APPENDIX D

RECRUITMENT EMAIL

Kris Nelson Protocol
Attachment: Recruitment Materials
Text for Recruitment Email

Hello,

You have expressed interest in participating in my doctoral research project entitled "Making Meaning in the Anthropocene." I will be conducting one-on-one interviews with college students at UMass Amherst and the Five Colleges over the next several months.

Currently I am recruiting college students for the study who are involved in curricular and co-curricular sustainability and climate justice activities, through classes, Registered Student Organizations, clubs, and other formal and informal associations.

What to expect:

I have attached a short questionnaire to this email for you to fill out and return to me. Filling out the questionnaire is just a first step. I am seeking a sample of research participants that represents a wide range of interests, activities, identities, and backgrounds. This questionnaire allows me to learn a bit more about potential participants. Based on this information, I will select the initial participants. If I am interested in conducting an interview with you, based on the progress of my study, over the course of the interviewing period, I will continue to recruit and select participants.

If you are interested in participating in the study, please complete the attached questionnaire and return it to this email: kenelson@educ.umass.edu with *Dissertation Study* in the subject heading.

Thank you for your interest. I look forward to hearing from you.

Kris Nelson
Doctoral Candidate

EMAIL WITH INTERVIEW PREPARATION INFORMATION

Thanks so much for your interest.

There are three quick preliminary steps:

1) I'm asking participants in the study to fill out a very short questionnaire (it takes less than five minutes). I've attached the link here. There is a consent form to fill out in the second half of the questionnaire:

2) Scheduling a day/time for our interview. The interview is 2 hours, so you'd want to keep that in mind.

3) I am asking participants to bring to the interview - as they are able - one or several "artifacts" from their lives that we will talk about in the interview. I'm using the word *artifacts* because the type of "thing" from your life that I'm requesting you bring is very open. It might be an object, but it might also be a song, a picture, brochure, website, etc.

Something from each category would be useful, but if you can't bring something from each category, or if one counts for a couple of categories, that's totally fine. Not to be stressed over. Whatever comes naturally to you.

Here are the categories:

1. A personal object or artifact of meaning to you.
2. An object or artifact that in some way expresses your awareness of and response to climate change and ecological crises.
3. An object or artifact that represents something in how you understand "spiritual" in your own life, however you have a sense of that or however/wherever you might experience that.
4. An object or artifact that represents something in how you understand "political" in your own life, however you have a sense of that or however/wherever you might experience that.

As a gesture of thanks, I'll have a $20 gift certificate for you.

Best regards,

INTERVIEW PROTOCOL

Name: Kris Nelson
Title: College Student Engagement in Sustainability Education and Activism
Research Protocol

Part I. Artifacts

<u>Instructions</u>

Participant will be instructed to bring a personal object or artifact of meaning to them to the interview. These will be the focus of the first part of the interview.

Questions (depending on the artifact, how they are being woven into the conversation, and the direction of the conversation)

- What artifacts did you bring? You can talk about them in whatever order you want to.
- Why did you choose it?
- What do you see in it?
- What does this object say about you – in terms of what matters to you, who you are, who is important to you, how you conduct yourself, what you do, what you care about? (only certain questions will be relevant)
- What emotions are elicited by it or are associated with it?
- Is there a story connected to this object – the object can be actively a part of the story or a memory / story that the object makes you think of.

Probing questions related to spiritual and political identities / artifacts:

- What does the term (political/spiritual) mean to you?
- What experiences or aspects of your life are those where you might feel most in touch with something "spiritual" or "political"?
- Does your understanding of yourself spiritually or politically relate to your awareness of or how you respond to ecological challenges? Can you think of any experiences that can help explain this?
- What is the relationship of your current or past college experience in relation to your various responses to climate change? Are you getting what you need/want from the college context in relation to climate change? What is working for you? What isn't working? What would you like more of?

Probing questions directed toward the participant's social identities:

- How do your identities in terms of race, class, gender, sexual orientation, (dis)ability intersect with your thinking, actions, and feelings?
- Is there any identity that is more relevant than others? If so, tell me about that.
- Tell me about a specific experience that helps illustrate what you are describing. What did that mean to you?

Transitional Question

We're going to shift now to focusing more on you in relation to the ecological / sustainability context. As we shift: Does this object connect in any way to current ecological challenges and your responses (feelings/thoughts/actions/etc)?

