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Dialectics of Eco-anxiety: Encountering Uncertainty and Negotiating (Im)possible Futures

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Dialectics of Eco-anxiety: Encountering Uncertainty and Negotiating (Im)possible Futures

by

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Abstract

Using a constructivist grounded theory method and taking a critical theory approach, this study aims to understand how people reporting eco-anxiety grapple with uncertainty about individual and collective futures in the context of the climate emergency. Data is drawn from public discussions about climate change in two online community forums hosted by the website Reddit. Findings are presented as dialectics representative of the multiple tensions and contradictions that frame and inform how people (primarily in the Global North) are currently making sense of the threat of climate change. These dialectics delineate several discursive dimensions of eco-anxiety and the meaning-making processes that people engage in to manage various forms of distress and how they (re)construct visions of viable futures. This project will contribute to sociological and psychological literature on the nature of eco-anxiety and the process of coping with uncertainty to enhance understandings of the impact of eco-anxiety on individual and collective well-being. In closing with a discussion of the implications for therapeutic practice, four pathways are suggested for stoking the burgeoning transformative process theorized here to be implicit in eco-anxiety.

Keywords: Eco-anxiety, Climate anxiety, Climate change, Grounded theory, Critical theory

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Chapter 1: Introduction

Climate change is but one facet of a larger ecological crisis encompassing issues like precipitous declines in arable land, pollution and environmental toxicity, and the sixth mass extinction (Marshall, 2011; Sogge, 2021). From changes in weather patterns, rising sea levels, increased frequency and severity of natural disasters, and potentially catastrophic shifts in the delicate balance of global ecosystems, to population displacement on a massive scale and dramatic increases in socioeconomic inequalities, the predicted global impacts of climate change are wide-ranging and ominous (Weissbecker, 2011). While the level of public concern about climate change has fluctuated over the past few decades, in recent years the threat has become more widely acknowledged as evident and imminent (Chu & Yang, 2019). Indications of growing concern among the general public are surging in contexts like political discourse, news media and journalism, organized public action and protest, as well as scholarly research across a wide range of disciplines, including psychology (Doherty & Clayton, 2011; Chu & Yang, 2019; Weissbecker, 2011). Notably, in a recent series of 14 polls in countries across the world, 71% of respondents endorsed the notion that climate change “is as serious a crisis as COVID-19” (Verplanken et al., 2020, p. 1).

This rising concern demonstrates that as much as climate change is a geophysical phenomenon, it is undeniably a social and psychological phenomenon that threatens well-being in diverse and simultaneous ways (Doherty & Clayton, 2011; Reser & Swim, 2011; Schreiber, 2021; Pihkala, 2018; Usher et al., 2019; Ojala, 2012). As the emerging field of climate psychology can attest, the psychological impacts of climate change are “estimated to be very significant,” and many scholars are issuing a strong call to expand the body of knowledge about them (Pihkala, 2020a, p. 1). While most public discussion about the expected consequences of climate change has focused on physical health threats, issues of well-being specifically have begun to garner increased attention over the last decade (Helne, 2021; Pihkala, 2020a; Weissbecker, 2011). General scholarly interest in

well-being has also increased in the past decade, which social policy researcher Tuula Helne (2021) suggests may be reflective of a shared cultural anxiety that signifies a “deepening sense of crisis” in our way of life due to a “growing and gnawing awareness of its ecological repercussions” (p. 222).

Interplays Between Climate Change and Well-being

Research into the impacts of climate change on psychosocial well-being generally attends to three areas of concern: first, the direct and immediate impact of experiences like extreme weather events; second, the unfolding disruptions to environmental and socioeconomic determinants of well-being, particularly for the most vulnerable populations, and; third, the indirect impacts of emotional distress and anxiety about the future associated with awareness of climate change as a global threat (Fritze et al., 2008). This study is oriented toward this third general area of concern, in the context of ‘developed’ or industrialized nations loosely categorized as the Global North.

The climate emergency is being increasingly recognized by psychologists as a unique psychosocial stressor associated with direct and indirect experiences of climate change—including those mediated by the social world, such as journalism and documentaries, movies and literature, scientific reports, and interpersonal interactions and overheard conversations—that complicate familiar social and environmental relationships (Reser & Swim, 2011; Ojala et al., 2021; Chu & Yang, 2019). Alongside direct experiences with climate-change related events that constitute acute stressors (e.g., wildfires, droughts), indirect and mediated experiences of climate change can be understood as “ambient” stressors—that is, characterized by continuous or prolonged conditions (e.g., pollution, shifting weather patterns) that are more subtle, existing as a “low-level background noise” that people habituate to over time (Reser & Swim, 2011, p. 281).

Despite increasing awareness and scientific clarity around the extent of the threat posed by climate change, it remains challenging for many people in the Global North to fully grasp. Surely, to say that climate change is “big” is a serious understatement, as it “joins together a whole series of

otherwise disparate” social, political, cultural, and existential issues (Marshall, 2011, p. 3).

Moreover, the currently observed and potential future impacts of climate change are multifaceted and differential across the globe and are predicted to unfold over a time frame that spans generations and even centuries (Reser & Swim, 2011). The difficulty in truly comprehending the scope of the threat may be due in part to its uniqueness—as Reser and Swim (2011) explain, climate change “constitutes a complex risk domain, an attitudinal object, and a social representation of a phenomenon” (p. 277). All of these facets contribute to shaping our understanding of the threat as at once critical and inevitable, immediate and distant, discrete and continuous. Perhaps the most concise way to describe the difficulty of grasping the threat of climate change is to understand it as a *hyperobject*—that is, “something that has vitality and cohesion, but is so distributed through space and time that its totality is unknowable and our ability to think about it is severely challenged” (Lewis et al., 2020, p. 272). In this sense, there is a kind of cognitive incongruity at work, wherein our inability to “integrate the data of the world into a meaningful schemata” is understood as a basic course of anxiety (Epstein, 1972, as cited in Pihkala, 2020a, p. 12).

Variegated reports of distress—including worry, fear, sadness, despair, hopelessness, guilt, shame, anger, frustration, and overwhelm—punctuated by expressions of uncertainty have emerged in the literature under umbrella terms such as eco-distress, climate anxiety, and eco-anxiety (Doherty & Clayton, 2011; Hayes et al., 2018; Reser & Swim, 2011; Pihkala, 2018, 2020a; Usher et al., 2019; Ojala, 2012; Verlie, 2019). As environmental researcher Panu Pihkala (2020a) notes, the term climate anxiety typically refers to concerns specifically related to anthropogenic climate change, while the term eco-anxiety encapsulates responses to the broader ecological crisis. Following Pihkala (2020a), I adopt the latter term. Given that distinctions between the two terms are often blurred, exploring and creating vocabulary that can help us grasp the parameters of eco-anxiety remains an important task (Pihkala, 2020a).

Eco-Anxiety: Definitions and Parameters

It may be useful to start from a basic phenomenological definition of anxiety as “a psycho-physiological feeling” that signals an “impending threat requiring a self-protection response” (TenHouten, 2016, p. 132). Conceptually, anxiety can be distinguished from fear on the basis that fear relates to a more concrete or specific threat whereas anxiety is deeply characterized by uncertainty (Pihkala, 2020a). Although worry also pertains to uncertainty, worry has been theorized to have a relatively more pronounced cognitive element, in that it foregrounds problem-solving and cognitive self-regulation strategies, whereas anxiety is understood to be marked by more emotional and affective elements (Ojala et al., 2021, p. 38; Pihkala, 2020a; Verplanken et al., 2020).

Definitions of eco-anxiety abound in the literature. Pihkala (2018) describes it as generally encompassing “various difficult emotions and mental states arising from environmental conditions and knowledge about them” (p. 546). Environmental philosopher Glenn Albrecht’s (2012) definition is more intense: The “generalized sense that the ecological foundations of existence are in the process of collapse” (as cited in Pihkala, 2020a, p. 4). This latter definition highlights how eco-anxiety is understood to carry distinct intonations of existential anxiety, which has itself been characterized as entangled with our relationship to nature, suggesting that eco-anxiety signals “that our relationship with nature is suffering” (Lutz et al., 2021, p. 13; Pihkala, 2020a).

One term associated with eco-anxiety is *environmental melancholia*, which is intended to capture “unresolved and often unconscious mourning” related to environmental change, such as seasonal patterns and the degradation of beloved landscapes (Lertzman, 2012; Pihkala, 2020a, p. 7). Similarly, Albrecht’s (2005) term *solastalgia* denotes a “condition of being painfully nostalgic for the way the environment used to be” (as cited in Lewis et al., 2020, p. 272). Closely related to both environmental melancholia and solastalgia, the concept of anticipatory mourning denotes a mode of grappling with and trying to reconcile “emotional connections to certain things” in an active

attempt to reduce suffering when they are inevitably lost (Pihkala, 2018, p. 549). This can relate to both tangible and intangible losses: human life, wildlife, landscapes, and ecosystems, including traditional knowledges associated with them; homes, material possessions, and economic security; a sense of identity, lifestyle, and spirituality, and; a view of the future as “containing both unlimited and positive potential” (Ojala et al., 2021, p. 41; Pihkala, 2020a; Shelvock, 2021).

Anticipatory mourning suggests that confronting and trying to reconcile the upheaval of climate change can provoke a response consistent with the process of grief (Lewis et al., 2020; Ojala et al., 2021; Pihkala, 2020a). The term *eco-grief* has been theorized as having both anticipatory and transitional dimensions that signal a deepening awareness of undesired change (Pihkala, 2020a). Moreover, eco-grief is increasingly understood as a form of “disenfranchised” grief—that is, publicly unsupported or minimized and unacknowledged by social structures, institutions, and policies (Ojala et al., 2021, p. 40; Shelvock, 2021). What these various definitional aspects illustrate is that (like anxiety itself) eco-anxiety is multidimensional, and it is important to note that it can be experienced on a spectrum from mild to strong (Pihkala, 2020a).

Eco-anxiety can also be adaptive, much like worry (for more on the adaptive function of worry, see Ojala, 2012, Ojala et al., 2021, and Verplanken et al., 2020). My earlier distinction between worry and anxiety is not to say that eco-anxiety precludes problem-solving—some researchers highlight an element of “practical anxiety” at work in eco-anxiety that leads people to “re-evaluate the situation, search for better information, and to make changes in individual and collective behavior” (Pihkala, 2020a, p. 14). The recognition that eco-anxiety can provoke both maladaptive and adaptive responses has led to warnings against pathologizing it and suggestions to opt for wider rather than narrow understandings of eco-anxiety (MacKay, 2021; Pihkala, 2020a). Indeed, “it isn’t a disorder to be stressed by stressors” (Schreiber, 2021, p. 30).

In this vein, many scholars emphasize that to a certain extent eco-anxiety represents a normal, healthy, rational, even constructive response to real ecological threats (Doherty & Clayton, 2011; Lewis et al., 2020; Lutz et al., 2021; MacKay, 2021; Ojala et al., 2021; Pihkala, 2020a; Schreiber, 2021; Verplanken et al., 2020). Moreover, understanding eco-anxiety as a response “based on an accurate appraisal of the severity of the ecological crisis” arguably invites consideration of eco-anxiety as a “moral emotion” (Pihkala, 2020a, p. 14). In this sense, eco-anxiety is recognized as having a collective or “macro” dimension that carries moral and ethical “undertones” manifesting through concerns about distant places and peoples, animals, nature, and future human generations that are often intertwined with concerns about oneself and close others (Ojala et al., 2021, p. 39).

Because learning how to cope with the inevitability of a future marked by climate change is arguably a major emotional task of the twenty-first century (McLeod, 2013), there is a growing recognition among psychologists and researchers that eco-anxiety must be understood and approached differently than clinical anxiety, “where the goal of treatment is to lessen the fear” (Lewis et al., 2020, p. 273). Reducing fear can be a means to an end if we hope to avoid paralysis and work productively with eco-anxiety (Zwicky-Pérez, 2021), but we must also avoid casting the threat of climate change as “misperceived or exaggerated” (Lewis et al., 2020, p. 273). Instead, we must engage the fundamental uncertainty and existential questions that arise from it in order to effectively adapt to life in the shadow of climate change.

Purpose and Objectives

Much of the social-psychology research on eco-anxiety implicitly or explicitly focuses on mitigation—it emphasizes questions of how to galvanize individual action to fight climate change, how to inspire hope as an antecedent of action, and how to build personal and community resilience to preserve a sense of agency in the face of climate change (Chu & Yang, 2019; Doherty &

Clayton, 2011; Fritze et al., 2008; Hayes et al., 2018; Ojala, 2012). This dominant focus on action has effectively sidelined examinations of how people experiencing eco-anxiety grapple with the unique uncertainty presented by the threat of climate change and how this process influences orientations toward the future. This represents a gap in existing knowledge about how climate change impacts well-being in terms of conceptions of and perspectives on individual and collective futures.

The purpose of this study, therefore, is to investigate how people (primarily in the Global North) endeavour to make sense of climate change and how their meaning-making influences and shapes orientations toward the future. Taking a critical theory approach and using a constructivist grounded theory method, I explore the discursive landscape of expressions of eco-anxiety in online discussions hosted by the website Reddit. My aim is to illuminate how people expressing eco-anxiety engage with, reproduce, challenge, or subvert the dominant cultural narratives about climate change, and to trace any alternative ways of framing and making sense of the threat it poses for individual and collective futures.

Rationale and Significance

This study is poised to have broad implications for psychological research and practice. First, a better understanding of the various dimensions of eco-anxiety and how they are discursively constructed and managed can extend our knowledge of this unique stressor and offer more insight into its impact on general well-being. More broadly, the topic of eco-anxiety presents a unique opportunity to examine the process of dealing with large-scale collective uncertainties. As the tone of public discourse increasingly shifts away from discussions of mitigation toward questions of adaptation—perhaps in recognition of the growing scientific consensus that some devastating impacts of climate change are likely inevitable—more researchers are beginning to attend to questions of psychological adaptation.

Second, the extent of uncertainty that surrounds how climate change will impact the future of our societies and our lives raises urgent questions about how people experiencing eco-anxiety can be supported psychologically as they grapple with the threat of a future marked by climate change. In part, this study aims to contribute to the growing body of literature proposing avenues toward the development of therapeutic approaches and interventions for supporting psychosocial well-being. Specifically, greater understanding of the conceptual frameworks people employ as they grapple with eco-anxiety (e.g., hope, agency, existential meaning) and the discursive practices they engage in to (re)construct perspectives on the future can inform how we might begin learning to live with climate change (Verlie, 2019).

Structure of the Thesis

This thesis begins by outlining the main dimensions of eco-anxiety from a combined social-psychological and critical theory perspective. In the second chapter, I outline the qualitative research method chosen for this study and describe the analytical process undertaken. The third chapter presents the main findings—the dialectics of eco-anxiety and their core processes. The fourth and final chapter discusses these dialectical processes as suggestive of pathways toward a different kind of engagement with eco-anxiety and includes implications for therapeutic practice.

Chapter 2: Literature Review

This chapter outlines the major dimensions that seem to shape the experience of eco-anxiety: dimensions of uncertainty, emotional and affective dimensions, existential dimensions, and aspects relevant to the task of coping with eco-anxiety. I then take a critical-theory approach to situating eco-anxiety in the broader social and political-economic context with an emphasis on contemporary life in the Global North. The chapter closes with a brief consideration of how a dialectical approach to understanding eco-anxiety can illuminate and augment the meaning-making processes at work as we grapple with the threat of a future marked by climate change.

Dimensions of Uncertainty

Implicit in the concept of uncertainty is an orientation toward the future, which is a central component of all forms of anxiety (Ojala et al., 2021; Verlie, 2019). Psychologist Susan Folkman (2010) outlines four types of uncertainty that can accompany any stressful situation: “when something will happen (temporal uncertainty), what will happen (event uncertainty), what can be done (efficacy uncertainty), and the outcome (outcome uncertainty)” (p. 903). More specifically, stressful situations engender “problematic uncertainty” (Pihkala, 2020a, p. 2) owing to their unpredictability and uncontrollability, which are known to be the most “ubiquitous determinants” of anxiety and distress (Reser & Swim, 2011, p. 283).

For people experiencing eco-anxiety, however, the threats posed by climate change and their predicted impacts over the coming decades represent a kind of uncertainty that is relatively unique in scope and scale. In many ways, eco-anxiety arises from a kind of unconfined uncertainty owing to the difficulty (or impossibility) of containing the complexity of the threat of climate change (Lewis et al., 2020). This lends an amorphous quality to the psychological impact of eco-anxiety, in that it is often indirect, interwoven with other anxieties, and existing in the “background” of other life challenges (Pihkala, 2018, p. 546). Furthermore, there are unique tensions between certainty

and uncertainty at work in eco-anxiety, due to the unknowability of specific outcomes alongside the sense that climate change is inevitable—as climate educator Blanche Verlie (2019) highlights, we are grappling with uncertain futures in tandem with the “certainty of unpredictability” (p. 754). These conditions are increasingly understood to generate a sense of powerlessness marked by “a diminished sense of efficacy” and “response unavailability” that can linger even if one chooses to engage in pro-environmental behaviours or direct activism (Pihkala, 2020a, p. 11).

There are also various domains of uncertainty. In addition to the basic uncertainty about what a climate-changed future will hold (which might be understood as scientific uncertainty) people are also confronted with “social uncertainty” pertaining to the practical choices available and which cultural norms to follow as they engage with the problem of climate change (Pihkala, 2020a, p. 11). One example of a newly-disrupted cultural norm is evident in the concept of *flight shame*, commonly understood as either self-evaluated or socially-mediated shame for participating in an activity known for its high carbon emissions (Pihkala, 2020a). Overall, the threat of climate change “troubles modern subjectivities and futures” by disrupting our taken-for-granted beliefs about our individual and collective capacities to exert control over the future, while fracturing dominant ideologies of human privilege and entitlement in a way that destabilizes our sense of relative security in the world (Verlie, 2019, p. 754).

Emotional and Affective Dimensions

The emotional dimensions of eco-anxiety are complex and multilayered, with intimate associations between fear, worry, and anxiety that can be interwoven with anger, frustration, despair, sadness, guilt, and shame (Chu & Yang, 2019; Ojala, 2012; Ojala et al., 2021; Pihkala, 2018, 2020). Verlie (2019) describes this complexity as “diffractive and affective” to capture the sense that eco-anxiety can involve “a wide range of very intense, and potentially conflicting, emotions” (p. 755). Even apathy may not necessarily signal a lack of concern, as it can “mask” profound distress

(Pihkala, 2018, p. 563). Indeed, psychologist Renee Lertzman (2015) has theorized a “myth of apathy” to denote a kind of numbness that arises from caring “too much, not too little” about the climate crisis (in Pihkala, 2018, p. 548). Albrecht (2007) points to a similar response that he calls ‘ecoparalysis’ which denotes a state of wanting to act but feeling incapable (in Pihkala, 2018).

Apathy or ecoparalysis can emerge from a sense of overwhelm, which can be understood to arise from “encounters with problems of an incomprehensible and possibly insurmountable scale” (Pihkala, 2020a; Verlie, 2019, p. 755). Overwhelm is often associated with a frantic sense of overstimulation—as one might experience due to exposure to climate-related information—and it may be felt and expressed in terms of not being able to “bear it anymore” (Epstein, 1972, as cited in Pihkala, 2020a, p. 11). Overwhelm is closely linked with frustration, albeit distinguished in terms of a sense of capability—that is, frustration often results from attempted action that is thwarted while overwhelm tends to disable action (Verlie, 2019).

Like overwhelm, sadness is suggested to be a passive stance that is unlikely to be associated with efforts resolve the feeling, but it carries a tone of acceptance in response to concrete and “irrevocable losses” (Chu & Yang, 2019, p. 770; Ojala et al., 2021). In this sense, sadness can be understood as closely related to resignation, whereas grief—conceptualized as both an emotion and a process in which people endeavour to cope “with the loss of important relationships”—involves an element of struggle (Ojala et al., 2021, p. 38). This sense of struggle is also evident in guilt and shame, which are typically understood as “self-conscious” emotions that each involve a moral dimension related to the “transgression of moral standards” and the “failure to live up to a moral ideal,” respectively (Chu & Yang, 2019, p. 770). Notably, guilt and shame “diverge in their action tendencies” in that guilt is understood to motivate reparative or compensatory action whereas shame may prompt one to avoid action on the basis of a “belief that change is impossible” (Chu & Yang, 2019, p. 770-71).

Comparatively less attention has been given to resentment as a component of grappling with the threat of climate change. Sociologist Warren TenHouten (2016) describes resentment as both a sentiment (i.e., a thought, view, or attitude) and an affective state that carries a moral dimension, in that it is entangled with anger and a sense of bitterness or indignation in response to “another’s freely willed action that is wrong, insulting, offending, injurious, or unjustified” (p. 107). Moreover, TenHouten (2016) distinguishes two kinds of resentment: helpless and forceful. Helpless resentment is linked with “meaninglessness and powerlessness and is a reaction to unjustified suffering” whereas forceful resentment prompts efforts to end suffering and punish those deemed responsible for it (p. 107). The “emotional landscape” of anger and moral outrage has also received comparatively less attention, although there is increasing awareness of reported ‘climate rage’ that warrants further investigation (Pihkala, 2020a). Tentatively, climate rage may be closely tied to forceful resentment emerging from a sense of unfair discrepancy and relative deprivation, which may be expressed as a critique of social privilege (TenHouten, 2016).

Much of the research on the emotional aspects of eco-anxiety has been explicitly or adjacently focused on how emotional responses influence behavioural responses, with the aim of understanding factors that affect participatory action (see, for example, Doherty & Clayton, 2011; Ojala, 2012; Reser & Swim, 2011). More recently, however, there seems to be growing interest in illuminating the supposed contradiction between high levels of concern about climate change and incommensurate levels of behavioural engagement. The tone of this burgeoning body of research is notably more reflective and evocative than hypothesis-driven, indicating heightened attention to the “emotional and affective interplays” between human beings and the natural world that bear down on the experience of eco-anxiety (Pihkala, 2020a, p. 2). For example, anthropologist Jonathan Paul Marshall (2011) points to “symbolic resonances” that take “hold of the imagination” since ecology is necessarily “part of our inner lives” (p. 3). Similarly, Pihkala (2018) muses that “there are

seasons in the human mind, just as there are in nature,” suggesting that despair and depression may be “as necessary and natural as is winter before spring” while acknowledging that being stuck in “a kind of never-ending psychic winter” signals the need for help (p. 561).

Existential Dimensions

The range of emotional responses characteristic of eco-anxiety can overlap with or seed the hopelessness and futility broadly associated with existential suffering, and therefore can be understood as signalling existential angst (Bruce et al., 2011). Profound questions related to the meaning of existence are often provoked by large-scale and uncontrollable threats, and climate change in particular has been suggested to prompt thoughts and feelings, whether conscious or unconscious, associated with mortality (Pihkala, 2018). Confronting the reality of climate change can understandably complicate the parameters of our familiar sense of existential meaning, bringing a “new dimension” to questions of purpose and meaning in life (Pihkala, 2018, p. 548).