Part II. Images
Participant's thoughts, actions and feelings
in response to current ecological challenges

Instructions

During this interview, we are going to talk about various ways in which you are responding to ecological issues. These may be a range of ecological issues, including climate change. By the word "responding" I mean all types of responses, including how you respond emotionally, your analyses of the ecological/environmental situation, and your actions.

We're going to use this collection of cards to begin the conversation.

(Provide participant with a binder of 60 8x8 inch cards with an image or picture on each one.)

I want you to look through the stack of cards and select **nine cards** that help you address and explore your responses to present ecological issues. Think of your responses in three areas:

a) 3 cards for thinking/analysis: how you analyze and understand ecological crises/issues – what you see to be the root causes of the problems we face; aspects of the issue you feel are important; how you see climate change
b) 3 cards for actions/doing: various things you do or have done or want to do in response to climate change; this can be related to choices you are making, ways you are living your life, specific actions, etc.
c) 3 cards for feelings: what are some of the feelings you have in response to ecological issues. There can be contradictory feelings.

A Shorthand way to think about this is Head / Hands / Heart.

Give the participant 5-10 minutes to select their cards.

Have the participant lay the cards out on the table in front of us.

For each area:

Tell me about why you have chosen these cards to represent your (thinking/action/feeling) responses.

Various Prompts, depending on the category: Explain more how you understand this image and what it means for you. What does this card get at that is important to you in understanding the issue? Do the cards represent different aspects of the issue, as you understand it? What's the relationship between the cards? When you say it represents ____ emotion, what do you see there that you resonate with?
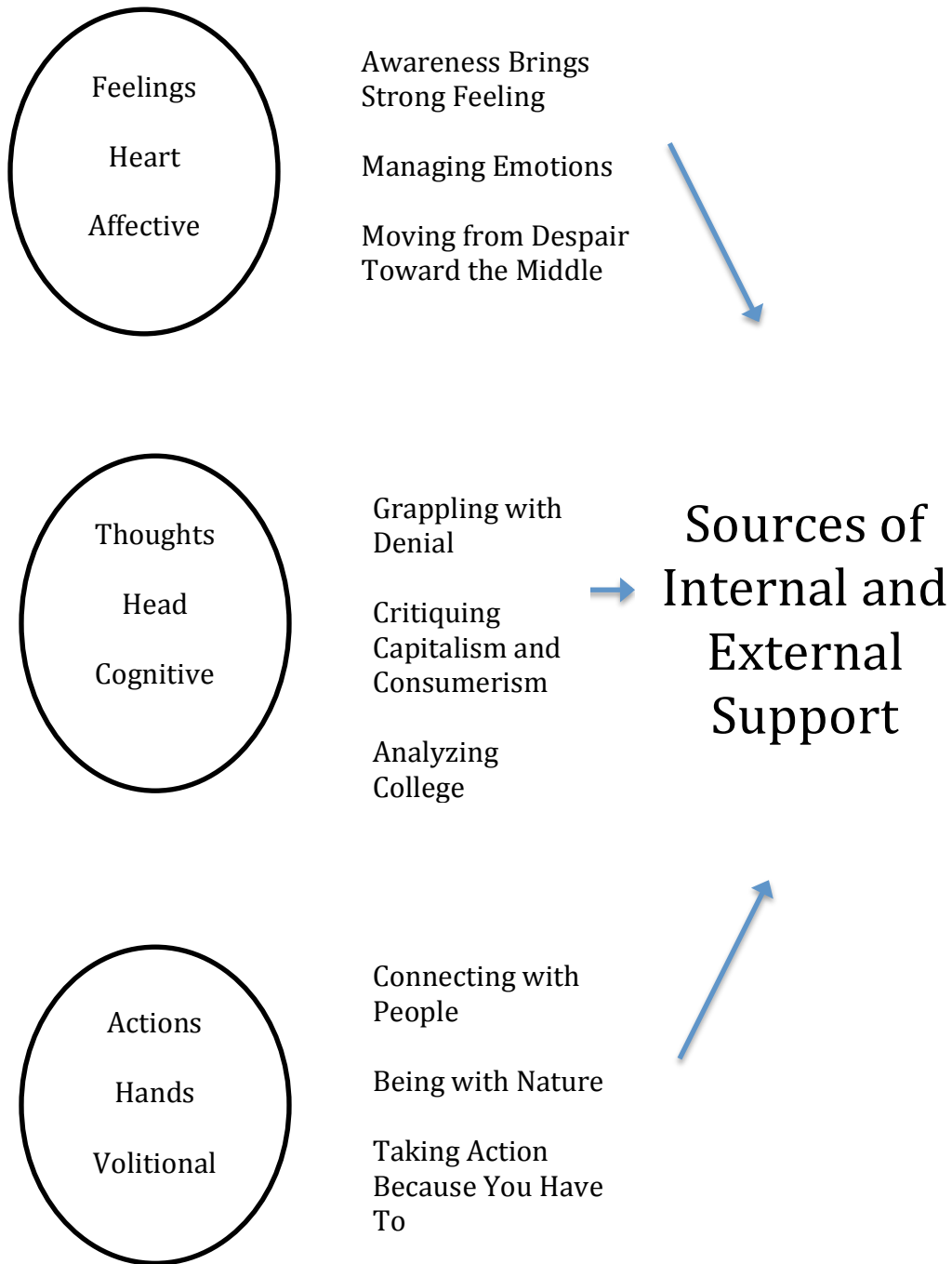
Is there anything else that hasn't come up in our conversation today that you'd like to include before ending?
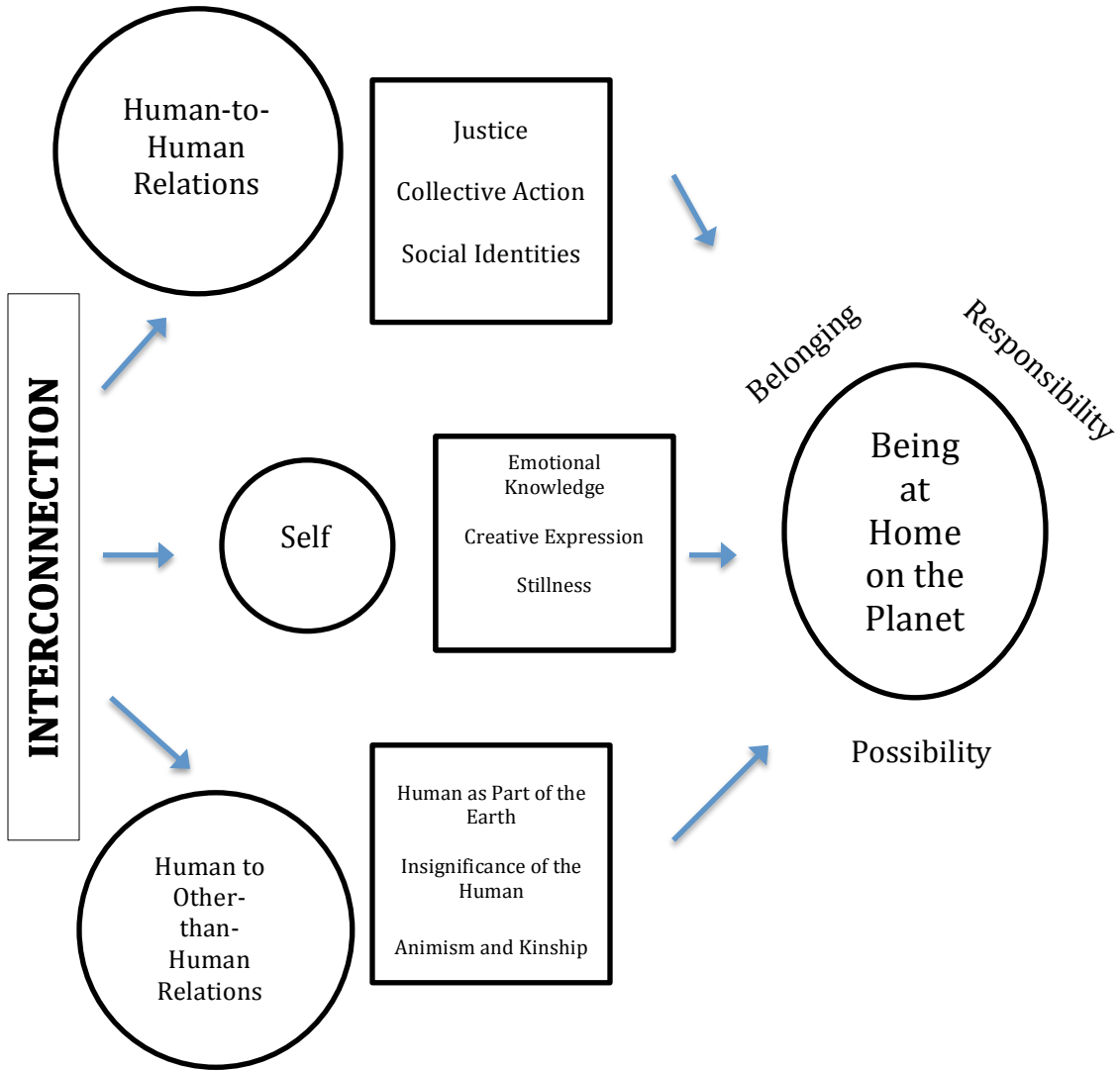
APPENDIX G