Meaning in life is generally conceptualized as a sense of understanding one’s experiences and feeling a sense of significance, combined with having aspirations that contribute to a sense of purpose in life (George & Park, 2017; Steger & Kashdan, 2013; TenHouten, 2016). Purpose can be defined as a sense that one’s choices and actions will “have an effect on future outcomes,” which suggests that efficacy—a belief in one’s ability to “mobilize resources in order to control important life outcomes” or make changes to personal or social situations—is a related component (TenHouten, 2016, p. 105). If meaningfulness connotes a sense of coherence derived from comprehending how and why things happen, then meaninglessness connotes senselessness, or “the perception that events in the social world occur in seemingly mysterious or incomprehensible ways that defy causal analysis or even mundane understanding” (TenHouten, 2016, p. 105).

Meaning in life has personal and social relevance; it is generally understood to be cultivated in terms of personal goals and accomplishments as well as contributions to one’s community and a

sense of belonging (TenHouten, 2016). Another way of cultivating existential meaning is through legacy or ‘symbolic immortality,’ which helps people feel that their lives have continued meaning after they die (Lifton, 2014, as cited in Pihkala, 2018). Sources of symbolic immortality can include biological relatives, creative or work-related contributions, religious participation, and nature—indeed, the feeling that “life goes on in the world of nature” can be an important source of symbolic immortality for many people (Pihkala, 2018, p. 552). In the context of climate change, these familiar elements of legacy are rendered uncertain and through this lens, taking part in ecological sustainability initiatives can be understood as an “immortality project” (Pihkala, 2018, p. 552).

In many ways, existential angst—which can encompass anxiety, anguish, inner turmoil, and apprehensiveness—has been theorized to have affective dimensions arising from a sense of “estrangement from value systems” (TenHouten, 2016, p. 130). In this sense, it can be understood as a “moral meditation” on meaning in life and the nature of freedom (Byrne & McCarthy, 2007, p. 47). Comparatively, existential dread is theorized as a narrower term that encompasses anxiety, awe, and an intense sense of alarm (TenHouten, 2016, p. 132). Specifically, dread is understood to function as anticipation of some terrifying reality that induces awe in the face of “the grandeur of nature, the reality of human life, and the hard fact of death and the end of existence” (TenHouten, 2016, p. 138). This anticipatory aspect of existential dread tends to come into sharp relief during life transitions, as people grapple with uncertainty about the future (TenHouten, 2016).

Psychoanalyst Sally Weintrobe (2012) helpfully distinguishes four existential anxieties that arise in the context of climate change—first, the sense that our reliable life-supporting ecological system is in jeopardy; second, the sense of losing a relatively predictable (or any) future; third, the sense that we are unprotected and uncared for by societal leadership, and; fourth, the sense of losing the status and self-concepts that are bound up with our familiar lifestyles. These existential anxieties speak to a loss of ontological security, coalescing in a sense that something is “deeply

wrong” about our mode of existence that bears on and is reflected in our relationships with ourselves, with others, and with the natural world (Ojala et al., 2021, p. 39).

Alienation

Confronting the existential dimensions of eco-anxiety arguably highlights a “breakdown of established ways of being, identifying and relating” that can be understood as a process of “dis-identification” (Verlie, 2019, p. 754-5). This process can be pragmatically explored through the concept of alienation. Characterized by a kind of “relationlessness,” alienation refers to a sense of estrangement from “a world experienced as indifferent” intertwined with a sense of “internal division” that erodes one’s relationship to oneself (Jaeggi, 2014, p. 1). Insignificance, meaninglessness, and powerlessness are hallmarks of alienation, contributing to a sense of being “not at home” in the world and being unable to exert any influence, existing instead “at the mercy of unknown forces” (Jaeggi, 2014, p. 1).

Although alienation has traditionally been theorized as a unidimensional phenomenon of separateness, people experience alienation in vastly different contexts, which necessitates attention to the particularities of those contexts (TenHouten, 2016). Rather than focusing on the sociohistorical and structural conditions of alienation as traditional theories tend to do, TenHouten (2016) approaches alienation as involving both cognitive and emotional aspects—as an “affect-laden state of mind”—which has been supported by research based on reported accounts of personal experience (TenHouten, 2016, p. 3). More than mere separation, the notion of estrangement as central to alienation offers an avenue toward a deeper understanding of the existential dimensions of eco-anxiety.

Estrangement can manifest in multiple ways that suggest a troubled relationship with oneself or one’s culture, but often these modes are intertwined (Jaeggi, 2014). In general, estrangement stems from a sense that one’s behaviours or perspectives are misaligned with

dominant social values, and one may either strive unsuccessfully to live in accordance with them or reject those social values with a sense of disdain or contempt for the dominant worldview (TenHouten, 2016). Cynicism is one brand of estrangement that can be considered a form of “radical” alienation signalled by a nihilistic disengagement from the world coupled with a refusal “to engage in a politics seen as inauthentic” (TenHouten, 2016, p. 126). In this way, cynicism may be an “adaptation to helplessness” in circumstances of disillusionment and disappointment with the dominant worldview, enabling one to continue participating in everyday life “for the sake of self-preservation” (Gunderson, 2021a, p. 758). For the cynic, the prospect of cultural change is regarded with deep skepticism and pessimism about “the honesty and motivations of change agents” (TenHouten, 2016, p. 127).

The fundamental relationlessness that characterizes alienation and intersects with existential angst is reflected in the broad parameters of eco-anxiety. For instance, Fritze et al. (2008) point to a “lifecycle” aspect of eco-anxiety, whereby young people are affected by the threat of a future marked by climate change in ways that differ significantly from how their parents and grandparents experience it (p. 6). This can complicate perceptions of social support and even entrench generational conflicts. More broadly, the issue of climate change has proven to be socially polarizing, which can fuel alienation and cynicism by intensifying contempt and sharpening the sense of being a stranger to the social world (Jaeggi, 2014; Lutz et al., 2021).

Groundlessness

Bruce et al.’s (2011) characterization of existential suffering as a form of anxiety that begins with a sense of “groundlessness” is particularly appropriate for reflecting on how the threat of climate change may impact human life on this planet (p. 7). They describe groundlessness as an experience of being “shaken to the core” and a “sense of unravelling” and “disconnection” that may involve intermittent or prolonged fear generative of a “sense of being unhinged” (p. 7).

In this view, there are three overlapping compensatory efforts that people engage in to regain “firm footing” in a sense of purpose and meaning: engaging groundlessness by turning toward discomfort and “learning to let go,” taking “refuge in the habitual” by turning away from discomfort by “clinging to familiar thoughts and ideas,” and “living in-between” which entails a recognition of the “flux of instability and unknowing” (Bruce et al., 2011, p. 7). This notion of living in-between is conceptualized as a “paradoxical and recursive process” that is fluid, dynamic, and necessarily “contains opposites” (Bruce et al., 2011, p. 8).

Similarly, Verlie (2019) asserts that learning to “live-with” climate change is a fundamentally existential task that requires much more than cognitive understanding or behaviour modification—it requires a new conception of “what life is, what it means to live, and how to live well” (p. 759). This task involves acknowledging the “myriad, overlapping, compounding and continuously morphing situations” that climate change engenders, which are “unfair, painful and unresolvable, but which still demand our best efforts” (Verlie, 2019, p. 759).

Dimensions of Coping

Research on how people grapple with the reality of climate change has illuminated several dimensions of complexity that inform our developing understanding of the challenge of coping with eco-anxiety. Three major dimensions are particularly fraught with tension—the problem of agency, the nature of hope, and the scope of adaptation—which I will unpack after briefly outlining some orienting ideas about stress and coping and describing the ways of coping with the threat of climate change that are most commonly discussed in the literature to date.

In the most general terms, coping is a response to stress, which Folkman (2010) defines as a contextual process—meaning that the experience of stress “involves a transaction between the person and the environment, and [...] it changes over time” (p. 901). Crucially, a situation is deemed stressful when it carries personal significance and places demands on the individual that exceed

their current coping resources (Folkman, 2010). The literature specifies three types of coping—problem-focused, emotion-focused, and meaning-focused—that are interactive and dynamic, often working in tandem (Folkman, 2010). Problem-focused coping involves planning, information-gathering, and decision-making, emotion-focused coping involves self-regulation strategies like distancing or escape-avoidance and support-seeking, and meaning-focused coping draws on values, beliefs, personal strengths, and existential goals to manage well-being (Folkman, 2010; Ojala, 2012). The efficacy of these coping strategies depends to some extent on the circumstances—for instance, when stressors are perceived as severe or uncontrollable, problem-focused coping can generate more distress (Ojala, 2012). Emotion-focused coping has been associated with reduced stress compared to problem-focused coping, although the beneficial effects tend to be more fleeting, and it may undermine active engagement with the problem (Reser & Swim, 2011).

Meaning-focused strategies have been regarded as the most constructive because they are suggested to restore our coping resources and foster an ability to shift our perspective in ways that can transform perceived challenges into opportunities (Folkman, 2010; Ojala, 2012). Furthermore, meaning-focused coping may be most important for sustaining coping efforts over time “when the stressor cannot be removed and solved at once (or at all) but still demands active involvement” (Folkman, 2010; Ojala, 2012, p. 226). There is considerable evidence suggesting that concern about climate change can inspire meaning-focused modes of coping that are considered adaptive—it can galvanize creative ideas and behaviours in ways that boost a sense of agency, enhance individual and community resilience, and prompt people to consider solutions and prepare resources to mitigate the risks they expect to face (Fritze et al., 2008; Li & Monroe, 2019; Verplanken & Roy, 2013). Overall, individual pro-environmental behaviour has been found to help stave off anxiety and frustration, enabling people to effectively cope with their concerns as a mode of managing well-being (Fritze et al., 2008; MacKay, 2021).

Other ways of staving off anxiety include skepticism and disavowal—as Pihkala (2018) notes: “People find ways to both know and not to know at the same time” (p. 549). As Marshall (2011) remarked, expressions of disavowal are often infused with tones of “panic, incoherence, uncertainty and repetition” suggesting to him that “everyone is searching for order and justice where none can exist” (p. 8). Skepticism and disavowal are generally thought to arise from a perception that the risks of wholesale change may be a greater threat to people’s interests than the risks of not changing (Fritze et al., 2008; Randall, 2009). Hence, emotions and sentiments with moral dimensions, such as anger, outrage, resentment, and accusations of “climate hysteria” often show up in polarized debates about the reality of climate change (Pihkala, 2020a, p. 8). Various psychological terms have been offered to make sense of this response, including denial, defense mechanism, compartmentalization, and a “crisis of cognitive dissonance” (Lavallee & Hadley, 2021; Lewis et al., 2020; Zwicky-Pérez, 2021, p. 9). Overall, literature addressing climate change denial seems to focus on concerns about denial as a barrier to active engagement coupled with the assertion that denial “fuels isolation and desperation” in people who accept the threat of climate change as real (Zwicky-Pérez, 2021, p. 9).

The Problem of Agency

People experiencing eco-anxiety must negotiate the irresolvable tension of recognizing climate change as both an individual and a collective challenge—while individual actions and lifestyle choices contribute to the problem, changing them alone cannot solve the problem (Lavallee & Hadley, 2021; MacKay, 2021; Ojala, 2012; Weintrobe, 2012). This duality complicates our sense of agency, which can undercut our level of engagement and render our sense of efficacy more tenuous (Chu & Yang, 2019; Ojala, 2012; Pihkala, 2018; Verplanken & Roy, 2013). The interplay between eco-anxiety and beliefs in personal efficacy is complex and multidirectional. On one hand,

frustration arises in the face of obstacles or barriers to achieving goals or ideals and can result in a sense of thwarted agency—a common experience that rings of disempowerment when people feel that their individual actions to mitigate climate change are inconsequential (Verlie, 2019). On the other hand, shared feelings of frustration can foster a sense of community and interconnectivity as people grapple with the reality that climate change is in fact a collective challenge (Verlie, 2019).

In studies of meaning-focused coping, an element of trust that “different societal actors will do their part in the fight against the climate threat” was found to enhance personal engagement, perhaps because that trust helps to foster a sense of collectivity and beat back the demoralizing feeling that our personal actions and sacrifices might be insignificant (Lavallee & Hadley, 2021; Ojala et al., 2021, p. 50). It has also been suggested that a heightened sense of agency or efficacy can arise from problem-focused coping attempts motivated by a belief that the threat of climate change can be mitigated—in other words, our motivation to restore a sense of control can lead us to hold beliefs about our agency and efficacy that “may not necessarily be founded on an objectively rational basis” (Ojala et al., 2021, p. 46). Examples of behaviours that may signal exaggerated efficacy beliefs include recycling and consumer-style activism.

As psychotherapist Sarah MacKay (2021) points out, consumer activism is problematic because the range of ostensibly pro-environmental choices varies widely in terms of the burden on individual resources like time and finances (e.g., recycling versus switching to solar power). Also, much of the societal infrastructure in the Global North is “not designed to make climate-friendly behavior default or convenient” (MacKay, 2021, p. 16). Another part of the problem with consumer activism arises from the lack of transparency about the environmental and ethical costs and impacts of consumer goods—it is not easy to make truly informed choices in our dynamic global consumer economy (Lavallee & Hadley, 2021; MacKay, 2021). This stark absence of truly comprehensible and useful information effectively clouds our awareness of our environmental impact (Lavallee & Hadley,

2021; Schreiber, 2021). Given the apparent impossibility of efficacy in these circumstances, resorting to emotion-focused coping responses like distraction or avoidance is understandably functional (Lavalley & Hadley, 2021).

The Nature of Hope

A better understanding of how people are coping with the unique threats posed by climate change has the potential to deepen existing knowledge about hope as both a functional mode of coping and a perspective on the future. Hope is crucial for the capacity to cope with uncertainty over time—it enables people to simultaneously hold conflicting expectations of the future and entertain alternative outcomes (Folkman, 2010; Li & Monroe, 2018). In some ways, hope may be defined as a sense of “certainty that something makes sense” (Weingarten, 2007, p. 21). Hopelessness, however, has been found to thwart constructive engagement with the problem of climate change and undermine well-being, prompting much interest in the role of hope as a motivational force for counteracting helplessness and disengagement (Li & Monroe, 2018, 2019; Chu & Yang, 2019; Ojala, 2012; Pihkala, 2018).

Our understanding of hope often gets tangled with optimism and self-efficacy, so it is worthwhile here to make conceptual distinctions. Optimism is characterized by feeling certain about or at least expecting a positive outcome, and self-efficacy is characterized by faith in one’s capacities (Li & Monroe, 2018; Weingarten, 2007). Hope is less a perspective and more of a process or practice of managing uncertainty, and as such, it is intimately related to anxiety (Folkman, 2010; Verlie, 2019; Chu & Yang, 2019). Indeed, we often oscillate between hope and anxiety when grappling with the same concern because hope emerges from “the same conditions as anxiety: uncertainty and contingency” (Verlie, 2019, p. 757).

The prevailing notion that hopelessness negates agency also warrants interrogation on the basis that hope may be a multidimensional construct with ‘being,’ ‘doing,’ and ‘becoming’ aspects

(Folkman, 2010). The 'being' dimension of hope can be understood as a deep and persistent element within oneself that sustains hope, while the 'doing' dimension manifests as a pragmatic and goal-oriented response to challenges, and the 'becoming' dimension of hope looks to the future in anticipation of positive possibilities (Folkman, 2010). This conception of hope offers more avenues for understanding the nuanced ways that hope can be practiced and sustained in the context of eco-anxiety. For instance, the practice of 'doing' hope even if we do not feel hopeful simultaneously "stretches us" and helps sustain our efforts as we cultivate pathways toward preferred futures (Weingarten, 2007, p. 16).

Another prominent idea about hope arises from the discursive construction of hope as an individual achievement. Psychologist Kaethe Weingarten (2007) takes issue with this discourse, arguing instead for understanding hope as a collective accomplishment. Her view is pragmatic, critiquing the expectation that people are to "summon hope on their own when they feel most dispirited" as seemingly "unwise, even cruel" (Weingarten, 2007, p. 14). Furthermore, she argues that the privatization of hope reinforces a "fundamental misconception about the nature of human relatedness" that positions us as isolated when we are "intrinsically interdependent" (Weingarten, 2007, p. 14). This perspective highlights how hope and hopelessness have a "relational context" encompassing interpersonal, community, and sociopolitical realms of experience that can both support and undermine hope (Flaskas, 2007). After all, hope and hopelessness can "touch our lives at far remove" as we take in everything that is happening in the world and grapple with "registering the immensity" of the problem of climate change (Weingarten, 2007, p. 15).

The relational context of hope also invites us to consider different ways we might practice hope from different vantage points—because hope and hopelessness are "unevenly distributed in our lives and on our planet," different responses are called for: "*Hopeless, we must resist isolation. Witness to despair, we must refuse indifference*" (Weingarten, 2007, p. 15, original emphasis).

Ultimately, what Weingarten (2007) suggests about coping with terminal illness holds relevance for coping with eco-anxiety: Hope as a process and a practice depends on possibility and “pathways thinking” toward an achievable goal, “whether that goal breaks our heart or not” (p. 17).

The Scope of Adaptation

The predominant public (and arguably, scholarly) perspective on coping and adaptation echoes approaches to emergency response management in that it emphasizes boosting engagement and channeling anxiety into effective action, which often entails questions about how to “manipulate” the emotions thought to be barriers to action and inspire or promote “preferred emotions” thought to be more conducive to action (Doherty & Clayton, 2011; Lewis et al., 2020; Verlie, 2019, p. 752). The need for psychological adaptation, however, is gaining more attention in the literature due to increasing recognition of the fact that climate change “cannot be solved in the near future” (Pihkala, 2020a, p. 13).

A focus on psychological adaptation posits that understanding how people engage with ecological crises demands much more than understanding values, attitudes, and behaviors—it requires acknowledging and investigating emotional responses while allowing for and honouring contradictions, tensions, and ambivalence (Lertzman, 2012; Lewis et al., 2020; Verlie, 2019). Emotions are indeed “holistic matters” with both universal and particular existential and relational dimensions (Pihkala, 2018, p. 561). As Lertzman (2012) suggests, how we experience uncertain and destabilizing ecological change involves “psychic and social” processes that mediate and reproduce “social, political, cultural and ideological practices” (p. 93-94). Further, she notes that her use of the term ‘experience’ in this context connotes more than belief, opinion, or attitude—it “suggests the presence of affect” (Lertzman, 2012, p. 94).

To build on the definition of affect as “felt, visceral sensations” (Lertzman, 2012, p. 94), we can consider Verlie’s (2019) description of affect as “far more than emotions that can be named” as

it includes “excessive, uninterpretable, nebulous forces” that “cannot be contained, controlled or fully known” (p. 753). In proposing that we need to “consider environmental and sustainability efforts as forms of care work,” Verlie (2019) advocates for working towards not just psychological or emotional adaptation, but affective adaptation (p. 761). She defines affective adaptation as distinct from and exceeding emotional resilience, which is often ideologically privatized in terms of self-sufficiency, and too often neglects the need for “capacities to attune to emotional experiences” and foster connections with others in a process of “relational regeneration” (Verlie, 2019, p. 761).

Drawing on Indigenous, ecological, and posthuman philosophies, Verlie (2019) suggests that affective adaptation “involves recognition that life arises through relations” and as such, living is necessarily a “living-with” marked by “deep attunement” to the web of all life (p. 758). In the context of climate change, attuning to interconnection entails recognizing that “valuable relations are threatened” (Verlie, 2019, p. 759). While resignation may be a step in the process of affective adaptation, living-with is ultimately about acknowledging that life will be radically different from our presently conceived notions of the future and mourning the losses incurred as familiar relations are “torn apart, disfigured and/or regenerated” by climate change (Verlie, 2019, p. 759). At the same time, learning to live-with involves continuing to hope and act for desirable futures in an overall process of “staying with the trouble” (Verlie, 2019, p. 759). This work of grappling with “ongoing pain to generate change and difference, and thus, better, more positive, yet never certain, futures” amounts to what Verlie (2019) calls the necessary “labour of bearing worlds” (p. 758).

Eco-anxiety in Context

Eco-anxiety is invariably shaped by cultural, political-economic, and sociohistorical factors and dynamics, and in the context of the manifold upheavals that characterize contemporary life in this decade—increasing sociopolitical polarization, an epidemic of loneliness, fracturing health care systems, the prospect of economic recession, not to mention the Covid-19 pandemic—eco-anxiety

is likely to “become increasingly intertwined with other anxieties” (Pihkala, 2020a, p. 14). In many ways, contemporary life is a “minefield of tensions” (Sevilla, 2019, p. 496). Making sense of climate change is a fundamentally interpretive process of negotiating personal concerns, thoughts, and feelings intermediated by sociocultural influences, developments, and forces (Fritze et al., 2008; Gunderson, 2020a; O’Keefe, 2017). It is a process of ordering our world, a process that “gains force” through social relations and serves to ground our experience (Gunderson, 2020b; Paliewicz & McHendry, 2020, p. 138; Reser & Swim, 2011). Ecological crises, however, involve not just cognitive and emotional dilemmas but “industrial and ideological” dilemmas as well (Lertzman, 2012, p. 99).

Individual and collective perceptions of and dispositions toward climate change are necessarily structured by cultural ideologies and “socio-ecological contexts” that inform how people “think, believe, and behave across different domains” where beliefs about efficacy and possibilities for change are negotiated (Li et al., 2021, p. 1; Verplanken & Roy, 2013). Environmental sociologist Ryan Gunderson (2017; 2020a; 2020b) highlights the core definition of ideology as referring to sets of ideas and forms of thinking, whether subjective or intersubjective, that conceal or “smooth over” contradictions through the legitimation and reproduction of the social order (2020b, p. 538). It is through ideology that we reconcile contradictions; in other words, ideology is “a solution in the mind to contradictions which cannot be solved in practice” (Larrain, 1979, as cited in Gunderson, 2017, p. 276). Essentially, ideology masks contradiction by asserting “things are the way they are” which carries a powerful implication: “it could not be otherwise than it is” (The Frankfurt Institute of Social Research, 1972, as cited in Gunderson, 2020b, p. 535).

The preeminent socio-ecological context of contemporary life, certainly in the Global North but by virtue of inescapability, across the world, is capitalism. Far more than an economic order, capitalism is an ideological powerhouse that espouses a narrative of “progress made possible by economic growth and advances in technology” in which “humanity is steadily moving toward a

brighter future” (Helne, 2021, p. 220). Capitalism influences how we think because its logic defines the “prevailing circumstances” of everyday life, conditioning our interests in a way that “blunts our understanding” of particularity, difference, and contradiction (Gunderson, 2020b, p. 533). At present, it is “well-established” in the environmental social science literature that the tenets and demands of capitalism—generally described as enforcing expansionary growth based on resource consumption—are central drivers of climate change (Gunderson, 2020a, p. 608).

This recognition highlights what many critical theorists have long argued: There is an essential “systemic contradiction” between capitalism and the environment that gives rise to a paradoxical situation in which “society continues to degrade the environment despite the fact that it knows it is destroying its life support” (Gunderson, 2017, p. 263, 278). This situation spotlights how ideological norms “separate climate change knowledge from climate change action” in order to construct a kind of “socially organized” denial (Norgaard 2011, as cited in Gunderson, 2020b, p. 538). Under this circumstance, the assumption that climate change denial and oppositions to mitigation are simply due to a lack of adequate or accurate information—known as the “information deficit model”—falls apart (Gunderson, 2017, p. 264). More broadly, the threat of climate change destabilizes the central narrative of capitalism, arguably to the point that it has “lost its credibility” (Helne, 2021, p. 220).

At this historical moment, ideology continues to operate through social practices that “structure routine knowledge” through ideas that “naturalize social reality” and reproduce existing social conditions, despite widespread cynicism or disbelief in its normative justifications (Gunderson, 2020b, p. 538). But conditions like climate change bring into question unignorable contradictions in our taken-for-granted way of life and cause “cracks and breaks” in our familiar conceptions of the social world (Gunderson, 2021a, p. 753). This kind of fracturing tends to highlight and trouble familiar domains of reference and their ‘natural’ or conventional facts—for instance,

conceptions of personal agency, morality, and justice (Gunderson, 2021a). After all, “society becomes directly perceptible when it hurts” (Adorno, 2000, as cited in Gunderson, 2021a, p. 753).

Disorder and Power

Marshall (2011) argues that climate change breaks down our certainties—our social categories and relationships, our taken-for-granted ideas about meaning in life, and arguably (for the psychoanalytically-inclined) our ego-based organization of reality. In this sense, “disorder is inherent in climate change and our psychosocial responses to it” (Marshall, 2011, p. 19). He is careful to say, however, that because disorder is “at the heart of our problem” it is important that we engage it rather than considering disorder as “a residue, a pathology, or something to be bypassed as inessential” (Marshall, 2011, p. 1). Indeed, repressing or denying the “troubling internal resonance” of disorder does not make it go away: “it returns and disrupts our hold on order” (Marshall, 2011, p. 2).

In situating climate change as “inherently disordering of previous orders” in a way that “threatens organizational breakdown,” Marshall (2011) asserts that climate change in fact produces social and psychological disordering (p. 19). In our “predictable” attempts to defend against this disorder, we might re-order or re-structure the “mess” through excessive abstraction and simplification, whether by identifying core features of a problem, or building “ideal types” through which we can think about a problem, or reducing complexity to fit a single narrative—all strategies that reduce variation by “discarding everything which does not fit” (Marshall, 2011, p. 2). This grasping for order depends in large part on the application of various forms of power, the use of which “disorders as much as it orders” (Marshall, 2011, p. 19). Ultimately, Marshall (2011) argues that these strategies and the applications of power that facilitate them only serve to “further reinforce the disordering and its effects” (p. 4).

Marshall's (2011) conception of our social and psychological responses to disorder seems aligned with Gunderson's (2021a) perspective on the nature of helplessness. As an implicit recognition of a "lack of control over background social conditions," helplessness prompts us to focus only on whichever elements of everyday life can be manipulated to achieve pragmatic aims, and to discard elements considered "non-valuable" for this purpose (Gunderson, 2021a, p. 757). In this sense, he frames helplessness as the reflective awareness that we lack the power to change structural conditions—like the contradiction of capitalism and the social inequities that it produces—despite being concerned about their detrimental effects (Gunderson, 2021a, p. 757). In the context of climate change, the powerlessness that seeds helplessness presents as both a subjective experience and an "objective socio-relational situation" that is rooted in particular cultural and political-economic conditions (TenHouten, 2016, p. 157; Gunderson, 2021a).

Moreover, on the social-psychological level powerlessness can be understood as a sentiment that intersects with resentment (TenHouten, 2016). TenHouten's (2016) distinction between helpless and forceful resentment as described earlier can illuminate some ways in which powerlessness intersects with eco-anxiety. Helpless resentment can arise when people sense that "their way of life and level of social entitlements are threatened" which induces a sense of relative deprivation that can either provoke resignation or it can fuel forceful resentment, where "the loss of power is contested and rights to power reasserted" (TenHouten, 2016, p. 157). Elements of helpless and forceful resentment are often entangled, although TenHouten (2016) suggests that responses emphasizing one or the other may be associated with power differentials.

Very generally speaking, people in positions of relative power tend to "envision desired future states of affairs and persist in carrying out plans" for realizing them, and hence, are more likely to challenge the social conditions that threaten their established way of life (TenHouten, 2016, p. 145). For relatively powerless individuals, the sense of lacking control over forces that shape their

lives tends to be more salient, and frustrated goals may be more likely to induce disappointment and resignation (Gunderson, 2021a; TenHouten, 2016). In the face of “unsolvable situations,” relative powerlessness can prompt adaptive responses like “limiting one’s needs, becoming averse to goal-oriented activities, and not making plans for the future” (TenHouten, 2016, p. 145-6). Resignation, then, can be understood as a mode of surrender that can accompany or engender hopelessness, alienation from the social world, and a profound sense of loss (TenHouten, 2016).

Justice and Morality

Climate change has and will continue to have differential effects on people across the globe due to geographical and socioeconomic vulnerabilities coupled with varying degrees of adaptive capacity (Weissbecker, 2011, p. 25). Furthermore, areas that are expected to bear the brunt of climate change impacts tend to be those that have contributed the least in terms of carbon emissions and have the least capacity to adapt (Ojala et al., 2021; Schreiber, 2021; Weissbecker, 2011, p. 25). Even within one country or one region, socioeconomically and politically marginalized communities are more severely impacted by the consequences of climate change, whether heat waves and natural disasters or direct threats to cultural traditions and economic livelihoods (for a broad review of research with vulnerable populations, see Ojala et al., 2021). As these egregious “political, economic, social, and health inequities” are exposed and exacerbated across the world due to climate change, dominant narratives of justice and morality are understandably deeply disrupted (Weissbecker, 2011, p. 25).

As mentioned above, Marshall (2011) asserts that the use of power “disorders as much as it orders,” which has implications for how we understand justice and morality in the context of climate change (p. 19). Justice is intricately tied with morality and, recalling Marshall’s (2011) assertion that disorder prompts attempts to re-order, he situates morals as an ordering force that underpins the “pattern of Justice” (Marshall, 2011, p. 7). Signalling an ideological critique by capitalizing the term,

he asserts that “Justice fails because it seeks a scapegoat, demands elimination of disorder and requires a uniformity, agreement and enforcement that cannot be present” (Marshall, 2011, p. 19). He argues that by demanding uniformity across worldviews and social relations lest they risk being unjust, unreflective Justice legitimizes a sense of moral superiority and “excludes the unjust,” which is hardly conducive to recognizing our fundamental interconnectedness (Marshall, 2011, p. 8-9).

In mainstream discourse about climate change, Justice can arguably lead us to make simplistic proclamations about what is ‘right’ with attributions of blame and responsibility that gloss over tensions and multiplicities. Essentially, because the ideal (or, ideology) of justice does not recognize heterogeneity and ambivalence, “it cannot deal with reality” (Marshall, 2011, p. 10). In other words, when we invoke the notion of Justice in efforts to combat global inequity, it can have the ideological effect of smoothing over contradictions (Gunderson, 2017; 2020a; 2020b) and obscuring the intricacy and nuance—and the validity—inherent in the vast range of responses to the threat of climate change.

As we grapple with the reality of climate change and deepen our awareness of its differential effects—whether concrete or vicarious—on people around the world, the values, priorities, and actions characteristic of contemporary life in the Global North have come to “carry a new moral assessment” that deserves reflexive and nuanced interrogation (Lewis et al., 2020, p. 285). Despite his strong position, Marshall (2011) does concede that choosing Justice “as the rubric for action” might be better than embracing an apocalyptic perspective “because apocalypse immobilizes altogether”—but he insists that Justice does not enable us to “deal with the mess of climate or power relations” (p. 10). Under these conditions, Marshall’s (2011) assessment of Justice turns out to be pragmatic:

“Ideas of Justice cannot get you out of this position as there are competing and conflicting ideas of what is just and what is fair. Justice can also be incapacitating and lead to positions

demanding purity, which can imply that as everything must be done to be effective, nothing can be done” (p. 9).

The Problem of Change

The problem of change revolves around possibility—what we witness as possible in contemporary society and what we imagine to be possible for the future. Emerging from the literature on climate change and eco-anxiety is a strand of critique that diagnoses the dominant cultural ideology as perpetuating conditions of (im)possibility that amount to a crisis of thought—more specifically, a “crisis of modern Enlightenment rationality” (Cochrane, 2014, p. 582).

This rationality—born of the European Enlightenment project of the early 17th century—is associated with grand narratives like progress, scientific and technological development, individualism, and domination over non-human nature as a means of liberation from it (Cochrane, 2014; Gunderson, 2020a). Enlightenment rationality propelled the industrial revolution, giving rise to a more specific ‘instrumental rationality’ that elevates production above other values and subsumes the material world (and now, arguably, human endeavours) under a totalizing ethic of progress and productivity that views nature simply as a resource (Cochrane, 2014). The contradiction inherent in Enlightenment rationality stems from the notion that humans are superior to and separate from nature when we are irrevocably interdependent, a fact that is laid bare as we grapple with the threat of climate change (Cochrane, 2014; Gunderson, 2020b). In this sense, Enlightenment rationality “breeds irrationality” and the contradiction that it conceals “finds its ultimate expression in climate change inaction” (Gunderson, 2020b, p. 521).

Other expressions of Enlightenment reason can be found in the most common prescriptive responses to the problem of climate change that Gunderson (2020a) deems problematic: ecological modernization, ecological revolution, and pessimistic fatalism. The case for ecological modernization is characterized by “techno-optimistic and market-friendly talking points” about ‘green growth’ and

'green capitalism' even though "the strategies associated with these frames have had limited success and counterintuitive impacts" (Gunderson, 2020a, p. 615). The case for ecological revolution is evidenced by "seeds of resistance" such as activist movements against resource privatization and organized civil disobedience tactics, and while any attempt to support and empower these resistance movements is certainly worthwhile, Gunderson (2020a) maintains that they lack the sufficient organization and international scope necessary for actual revolution—that is, "to replace global capitalism with an ecological society" (p. 616). The case for pessimistic fatalism arises from increasing acknowledgement of the direness of the situation as we witness accelerating impacts alongside a dearth of globally coordinated and commensurate mitigation actions, and this bleak outlook gets recycled and reproduced in mainstream discourse about climate change (Gunderson, 2020a, p. 617).

The growing insistence that cultivating a holistic understanding of nature is crucial for informing our collective response to climate change continually bumps up against dominant Enlightenment ideology to the extent that we cannot seem to think outside of it—hence, the crisis of thought (Cochrane, 2014; Gunderson, 2020b). As Gunderson (2021b) explains, "historically contingent conditions and patterns of thinking are projected into the past and future" which makes historical social structures "appear fixed [and] unchangeable" effectively rendering us "blind to alternative social futures" (p. 131). This circumstance is perfectly expressed in the sense that it is "easier to imagine the end of the world than to imagine the end of capitalism" (Jameson, 2003, as cited in Gunderson, 2017, p. 265).

Engaging Ambivalence and Contradiction

Reflecting on her experience conducting a field study on psychosocial aspects of environmental degradation, Lertzman (2012) described encountering contradictions between industrial progress and ecological sustainability. She noted that rarely acknowledged ambivalence

and contradiction are “at the heart of ecological damage” perhaps because there tend to be benefits that we get to enjoy (p. 94). Furthermore, she suggested that we tend to internalize this conflict—we might mull over questions like “Why am I not doing more to save or protect the environment?” or come to conclusions like “If I really cared, I’d do more” (p. 95).

Mainstream discourses about climate change contribute to ambivalence by constructing and presenting parallel narratives—one about the tragic problem, the other about idealized solutions (Randall, 2009). Impending loss on a grand scale is the dominant theme in the problem narrative but it is conspicuously absent in the solution narrative, and this oversight may deepen ambivalence by failing to attend to the possibility that “the actions that need to be taken to avert catastrophic loss themselves involve loss” (Randall, 2009, p. 119).

One way to engage ambivalence and contradiction would be to disrupt the ordering of the reality of climate change into tidy narratives that conceal contradictions. Dialectics can offer a space and framework for interrupting and interrogating the ideological bind in which, it seems, eco-anxiety is able to thrive unabated. Dialectics can illuminate the wide range of interwoven forces that shape perspectives on climate change and bear down on the experience of eco-anxiety (O’Keefe, 2017). Moreover, it is well-suited to the task of engaging with eco-anxiety because dialectical thinking “presupposes that the world is alienated, internally contradictory, and pregnant with various futures” (Gunderson, 2017, p. 283).

A Dialectical Approach

A dialectical approach is generally based on three principles: the expectation that change is constant, tolerance of and interest in contradiction, and holism or totality, which presumes interdependence and advocates for an all-encompassing analysis of reality (Cudworth & Hobden, 2014; Li et al., 2021). Putting these principles together, a dialectical approach regards the totality of reality as “in a constant state of flux” wherein “contradiction is the driving force of change”

(Cudworth & Hobden, 2014, p. 630). In psychotherapeutic contexts, a dialectical approach involves naming opposing parts—e.g., cognitive, emotional, affective—that contribute to ambivalence or inner conflict to allow for their integration within the self (Lewis et al., 2020). This kind of engagement with contradiction can circumvent overwhelm and expand “capacities for thought and feeling, fostering full engagement with reality” (Lewis et al., 2020, p. 272). In the context of critical theory, dialectics can help expose the tensions between everyday lived experience and the potentialities it may harbour—that is, the “practical purpose is to search for emancipatory alternatives within already existing oppositional ideas” (Gunderson, 2020a, p. 610). As Gunderson (2020b) suggests, opening up the possibility for alternative social conditions and illuminating a wider field of possible futures begins with bringing routine categories of experience “under the blade of dialectics” (p. 536).

Chapter 3: Method and Analysis

This chapter presents the qualitative research method employed in this study by describing its philosophical underpinnings, outlining its core procedures and practices, and establishing its applicability to my research aims. Later in the chapter, I describe my data collection procedure, research questions, and my analytical process before closing with a description of the guiding criteria for quality research.

Introduction to Qualitative Inquiry

Qualitative inquiry is defined by a range of flexible empirical methods for guiding the process of rigorous investigation into aspects of the social world, underpinned by a social-constructivist epistemology that “adopts a critical stance towards the taken-for-granted ways in which we understand the world and ourselves” (Coyle, 2011, p. 3; McLeod, 2001). Hence, qualitative inquiry is critical of the mainstream positivist paradigm that assumes a single objective, universal, and ultimately knowable reality and instead approaches knowledge and meaning in terms of multiplicities that are continually negotiated and co-constructed (McLeod, 2001).

Different approaches to qualitative inquiry draw on different interpretive practices (e.g., discourse and narrative analysis, phenomenology, forms of ethnography, grounded theory) that each offer different vantage points for understanding and making visible certain social experiences and meaning-making processes. As a starting point, qualitative inquiry invites “uncertainty, ambiguity, a sense of the unknowability of things” and orients the researcher toward discovery (McLeod, 2001, p. 10). This impetus toward discovery notwithstanding, the qualitative research process inevitably jumps off from some aspect of the familiar, taken-for-granted, everyday reality in order to see it anew, with the implicit acknowledgment that “psychological phenomena have a public and collective reality” (Coyle, 2011, p. 4; McLeod, 2001). In broad terms, qualitative researchers endeavour to provide “conceptual frameworks” for new ways of understanding the

social world comprised of pragmatic knowledge about the exigencies of particular experiences that can inform public and professional interests in a given social phenomena (McLeod, 2001, p. 4).

One aim of this study that qualitative inquiry is well-suited to is expanding on or developing knowledge about the phenomena of eco-anxiety. Qualitative inquiry can also accommodate the development of reflexive knowledge—that is, knowledge about the processes and arenas within which psychological researchers and practitioners construct phenomena like eco-anxiety—with the hope of identifying “something fresh and new” about our concepts, constructs, perspectives, and approaches to this concern (McLeod, 2001, p. 4). Without presupposing any possibility of truly or fully knowing the experience of eco-anxiety—because in the qualitative paradigm knowledge is understood as temporary, incomplete, and non-cumulative (McLeod, 2001, p. 5)—my aim is to delineate new or under-represented possibilities for understanding and engaging with eco-anxiety in social-psychological research and psychotherapeutic practice.

Constructivist Grounded Theory

For this study, I used Kathy Charmaz’s (2014) constructivist grounded theory method, the general purpose of which is to “construct a theory that offers an abstract understanding of one or more core concerns” (Charmaz & Thornberg, 2021, p. 1; Charmaz, 2017; Hood, 2007). Charmaz and Thornberg (2021) distinguish constructivist grounded theory in part by pointing to “residues” of positivist epistemology at work in earlier versions of the method (p. 7). For instance, they critique previous approaches as upholding positivist definitions of theory, as in “theories that seek causes, and stress explanation, prediction, generality, and universality” (p. 11). They also identify positivist presuppositions about “neutral observers” that can discover an “external world” through close observation and come to an “objective view of the data” while unproblematically separating the researcher’s positioning from the research process (Charmaz & Thornberg, 2021, p. 7).

In contrast, constructivist grounded theory emphasizes the interpretative aspects of theory, giving “abstract understanding greater priority than explanation” (Charmaz, 2014, p. 230 in Charmaz & Thornberg, 2021, p. 11). Moreover, it approaches the very notion of ‘experience’ as always socially, culturally, historically, and interactionally situated (Charmaz, 2017; Charmaz & Thornberg, 2021). Overall, constructivist grounded theory retains the core methodological strategies of previous versions while “shifting the epistemological foundations” in order to ask probing and critical questions about the data, the researcher, the research and analytical processes, and the interactions therein (Charmaz, 2017, p. 34).

Grounded theory is aligned with the American philosophical tradition of pragmatism, which views reality as plural, people as creative actors, and assumes that meaning emerges in the process of acting to solve problems (Charmaz, 2006). It ideally begins from a perspective of ambiguity and doubt—that is, “having reservations about what is happening or happened, defining uncertainty, and interrogating ready explanations” (Charmaz, 2017, p. 34). As such, grounded theory is open-ended and emergent, relying on inductive reasoning to foster ‘discovery’ by systematically invoking doubt about what is seen in the data as well as cultivating a persistent uncertainty about the analytic process as it unfolds (Charmaz, 2017). This approach allows grounded theorists to incorporate “intuitive ways of knowing” and “sense implicit meanings” while recognizing that this way of knowing is “always interpretive” (Charmaz, 2017, p. 41).

By studying actions and showing how they connect to meanings, grounded theorists endeavour to make implicit processes explicit (Charmaz & Thornberg, 2021, p. 4). Hence, grounded theory is best applied to studies framed by research questions that focus on elucidating one or more processes rather than a description of phenomena (Hood, 2007). The pragmatism of grounded theory is evident in how the method enables the researcher to develop emergent and ongoing critical questions while “designing and fitting methodological strategies” to explore these questions,

thereby sharpening their analysis (Charmaz, 2017, p. 35). This pragmatism is also evident in two general criteria for grounded theory analysis: fit and relevance. As Charmaz (2006) explains, fit depends on developing categories that “crystallize participants' experience” and relevance pertains to making “relationships between implicit processes and structures visible” (p. 54).

Toward a Critical Grounded Theory

Critical theory is a diverse discipline that includes a range of perspectives, from Marxist and Neo-Marxist traditions to feminist and queer studies to critiques of postmodern neoliberal society, and more (Charmaz, 2017; Gibson, 2007). A common thread across critical traditions is an impetus to investigate, expose, and challenge “power, ideology, class divisions, social and cultural reproduction, and the consequences of capitalism” (Charmaz, 2017, p. 35). In many ways, critical theory is “embedded in a transformative paradigm” that seeks to investigate “justice and injustice as enacted processes” (Charmaz, 2017, p. 35).

The pragmatism underlying constructivist grounded theory—that is, the stance of doubt, the promotion of fit and relevance, the goal of making implicit processes explicit—positions the method in alignment with the tenets of critical theory (Charmaz, 2017; Gibson 2007). As Charmaz (2017) concisely explains: “Pragmatism offers ways of thinking about critical qualitative inquiry; constructivist grounded theory offers ways of doing it” (p. 34). Here, pragmatism invites a perspective on social phenomena that can highlight pluralities as productive tensions, and these tensions can be positioned as a starting point for a “critical grounded theory” that provocatively challenges current sociocultural “assumptions and arrangements” (Gibson, 2007, p. 7; Charmaz, 2017, p. 37). In recognizing the multiplicity of possibly useful theoretical constructs, a rigorously constructivist orientation toward analysis “lessens the likelihood” of uncritically imbuing the data with conventional definitions or dominant ideologies. (Charmaz, 2017, p. 39). A large part of this methodological rigour depends on reflexivity.

Researcher Reflexivity

Reflexivity, or what Charmaz (2017) refers to as methodological self-consciousness, is about coming to the data with an awareness of one's social location—one's class, gender, race, nationality, age, health, professional status, historical era, and their intersections—coupled with a commitment to scrutinize the preconceptions stemming from one's positioning. Indeed, the makeup of our social location frames the way we view the world, informing our assumptions and priorities, and it affects the steps we take and the interpretations we make during the research process (Charmaz, 2017). For instance, researchers from Western industrialized nations may unknowingly bring "shadows" of capitalist individualism to their analysis (Charmaz, 2006, p. 67). Or, psychologists may be predisposed to see and privilege markings of predominant psychosocial concepts in the reported experiences that comprise their data (Gibson, 2007).

Reflexivity thus demands close attention to the ways in which our preconceptions can unwittingly inform how we interpret what a particular experience described in the data means or entails (Charmaz, 2006). To neglect this crucial process is to risk uncritically threading one's particular worldview into the analysis, forcing the data into existing theories (which are never value-neutral), and even mistaking one's own "social-psychological process of discovery" for a process arising from the data (Gibson, 2007, p. 10). Ultimately, constructivist grounded theory and critical theory both challenge the researcher to continually negotiate the tension between the familiar everyday social world and "a sociology that is meant to reach beyond this" (Gibson, 2007, p. 5).

Rationale for the Method

Constructivist grounded theory is an ideal method for this study. The systematic yet flexible approach provides clear guidelines on the research process while enabling the kind of productive oscillation between data analysis and creative theorizing that I believe to be best suited to my research questions (specified below). Most importantly, the grounded theory method is designed

for illuminating not just concepts and meanings but the actions and processes that inform and circumscribe meaning-making—the ‘how’ of meaning-making—which is a main goal of this study.

Eco-anxiety is a multifaceted social phenomenon that deserves an inductive approach to interpretation underpinned by the pragmatism of trying to understand how people endeavour to solve problems. Grounded theory fulfills this need and is particularly well-suited to investigating and making visible any implicit or under-theorized processes at work in how people grapple with eco-anxiety. Furthermore, constructivist grounded theory is aligned in many ways with critical inquiry, which invites interdisciplinarity and allows me to accommodate and apply my previous training in (and persistent inclination toward) critical theory to inform my analytical approach.