SAMPLE DATA MATRIX

Category	Image #s	Brief Description	Ideas Expressed	Phase 1 and 2 Concepts F, D, T = for Phase 1 category Section 2 + 3 = for Phase 2
Feeling Part. #1	9	Black haired Girl	Cutting off from reality - self and societal level;	Shutting Out Reality of Climate Crisis and/but working to stay connected (D Section 1)
	22	Me, Me, Me	Me in self-absorbed bubble - need to be more engaged; strive to put earth/others first; Need to take care of myself in order to be useful	Emotions Necessary on cultural/individual level (Section 2 or 3) (Connected to Denial) Relationship of Self and Other (Section 2)
	45	Man on Rock	Tranquility w nature; part of something bigger; humans belong in nature	Am I doing enough? (D Section 1) Humans Part of Nature (Section 2) Self in Cosmos - Part of something bigger than me (Section 2) Connection to Natural World/Nature a Solace (D Section 1)
Thinking Part. #5	7	Spider Web	Not seeing the interconnection is how we got ourselves into this mess. Everything is systems.	Use in Section 1, introduce the idea of interconnection to be picked up in Section 2
	2	I shop therefore I am	I shop: Consumerism at the core of the issue	I shop: (T Section 1) consumerism the problem
	13	We are not drowning	"We have to try, because what else can you do?"	We are not drowning (D Section 1) - Take Action because you have to.
Doing Part. #11	12	Perseverance	Who will the Freedom Riders be?	Use in Section 3,
	7	Spider Web	What would it mean for us as people to be really connected?	Use in Section 3 - Interconnection - Use as Guide
	11	Iceberg	Iceberg as metaphor for solidarity economy theory	Use in Section 3 - What's underneath in capitalist economy / Justice
	10	Resist/People Over Power	I think the movement work that we have is going to blossom from people	Use in Section 3 - collective action