Procedure and Data Collection

As mentioned above, the grounded theory method is comprised of a set of principles and practices that invite researchers to use specified strategies flexibly and creatively, and Charmaz (2014) emphasizes the study of actions and the investigation of processes in order to create “abstract interpretive understandings of the data” (p. 16). In short, the grounded theory method is a “way of thinking” about the data that involves allowing one’s analytic focus to emerge throughout the research process rather than being predetermined (Charmaz, 2014).

As such, the method advocates for simultaneous data collection and analysis so that researchers can steadily develop concepts as they proceed, often gathering further data to continually revise and refine their conceptualizations (Charmaz & Thornberg, 2021). To guide the analysis, grounded theory offers a set of interconnected steps or strategies that begin with and evolve from coding the data—briefly, they include initial and focused coding, conceptual categorizing, theoretical sampling and sorting, constant comparison, and memo-writing. These strategies are described in further detail as I outline my process of analysis below.

Research Questions

This study is structured by two research questions stemming from the acknowledgment that climate change renders familiar perspectives on the future unstable, arguably forcing a re-conception of the field of possibilities for the future on both personal and social levels. First, how are people that express eco-anxiety grappling with and making meaning from the threat of climate change? Second, how is their meaning-making deployed in the process of (re)imagining individual and collective futures? The foundational goal of this study is to illuminate the meaning-making process(es) people engage in as they contemplate a future marked by climate change. In recognizing that the task of (re)imagining possible futures is likely to hinge on conceptual frameworks that promote and constrain certain kinds of meaning-making, the second goal of this study is to explore and map the ideological landscape in which this process takes place.

In addition to the research questions outlined above, during data analysis I plan to keep in mind one analytical question: What might this study suggest about the process of coping with eco-anxiety and associated factors that support or detract from psychosocial well-being? Investigating the ways in which people manage distress about the climate emergency can deepen our understanding of the impact of eco-anxiety on well-being, which is important for informing how therapists and counsellors can support individuals and communities in dealing with this concern.

Data Source and Collection Process

While many grounded theory analyses draw data from interviews, the method can also be applied to cultural texts—news media, podcasts, social media, and organizational policy reports are just a few examples. For this study, I collected data from online discussion forums—that is, social arenas where users interact to share perspectives and experiences, where content simultaneously reflects and shapes how people construct meaning. Discussion forums are therefore rich naturalistic resources for investigating and tracing how dominant cultural ideologies are reinforced, challenged,

and negotiated via everyday meaning-making practices (Gunderson, 2017). In order to address the research questions posed above, I collected written content from topic-based online forums hosted by the website Reddit, a user-driven community where participants interact to share information and advice on a broad range of topics. My exclusive focus on user-driven content was intended to make space for any alternative or subversive meanings to arise as potential counterbalances to what might be considered the dominant cultural or even scholarly narrative about eco-anxiety and outlooks on the future.

Reddit is relatively unique among social media websites in that it permits lengthy written posts and fosters ongoing interactive discussions. Users can subscribe to the topical forums that interest them, and all content is available to all users. At the time of this writing, Reddit is comprised of over 130,000 forums, called subreddits, which are available to search by category (Dixon, 2022). Reddit has over 430 million active users globally with an average of 1.5 billion visits per month as of early 2022 (Dixon, 2022). The United States, United Kingdom, Australia and Canada together account for over 60% of Reddit traffic (Dixon, 2022). It is reasonable to assume, therefore, that the vast majority of Reddit users are citizens of the Global North. I do not, however, have specific demographic information about the Reddit users whose writings comprise my data, unless they volunteered this information in their comments (which some do). Therefore, the workings of privilege and oppression that shape their lives is unknown unless they directly comment on them (which some do), and I am mindful that while living in the Global North bestows relative global privilege, this designation is far from straightforward.

Selection Procedure

Due to the volume of content on Reddit, I developed a stringent selection process in order to make data collection manageable. I focused on two subreddits: r/climatechange was created in 2009 and has 45,000 members, and r/climate was created in 2008 and has 112,000 members.

Because the topic of eco-anxiety is necessarily entangled with broader personal and public discussions about the climate emergency—i.e., climate projections, intergovernmental reports, climate policy, and environmental activism—I attempted to limit data collection to posts that explicitly express distress about the threat of climate change. Toward that end, I chose three search terms that broadly reflect my research interests—‘anxiety,’ ‘hope,’ and ‘future’—and searched both subreddits with these terms. Within these search results I focused on discussion threads that began within the last 18 months. At this point, my search produced 279 discussion threads. I then sorted each search-term result in each forum by descending number of comments and focused on threads with a minimum of 30 comments, as an indication of at least moderate engagement.

This first round of data collection yielded a total of 81 discussion threads. I then added two further selection criteria: I excluded threads with a strong emphasis on debating the merits of particular claims or beliefs about climate change, while focusing on those emphasizing the perspective of the writer, loosely indicated by I-statements, and those focused on advice-giving, loosely indicated by you-statements. This filtering process yielded 19 discussion threads encompassing 1,410 comments. Working toward a manageable amount of data, I re-applied the above criteria to the comments within the threads and removed insubstantial comments such as “Nope, no hope” and “don’t give up” to favour more elaborative writing. This last round of filtering substantially reduced the volume of data to 480 comments for analysis.

Analytical Process

In grounded theory, coding is comprised of two phases—the first phase includes initial coding and focused coding; the second phase is theoretical coding (Charmaz, 2006). Coding and data-collection tend to occur simultaneously as gaps in the data are noticed and questions arise about codes and tentative categories (Charmaz, 2006). Such questions spur memo-writing, which is a crucial analytical activity in grounded theory that begins early in the process and continues

throughout as the emergent theory is developed (Charmaz, 2006). Another continuous strategy employed in grounded theory is constant comparison—of data to data, data to codes, codes to codes, codes to categories, categories to concepts, and so on—in order to find similarities and differences (Charmaz, 2006). Once conceptual categories are deemed to sufficiently capture what the researcher interprets in the data, the researcher begins theoretical sampling and sorting to work toward theoretical sufficiency. These are intertwined processes that further and deepen the analysis toward the construction of theory (Charmaz, 2006). This section outlines how I employed these strategies in my analysis.

Coding

Initial Coding. The first step of analysis is initial coding, which begins the process of separating, distilling, and sorting the data (Charmaz, 2014). Initial coding can take different forms depending on the type of data collected; since my data is comprised of reported personal perspectives and experiences, I determined line-by-line coding to be most appropriate strategy, as it can help “identify implicit concerns” as well as attend to explicit statements (Charmaz, 2006, p. 50). I began by reading and re-reading the 480 comments I had collected to get an overall sense of the constellation of meanings being constructed and expressed.

As Charmaz (2006) outlines, coding involves labelling fragments of data to summarize and define the actions and processes that the researcher sees as happening in the data, and as such it is the first step toward analytic interpretation (Charmaz, 2006). With initial coding, it is important to remain close to the data and open to all possible meanings (Charmaz, 2006). The goal is to create codes that are “provisional, comparative, and grounded in the data”—being tentative is important because it allows for rewording to improve fit, as in how well the codes “capture and condense meanings and actions” (Charmaz, 2006, p. 48). In this first round of coding, I constructed 93 broad semantic codes that together lent form to the emergent landscape of meanings and processes. For

instance, “I feel so hopeless” was coded as “feeling hopeless” and “why bother” along with “everything we do is pointless” were both coded as “sense of pointlessness.”

At times, initial codes may be *in vivo*—that is, terms used by the writer that “serve as symbolic markers” of meanings—which provide a “useful analytic point of departure” that help to “preserve participants’ meanings of their views and actions” (Charmaz, 2006, p. 55). *In vivo* codes can include insider shorthand that reflects a particular perspective, innovative terms that capture particular experience, or general terms that “flag condensed but significant meanings” (Charmaz, 2006, p. 55). For instance, “do what you can to fight climate change” and “we have to keep fighting” were coded as “‘fighting’ climate change.” Despite arising directly from the data, *in vivo* codes must be treated like any other code—that is, they must still be investigated for implicit meanings and particularities in how those meanings are constructed (Charmaz, 2006).

By the end of this first round of coding, I began to sense tensions and contradictions in the data that intrigued me, such as debates about the efficacy of individual pro-environmental behaviour, oscillations between hope and hopelessness, and juxtapositions between economics and sustainability. Often times these tensions were expressed by one writer. As I moved into focused coding, I let this curiosity guide my analytical process.

Focused Coding. Once initial coding has yielded some promising analytical directions, focused coding is used to identify which codes stand out as most significant or most frequent, and enables larger portions of data to be synthesized and re-interpreted as categories that capture what is happening in more conceptual terms (Charmaz, 2006). Categories can consist of *in vivo* codes or represent the researcher’s “theoretical or substantive definition” of an action or process (Charmaz, 2006, p. 92). In my analysis, focused coding began with conceptually grouping initial codes together, at times elevating an initial code to the level of focused code. The principle of constant comparison

is still at work in this step, as moving to focused coding is not necessarily a linear process, and the researcher is encouraged to remain open to emergent meanings (Charmaz, 2006).

During focused coding, I retained some in vivo terms that struck me as particularly evocative distillations of experience, such as “sense of ‘us versus them’.” At this stage, the tensions and contradictions I had previously noticed became sharper and I was compelled to sort the codes into a diagram. I created a visual representation of the relationships between codes to reveal new connections, explore the fit and relevance of conceptual categories, and assess the scope of the emergent theory, which enabled me to sketch the “initial analytic frame” (Charmaz, 2006, p. 121) that led to my interpretation of the conceptual tensions as dialectics.

Theoretical Coding. The notion of dialectics marked my transition into theoretical coding, as it lent form and coherence to my interpretation of the relationships between categories of conceptual tension. Charmaz (2006) suggests that one way to think about theoretical coding is weaving back together the data fragmented by initial and focused coding, which accurately describes my experience with this stage of analysis. It is clear to me that sensitizing concepts from prior theoretical knowledge about dialectics—from both critical theory and approaches to psychotherapy—influenced my interpretive stance. My efforts to heed Charmaz’s (2006) warning to avoid imposing a theoretical framework on the data relied on the constant comparison process and memo-writing, as I endeavoured to entertain other conceptual configurations of the data. Ultimately, the conceptual umbrella of dialectics added a certain coherence that consistently supported the fit and relevance of my analysis, in terms of crystallizing the perspectives and experiences described in the data, and making implicit processes visible (Charmaz, 2006).

Memo-writing. Throughout analysis, grounded theorists write memos about the codes they create, the comparisons they make between fragments of data, and the questions that arise during this process (Charmaz & Thornberg, 2021). Memos are typically written in a spontaneous, informal

style and can take any form that serves the researcher's analytic process (Charmaz, 2006). Memo-writing early in the analytical process is a central strategy in grounded theory, as it helps to flesh out the parameters of questions and curiosities, clarify and direct coding, elaborate comparisons, connections, and insights, and elevate focused codes to the level of conceptual categories (Charmaz, 2006; Charmaz & Thornberg, 2021). From the initial coding stage, I wrote free-flowing digital notes to capture my impressions and curiosities about the meanings underlying writers' statements. I debated with myself about how the emerging codes and categories related and diverged, and speculated on the depth or superficiality of the comparisons I made between the data and my codes and categories. By the end of coding, my memos reflected a continually unfolding theme related to grappling with eco-anxiety in a fundamentally dialectical manner. This theme was investigated, challenged, and clarified through theoretical sampling.

Theoretical Sampling, Sufficiency, and Sorting. As the analysis progresses, the researcher engages in theoretical sampling and sorting. Theoretical sampling is about intentionally seeking data to illuminate, qualify, and elaborate categories that structure the emerging theory by developing and refining the properties of categories "until no new properties emerge" (Charmaz, 2006, p. 96). The process is "strategic, specific, and systematic" leading to a clarification of the relationships between categories, and therefore underpins the construction of theory (Charmaz, 2006, p. 103). By returning to the data to compare, contrast, and reorganize fragments in terms of the tensions I saw arising from my focused codes, I began to clarify the relationships between conceptual tensions and deepen my interpretation of the dialectical processes I saw happening the data. This process allowed me to refine the parameters of the core conceptual categories and construct second-order theoretical categories (i.e., the dialectics).

The grounded theory method typically advises aiming for theoretical 'saturation,' although saturation is a fraught concept in qualitative research, as it can be "invoked uncritically" to justify

interpretive closure (Charmaz, 2006, p. 114). As an alternative, Dey (2007) offers the term ‘theoretical sufficiency’ to indicate that data is sufficiently suggestive of categories, and he reminds us of the importance of proving it with representative examples. Ideally, theoretically sufficient categories crystallize the reported experiences and processes gleaned from the data and provide a “handle” for understanding them (Charmaz, 2006, p. 100). In this study, the notion of dialectics offered that ‘handle’ by capturing and reflecting the prevalent sense of negotiation and lack of closure arising from the reported experiences of, and perspectives on, grappling with eco-anxiety.

Sorting is intertwined with sampling and striving for theoretical sufficiency, and it can entail any strategy that prompts researchers to “compare categories at an abstract level” to further refine the emergent theory (Charmaz, 2006, p. 115). Sorting is particularly helpful when dealing with several categories, as it can force the researcher to “think through theoretical links among categories that may have been left implicit” and to delineate intelligible relationships (Charmaz, 2006, p. 121). As theory construction progressed, I re-sorted my previously diagrammed codes and categories to clarify the parameters of the emergent dialectics and assess the fit of speculative sub-dialectics. This process resulted in five theoretical categories and two theoretical sub-categories encompassing 28 conceptual categories and one conceptual sub-category, as shown in Table 1.

Constructing Theory. In constructing grounded theory, the stance of doubt that underpins the method comes to the fore because it is “generative” for conceptual abstraction and for critical inquiry (Charmaz, 2017, p. 38). Conceptual abstraction is often referred to as abduction—a means of inference that is different from induction and is geared toward constructing extended knowledge by identifying “the most plausible theoretical explanation, which may be a new theory” (Charmaz, 2017, p. 38). Ideally, abduction leads the researcher toward meaning-making, which involves an “intellectual jump” that adds something new to their interpretation (Reichertz, 2007, p. 11).

Abduction invites the researcher to view the data “as a sign, an indicator of something else, and we have to imagine what that something else might be” (Locke, 2007, p. 9). The “imaginative effort to understand” foregrounds the creative aspect of theorizing that involves spontaneity and conjecture, calling on the intuitive mode of thinking that “permeates our everyday lives” and consists of recollections, apprehensions, perceptions, images, metaphors, feelings, and perspective-taking (Locke, 2007, p. 3, 5). It is important to note that theories constructed via abduction are “neither (preferred) constructions nor (valid) reconstructions, but usable (re-)constructions” (Reichertz, 2007, p. 9). They are useable in the sense that they “articulate each significant concept and then, through the articulation of theoretical propositions, the relationships between these concepts” (Holton, 2007, p. 23).

Table 1

Dialectics of Eco-Anxiety and Conceptual Categories

Dialectics and Sub-dialectics	Conceptual Categories
Dialectic of Uncertainty <ul style="list-style-type: none"> • Sense that stable concepts are made uncertain, necessitating revised points of reference • Dialectical Process: Grasping for coherence 	Uncertainty Certainty
Dialectic of Alienation <ul style="list-style-type: none"> • Sense of isolation within current social reality and disconnection from expected futures • Dialectical Process: (Re)negotiating existential meaning 	Disorientation Disconnection Revising Futures Ecological Mourning Existential Angst Sub-category of existential angst: (Re)constructing legacy

Dialectics and Sub-dialectics	Conceptual Categories
<p>Dialectic of Agency</p> <ul style="list-style-type: none"> • Sense of grappling with capacities and limits of individual and collective agency • Dialectical Process: Grappling with interdependence <p>Sub-Dialectic of (De)constructing Power</p> <ul style="list-style-type: none"> • Sense of mapping the territory of global power relations • Dialectical Process: (Un)settling Injustice 	<p>Individual Agency</p> <p>Individual Powerlessness</p> <p>Collective Agency</p> <p>Collective Powerlessness</p> <p>Grappling with Interdependence</p> <p>Characterizing Privilege</p> <p>Naming Inequity</p>
<p>Dialectic of Change</p> <ul style="list-style-type: none"> • Sense of (re)conceptualizing potentialities for personal and systemic change • Dialectical Process: (Re)constructing visions of personal and social futures 	<p>Crisis of confidence</p> <p>Radical Individualism</p> <p>Calling for Revolution</p> <p>Calling for Transition</p>
<p>Sub-Dialectic of Human Nature</p> <ul style="list-style-type: none"> • Sense of evaluating the limits and potentialities of humanity • Dialectical Process: (Re)defining human nature 	<p>Human nature as exploitative</p> <p>Human nature as adaptive</p> <p>Human-as-nature</p>
<p>Dialectic of Hope</p> <ul style="list-style-type: none"> • Sense of (re)formulating possibilities for and avenues toward hope • Dialectical Process: Cultivating hope as/in practice 	<p>Hopelessness</p> <p>Active Hope</p> <p>Hope-free</p> <p>Reasonable hope</p> <p>Radical Hope</p> <p>Hope as/in Practice</p>

Criteria for Research Quality

In constructivist grounded theory, there are four main criteria for defining quality research: credibility, originality, resonance, and usefulness (Charmaz, 2006; Charmaz & Thornberg, 2021). Credibility is associated with collecting sufficient relevant data to enable empirical observations that have depth and breadth, coupled with fidelity to the principles and strategies of the method, such as constant comparison (Charmaz, 2006; Charmaz & Thornberg, 2021). Credibility also pertains to the researcher's awareness and transparent reflexive examination of their social positioning and its influence on the research process (Charmaz & Thornberg, 2021).

Originality can mean generating new concepts, "offering new insights, providing a fresh conceptualization of a recognized problem, and establishing the significance of the analysis" (Charmaz & Thornberg, 2021, p. 12). Significance can be conceived as a contribution that challenges, expands, or refines current ideas and concepts about the experience under study (Charmaz, 2006). Resonance refers to the goal of constructing concepts and building theory that reaches beyond the particularities of the experience or process under study (Charmaz & Thornberg, 2021). In other words, a grounded theory is resonant when it illuminates the experience of the social world under study in a way that can offer insights to others (Charmaz & Thornberg, 2021).

Usefulness can mean clarifying processes in, or offering interpretations of, everyday experiences that bear on how people make sense of some aspect of their lives; it can also mean making a contribution by conceptualizing and relaying what is meaningful about the area of study to directly inform policy and practice, or inspire new branches of research (Charmaz, 2006; Charmaz & Thornberg, 2021, p. 12). Ultimately, the combination of credibility and originality heightens resonance and usefulness, increasing the value of the contribution (Charmaz, 2006).

Applicability and Validity. In contrast to the quantitative research paradigm, grounded theorists view generalizability as pertaining only to the constructed theory, rather than the specific

findings (Hood, 2007). In other words, the epistemological foundations of grounded theory presuppose a reality that is subjective, plural, and multifaceted—a stance that precludes traditional assumptions about generalizability—but the abstracted theory itself may be explored and applied across different contexts that seem to share qualities with the social world under study, ideally helping to illuminate other experiences (Charmaz, 2006; Hood, 2007). In this sense, grounded theory is less concerned with generalizability than applicability, a priority that is arguably aligned with the criteria of resonance and usefulness outlined above (Charmaz & Thornberg, 2021).

Moreover, the concept of generalizability might be more appropriate for quantitative studies aiming to ascertain, for example, the proportion of people reporting eco-anxiety or the range of positions on climate change across the general public. This is not the goal of my research. I aim instead to examine discursive variability and to map the tensions that arise in the process of grappling with eco-anxiety in an arena primarily—but certainly not exclusively—populated by citizens of the Global North.

As for validity, ensuring that the categories and concepts are meaningful interpretations of what is happening in the data can be considered face validity (Dey, 2007). Similarly, the impetus to make acute interpretations and construct a theory that is empirically and conceptually well-grounded speaks to the priority of consistency, which can be considered aligned with the notion of construct validity for qualitative inquiry (Dey, 2007).

Ethical Considerations. Given that my data is comprised of writings by self-selected participants in public discussions about climate change who are anonymized by their chosen usernames, my main ethical concern relates to how I represent their writings. In using constructivist grounded theory, I am highlighting my analysis as always-interpretive and situating my findings as representing one set of many possible interpretations.

Reflexive Process. My reflexive process unfolded most notably through memo-writing. I first noticed how my persistent inclination toward critical theory was driving my questioning—a constructivist at heart, I am fascinated by meaning-making practices and the ideological frameworks that inform and circumscribe how we understand our experiences. Also, as a counselling psychologist in training, I have a strong inclination to notice contradictions and a growing tendency to interpret meaning-making in dialectical terms.

As a citizen of the Global North, I share many privileges that Reddit users are assumed to have when considered in a global context—for example, living in an affluent country with an ostensibly democratic society, enjoying relative political security, having access to relatively secure housing, utilities, and communications technologies like the Internet, and being supported by at least basic social services. Moreover, as a White woman of settler ancestry born in Canada with relatively good health, I have racial, citizenship, and health privilege in my country. Also, being a woman in the Global North can be considered a position of relative privilege depending on other identity intersections. It is important to keep in mind, however, that while the Global North occupies a privileged position relative to the Global South, it is hardly a monolith and varying degrees of privilege intersect with varying degrees of oppression for people and communities both within the Global North and across the world.

Finally, my orientation toward this research is inevitably shaped by my struggle with eco-anxiety, the particularities of which are interwoven with my positioning and worldview. Ultimately, my fascination with meaning-making kept me grounded in a stance of curiosity as I strove to map the landscape of meanings and tensions in which I am inextricably positioned.

Chapter 4: Findings

This chapter presents the main theoretical categories that arose from my analysis, interpreted as five overarching dialectics that encompass two sub-dialectics and 28 theoretical categories. A multitude of other possible dialectics circulating in dominant and emergent discourses about climate change, if present in the data, may have been subsumed by my interpretive process or intentionally excluded from analysis.

The content of the Reddit data includes statements expressing personal views, perspectives, and reported experiences as well as advice-giving statements. In accordance with grounded theory practices (Charmaz, 2006), I present several fragments of data to support my findings. In some cases, I corrected typographical errors in order to enhance readability, but the writers' original grammar was unedited. Because I believe it is important to preserve as much context as possible in my presentation of these writings, fragments of text will at times contain features of other dialectics and their categories, representing the complexity and intermediation of different aspects of eco-anxiety, as theorized here.

Dialectics of Eco-Anxiety

Typically, dialectics represent opposites and dualities. My analysis did not produce such a straightforward representation; instead, I saw tensions, ambivalences, and dualities both within and across domains of meaning-making. Some dialectics presented here have clear dualities (e.g., the dialectics of agency and hope) while other dualities are more subtly emergent within single categories that comprise a dialectic (e.g., the dialectic of alienation), and some dialectics contain both clear and subtle dualities (e.g., the dialectic of change). In short, the poles of these dialectics are not fixed or tightly bound. There is an element of discomfort—or as Marshall (2011) might say, a semblance of disorder—in resisting the temptation to over-interpret the data into tidy categories,

but I view at least some disorder as necessary to highlight the layers and intricacies of emergent meanings and to keep the dialectics open to further and competing interpretations.