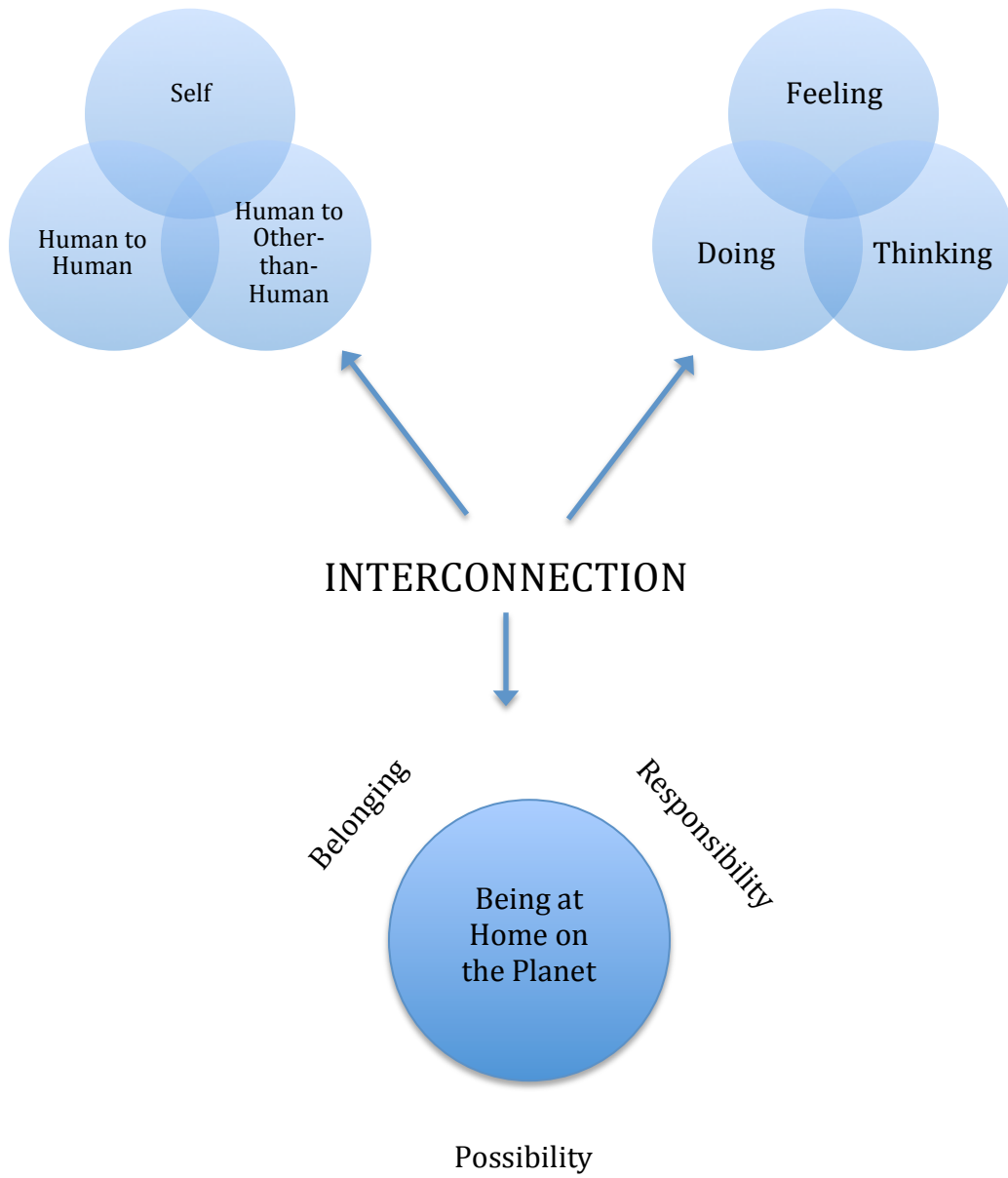**PHASE ONE DIAGRAM**

Feelings

Heart

Affective

Awareness Brings
Strong Feeling

Managing Emotions

Moving from Despair
Toward the Middle

Thoughts

Head

Cognitive

Grappling with
Denial

Critiquing
Capitalism and
Consumerism

Analyzing
College

Sources of Internal and External Support

Actions

Hands

Volitional

Connecting with
People

Being with Nature

Taking Action
Because You Have
To

APPENDIX I

PHASE TWO DIAGRAM

The diagram shows "INTERCONNECTION" on the left pointing to three circles: "Human-to-Human Relations", "Self", and "Human to Other-than-Human Relations".

Human-to-Human Relations box: Justice, Collective Action, Social Identities

Self box: Emotional Knowledge, Creative Expression, Stillness

Human to Other-than-Human Relations box: Human as Part of the Earth, Insignificance of the Human, Animism and Kinship

These point toward "Being at Home on the Planet" surrounded by: Belonging, Responsibility, Possibility

PLANETARY IDENTITY

Self

Human to
Human

Human to
Other-
than-
Human

Feeling

Doing

Thinking

INTERCONNECTION

Belonging

Responsibility

Being at
Home on
the Planet

Possibility

The following images were included in the binder of sixty-one images provided to the participants during the second half of the interviews. Participants chose nine images, representing "feeling," "thinking," and "doing" in relation to their responses to climate change, with three images within each category. The thirty-seven images on the next page are the ones that were selected by the participants from the binder. Each one is labeled with a number that corresponds with the image number indicated in the report of the Findings in Chapters Four and Five.

These images are covered within the "fair use" category. The list below identifies the creator or artist for the images where this information is provided.