While a dialectic of nature is discernible in the data, generally discussed as something to cherish and mourn or something to fear and prepare to defend against, I chose to resist formally categorizing it. Instead, I include references to nature in each dialectic because the specter of ecological crisis is woven throughout discussions about climate change and is thus inextricable from the overall process of grappling with eco-anxiety. Although uncertainty also arises across dialectics, I begin the presentation of findings with a dialectic of uncertainty. In my view, dialectics of eco-anxiety *are* dialectics of uncertainty, and as such, this first category is intended to offer a foundational context for the dialectics that follow.

Dialectic of Uncertainty

This overarching dialectic conveys a sense that stable concepts are rendered unstable, prompting revised points of reference suggestive of an effort to recover a sense of stability. In classic dialectical form, there are two categories: uncertainty and certainty. The overall process that I interpret in this dialectic—and by extension, throughout each dialectic of eco-anxiety described in this study—is one of grasping for coherence. In other words, it is a process of making meaning.

Uncertainty

A sense of uncertainty is present throughout the data, from acknowledging the complexity of climate systems and casting predicted impacts of climate change as ambiguous to framing the future as necessarily unknowable and debating what might be reasonable to assume about the future. Many writers convey a sense of overwhelm as they comment on the complexity of the climate emergency and characterize it with variations on “too big to comprehend and handle.” The aforementioned conception of climate change as a hyperobject is reflected strongly here.

There is also a palpable sense of in-between-ness as writers appear to grapple with making sense of climate science and projected impacts. For instance, one writer insists: “We have time. Not much, but maybe, just maybe, enough.[...] So we are walking along a middle path. One where no one is quite sure what will happen next.” Another writer asserts: “There is room between ‘overcome the challenge’ and ‘humanity has lost the fight.’ We are in between.”

Similar conceptions of where we are on the imagined continuum of climate change refer to “tipping points,” whether understood as already triggered or as inevitable in the near future. Yet, some question the reliability of these indicators—as one writer says, “given the nonlinear and discontinuous responses of many complex systems to stress [...] if such a point does exist we would be unlikely to be able to anticipate it.”

In contemplating possible futures, many writers advocate for resisting the temptation toward binary thinking. As one writer suggests: “The mind really wants to see black and white. If we do this then what? And it wants to feel safe. What can I rely on? But the reality we have is very grey. And because of this, you must find peace in the unknowable.” Another writer echoes this sentiment, stating that “it's not either too late and we're fucked or we have time and we can go back to ‘normal’” before insisting: “It's always too late and never too late at the same time.”

Tones of unknowability and unpredictability also arise as writers debate what might be reasonable to expect for the future. One writer responded to a dismissal of the notion of societal collapse by saying: “We cannot really predict what will happen once the permafrost melts and the world’s forests burn down. I would not call complete collapse ‘nearly an impossibility’ when we are entering unknown territory.” Echoing this sense of unknowability, another writer suggested that “to just throw in the towel and say ‘we're doomed’ is [...] to hold a much greater degree of certainty about the future than I think is ever justifiable.”

Certainty

The opposite end of this dialectic is signalled by comments expressing varying degrees of certainty about the nature of climate change and expectations for the future, often with a tone that may be read as either dismissive of uncertainty or as offering reassurance. For instance, some writers describe climate change as expected and predictable: “Relax. Climate change is a natural process and it takes a very long time. Previously in Earth's history the climate changed from warming to cooling and back roughly every 40,000 years.” Similarly: “Life has persisted to go on in spite of these regular fluctuations. If I were you I wouldn't give it another thought.” Other writers seem to derive a sense of certainty from past experience—as one writer shared: “I believe the climate [is] barely marginally different now compared to 50 years ago, nothing drastic is likely to happen in the next 100 years. You will surely grow old!”

Some writers conveying a sense of certainty situate their perspectives in terms of “reason” and “logical” arguments, suggesting that writers expressing uncertainty are “confused” by fear or plagued by a persistent “apocalyptic impulse.” As one writer evoking uncertainty as part of their expressed rationale stated: “You seem quite certain about things that are quite far from certain, which is not very scientific is it? This leads me to believe that you are being emotional and not very rational.” Overall, comments in this category tend to question the veracity of climate change as a destabilizing force and seem suspicious of perspectives advocating for systemic change.

As noted above, tensions between uncertainty and certainty are present in each dialectic of eco-anxiety, at times subtle and at other times more prevalent. They are most evident as writers grapple with making sense of eco-anxiety and the threat of climate change itself.

Dialectic of Alienation

This dialectic invokes a sense of isolation from current social realities coupled with a disconnection from previously expected futures. There is a sense of being alienated from the

present as currently known and from the future as it had been imagined. In this dialectic, the past necessarily shows up too—as nostalgia, as mourning, as regret. The process I see at work as writers grapple with alienation—that is, my abstracted interpretation of what people actually do with the elements of this dialectic—is (re)negotiating existential meaning. The dialectic of alienation encompasses five core categories and one sub-category: disorientation, disconnection, revising futures, ecological mourning, and existential angst and its subcategory, (re)constructing legacy.

Disorientation

The sense of disorientation emerges as writers express various perspectives on the climate emergency and the unique uncertainty about the future it evokes. There is a palpable sense of confusion in their writings—a struggle to grasp the reality of what they see happening in their daily lives and an inability to reconcile it with their understanding of the threat of a future marked by climate change. Within this sense of confusion, there are hints of desperation that settle in my mind as I read these comments.

One writer dismissed the word ‘sad’ as inadequate for capturing their feelings and offered instead “despondent, reticent, and hopeless.” They went on to say “all I see now are distractions from saving ourselves” and asked, rhetorically: “With climate change a real threat to our society, what are we deciding to do with the time? Whatever you want, we live like gods in the garden of Eden and we’re burning it to the ground in our joy.” Another writer evocatively expressed a sense of disorientation: “Sometimes I feel like we are time travellers from the future trying to convince a clueless civilization to transform itself before its self-inflicted decline into barbarism.” Similarly, one writer remarked on never having felt a sense of community and feeling more “like a wanderer through this individualistic, post industrial late stage capitalist hellscape we've created.”

Within this sense of disorientation, intimations of anger and frustration sometimes show up, as when one writer said “so many people keep living as though there’s nothing wrong with the way

we're treating our planet. The sheer greed and stupidity of it is infuriating." Here, I sense a tone of desperation underlying this expressed fury. Another writer, self-identified as 14-years old, brought a sense of desperation into sharp relief when they said "except we're losing so badly and the fight is so exhausting and long and slow and makes no sense and the people around us are gaslighting us all the time and our parents are on the wrong side and...I'll stop."

Disconnection

This category conveys a sense of relational disconnection—many writers expressed a sense of being unable to relate to people and feeling estranged from close others. Some writers also remarked on feeling dismissed and misunderstood when they attempt to share their concerns about the climate crisis and their fears about personal and social futures.

As one writer said: "It's so clear to me but when I try to communicate these facts to others they either just don't pay attention, or tell me to do more activism which hasn't worked. It has effected me so greatly I have panic attacks now." Other writers described experiences with close others that foreground a sense of opposition. For example: "When I heard about it as a kid and wanted to do something as simple as recycling to help, my dad said not to do it because it was a lie made up by the 'eco freaks' to stop people from making money."

In some reports that evoke a sense of feeling dismissed, estrangement shows up alongside inklings of generational resentment. As one writer said, "the people who raised me didn't care enough to do anything about it, and are actively some of the worst participants in causing it. And now they continue to do those things, and mock me for trying to do anything different." Another writer shared a similar sentiment that highlights the notion of estrangement: "My parents' view is that it's ok for their grandchildren to suffer in the future as long as my parents are very slightly happier now. They were open about this before we stopped talking."

For some writers, the sense of disconnection takes on a more collective tone, broadening the sense of alienation to the sociohistorical level. As one writer responded to a question about what saddens people the most about the climate crisis, they commented “I knew humanity would do nothing about it even back in the 80s but when I told people they just called me depressing or too negative. I am saddened that I was right.”

Revising Futures

This category suggests a multifaceted sense of loss, at times present-oriented when writers comment on the decisions they are grappling with now in light of expected futures, and at times anticipatory when writers seem to be contemplating what their futures might look like. A sense of alienation seems to emerge from perceptions of narrowed possibilities tinged by visions of catastrophe, alongside intimations of a lost sense of purpose conveyed through comments on restricted life opportunities and thwarted goals.

The notion of ‘dreams’ for the future was a common refrain in these writings—for instance, as one writer expressed a sense of sadness they referred to “the lack of the future I've always dreamed of.” Another writer echoed this sentiment when they said, “since I was a kid I wanted to be a writer/director, which is also a dream I've lost hope in because of climate change.” Some writers were explicit about how they have reformulated their visions of the future in an apparent effort to retain a sense of purpose. For example, after stating that they are re-evaluating career plans, one writer explained: “I want to work for cooperatives. Private or shareholder owned corporations are exploitation and that sh!t flows downhill. [...] So, working for co-ops, open source projects, and other democratizing workplaces is pretty much the only way for me to move forward with my soul intact. I say this as someone who has worked for and applied to some top-tier polluters before.”

A more general sense of anticipatory loss pertaining to expected futures was often marked by expressions of fear and hopelessness. As one writer said: “I'd rather have industrial civilization

collapse then have to live in a shittier version of the world where things I enjoy no longer exist.

[H]ow come nothing good for me comes out of this?" Another writer cast a vision of their expected future alongside expressed feelings of anger, sadness, and dread: "I'm only 19 and I've lost all hope that I'll ever have future on this planet. I don't wanna wake up every day for the rest of my life to the news of more wildfires, floods, crops dying, I would prefer to just sleep and never wake up then to see that, my heart and mind can't handle it."

Ecological Mourning

This category suggests a sense of alienation from one's familiar relationship with and to the natural world. Mourning and solastalgia (i.e., nostalgia specific to experiences of the environment or climate) intermingle with anticipatory loss here, as some writers draw sharp contrasts between the past and the present while remarking on their expectations for the future.

Many writers expressed variations of ecological mourning alongside reported emotional responses like anger and sadness, as they shared specific visions of anticipated ecological loss. Opening with a comment on the "great tragedy" of the "decimation" of "precious life," one writer said "I live in California, and increasing heat waves and drought are threatening the existence of both the coastal and sierra redwoods, as well as much of the ocean life. If these things perish, I large piece of me will die along with them. Sometimes I just don't get the human species." Another writer stated: "To me, the real despondent sadness comes from the little things. It's the reality that my future summer evenings won't be filled with lightning bugs, that crisp fall mornings spent wondering in pristine Appalachian forests might be over, and that there may be a last night listening to birds from a camping site sleeping bag."

Tones of solastalgia arise in comments like this, as writers seem to speculate on how their individual and collective relationships with, and experiences of, the natural world may change in their lifetimes and beyond. Remarking on their conviction that much of the "natural beauty" they

have experienced will be “changed or destroyed,” one writer said “I may have seen things that I will never see again and will only be described in nature docs or textbooks.” Another writer conveyed this sentiment more expansively, lamenting that their “children's children won't see butterflies, certain plants, animals, landmarks, except in museums/zoos or on video.” Some writers conveyed a sense of transitional loss arising from witnessing environmental changes. For instance, speaking about their son, one writer said: “He’s seen giant sequoias which is one [of] the bucket list items for our family. He also experienced near record breaking temperatures of 125 in the desert also, which was not a bucket list item.”

Other suggestions of intertwined mourning and solastagia invoke impressions of the increased frequency of natural disasters and the ecological damage attributed to climate change. As one writer beautifully remarked: “I miss birch trees, with their papery white bark, peeling back to reveal soft sunset pinks, peaches, and golds underneath. I miss their brilliant golden leaves in the autumn. Most of ours are either dead or dying. [...] I miss summers without smelling smoke from wildfires to our north and west. I miss the gray gloomy drizzle or soft rain that used to fall for a week at a time in the spring and summer without anything flooding.” To me, there is an uncanny sense of things out of place and time alongside the alienation conveyed by these expressions of longing. Another writer’s comment remains lodged in my mind: “I already mourn the corrals of the Red Sea and the Fennec foxes of the Negev Desert. They were sources of joy and wonder for me when I was a kid. Now the former are a bleached graveyard, and the latter are all gone.”

Existential Angst

As noted in the introduction to this dialectic of alienation, the process I see writers grappling with pertains to (re)negotiating existential meaning. This category is a collection of comments that I interpret as indicating an even more profound alienation suggestive of a crisis of existential meaning that manifests as a sense of dread. For instance, there is a tone of expectation in these writings, as if

catastrophe or some extinction event will “hit” at some as-yet-unknowable moment. As one writer stated, with reference to a recent apocalyptic film: “We are in Don't Look Up sitting at the dinner table, making small talk while the shockwave is making its way to us.”

Some writers speculate on what a future marked by climate change might mean for their lives individually, often tinged with a sense of resignation. For example, one writer said, “it does not sadden me but I expect I will die of heat stroke or something and won't live to retire.” Another comment suggestive of this sense of resignation adds a dash of dark humour: “Luckily we don't have to worry about planning for retirement lol.”

Other writers convey a sense of alienation from collective social reality alongside intimations of existential uncertainty. For instance, one writer asked: “How can people still have kids? What kind of future are they leaving to them? Am I really going to grow old?” Another comment suggests a pervasive existential angst laced with a sense of frustration regarding our collective social reality: “I live with the feeling that I'm constantly repressing a scream of existential dread for what's coming our way, and how stupid and hopeless humanity seems.”

Many writers implied a sense of purposelessness layered into a narrowed perspective on the future that seemed to evoke a sense of existential doom. For example: “I just ask myself why, why bother with school why bother with anything if [w]hat I do in my younger years such as school and beginner level jobs is sorta for a successful career in the future what's the point if my future is SCREWED.” Similarly, one writer said “it's incredibly sad to think how every human who lives today is only going to watch it get worse and worse.”

Sub-category of Existential Angst: (Re)constructing Legacy. In this sub-category, there is a sense of alienation from familiar notions of legacy or symbolic immortality, indicating how the threat of a future marked by climate change troubles conventional ideas about how the meaning of our lives will endure after we die. Tones of disorientation and disconnection are echoed here,

intertwined with signals of hope and hopelessness, and references to personal and social forms of legacy. Here, the notion of legacy strikes me as a convergence point where the above categories of alienation inform the process of (re)negotiating existential meaning. The predominant legacy-bearing topic in these writing is parenthood.

Many writers reported contemplating what their existing children might face in the future in terms of “terror,” “uncertainty,” “sadness,” and “guilt.” One writer said: “Now that my little boy is here, I can't eat or sleep without worrying I made a very critical error with my hopefulness.” Similarly: “There are days where I hate myself for bringing him into this world; nights where I lay awake wondering what I've damned him to. It can be incredibly overwhelming.” At times, comments convey a sense of loss around the ability to hold hope for the next generation. For instance, echoing a previous writer's expression of sadness, one writer remarked: “I feel very similar when I look at my 4 year old nephew running around with his raggedy polar bear stuffy.” To me, ‘raggedy’ suggests well-loved, conjuring a heart-breaking vision of as-yet-unrealized loss.

Some writers who stated they had decided not to have children expressed feelings of sadness mixed with relief. One writer positioned having children as “a very optimistic endeavour” alongside a declaration of their choice to refrain “because of climate change.” Many writers justified not having children in terms of reducing their overall carbon footprint, often conjuring a sense of projected hopelessness. For example, one writer equated having a child to “forc[ing] an innocent soul to be exactly like me very worried about the future and might not even have one due to scarcity of resources.”

For those who seemed to be grappling with whether to have children, visions of the future feature prominently in their comments. Conveying a sense of alienation, one writer said: “I feel so sick about it all. I am recently married, and there's all this family pressure (and pressure from my wife) to have kids and build a family as humans are supposed to do. But when I look at the world

and climate news, I just see so much evidence of it becoming a nasty, nasty place in the future.” This concern about what future children might face is echoed in many comments, such as “I feel wrong and guilty about just the desire to have a biological child one day. I can’t guarantee the world will be an okay place to exist in their lifetime (prob won’t be) so it’s selfish to bring a child into existence so unnecessarily.”

This category also encompasses broader conceptions of what children represent in terms of hope for the future, foregrounding the notion of legacy. As one writer stated: “We need your descendants in this world to carry forward that hope you crave.” Another writer emphasized instilling children with hope in order to shift or correct the legacy of previous generations, who “have taken action out of fear, and I think we have a real opportunity to build the next one on hope and wonder.” Many writers positioned their children as motivating influences for committing to and modelling pro-environmental behaviours. One such writer stated: “When my kids feel down about the planet, I tell them that they were born at a perfect time to help save the world.”

Dialectic of Agency

This dialectic conveys a sense of grappling with the capacities and limits of individual and collective agency. Within and across the different categories below, tensions between conceptions of efficacy and powerlessness come to the fore. At the same time, there is a sense of interrogating individual responsibility as well as the very notion of collectivity. The process that I see as characterizing this dialectic is grappling with interdependence. The dialectic of agency encompasses five core categories: individual agency, individual powerlessness, collective agency, collective powerlessness, and grappling with interdependence. I have also distinguished one sub-dialectic, (de)constructing power, with two categories: characterizing privilege and naming inequity. In the sub-dialectic of (de)constructing power, I interpret the process as (un)settling injustice.

Individual Agency

The question of what individuals can do in the face of a future threatened by climate change is a persistent theme throughout the data; it intersects with a sense of striving for a modicum of control and retaining a perspective of possibility. Advice-giving figures prominently here, indicating the ideological positions of writers that suggest specific practices, recommend personal actions, and make pronouncements about how to best engage with the problem of climate change.

Many writers emphasize cultivating an attitude of personal agency alongside an awareness of its limits. For instance, “When it comes to anxiety it’s best to focus on what you can do rather than big systems that are beyond your control.” Similarly, “I choose to act, in my limited ability, and be optimistic, although facts don’t support it, because it makes me feel better, and changes my small environment for the better.” At times, discursive contradictions emerge in comments on individual agency. For instance, one writer advocated for the necessity of individuals to “work much much harder themselves to make better choices” while at the same time conceding “even then all we can do is shift the marketplace of ideas and financial incentives in a marginal way.”

Other comments uphold individual agency in stronger terms, such as “we all play a role and we can all do something” or “there is so much we can still do.” As one writer stated: “We are in control and we can do something about it. It is not too late; it is never too late.” At times, a tone suggestive of frustration emerges in comments such as “don’t be a victim” and “don’t be so damn fatalistic about it.” For example, one writer asserted that “[w]e are not a passive spectator of our own demise” and another stated “[w]e can't blame anyone but ourselves for not acting in 2022 and beyond.” The notion of personal responsibility is often foregrounded here, such as with the presumption of individual control oriented toward using “your own skills, talents and education to make this world a better place.” As one writer remarked: “It'll never happen from the top down and we are all going to need to make sacrifices to speed the recovery.” Similarly, another writer asserted

that “pretending that the fight is over is just copping out on our responsibility to make the change for the better.”

Individual Powerlessness

A sense of disillusionment with the notion of individual agency arises from the writings in this category, often situated in the context of collectivity. Here, there is a general sense of helplessness and futility associated with considerations of individual efficacy, as many writers express sentiments like “no matter how much I do and how hard I try, there’s a slim chance I can make a difference in the grand scheme of things.” With a tone suggestive of desperation, another writer said “I feel so helpless, but I can't do anything to stop this mess.”

In addition to helplessness and futility, a tone of exhaustion is a common theme among writers that reportedly engage in pro-environmental behaviours. As one writer shared, “no matter what I do to reduce my carbon footprint, I'm shovelling s--t against the tide.” Similarly: “It feels like everything we do now is pointless. I keep going as long as I can lie to myself that there's still a chance, but that chance is already pretty bad and it's getting worse with every day.” Another writer echoes this sense of futility: “It’s tough because I still do what I can to reduce my waste and footprint but an oil company still sets the Gulf of Mexico on fire every few years.”

The process of grappling with interdependence appears evident here, as many writers seem to locate a sense of powerlessness in the context of a perceived lack of action by others, especially institutions and corporations. As one writer laments: “It’s impossible to get anyone to cancel a flight for their vacation, like a politician would do the right thing? We’re screwed. Might as well go on that flight. I feel like an idiot for using a garbage can. What is the point?” Similarly, another writer insisted that “any real solution that can actually make any impactful change has to be political. What you and I do is of almost no import. What ExxonMobil and Monsanto do is.”

Many writers vehemently critique and reject the notion of individual agency in response to discussions of personal responsibility. Some discredit pro-environmental consumer choices as insignificant compared to the “100 companies [that] are responsible for 71% of global emissions.” Others are more brusque—for example: “I’m not sure I want to discourage you but, taking personal responsibility for climate change was a literal marketing campaign paid for by big oil in like, the early 2000’s. [...] You bought into that notion and are living your life around it, and it is basically a lie. They could replicate you a billion times, and it’s still nothing compared to the absolute rape of the planet they commit on a daily basis.”

Collective Agency

In this category, there is a sense of faith in collective power and a tone of cooperation coupled with urgency. Many writers suggest that a belief in collective agency provides inspiration and evokes a sense of community. This sentiment arises most prominently when writers describe finding inspiration from increasing public awareness of the climate emergency. For instance, after asserting that “the winds are changing,” one writer stated: “The world is more keenly aware of our precarious situation than ever. We’re not acting nearly as fast as we should, but I hope we’re finally starting to move in the right direction.” At times, there is a sense of drawing inspiration from the knowledge that one is not alone, as this writer suggests: “If nothing else, know that no matter how blind and oblivious the world seems, there are a whole lot of us out here who are scared too and we’re pushing back hard.”

The notion of collective agency seems inextricable from beliefs about individual agency, in that writers often refer to personal action as a sort of foundation for or impetus toward building collective momentum. For example: “The more of us that try to change our own lives for the better, the more of the world that is on Team Earth.” Similarly, some writers draw direct links between

individual “decision[s] to lead sustainable lives” and amassing the necessary level of “control” for the population to effect change.

At times, comments espousing the power of collective agency can take on the tone of a rallying cry. As one writer said: “We just need the companies and governments to know we are not going away, we will not stay quiet and we won’t believe their lies anymore.” Similarly, one writer insisted that “we have to yell louder than billions of dollars of campaign advertisements.” Another writer conveyed a sense of inspired motivation that hints at identification with the collectivity of their generation: “I try to remind myself that it is a good fight and one that we should feel proud to sacrifice for. Of all the eras we could have been born into; of all the stupid wars we could have been conscripted to fight, suffer and die in; our generation got the fight to literally save the world. It's kind of badass when you think about it.”

Collective Powerlessness

Comments in this category suggest a general disbelief in the capacity of individuals to influence predicted trajectories toward a future marked by climate change. At times, writers blatantly express disbelief in collective agency in the face of such a complex challenge as climate change. For instance: “Anyone who thinks we can handle the climate crisis [...] obviously hasn’t been paying attention.” Conveying a sense of resignation, one writer remarked “somehow people still believe we will all come together in the face of the fossil fuel lobby and remedy an ongoing catastrophe that has a great weight of inertia behind it and is fiendishly difficult because of how ingrained the casual mechanism is in our civilisation, and that we will do all that is required before natural processes take the decision out of our hands. They’re dreaming, if not delusional.”