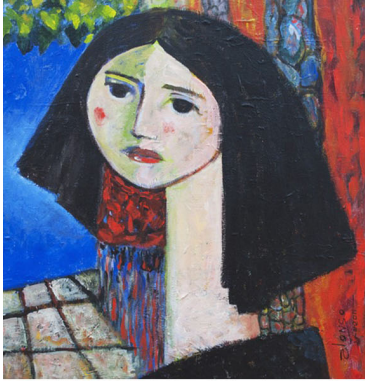|	
#2: Barbara Kruger	#21: Dante Gabriel Rosetti
#3: Gideon Fasola	#27: Karen Mate Vosyan
#5: Banksy	#44: Alexander Milov
#8: Banksy	#45: Patricia Bereskin
#9: Juan Alanso	#46: Edvard Munch
#12: D'azi Productions	#47: Design Toscano
#13: 350.org	#57: Gregory Colbert
#16: Mark Yale Harris	#60: Yvon Favre
#20: Walt Curlee	

1

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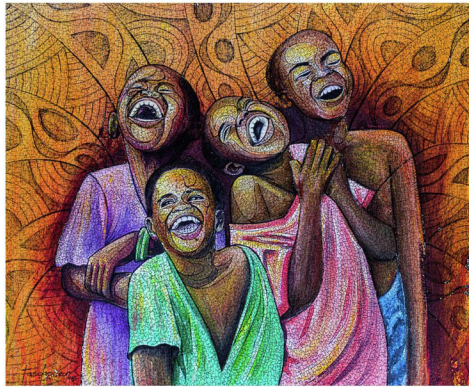
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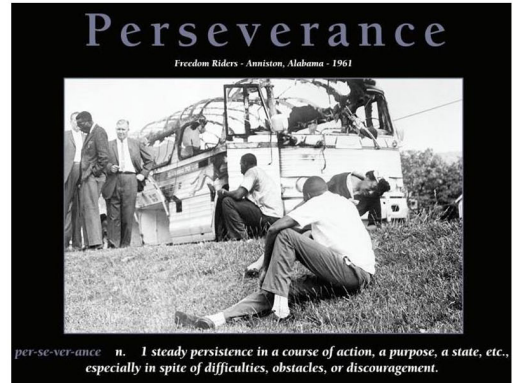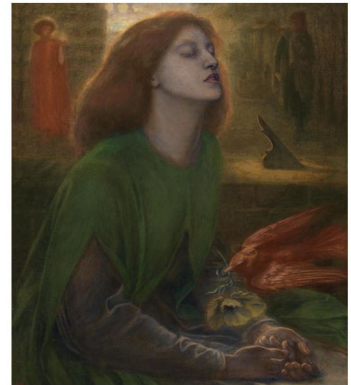

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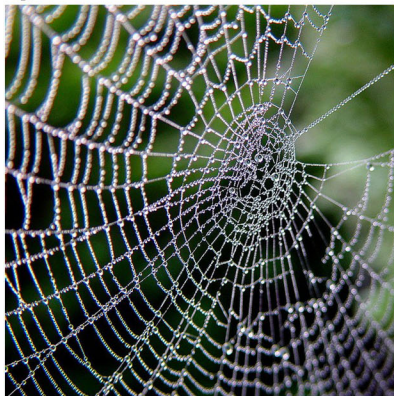
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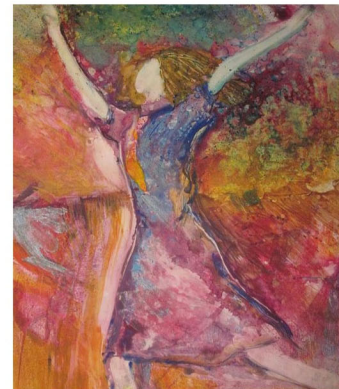

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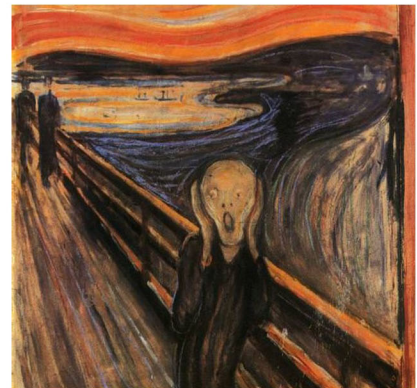23

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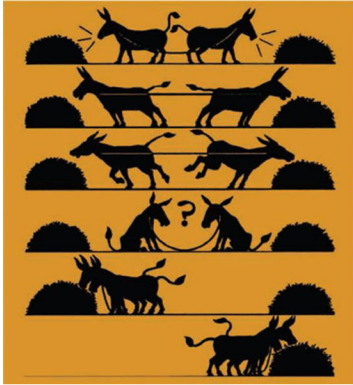

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