Many writers invoke contradiction to frame and justify a sense of collective powerlessness. One writer suggested a fundamental sense of ambivalence: “We are aware it's coming, but there is nothing we can do. We know there are too many people consuming too much, but we want

everyone to live longer and never go without.” Some writers point to systemic contradictions as they grapple with possibilities for collective efficacy. For example: “I think the way things are set up the needs of corporations and governments are diametrically opposed to the team effort we need” and “I also see that the most powerful forces in society are against rapid decarbonization.”

Remarks on these contradictions often coalesce into a sense of polarization, or as one writer put it, a sense of “us vs them” that “stops us from putting aside our differences and working together to overcome a common existential threat.” This sense of polarization shows up in manifold ways in the data as writers seem to be interrogating the very notion of collectivity. Some comments frame this ‘us versus them’ dynamic by identifying factions within the supposed collective—for instance: “I wish we knew how to reach them. I think climate doom could be the new climate denial.” Other writers position certain powerful groups as intentionally fomenting social division. After sharing their belief that collective power is possible, one writer said “I believe that the powers that be know this and that’s why things have been so divisive over the last few years.” Another writer echoed this sentiment with a more explicit attribution of intentionality: “‘Corporate donors’ want you to give up and let them win. It's literally their strategy.”

Grappling with Interdependence

As mentioned in the introduction to this dialectic of agency, the process that I see here is one of grappling with interdependence. This category is an assemblage of comments that convey this process more directly, as writers interrogate the discursive binary of individual–collective that often brackets discussions of agency.

Many writers make assertions about global interconnectedness as they contemplate possibilities for individual and collective agency. For instance: “The problem for me is we don't live in a vacuum. While I think my area is going to be lucky, we're a globalized economy and what affects one affects all to varying degrees.” These assertions are often positioned alongside a sense of

instability, fragility, and vulnerability, and many writers reference global supply chains as a concern made particularly salient by current Covid-19 pandemic. As one writer stated, “[t]he global economy is a fragile thing. Supply chains are nowhere near resilient. The supply problems we've seen as a result of Covid made that abundantly clear.” Another writer insisted that “our food systems” are “very likely to break down as we get further down the road of the climate disaster.” They went on to ask: “As a thought exercise, imagine if grocery stores vanished – how would you get your food? ALL of your food?”

Industrialized nations and corporations are common reference points in these comments as many writers outline their understanding of global interdependence and its consequences. For example, one writer stated that “China makes up over 30% of total energy demand. Their demand is made up of over 80% coal. Your country (which ever it may be) can do whatever it wants to reduce CO2 emissions and it won't matter if China does not change.” There is a sense of debate around the relative inadequacy of individual actions in the context of global interdependence, with some writers positioning individual action as worthwhile and others locating more power in social organizations and institutions. For instance: “Individual consumer changes will help but they will never equal the amount of change corporations could illicit.” One writer offers an evocative metaphor: “The individual choosing to drive less is a drop in the bucket. A drop is important, but the hose blasting water is a more clear concern.” They go on to say: “What we do as individuals will be utterly meaningless if we can't change policy.”

Overall, comments in this category frame agency as interconnected, troubling the conceptual division between ‘individual’ and ‘collective’ efficacy. As one writer stated: “I believe changing the way you live your own life will reinforce your will to insist on enacting broader change, and enacting broader change will make it easier for people to change their lives in positive ways.” Another writer seemed to advocate resting with the contradiction: “The best choice you can make is

to just live your life in the way that best serves you and the people around you. And accept that the global climate is truly a global phenomenon. Meaning that it's primarily influenced by global forces — not individual choices.”

Sub-dialectic of Agency: (De)constructing Power

This sub-dialectic of agency suggests how people endeavour to make sense of the powerful sociopolitical and cultural influences that are elaborated in the above categories. This sub-dialectic of agency conveys a sense of mapping the territory of global power relations. As noted above, the process that I interpret in these writings is one of (un)settling injustice. The sub-dialectic of (de)constructing power encompasses two categories: characterizing privilege and naming inequity.

Characterizing Privilege

The topic of relative privilege is threaded throughout many discussions as writers express uncertainty about the future, negotiate agency, and contemplate vulnerability. Attributions of socioeconomic privilege emerge as writers speculate that concerns expressed by people in “westernized nations” may be “generally unfounded for the remainder of this century.” Some writers point to relative national wealth as a protective factor against the impacts of climate change and offer reassurances such as “[y]ou and your family will almost certainly be fine and live long lives.” These attributions of privilege are commonly set in a comparative context, as writers ascribe a relatively higher “ecological impact” to individuals in the Global North or state that “it’s those in poorer and developing countries who will be worst affected” and “[p]oor people in hot countries will have to adapt a lot more.” As one writer stated, some populations “are going to get hit harder and faster by climate change” which evidences the “great tragedy of colonialism and geography.”

As an extension of attributions of relative privilege, some writers convey a sense of acknowledgement and gratitude for relative security in the context of globally differentiated forms of oppression. Often, this sentiment is expressed in response to other writers—for instance: “I think

at least you can feel some comfort in that you don't have other immediate dangers to worry about like life threatening health and security issues. I'm assuming that if you're main concern is climate change then you have a fairly stable life." Similarly, one writer remarked "if climate change is your main concern then you have the power to do something about it."

Despite the tone of reassurance offered by comments such as these, many writers seem to find little respite from expressed eco-anxiety despite attributions of relative privilege. As one writer said: "The fact that I live in Denmark doesn't give me that much relief, because people and animals around the world will still suffer, and I don't like to think about that." This comment undermines the discourse of individualism underpinning considerations of privilege and invokes the sense of collectivism that I see reflected in other comments expressing and advocating for a sense of responsibility toward less-privileged populations.

Writers typically associate this sense of responsibility with a recognition of inequitable global distribution of wealth and resources. For example, one writer stated that "limiting our temperature rise will limit the impact to those countries, which is what we should do because we either caused it in the first place or benefited from it." With a stronger tone, another writer remarked "[we] are absolutely responsible to try our best to change things or at least make things better for the countries that will be the most affected." Another writer extended this sentiment to encompass future generations, expressing a sense of responsibility to change "for the people who will be living in the most turbulent climate in the future (younger millennials, gen Zs and beyond)."

Naming Inequity

Many comments that invoke the discourse of privilege are laced with expressions of marginalization and oppression. A sense of distress concerning impressions of injustice coupled with suggestions of vulnerability arise from these comments, and while many are focused on global economic inequity, some comments point to social and ecological injustices.

Some attributions of privilege described in the previous category position the entire Global North as beneficiaries of technologies expected to mitigate the damaging effects of climate change. In response to one such comment, one writer stated: “Not for everyone. For the rich, yes. For the poor, not so much. We can still change that. We have to adapt like crazy at this point.” Another writer remarked: “Unless we’re poor. How can the poor find hope in a world which exploits us? From the impoverished point of view, the human race is not worthy of survival.”

Many writers convey a sense of anger and frustration toward perceived injustices associated with already-occurring and predicted impacts of climate change. For instance, one writer expressed “fury” when lamenting that “the ones truly at fault won’t care, deflect their contribution, and will never be held to account. The thought of justice never occurring over such a massive, malicious misdeed will be hard to stomach.” Another writer echoed this sentiment, conveying a tone of resentment: “This is also what is driving me mad. The few people in power who could actually turn the ship around (not politicians, rich capitalists), will be the ones least affected by it as they’ll either be dead by then or escaped to their space stations.” Similarly: “Asshats like Bill Gates sitting pretty touting what needs to be done while living a life of pure luxury pisses everyone less fortunate off.” Some writers suggest that socioeconomic injustice will only be intensified in the future, when “the majority of earth [will be] so uninhabitable that only the super wealthy will be able to afford liveable conditions and necessities like water and clean air.”

A similar tone of resentment seems operative in comments invoking the concept of “intergenerational injustice.” One writer positioned “fighting” injustice as motivated by an effort to “show future generations that not all members of our generation were as oblivious and myopic as it may seem from their perspective.” Another writer admonished the wealthy for “car[ing] more about the money in their pockets than the future of their children and grandchildren.” As one writer

advocated for calling out socioeconomic injustice, they asserted the need to “convince the pig devils in charge of the world to be an iota less greedy so that the species can have a decent future.”

In grappling with hope for the future in the face of injustice, there is a sense of moral injury in these remarks that extends to comments signalling ecological mourning. As one writer remarked with a sense of outrage: “I would be part of the hopeful realm and actually I was a part of it until the recent British Columbia (and PNW) crustacean die off. Now. I’m pissed. Too many people digest silly intangible hopes and the use of random storied words to advocate for change. Yet nothing happens. This stasis is unadulterated bs. This complacency is nothing less than cruelty to those ‘unimportant’ populations. But they do matter. They do matter.”

Dialectic of Change

This dialectic conveys a sense of (re)conceptualizing potentialities for systemic change. These writings invoke tensions between the way things are and imagined alternatives, as leverage points and barriers to change are considered across individual and social spheres. The process that I see at work here is (re)constructing visions of personal and social futures. The dialectic of change encompasses four categories: crisis of confidence, radical individualism, calling for revolution, and calling for transition. In addition, I have identified a sub-dialectic of human nature, with three categories: humans as exploitative, humans as adaptive, and human-as-nature.

Crisis of Confidence

This category is a collection of writings that suggest a crisis of confidence in sociocultural institutions like media, government, and the scientific establishment, as well as corporations. There is a sense that systemic change is rendered impossible by the prevailing political-economic interests that shape contemporary society in the Global North. A prevailing tone here is distrust or suspicion, coupled with a sense of individual responsibility to determine who and what to trust.

Many comments invoke a sense of distrust in the media, whether through accusations of “fear-mongering” and “hype” or by suggesting the existence of hidden agendas. For example, one writer insisted that the role of media “is not to inform” but to “make money by pulling in readers and viewers. It does that by presenting lurid stories since fear, atrocity, and danger bring in the viewers.” Many writers seem to challenge the notion of authoritative information in an arena where “there are people who are actually working to spread disinformation.” For instance, one writer said “some very good professors and scientists have been bought and maintain different things in private.” Another writer lamented: “I’ve found it hard to find uncorrupted sources with corporate entities pushing both doomism and hyper-optimism as far as they can.”

Some comments convey a sense of distrust through advice-giving, as one writer suggested to those wanting to learn about climate science that “the onus is on you, and all of us, to practice skepticism and inquiry when presented with unsourced, or editorialized information.” Intimations of climate change disavowal emerge in these writings as well—as one writer stated: “Stop believing all the doomsday shit. There is no real evidence for any of it. Those who are pushing it all have their agendas that have nothing to do with the climate. Figure that out and you will feel much better.”

Comments signalling a crisis of confidence in government seem inextricably tied to distrust in corporations. For instance, one writer asserted that “it's way too late to try to elect our way out of this. We can't possibly get enough candidates who are willing to take bold action within the next two or four years to make a difference.” They went on to say “[b]esides, unless the corporate donors approve them they'll never get a seat anyway.” Indeed, many writers point to corporate lobbying as a powerful force in government operations. As one writer remarked: “Oil lobbyists and oil companies are constantly getting Democrat and Republican political leaders involved with their own best interests and this is slowing things down.” Similarly: “US government policy is not set in Washington by those elected people. It is set in places like Irving, Texas, home to Exxon Mobile

Corporation.” There is a tone of resignation in many of these comments—as one writer stated:

“We’re being naive if we think an elected candidate will save us at this point.”

Overall, this crisis of confidence seems underpinned by a sense of frustration, as many writers lament the perceived lack of action toward mitigating climate change. As one writer stated:

“I can’t stand how much political capital has been wasted on things that aren’t climate change. It’s like no one can think far enough ahead to realize that ‘X really important thing’ won’t actually matter down the line if we don’t do things now to keep our planet habitable in the future.”

Radical Individualism

This category reflects indications of a radically individualized response to the climate emergency. There is a sense of locating any potentiality for change strictly on a personal level, with lifestyle adjustments figuring prominently in comments suggesting the necessity of taking matters into one’s own hands. Many writers report engaging in personal preparation and advocate for prioritizing skill development in the face of uncertain futures. One writer suggested that “we proceed how we would when faced with any other challenge, we prepare ourselves.” As one writer remarked: “Honestly, I lost hope and think we're just doomed. I hope I'm wrong. So right now it's just protecting my family and I.”

Other writers express this sentiment in stronger terms, such as “[b]ecome the most skilled person you know. Invest in yourself. If shit hits the fan, you want to be one to survive it.” Another writer advised skill development by referencing a movie to invoke a vision of the future marked by resource scarcity, societal collapse, and predatory violence: “Train yourself to be adaptable and clever [...]. Be the cleverest person at your boring ass regular job, but always be ready to bug out and be the cleverest person in Mad Max land as well, if it comes to it.” Many writers mention working toward creating or fortifying homesteads as a focus for individual preparation, often sharing practical information and advice. There is an element of coping intertwined with discussions about

preparation. As one writer said: “I find that taking concrete actions in my life to work towards some level of adaptation to be beneficial for my mental health. This – for me – involved building up my homestead.”

Underlying these comments on preparation is a sense of embracing self-sufficiency, valuing simplicity, and shifting perspectives on what a ‘good life’ might look like. Some comments convey a sense of acceptance, which one writer framed as “an acknowledgment of the increasingly catastrophic impacts we’ve already locked in for ourselves.” Similarly, another writer said “the important thing to acknowledge is that life how we know it cannot continue.” Intertwined with these intimations of acceptance, I see a spark of hope for the future, which one writer summarizes:

“It’s not too late to learn how to live a simpler life and hedge against future problems. Learn how to grow and prepare food to try and maintain your own food security, and please note I’m not saying it’s all over and we need to form compounds and grow all of our own food and protect ourselves from roaming gangs, but having the knowledge and ability to grow food can start to limit the risk you are exposed to. [...] The point is it’s not all over, and a new greener world is possible, just maybe not how we picture it.”

Calling for Revolution

In this category, as writers grapple with potentialities for systemic change there is a sense of deep hostility toward the tenets of capitalism, coupled with a sense of moral injury. The prevailing sentiment is that the system is broken. These comments position ecological sustainability in opposition to the dominant economic order and invoke the notion of revolution as the only pathway toward change.

Many writers point to an ideology of self-interest as entrenched in past and current responses to the climate emergency. As one writer asserted, “people knew about climate change for years like in the 70s, and certain people did everything they could to hide it. I feel like not enough is

being done, and that the world leaders don't care [and] greed is still being put ahead instead of the climate." Similarly, in response to a comment suggesting that corporations are making efforts to change, one writer insisted "the primary polluters such as Exxon have known about this for decades, and spent millions to cover it up so morons like you can pretend it hasn't literally been the most pressing crisis of our time."

Some writers suggest that climate change is a natural consequence of the dominant economic order by framing ecological sustainability in stark opposition to capitalism. This sentiment arises in comments such as "[o]ur global economic system is designed to be a competition that rewards the destruction of our species" and "if there weren't a market for ecocide there wouldn't be ecocide." As one writer characterized climate change as "the physical manifestation of human greed," they asserted "[t]hat which has created it also prevents it from being resolved. Sustainability is inherently anti-capitalist as it doesn't seek growth but balance. And here we are."

In this category, there is a sense of urgency around imagined alternatives as many writers call for a wholesale shift in the dominant economic order. As one writer explains: "You cannot even start talking about solutions without removing (or constraining) the system that got us here in the first place. If you don't do that then the system will fight you at every turn which is what you see happening right now." In this vein, some writers refer to "collapse" as inevitable—one writer insisted that "[t]he very basis of our current civilization is the continuous growth and access to more and more energy. That can't and won't continue." Another writer echoed this perspective in saying "our thermo-industrial society and its worship of economical growth has already started to collapse and **MUST** collapse."

Underlying these views on societal collapse is a sense that it need not be disastrous; one writer suggested the possibility of a "happy collapse" that will "allow us to build a resilient [economy] to replace it." Overall, comments in this category convey a clear sense that systemic

change necessitates a wholesale shift in the dominant economic order. As one writer stated: “It’s revolution or nothing. Anything else is just hopium.”

Calling for Transition

This category is suggestive of efforts to locate possibilities for change within the dominant economic order. There is a sense of faith in technological innovation and the power of consumer choice to influence the market, suggestive of a belief that effective responses to climate change are aligned with the tenets of capitalism. Overall these comments seem to advocate for working within the system. Many writers counter the calls for systemic revolution by advocating for a policy-driven “transition” to clean energy and consumer support for ‘green’ industry development. As one writer suggested, “even if they are a drop in the bucket [...] the push and demand for macro scale solutions will grow.” Another writer emphasized the need for “top down technology driven industry adaption” as the only solution to climate change.

In this category, comments on socioeconomic power skew toward the positive in terms of possibilities for change—as one writer summarized: “Yes, we can still criticize certain billionaire space industrialists for their greed and instability. But this is also key to our future.” Some writers reported a sense of encouragement associated with a recognition that “climate risk is being understood as a financial risk.” As one writer elaborated: “Even investors are realizing climate change is a threat to their portfolios and are beginning to vote against the CEO’s and force them to take action.” The notion of working within the system also arises in comments on possibilities for individual action. As one writer insists:

“[S]o much could still be done if those with knowledge and interest in climate science decided to built their own power and influence. To rise the corporate ranks and influence executive discussions, sit on board meetings, make hire/fire decisions, and allocate budgets. To develop strong political platforms that out-compete the incumbents, and begin to remedy

the damages and change policies for the better, thus influencing the behavior of so many others, both private and public entities.”

Sub-dialectic of Change: Human Nature

This sub-dialectic of change conveys a sense of evaluating the limits and potentialities of humanity as a species, which necessarily inform how people grapple with the problem of change. The process that I see at work here is one of (re)defining human nature. The sub-dialectic of human nature encompasses three categories: human nature as exploitative, human nature as adaptive, and human-as-nature.

Human Nature as Exploitative

This category is a collection of comments that convey a sense of doubt about humanity’s ability to effectively confront the threat of climate change. There is a tone of diminished faith or outright disbelief in the human capacity for change—as one writer lamented: “We as a species have overcome so much, working together and against each other we’ve created the modern world, but we currently seem incapable of reaching the heights we should.” Similarly: “Our species has known of the effects on the climate of fossil fuels for decades, arguably over a century now, but time and again there is always ‘something’ more urgent and important that directs our attention away from addressing it.”

Other comments characterize human nature as fundamentally greedy, cruel, and “despicable” as many writers seem to conflate human behaviour in the context of globalized industrial capitalism with human nature itself. Some writers situate exploitation as an inherent human trait—for instance: “[d]eforestation is man's instinct.” Interwoven with this sentiment is a sense that we are experiencing a “post-peak” period of human civilization. As one writer asserted: “We’ve reached the limitations of our species. We can’t progress beyond this point because of our inherent flaws. We won’t solve this problem because we aren’t able to.” Similarly, one writer

lamented: “We advanced our technology too fast and we have powers we are too infantile to possess. A few isolated settlements will survive. But the human world as we know it is dying soon.”

Amidst the critique of human nature, I interpret faint intimations of guilt and punishment. Pronouncements such as “[w]e are the cause of Earth’s next major extinction event” garner responses like “I’m starting to think we deserve to go extinct.” Other writers convey a sense of despondency with comments such as “[e]xtinction events are meant to happen just get on with your lives and carry on consuming it’s what we do best.” Similarly: “I had previously thought humanity could be saved. Not anymore.”

Human Nature as Adaptive

This category suggests that humanity can meet the challenges presented by climate change, as many writers characterize humans as adaptive and creative and express a sense of faith in possibilities for systemic change. For example: “Humans are an amazing species, we absolutely can do something to change all of this if/when we decide to do so.” Another writer insists “there’s little reason to think that [the human race] won’t adapt to the next world.”

At times, writers situate this sense of faith in our adaptive capacities as a challenge or a lesson—as one writer insisted, “it’s important to remember that as a species we adapt best when we’re pushed into a corner but who’s to say it won’t be too late then.” Similarly, one writer asserted that “to say we’re doomed is [...] to underestimate the adaptive capacity of human beings in a pinch.” I noticed a thread of exceptionalism in many of these comments; humanity is often framed as the “most adaptable species” and situated apart from “plants and animals” that may not be able to adapt to the effects of climate change. As one writer asserted: “There will be winners such as rats and jellyfish and many many more losers that will go extinct.”

Writers often cite a history of human adaptation in support of this sense of faith. As one writer advised: “Just change your mindset and remember humans have adapted and survived

through lots of shitty events.” Similarly: “Climate change will be the most significant struggle of the twenty-first century, but human beings have proven adaptable in the face of seemingly insoluble crises before.” Some writers convey a sense of adaptation as a process as they express belief in our capacities—for instance: “We will learn. It's not going to be the sudden change-in-a-day scenario depicted in the fantasy ‘Day After Tomorrow.’ The more we do today, the less we will need to adapt tomorrow, but either way, we will get through this.” Often this suggestion is associated with human technological innovation. For instance, as one writer speculated on potential future technologies that could “simulate an ‘ideal’ version of our ecosphere/biosphere, and then direct other machines to bring those conditions about in physical reality,” they stated “I have faith in human creativity and I know that we will invent our salvation.”

Human-as-nature

As writers construct their understandings of human nature, I noticed hints of a third discourse emerging in the comments—one that troubles the arguably more familiar conception of humans as separate from or superior to nature. For example, one writer remarked: “It's amazing that so many authoritative sources speak of eco ‘services’, as if all beings on this planet were our servants.” At times there is a tone of responsibility, as some writers denounce the notion that “nature takes care of itself.” One writer said this idea “has no place in a world that has been molded by humans. We need to take responsibility.” Another writer suggested a tone of responsibility while pointing to the notion of ecological interconnectivity: “The world will not save itself, and we need to change our relationship with our environment and start acting like we are just like any other species dependent on our ecosystems.” Underlying these comments is a tone of humility—as one writer concisely stated: “I just feel like there are limits to controlling nature.”

Dialectic of Hope

This dialectic is suggestive of (re)formulating possibilities for and avenues toward hope coupled with a sense is that hope is “essential but impossible” (Lewis et al., 2020, p. 281). These comments indicate a struggle to find and maintain hope, as writers across categories grapple with contradictions within and between various discourses about hope. The process that I interpret here is one of negotiating hope as/in practice. The dialectic of hope encompasses six categories: hopelessness, active hope, reasonable hope, radical hope, hope-free, and hope as/in practice.

Hopelessness

This category conveys variations of hopelessness—as resignation, as doubt about possible futures, as suggestive of pragmatism, to name a few. There is a tone of certainty in many of these comments alongside intimations of acceptance as writers seem to negotiate beliefs about the utility of hope. The sense of resignation in these comments is often paired with a tone of certainty. For instance, one writer stated: “This is where I’m at – I’m 22 and in college studying climate science and I’m just like well, we’re not going to avoid this. It’s better to accept and prepare than be anxious because unfortunately things are going to get worse. I hate to be pessimistic but that’s the way it is.” Similarly, one writer said “unfortunately I believe we’re just screwed no matter how you look at it. It was too late a decade ago.” At times, writers situate hopelessness in existential terms—for example: “I suggest you read some books on death acceptance and grief recovery. Imagine you have a terminal disease but you get a good 20-30 years left. That’s what we are facing.”

Some writers refer to “giving up” and express disbelief that we will be able to “stop climate change.” Others convey a sense of exasperation—for example: “It’s a blue sea today. A green veld tomorrow. But next week ? This sh** is black burned drowned and polluted. Where’s the hope in that?” Similarly, one writer qualified their reported lack of hope by stating “[t]oo many people are going to just keep on keepin’ on. It won’t even matter that the oceans are boiling.”

There is a sense of grappling with beliefs about possibilities for mitigating the effects of climate change, as many writers situate perspectives on possible futures in the context of the past. For example, one writer stated “it appears that the hopeful optimism of the projections we were given are just not accurate. The projections, in all fairness, were always a shifting continuum that was hard to guess. [...] My major concern is all that we're losing while we put it off hoping that it's just going to solve itself.” This comment reflects a pervasive sense of hope as mere distraction from the reality of the climate emergency. As one writer stated: “I think the main issue people are coming to realize, is that being hopeful for the past 30 years has gotten us nowhere, and now folks are starting to think realistically about the issues we face.” Similarly: “I think you should be optimistic, but being blindly hopeful only leads to disappointment, frustration, and despair. We have to accept that it could, and likely will happen, not live in hope that it won't happen.”

At times, writers negotiate the meanings and parameters of hope interactionally. For instance, in response to a comment suggesting that our only hope lies with increased individual action, one writer responded: “As someone entering into their third decade of hopelessness, if you think you can contribute meaningfully to a solution I don't think we're experiencing the same hopelessness. [...] Not that I feel my hopelessness is doing any good, but I don't ever feel like any of my individual actions are meaningfully contributing to a damn thing.”

Radical Hope

In contrast to hopelessness, some writers express and advocate for a perspective that I interpret as radical hope. At times, radical hope arises in comments that equate hopelessness with surrender—for instance: “I will always have hope. Even if we fall short of our goal, every decimal of a degree of warming we can prevent is worth the effort. But we can do this. If we surrender, then all is lost.” Another writer asked: “Because what's the alternative, waiting for the end of the human species? To me that's not an option.”

A sense of negotiating uncertainty arises in many comments suggestive of radical hope, as writers appear to hold space for the unknown. For example: “It's when we give up that things are lost. No need to give up, ever. Might turn out great, the future. Might turn out bad. Better to fight, I say.” Many writers seem to insist that hope is a necessary, if not crucial, perspective that at the very least preserves the possibility of change. As one writer asserted, “[t]he thing about giving up hope is that it's a self fulfilling prophecy.” Similarly: “Giving up on hope is no solution. That just adds to the problem.” Some comments convey a sense of holding on to hope despite lacking a clear rationale. As one writer stated: “As a strategy I'd rather go out buoyed by senseless and hopeless optimism, than dragged down by despair and apathy.” Another writer suggested there is no downside to hope, in stating “[w]e're playing for the highest stakes our species has ever seen. My bet will always be on us persevering. Hope costs nothing, and the benefits can be huge.”

Active Hope

This category emphasizes hope as something that must be practiced and cultivated. Here, personal action is situated as generative of hope and a sense of control, as well as a productive strategy for relieving anxiety. Many writers assert that action is a “powerful counter to hopelessness” and express a sense of hope as an endeavour requiring sustained effort. For example: “There is always hope when you take ownership of the problem and legitimately try to make a difference.” Another writer suggested “even if it is hopeless we still have to fight tooth and nail to avoid the worst outcomes – because how else can we look ourselves in the mirror?”

A common sentiment in this category is that hope fosters a sense of control—as one writer noted: “If I cannot control the big picture, I can control what's in my circle.[...] It won't go away entirely, but taking action makes me feel like at least I'm trying to make things a little better.” Another writer described a need to “cling to something to be able to breathe” and described how “[d]oing anything that makes me feel like I'm doing something about it relieves enough stress so I

can keep functioning as a human being.” Other comments echo this sense of relief, suggesting that personal action functions as a coping strategy—for instance: “A good step to help shake these feelings [is] to be active.” Similarly, one writer insisted that “[f]inding a way to turn the anxiety into action is probably one of the best ways to deal with it.”

Reasonable Hope

This category of hope conveys a sense of rationalization, as writers commonly list reasons for maintaining hope for the future. Perhaps the most prevalent reason cited is growing public awareness of the climate emergency. As one writer noted, “awareness and anger over the injustice is spreading fast, so I think we should all be cautiously hopeful that we aren't all gonna die, at least not quite yet.” Another writer described feeling encouraged by “the incredible shift in public opinion over the last several decades.” They went on to say: “Climate denialism is incredibly rare in young people and even within the millennial generation which is quickly replacing boomers in positions of power. Our dirtiest industries are under extreme pressure to lessen their impact and this pressure just continues growing.”

Many writers reference technological innovation as reason for hope, suggesting that “it's possible someone could come up with a solution before it's too late.” For instance, one writer insisted that “renewables are mainstream now, beating fossil and nuclear energy in every imaginable way, including cost. They can't be stopped. Would be great if politicians started supporting renewables instead of undermining, but it in the end the cat is out of the bag.” This sense of placing hope in industry innovation is nicely summarized in this comment: “Carl Sagan once alluded to the idea that any problem created by science and technology can be solved by science and technology. That's our only hope at this point, [in my opinion].”

Another theme in this category is finding reason for hope in past environmental protection efforts that were effective, such as pollution mitigation and policies instituted to protect old-growth

forests. For example, one writer stated: “When I was younger than you we had holes in the ozone layer. It was a big deal and after a lot of pressure the world banned CFCs and the problem corrected itself. I think climate change is going to be trickier to fix than CFCs but we are capable of fixing big environmental problems.”

Hope-Free

In the dialectic of hope, this category might be best understood as disrupting the binary of hope and hopelessness. In some ways, these comments seem to question the necessity of hope as a precursor to personal action, while in other ways they seem to challenge the notion of hope as the only route away from despair.

Many writers seem to trouble the arguably strong association between hopelessness and lack of personal pro-environmental action. As one writer noted: “Just because we feel hopeless doesn’t mean we stop trying.” Even more succinctly, another writer asserted: “You can still act without hope.” One writer pointed to the utility of a “hope-free” stance for inspiring personal action: “I find thinking about the worse possible scenario helps get my creative juices flowing. (This is commonly done in business, it's called scenario planning.)”

Other writers seem to challenge the reverence for hope in discourses about climate change by offering other reference points, such as “commitment” to local community, family, or the natural world. For example, emphasizing personal choice, one writer stated “there is a chance that by fighting against these odds you can make a difference to those you love.” They went on to say: “If you love anyone or anything, then fight for them. Base your decisions and actions on this love and not on something fickle like hope or despair.”

Another theme in this category is the notion of learning to appreciate life without hope. One writer drew a comparison to learning to live a good life “without faith.” Many writers suggested that a “hope-free” perspectives does not preclude the possibility of enjoying “day-to-day life.” For

instance: “Giving up hope doesn’t mean giving into despair. We still can enjoy the small window where life is good.”

Hope as/in Practice

This category captures the process I see at work in the dialectic of hope—negotiating hope as/in practice. A sense of practicing hope arises from comments that offer qualifications of hope in terms of multiple possible outcomes, suggest attempts to circumvent the temptation toward black-and-white thinking, and convey a sense of hope as tentative.

Many writers signal attempts to clarify the landscape of hope and hopelessness by specifying where exactly one might locate hope for the future. As one writer asks: “Is there hope? Well hope for what? Hope to “stop” the climate change? No not really, the climate will change now, I don't think anything can stop what is already started. Hope for humanity? Absolutely. Climate change will not destroy all humans.” Another writer seems to refine the scope of hope in suggesting that community action can provide “a sense of purpose or hope”—they go on to say: “Not hope that it'll all work out fine, but hope that people will manage to live meaningful lives even if their material circumstances get worse.”

Other comments suggest an effort to balance “doomism and hyper-optimism.” One writer said they try to remind themselves that “this doesn't have to be an all or nothing situation” and went on to say: “Is irreversible climate change happening? Yes. Can we still make decisions that will limit the impact on the future? Yes. When this all shakes out I think we'll land somewhere in the middle.” The sense of tentativeness often arises in comments on speculative futures. For instance: “I have every optimistic hope that we will endure. That we will come together right around now and start managing our resources and rehabilitating the habitat. I also know we may very well absolutely not do that, and run the biosphere into the ground and collapse our own agricultural systems and then launch wars over scarce resources.”

At times there is a sense of oscillating between extremes—many comments conveying a sense of hopelessness are punctuated by statements like “I hope I’m wrong.” As one writer stated: “All that is not to say that I am resigned. When it comes to those who believe we can overcome this challenge vs me who doesn’t; one of us is wrong. I hope it’s me; but I think it’s them.” Similarly, “I don’t harbour much hope – other than I really hope I’m wrong about the path we’re on.”

Encountering Uncertainty: A Note on Coping

As noted in the method chapter, during data analysis I wanted to keep one analytical question in mind: What might this study suggest about the process of coping with uncertainty and associated factors that support or detract from psychosocial well-being? In this section, I outline the main findings that pertain to this question—a process of contemplating mortality and a dialectical engagement with perspective as an emergent strategy for coping with eco-anxiety.

Contemplating Mortality

In the many comments suggestive of grappling with the unique uncertainties engendered by the threat of climate change, writers offered reflections on existential meaning and mortality that were suggestive of coping processes. Variations included striving to sit with uncertainty, encouraging a “healthy dose of denial,” and nihilistically embracing meaninglessness. Several writers challenged the notion of yearning for certainty—as one writer said: “We don’t live and enjoy life because we have a guarantee that we will grow old, healthy happy and rich, without ever experiencing tragedy. We live it because we find joy despite all those possibilities.” Another writer characterized climate change as “our biggest threat so far” and remarked: “Down the road surely lie new threats. Further down, unimagined ones. But that is part of the package of being alive. With life, and attachment, comes risk of loss. But that’s what makes the game interesting.”

Other writers touched on the topic of meaning in life by emphasizing a focus on “joy” and living life “to the fullest extent” for as long as possible. For instance: “Something I tell myself often is

that I wasn't going to live forever any way, but that shouldn't change how much joy I get out of this life, however fleeting." At times, this sentiment was tinged with a sense of nihilism: "I say do what you want. Live it up while you're still breathing. [...] I dunno, does anything really matter? Do what you want."

Many writers drew connections between facing a future marked by climate change and confronting mortality. As one writer acknowledged: "It won't be easy, but like anything, it's just one foot in front of the other. We will live or we will die. But then, we all die eventually." Another writer advised: "Try not to let this catastrophic potentially civilization-ending phenomena affect you any more than the knowledge of your own death. It's just another day in the 21st century." Remarks on mortality often seemed to advocate acceptance and encourage a shift in perspective. For instance, one writer said "the wisdom of age says to embrace the inevitability of mortality – we're only here because previous extinction events gave the time and space for humans to evolve."

A Dialectical Engagement with Perspective

A strong theme that emerged from the data was a sense of perspective management as a mode of coping with eco-anxiety. Whether through advice or reported experiences, many writers spoke to a sense of relief brought about by intentional or prompted shifts in perspective. I found myself wondering if these comments might be suggestive of a perspective on psychological distress as stemming from clinging to familiar conceptions of how things are and ought to be. While reported relief may be momentary, these comments suggest that shifts in perspective can be quite profound. Here, I outline the two main modes in which writers reported shifting perspectives, which I have labelled contracted and expansive.

Contracted Perspective. Comments in this category are primarily comprised of advice-giving and emphasize focusing on the present moment. There is a vague sense that a contracted perspective might be understood as helping to manage overwhelm, as writers often made these

remarks in response to statements conveying agitation and frustration. For instance, one writer said: “Most importantly, take a deep breath. You’re alive, you’re here, you’re okay right now. Ain’t that great?” Similarly: “All you can do is focus on the present moment; the past and the future are all imaginary scenarios the brain perseverates on.”

Some writers invoked a reflective, almost meditative tone with their advice: “Let go of trying to control it. Let fear go just like it came, without thinking of it. With no effort. Do nothing but breath and observe every single moment. The future is our imagination. Our own construct. The only thing real we have is this very moment.” Other writers situated a contracted perspective as a response to broader contexts of experience—for example: “You're just one cog in a giant wheel. You don't even have the power to control the whole wheel, so just focus on being present in your little space.” Similarly: “I try to remember that everything is temporary -- all lives, all species, all planets. That a lot of good, joy, love is still possible in this moment.”

Expansive Perspective. Comments indicative of an expansive perspective tend to highlight conceptions of change and impermanence, making frequent reference to the universe and time as organizing motifs for contemplating the “grand scheme” of things. For example, one writer remarked, “the only comfort I have is to learn more about astrophysics. Realizing just how insignificant the earth is, the tiniest speck of a speck of a speck in the Universe, for some reason makes me feel better.” Other writers share reflections on insignificance in the context of random chance, such as “you’re on a speck of dust in space – and without the occasional meteor collision and CO2 eruption none of us would be here today.” Similarly: “The earth has been hit with FAR worse and life still managed to pull through in the end. A meteor could strike tomorrow and obliterate the planet and in the grand scheme of the universe it really doesn't matter.”

Some writers seem to advocate for stretching the timeframe for contemplating climate change. As one writer remarked: “If you are thinking at the decade or next few centuries it's bad.

Looking at the two-thousand-year timescale however and humanity may be doing just fine.”

Similarly: “It will be over a billion years until the sun gets too hot to sustain life. Think about how many millions of years that is. Think of all the ways life will flourish and adapt in that time, even if we cause the worst of damage we can. [...] Human destruction will be a blip in nature’s long story.”

With an expansive perspective, some comments invoke a sense of hope for the far off future—for instance: “I fantasize about societies or enclaves of people in the future who will look back on this time as a learning period, embrace a more honest relationship with the world around them and build self-sufficient bubbles around them.” Ultimately, cultivating an expansive perspective seems to offer a sense of relief for many writers, as suggested by this comment:

“After I read *The Rise and Fall of the Dinosaurs* it just relaxed me all of a sudden. Something about the immense amounts of time of each geologic period and the absolutely crazy extinction events that have already happened several times. Something about that made me Zen about our current down slide [...]. The book made me realize how unimportant we really are in the grand scheme of things. We were always destined to die off. Almost all animal species are. We are no exception. Accepting that is a relief.”

Chapter 5: Discussion

Psychology, so dedicated to awakening the human consciousness, needs to wake itself up to one of the most ancient human truths: We cannot be studied or cured apart from the planet.

– James Hillman

These inner ‘untrodden paths’ through our defences and complex feelings about our ecological predicament might just hold some of the answers we need, and counter intuitively show us the way.

We need ‘inner’ as well as ‘outer’ activism.

– Caroline Hickman

The findings of this study map out a field of existential and ideological tensions representative of eco-anxiety as reportedly experienced by Reddit writers. They arose as descriptions of lived experience with *contradiction-crisis* (Gunderson, 2017, 2020b) that indicate shifting and conflicting affective themes and points of reference (Lertzman, 2012). The dialectics of eco-anxiety convey a sense of effortful engagement with the threat of climate change, through “an infinity of individual hopes and partial social projects” that suggest the persistence of hope in bleak times, the fatalism of resignation and the withdrawal from hope, the struggle to discern pathways toward solutions, and more (Byrne & McCarthy, 2007, p. 36). As a whole, Reddit writers seem to ‘dance the dialectic’ of uncertainty with a kind of improvisational choreography as they grapple with the exigencies of contemplating a future marked by climate change (O’Keefe, 2017).

I, too, dance the dialectic, shifting and swaying on a weekly, daily, hourly basis as my analytical process is charged with emotional and affective reverberations. For me, the dance is overwhelmingly somber, more of a shuffle really, despite occasional flares of hope. In avoiding the temptation to find (read: construct) stillness in the form of a coherent conceptual framework, my aim to respect the tensions that arose from the data resonates with Lertzman’s (2021) description of

her research goal: to “surface and make visible the ruptures, dilemmas, emotions, conflicts and lived experiences” of eco-anxiety (p. 97). The grounded theory method enabled me to oscillate between close focus and abstraction—a kind of “analytical choreography”—while persistently asking “what is this really about?” in an effort to generate theoretical relevance and resonance (Timmermans & Tavory, 2007, p. 4; Charmaz, 2014). As a result, Lewis et al.’s (2020) observation that eco-anxiety gets fractured into myriad dialectics was borne out in this study.

Theorizing Eco-Anxiety

My findings outline several processes at work in the dialectics of eco-anxiety, under the overarching process of grasping for coherence in the face of uncertainty. These dialectical processes include (re)negotiating existential meaning, grappling with interdependence, (un)settling injustice, (re)constructing visions of personal and social futures, (re)defining human nature, and negotiating hope as/in practice. Together, these processes evoke something more than anxiety as it is generally understood in psychology—that is, as something disproportionate to reality, something to be managed or quelled. In my interpretation, the sense of effortful engagement evoked in and by these processes suggests something more akin to burgeoning transformation. Collectively, writers expressing eco-anxiety seem to be undergoing a multidimensional process of re-evaluating the social world, albeit in various implicit, explicit, and divergent ways.

Climate psychologist Caroline Hickman (2020) has elaborated on a metaphor that seems to be circulating in public discussions of eco-anxiety: the metamorphosis that caterpillars undergo to become butterflies. Essentially, Hickman (2020) highlights how the caterpillar does not control its transformation; it must surrender to the process of disintegration as a necessary step in its metamorphosis. Hickman (2020) relates this metaphor to human experience by suggesting that rather than focusing on ‘mindset’ or ‘agency’, we must embrace an element of surrender. She notes that dissolving is a struggle—we resist, get scared, go rigid—but she insists that we need to cultivate

a perspective from which we can sit with the struggle without being disabled by the intensity of it (Hickman, 2020).

Whether this cultural moment is ripe for such an endeavour on a collective scale is up for debate. Gunderson (2020a) has argued that we are not living in a revolutionary moment, but Verlie (2019) has suggested that eco-anxiety holds nascent opportunities for affective adaptation that have the potential to revolutionize our conception of the self and its relation to the social world. This notion is aligned with my theory of eco-anxiety as a process of burgeoning transformation that both entails and signals an unfolding re-evaluation of the current social order. The question that arises for me, then, is how might these inklings of transformation-in-process be clarified, stoked, and catalyzed to propel us collectively toward affective and possibly even pragmatic revolution?

Thinking-with Rather than About

It has been argued that in the Global North, the climate crisis “is registered as an intellectual problem” that may be “incommensurable with the pragmatic practices and concerns of everyday life” (Gunderson, 2017, p. 264). Although I agree with Verlie (2019) that the climate crisis is also (or perhaps primarily) an emotional and affective problem, the idea that it is an intellectual problem opens critical avenues for more deeply understanding the nature of our predicament and—inspired by Verlie’s (2019) notion of ‘living-with’—for situating eco-anxiety as an intersubjective mode of ‘thinking-with’ rather than ‘about’ the threat of climate change. I propose that thinking-with is a first step in productively engaging with the transformative potential that I theorize to be inherent in eco-anxiety. Furthermore, thinking-with can add scaffolding to the task of learning to live-with, potentially enabling us to co-construct alternative frameworks for living. As Gunderson (2017) suggests, investigating the qualitative dimensions of how people make sense of the social world can provide conceptual tools for gaining a deeper understanding of the ideas, affective elements, and practices that develop in the context of lived contradictions.

Suggested Pathways Toward Transformation

The dialectics of eco-anxiety and their processes as interpreted in this study suggest several modes of engagement with the problem of climate change that resonate with key themes in current scholarly conversations about eco-anxiety. In other words, many aspects of how Reddit writers are seeming to express and grapple with eco-anxiety reflect and elaborate on some increasingly prevalent conceptual orientations toward the problem of climate change. These alignments lend support to my contention that the burgeoning process of transformation theorized here, while often amorphous and at times tenuous, is underway. The dialectics of eco-anxiety are rife with deep ambivalences and formidable contradictions that—akin to the analogy of metamorphosis described above—coalesce into a broad sense of destabilization, disintegration, and dissolution, with hints of surrender. There is a sense that the dominant narrative of Enlightenment reason is indeed beginning to fracture under the strain of the problem of climate change.

Below, I present four areas of alignment between key themes from the interdisciplinary eco-anxiety literature reviewed above—specifically those pertaining to disorder, hope, well-being, and the self—and the dialectical modes of engagement with meaning-making processes that emerged from my analysis. In addition to helping us further understand the nature of the problem of climate change, recognizing and investigating these alignments can highlight ways of thinking-with eco-anxiety and illuminate pathways toward stoking the burgeoning process of transformation theorized here to be inherent in eco-anxiety.

Dealing with Disorder and Contradiction

As Weintrobe (2010) remarks, our political leaders tend to shield us from disorder—they “have not sufficiently appealed to us to grapple with difficult complexities and painful realities,” trying instead to “seduce the part of us that tends to feel superior and arrogant with the quick fixes of denial” (p. 120). But denial, as Gunderson (2017) reminds us, “disavows the existence of the

contradiction” between capitalism and nature in order reproduce the “treadmill of production” (p. 280). Rather than demanding certainty and reassurance, Marshall (2011) calls for us and our leaders to ‘listen’ to disorder and its contradictions.

The dimensions of eco-anxiety that comprise the dialectic of change and the dialectic of agency, including the sub-dialectic of power, suggest effortful engagement with disorder alongside ‘quick fixes’ reflective of political narratives that circumvent contradiction. For instance, the sense of a crisis of confidence in social institutions, sentiments like ‘life as we know it cannot continue,’ and calls for wholesale revolution suggest a deep confrontation with contradiction. On the other hand, expressions of faith in technological innovation, claims of personal control, and even the radically individualized response emphasizing preparation and fortification against expected impacts suggest efforts to find certainty and reassurance amidst the disorder.

When we recognize disorder as a “sign of something neglected, of the unconscious or the unknown,” we shift our perspective on the symbolically-ordered social world in a way that can help us synthesize it with our meaning-making (i.e., ordering) to render it “symbolically conceivable” and hopefully enable us to better grapple with the challenges we face (Marshall, 2011, p. 19-20). In contrast, not recognizing—or misperceiving disorder as merely an obstacle, something to be tamped down or discarded—can blind us to “burgeoning creativity” that through the lens of the existing social order, “can look like vandalism” (Marshall, 2011, p. 19). Or, it can blind us to burgeoning transformation that might first necessitate disillusionment with the notion of agency and expressions of hopelessness and defeatism that can, at first, look like destructive disengagement. But these elements of the dialectics of agency and hope could be understood as recognizing disorder in ways that may help us (re)imagine possibilities and futures that are “not locked into our current ways of being and relations of power” (Marshall, 2011, p. 20).

In this sense, thinking-with and learning to live-with climate change entail respecting the disorder of reality and require us to “learn how to deal with disordered, fragmentary and fragile networks, as opposed to ordered institutions” (Marshall, 2011, p. 20). Perhaps the distrust and suspicion of institutional authority and the critiques of prevailing political-economic interests that show up in the dialectic of change represent an “unravelling” of institutionally-reproduced ideologies that serves the purpose of learning to deal with disorder (Marshall, 2011 p. 20).

Because we cannot know what a new order would look like in advance, dealing with disorder entails a process of accepting uncertainty (Marshall, 2011). This means accepting that once-stable concepts have been rendered uncertain, resisting the temptation toward binary thinking, and troubling our familiar sources of reassurance, as indicated in the dialectic of uncertainty. Ultimately, we cannot hope to eradicate disorder—“there is always something left over” because our conceptual categories and processes are always incapable of describing reality in its totality, and we “can only work within the limits of what is orderable at the time,” but we can hope to minimize repressed disorder while bolstering our adaptability (Marshall, 2011, p. 20).

Orienting Toward Hope as/in Practice

Findings collected under the dialectic of hope illustrate that hope and hopelessness are far from dichotomous—although the language of hope suggests polarity, this is not always true in practice (Flaskas, 2007). Perhaps a quintessential illustration of this is how several writers, after expressing their sense of hopelessness, said they hope they are wrong.

Hope and hopelessness necessarily coexist in a “layered experience of emotion, meaning and behaviour” that plays out in relational contexts (Flaskas, 2007). In the dialectic of hope, writers seemed to interactionally define the nature of hope as encompassing different varieties—radical, active, reasonable hope, and hope-free as a variety of hopelessness. Orienting toward this heterogenous understanding of hope and hopelessness provides fluid opportunities to recognize

hope as something that we think, feel, and do (Flaskas, 2007). It provides “compass points” for understanding hope as not just relational but as something distributed across social networks where the “labour of hope and hopelessness may be shared” (Flaskas, 2007, p. 33). This sense of shared hope was reflected in the process of grappling with interdependence in dialectic of agency, as some writers expressed a loss of hope due to a sense that others are failing to act.

Inviting conversations about hope or lack thereof can open up spaces to consider how forms of hope and hopelessness circulate in everyday life and impinge on our lived experience. For instance, we might talk about hope as/in practice as a balancing act or as a process of mediation wherein the balance between hope and hopelessness—and the various ways they coexist—can shift and pool in different places “even if the hopelessness itself stays just as strong” (Flaskas, 2007, p. 33). The hope-free dimension of the dialectic of hope is representative of this mediation process, and it suggests that while hopelessness “cannot be cured or talked away,” it may come to be “experienced as more tolerable across time” (Flaskas, 2007, p. 33).

Overall, this orientation toward hope has the potential to disrupt the temptation to reduce the complex and contradictory nature of collective eco-anxiety to an experience marked by polarization, instead encouraging us to recognize layers and variations of experience and their effects on us individually and collectively.

Reconceptualizing Well-being

For many citizens of the Global North, especially those with moderate to high socioeconomic status, the threat of climate change reveals the world to be “much more tragic and fragile” than previously assumed (Pihkala, 2020b, para. 4). The varieties of mourning and existential angst in the dialectic of alienation convey a broad sense that cultivating and maintaining well-being is an onerous task under the shadow of climate change. Furthermore, the dimensions of disorientation and disconnection in this dialectic suggest a recognition that the social world and the

future “is not like it was, or like we thought it was,” which can profoundly impact well-being as we are begrudgingly compelled to “relearn the world” (Pihkala, 2020b, para. 3).

As Helne (2020) remarks, “all humans wanted the good life” and as we come to know and grapple with the lived contradictions of climate change, it begins to seem as if there is “something inherently rotten in the way the good life is conceived” (p. 220). The category of radical individualism in the dialectic of change reflects this sentiment and hints at efforts to re-evaluate what ‘the good life’ might look like in a future marked by climate change. Similarly, the various forms of hope outlined under the dialectic of hope convey a sense of striving for a future worth living in. Indeed, hope for the future is bound up with the concept of well-being, and as such, the will toward well-being can be a “catalyst for transformation” (Helne, 2021, p. 222).

At the same time, it is important to challenge the neoliberal ideology that radically individualizes and privatizes well-being, situating it as “a process of internal management and control” for which individuals are fully responsible (Helne, 2021, p. 224). The topics of personal preparation and self-sufficiency in the dialectic of change reflect this ideology, in that people seem to retreat into the sphere of their personal capacity for well-being and, together with the dimension of revising futures in the dialectic of alienation, people seem to be engaging in a process of revising their “conceptions of the good life – in other words, well-being” (Helne, 2021, p. 221).

Helne (2021) advocates for a relational understanding of well-being, which would recognize that although our experience is subjective, well-being “always depends on our social and natural environment” (Helne, 2021, p. 225). In short, well-being is holistic or “ecosystemic” (Helne, 2021, p. 225). Expressions of ecological mourning and solastalgia in the dialectic of alienation certainly corroborate this perspective. Public discourse about the empirically verified connections between nature and well-being is expanding, which may play a significant role in fostering or deepening our understanding of nature as crucial for overall well-being (Helne, 2021). But this utility goes beyond

mere coping strategies to manage anxiety—it can turn our attention to aspects of well-being that are not only “dependent on material resources” for actualization, which undermines economic growth as a preeminent goal and “accentuates growing as a human being” (Helne, 2021, p. 227). Decoupling well-being from materialistic discourses may be a crucial step in offering an “alternative narrative of well-being to better guide individuals and societies toward more sustainable and satisfying ways of life” (Helne, 2021, p. 227). Ultimately, reconceptualizing well-being entails a recognition that change—whether incremental or transformative—requires “a sound idea of well-being,” and this idea will arguably need to be grounded in an understanding of the self as holistic or ecosystemic (Helne, 2021, p. 223).

Enlivening the Self

Stoking the transformative potential of eco-anxiety can involve reconceptualizing the Western individualized self by cultivating an expanded awareness and embodiment of the self as fundamentally relational. Beyond the interconnectivity of humanity, this awareness would encompass the full scope of relationship between “personal and planetary well-being” (Helne, 2021, p. 227). In the dialectical process of (re)defining human nature, particularly in the human-as-nature category, there was a sense of troubling familiar conceptions of humans as separate from or superior to the natural world. Tones of humility and responsibility were suggestive not only of recognizing ecological interconnectivity, but of challenging individualized discourses of the self.

Similarly, the dialectical engagement with perspective presented as an emergent mode of coping with eco-anxiety suggests that such an expanded awareness can bring a profound sense of relief, not just from distress, but from the strictures of the Western individualized self. Expressions of recognizing impermanence and the relative insignificance of human beings in the grand scheme of the universe or our planetary history invoke a sense of tapping into something beyond this individualized notion of self.

Understanding the self as relational is certainly not new—it resonates strongly with Buddhist philosophies and Indigenous cosmovisions (Cochrane, 2014; Sogge, 2021). What this orientation foregrounds is a challenge to Enlightenment rationality that calls for an escape from the “dualist Enlightenment paradigm” to shift toward an “Enlivenment paradigm” (Weber, 2013, as cited in Helne, 2021, p. 227). Psychologist Kimberly Sogge’s (2021) discussion of a “psychology of awakening” echoes this call for enlivenment—she draws on Buddhist philosophies to argue that reconceptualizing the self is crucial for galvanizing “human potential for a creative response” to climate change (p. 15). The traditional Western paradigm of psychology tends to emphasize a “strong sense of self separate from ecological context” while Buddhist or contemplative traditions conceptualize the self in “a more fluid, process-oriented, and universal way” that emphasizes holistic interdependence (Sogge, 2021, p. 15). Under this rubric, an enlivened self would be an “ecological self” that is “experienced as one node in a web of relationships” (Sogge, 2021, p. 15).

While theories of such an ecological identity are present in discourses of environmentalism, residues of the Western individualist paradigm are evident in their tendency to position the non-human world as an ‘other’ that humans must (re)establish a connection with (Martin, 2020). As such, they miss the kind of relationality espoused by Indigenous conceptions of the self and community that are founded on the fundamental “kinship of creation” (Martin, 2020, p. 95). This nuanced distinction holds powerful implications—the environmentalist project of subverting the Western individualized self may ultimately be misguided if it fails to recognize that a relational ecological identity is not just a matter of “how I connect to the earth” but a matter of our collective visceral relationship with the land (Martin, 2020). This kind of relational ecological identity is essential for awakening to our inextricable interrelationality—as Martin (2020) puts it: “It is time we sought out the actual roots; it is time we got digging” (p. 102).

Ultimately, the task of enlivening the self challenges us to explore pathways toward unsettling Enlightenment individualism in ways that “may allow for the emergence of a more ecologically-oriented self” (Sogge, 2021, p. 15). We might begin by asking “what happens psychologically when people turn towards their larger nature?” (Sogge, 2021, p. 15). It is important to note that when drawing lessons from the philosophies and knowledges of non-Western cultures in an attempt to apply them in the context of Western societies, the challenge is to resist idealizing and essentializing them (Cochrane, 2014). The overarching argument for recognizing and grappling with complexity applies here as well—if we draw from the knowledge traditions of non-Western cultures to enliven the Western self, our efforts must be grounded with historical consciousness and cultural humility.

Implications for Therapeutic Practice

Expanding our knowledge about the various dimensions of eco-anxiety is essential for the capacity of therapists and counsellors to support clients in the process of grappling with the reality of climate change (Pihkala, 2020a). Remembering Pihkala’s (2020a) suggestion that eco-anxiety is likely to “become increasingly intertwined with other anxieties” as well as the problems of everyday life, practitioners may encounter hints of eco-anxiety in aspects of presenting concerns reported by “people who do not recognize—or do not have the time to think about—their eco-anxiety” (p. 14). Indeed, for many clients in the Global North, the demands of daily life are intensified by levels of oppression, abuse, trauma, tragedy, and stress that may preclude any conscious engagement with the problem of climate change.

Furthermore, deepening our understanding of eco-anxiety will necessarily involve reflexivity. Examining our own perspectives, positionings, and processes of confronting the reality of climate change can influence how we respond to and work with clients expressing eco-anxiety, as well as

promote an “empathic appreciation” for the lack of engagement with this complex dilemma (Lewis et al., 2020; Schreiber, 2021).

Recognizing and Engaging Eco-anxiety

Truly recognizing eco-anxiety goes beyond simply identifying its representative elements as they arise—it entails recognizing the nature of eco-anxiety as something that ripples with existential angst, signals some level of alienation and lived-contradiction, deeply complicates hope, and is “likely to be a fixture across the lifetime” (Piotrowski, 2021, as cited in Schreiber, 2021, p. 30).

At the same time, truly recognizing eco-anxiety involves taking a non-pathologizing stance. While offering anxiety-reduction techniques to manage distress can be pragmatic and supportive, Lewis et al. (2020) advise that an approach overly determined by this goal is invalidating and perpetuates denialism (p. 273). After all, psychoeducation on the physiological mechanisms of anxiety as a pathway toward regaining a sense of calm and safety cannot adequately contend with the reality of the climate crisis, which “threatens the most basic of human needs: safety and security” (Zwicky-Pérez, 2021, p. 9). The validity and multidimensional nature of eco-anxiety calls for a modification of these techniques with the goal of “transforming the anxiety into relational, agentic, cognitive, and spiritual forms of adaptation to climate threats” (Lewis et al., 2020, p. 291).

If eco-anxiety represents a burgeoning process of transformation as theorized here, therapists and counsellors are well-positioned to help clients explore and engage with the particular dimensions of their response to climate change in ways that not only support adaptive coping, but may stoke transformative potentials. This broader understanding of eco-anxiety as indicative of something beyond anxiety as it is currently conceived can help professionals design, incorporate, and adapt therapeutic approaches in ways that might better attend to the exigencies of making sense of climate change, living with contradiction and disorder, (re)constructing the meanings and parameters of well-being, and orienting toward hope as/in practice.

Working with Dialectics of Eco-anxiety

As described earlier, climate change constitutes a hyperobject—something so complex and distributed across so many interdependent realms of understanding that its totality is unknowable. Lewis et al. (2020) suggest that due to our inability to “contain” its complexity and uncertainty, we tend to think about it in terms of “conflicting or opposing parts”—that is, dialectics (p. 272). In their view, this enables us to stave off cognitive dissonance and formulate individual responses despite the problem being unsolvable at the individual level (Lewis et al., 2020).

The notion of containment has psychoanalytic roots, but Lewis et al. (2020) also use this term to refer to a broader mode of containing the “irreconcilable” (or, the contradiction) through “cognitive frames, spiritual beliefs, and relationships that allow one to adaptively bear what can be difficult to bear” (p. 274). Containment in the therapeutic space can further be understood as a co-created “conversational reality” that allows clients and therapists to encounter and engage with contradiction (Byrne & McCarthy, 2007, p. 48). This is a space “beyond or behind the reach of our normal scientific consciousness” that grants access to “the transcendent” (Hederman, 1985, as cited in Byrne & McCarthy, 2007, p. 48).

Lewis et al. (2020) argue that working therapeutically with eco-anxiety begins with identifying and validating dialectics, whether they arise within the client’s reported concerns or within the relationship between the client and the therapist. They advocate for “gritty exploration” of tension and an “appreciation of the dialectic as a whole, which affords a containing sense of completeness” (Lewis et al., 2020, p. 291). In this process, it is crucial to hold open the space between dialectic poles—they strongly caution “against closing them, against allowing their collapse into either pole” (Lewis et al., 2020, p. 274). This form of dialectical thinking has deep roots in Asian philosophy, where contradiction is not regarded as necessarily antagonistic or as something that demands synthesis, as is often the case in Western ideas about dialectics (Li et al., 2021, p. 2).

Holding the dialectic open involves creating a large enough conceptual space and cultivating a “both/and” perspective to contain and engage the coexistence of dialectical poles (Lewis et al., 2020, p. 274). With this stance, the therapist does not aim to overcome oppositions or resolve the client’s distress (Byrne & McCarthy, 2007; Lewis et al., 2020). Rather, the aim is to co-create a space that invites ambivalence and makes room for the client’s “imaginative capacities to bear fruit” (Lewis et al., 2020, p. 275). For example, tensions between the persistence of hope and the closure of fatalism are positioned as “a conjoined future perspective” that can expand the horizon of meaning (Byrne & McCarthy, 2007, p. 38).

In terms of techniques, Byrne and McCarthy (2007) describe two approaches for co-creating such a space: questioning at the extreme and juxtapositioning. Questioning at the extreme invites an ‘as if’ disposition that involves exploring each pole of the dialectic and drawing out what is implicitly known about them—for instance, the therapist might ask the client to imagine what it might mean or what might happen if one of the dialectical extremes were to “form the basis for future actions” (Carr, 2012, p. 135). With juxtapositioning, clients might be invited to compare and explore contradictions in terms of what their differences might mean for their future perspectives and actions; it is a process of amplifying the extremes in order to explore their implications (Carr, 2012). Both questioning at the extremes and juxtapositioning imply a “trust in the dialectical mediation of contradictions [...] to produce conversational realities and relationship forms unforeseen at the outset” (Byrne & McCarthy, 2007, p. 47). These techniques are particularly appropriate for engaging with crisis or catastrophe because these situations call for more than straightforward problem-solving that presupposes an “established horizon of expectation and meaning” where outcomes reflect effort and/or luck (Byrne & McCarthy, 2007, p. 47).

Shifting Toward 'Climate-informed' Practice

Much of the literature exploring the role of psychology in addressing eco-anxiety tends to emphasize working to help clients overcome barriers to behavioural change and manage the adverse effects of climate change on their lives, as well as more broadly contributing to knowledge about how to prepare for adverse impacts and build community resilience, including shaping public health communication, and informing government policy (Schreiber, 2021; Whomsley, 2021). Leveraging existing psychological knowledge in these ways is undoubtedly important, but this focus can neglect opportunities for deeper engagement with the experience of living with the contradiction-crisis of climate change (Gunderson, 2017; 2020b). This aim would require more emphasis on leveraging therapeutic skills for illuminating “pathways out of disorientation” (Lewis et al., 2020, p. 273). Indeed, working with eco-anxiety as an experience rife with transformative potentiality entails cultivating the “capacity to move forward in situations that we do not fully know” (Lewis et al., 2020, p. 274).

As a starting point, practitioners can consider including climate or environmental concerns among the set of questions they regularly ask clients, which would signal a willingness to discuss these (often politicized) concerns and may inform therapeutic approaches (Schreiber, 2021). Psychologists might also explore pathways toward enlivening the self as suggested above—this could mean exploring and developing competencies in theoretical orientations and interventions grounded in conceptions of the self as relational and fundamentally ecological (Sogge, 2015). In addition to Indigenous and Buddhist approaches to practice, so-called third wave psychotherapies such as Acceptance and Commitment Therapy (ACT) emphasize cultivating a sense of ‘self-as-context’ as a core component of developing the psychological flexibility that can clarify ecological values and provide “context-relevant strategies for how clients can approach rather than avoid suffering” associated with the climate crisis (Sogge, 2021, p. 15).

For those interested in a more comprehensive shift toward climate-informed practice, there are several organizations that can support this endeavour. For instance, the Climate Psychology Alliance (<https://www.climatepsychologyalliance.org>) is an organization based in the United Kingdom comprised of interdisciplinary groups of researchers and practitioners from across the world that are focused on producing research exploring the lived experience of eco-anxiety and a range of related topics. The Climate Psychology Alliance also coordinates a therapeutic support network for clients and provides collections of informative resources.

Practitioners might also find value in studying ecopsychology, a field that “explores humans’ psychological interdependence with the rest of nature and the implications for identity, health and well-being” (APA, 2011). More specifically, ecopsychology is characterized as a countercultural, eco-centric field that provides an alternative to the “human-centric, reductionist, and primarily intellectual modes of academic psychology and mainstream clinical practice” (Doherty, 2009, p. 2). As such, ecopsychology attends to various dimensions of grappling with the reality of climate change and espouses an explicitly therapeutic focus that emphasizes experiential and nature-based interventions (APA, 2011; Doherty, 2009)

Ultimately, climate-informed practice is compatible with a dialectical approach to working with eco-anxiety—both orientations can deepen our ability to help clients feel supported and “contained” in the therapeutic space as they confront “unspeakable feelings of loss, anger, confusion, or apathy” in a way that can help them to “preserve a capacity to think under threatening and rapidly evolving conditions” (Lewis et al., 2020, p. 274).

Conclusion

All of us will experience metamorphosis several times during our lives, exchanging one identity for another... Any transition serious enough to alter your definition of self will require not just small adjustments in your way of living and thinking but a full-on metamorphosis. I don't know if this is emotionally stressful for caterpillars, but for humans it can be hell on wheels. The best way to minimize trauma is to understand the process.

— Martha Beck

This work has shown eco-anxiety to be a multidimensional mode of grappling with uncertainty and incoherence at a time when the fundamental contradictions that underpin Enlightenment reason have erupted into crisis. As the set of dialectical processes indicative of burgeoning transformation suggest, the fracturing of the dominant narrative of Enlightenment reason is gaining momentum in public discourses of eco-anxiety. As a response to the breakdown of our certainties about the social world and our taken-for-granted ideas about existential meaning, eco-anxiety is thus emblematic of a confrontation with this disorder.

The dialectics of eco-anxiety as interpreted here, with their many opposing, layered, and divergent dimensions, ultimately suggest that Enlightenment reason has “reached a state of exhaustion” (Cochrane, 2014, p. 584). Within this sense of exhaustion, the dialectics evoke a sense of burgeoning transformation, and they hint at some elements that might be leveraged to spur the process. These include at least four pathways: dealing with disorder and contradiction, orienting toward hope as/in practice, reconceptualizing well-being, and enlivening the self. I have described some implications for psychological and therapeutic practice that have the potential to illuminate these pathways, but surely there are many more implications and avenues to explore.

As Gunderson (2021b) remarks: “The difficult path remains theorizing society as a totality without losing sight of its human formation” (p. 144). Similarly, Marshall (2011) suggests that engaging with the ‘mess’ of disorder must focus on “how people come to know their interests, and how they frame the world so as to make those interests seem real and possible” (p. 1). As much as we need to continue investigating the reasons behind the organizational breakdown that climate change heralds—“pointing out the fear of change, describing denial, talking of conflict between particular power-blocks, demanding justice, or positing that the ruling class is determined to make money at the expense of the ecological system and their own survival” (Marshall, 2011, p. 1)—we must not lose sight of the transformative potentialities of thinking-with eco-anxiety.

Some theorists locate transformative potential in affective adaptation (Lertzman, 2012; Verlie, 2019) while others suggest reconfiguring the dominant ideologies of self and well-being that pervade the Global North (Helne, 2021; Sogge, 2021). In the spirit of thinking-with eco-anxiety, these and related tasks might benefit from continued efforts to generate “more vocabulary” with which to understand the dimensions of eco-anxiety (Pihkala, 2020a).

As appropriate as the term ‘anxiety’ is to describe the various states and affective elements that the threat of climate change provokes, it also falls short in many ways. For one, it is too bound up with paradigmatic psychological ideas that denote a response that is disproportionate to reality, generally maladaptive, individualized, and essentially ignorable. Hence, it fails to capture the sense of process at work in grappling with climate change, obscuring possible modes of stoking the transformative potential suggested in the dialectics presented here. How we think about and talk about the multidimensional response to ecological crises will shape how we respond to them individually and collectively. Vocabulary is scaffolding for perception and for possibility, and who among the eco-anxious couldn’t use a little more support?

Epilogue

There is a song by Trent Reznor of Nine Inch Nails, titled Right Where it Belongs. The music is a soothing backdrop to lyrics soaked with uncertainty and alienation and existential angst. Reznor asks us to contemplate the nature of self and our relationship to the non-human world, he hints at despair and disorder, and he points to our inability to see outside the self-world as we have made it. At first his voice is distant and monophonic, but there is a moment I wait for when the haziness fades and his voice becomes clear, present, and stereophonic and then the rumble of a cheering crowd surfaces in the background. Because of this moment, for me this is a headphones-only song. It reliably sparks a psychophysiological response—otherwise known as a peak emotional response—involving chills and usually tears. It feels like an affective awakening, like being thrust into clarity and connection. For a moment I can embody a different mode of being. This moment of resonance and coherence strikes me as an affective micro-representation of the transformative potential of eco-anxiety, and while it is always fleeting, the mere possibility of it gives me solace.

Right Where it Belongs

See the animal in his cage that you built
 Are you sure what side you're on?
 Better not look him too closely in the eye
 Are you sure what side of the glass you are on?
 See the safety of the life you have built
 Everything where it belongs
 Feel the hollowness inside of your heart
 And it's all
 Right where it belongs

What if everything around you
 Isn't quite as it seems?
 What if all the world you think you know
 Is an elaborate dream?
 And if you look at your reflection
 Is that all you want it to be?

What if you could look right
Through the cracks?
Would you find yourself
Find yourself afraid to see?

What if all the world's inside of your head
Just creations of your own?
Your devils and your gods
All the living and the dead
And you really are alone?
You can live in this illusion
You can choose to believe
You keep looking but you can't find the woods
While you're hiding in the trees

What if everything around you
Isn't quite as it seems?
What if all the world you used to know
Is an elaborate dream?
And if you look at your reflection
Is that all you want it to be?
What if you could look right
Through the cracks?
Would you find yourself
Find yourself afraid to see?

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