

Preface and Introduction

Young people growing up today must navigate the challenges of youth while also facing the urgent spiritual, developmental, existential, and safety-related challenges presented by climate change. Given the enormous differences in how youth across the globe experience the impacts of climate change, understanding the complex relationship between the climate emergency and young people's mental health is an inherently multidisciplinary and multicultural endeavor, one that requires us to engage in reflection, creativity, questioning, collaboration, and reimagining. The viewpoints gathered in this volume represent our effort to engage in this way, and to offer a platform that outlines multiple and diverse ways to acknowledge and support young people's right to a safe and livable planet.

This volume is a collection of multidisciplinary perspectives that explores, in this moment of heightened recognition, how climate mental health and adjacent fields currently approach the complex and interacting effects of climate change on young people. This book gathers and unites different voices to advance collaborative scholarship and to encourage future academic, healthcare-related, educational, legal, and community-based efforts aimed at understanding and supporting youth through the planetary emergency.

This volume aims to accomplish three main goals:

1. To demonstrate that the relationship between the climate and environmental emergencies and young people's mental health exists and must be taken seriously as a significant factor impacting young people's psychological well-being.
2. To provide multidisciplinary and multidimensional perspectives on the topic of climate change and youth mental health by placing individuals and communities in conversation to inform, shape, and build off each other's work.

3. To assemble a volume that offers frameworks for understanding how climate change influences youth mental health, and to provide guidance and future directions for a global crisis that will only become more prevalent in young people's lives.

To root us in the complex and interacting ways in which climate change influences young people's well-being, Part I of the volume – *Conceptual Foundations of Climate Distress in Young People* – provides an in-depth overview of the psychiatric and psychological evidence and theoretical frameworks surrounding the emerging psychological responses associated with the climate crisis. To do this, Part I lays out evidence for climate distress and related syndromes at different ages; provides terminology and definitions to capture the complex psychological responses to climate change; explores psychiatric and developmental considerations; and proposes future research agendas. A variety of theoretical models are offered – including trauma-based, cognitive behavioral, relational, psychoanalytic, neurobiological, and biopsychosocio-environmental understandings of emotional dysregulation – for the purpose of forwarding a more individualized and nuanced understanding of climate distress.

Susan Clayton and Tara Crandon lead Part I with an overview, describing both positive and negative impacts of climate emotions and coping styles on mental health and tracing the development of scales that measure functional impairment related to climate change anxiety. In exploring the downstream complexities of climate emotion, the authors highlight the work of Galway and Beery, which shows that *hope* correlates with *negative* climate emotions such as betrayal, anger, and grief, and that expressing them can facilitate environmental action. Similarly, awareness of climate change can evoke soliphilia and other warm emotions. These are important rebuttals to those who claim fear-mongering when we encourage young people to express climate change feelings. Clayton and Crandon provide an in-depth analysis of the Climate Change Anxiety Scale, which has been able to disaggregate climate anxiety from clinical anxiety and depression across a variety of international populations, despite the role of cultural factors in shaping how climate distress is experienced.

Through an artful analysis of the concept of distress itself, Panu Pihkala provides a definitional framework for the book. He offers interdisciplinary and multicultural definitions and conceptualizations of climate distress, drawing on environmental, psychological, and philosophical perspectives. Pihkala explores the relationship between climate distress and other climate-related terminology, touching on how these terms have been

used historically and the ways in which contextual, political, societal, and cultural factors and power dynamics shape our interpretations of these phenomena. He closes by emphasizing the dual character of climate distress as both a potential mental health issue and a fundamentally adaptive response, and offers us a novel, nonpathologizing, and culturally sensitive definition for climate-related psychological distress.

Beth Haase provides an in-depth and comprehensive look at the relationship between climate distress and clinical symptoms from a psychiatric perspective. Haase situates this debate in the historical and sociopolitical foundations from which climate distress is observed, defined, and interpreted as well as the ongoing developmental processes in the young people it affects. She condenses complex questions about the relationship between climate responses and clinical symptoms into digestible lists and action items, and delves into psychiatric understandings of the factors that contribute to adaptive and maladaptive anxiety, depression, and traumatic stress. This chapter reviews the evidence for and against climate distress as a psychopathology, suggests how to assess a young person with significant climate distress for overlapping psychiatric syndromes and risks, and concludes with a series of case studies. This chapter may be a particularly helpful guide for those in the mental health and medical fields.

The developmental theme is developed by Francis Vergunst and Helen Berry. The authors masterfully review a systems thinking and developmental life course perspective, highlighting the many iterative feedback loops affecting development between the growing young person and climate-induced changes in the microsystem, mesosystem, and exosystem. Vergunst and Berry's suggestions for how to assess such complex systems quickly and intervene at points of maximum stress provide much-needed guidance for responding to the multiple intersecting climate risks that impact younger generations.

Youth facing climate change have the thorny task of staying connected to real threats without overwhelming their stress-response systems. Jacob Lee and Anthony Guerrero describe how understanding the neurobiology of anxiety can inform the supports we offer young people with climate distress. They lay out the neuroanatomy of the fear system, highlighting the delicate balance of the opposing behavioral approach and behavioral inhibition systems. Lee and Guerrero conclude that keeping stress levels low enough to promote curiosity and explorations in response to challenges can protect against extreme stress, and suggest that we teach young people skills for emotional regulation and cognitive control.

Archana Varma Caballero and Janet Lewis suggest innovative ways of applying traditional psychodynamic conceptualizations of grief, regression, and Kleinian object relations to understand adaptive and maladaptive climate responses. They offer a novel application of Erik Erikson's psychosocial developmental stages to explain the particular emotional challenges of climate awareness for trust, self-esteem, hope, and engagement. Emphasizing the importance of an adequate emotional "container" for the feelings aroused by such a complex problem, the authors provide a useful categorization of fragmented, rigid, and flexible psychic "containers" for those involved with young people. Varma Caballero and Lewis take a developmental approach to understanding adolescent climate responses by exploring the relationship between climate distress and adolescents' agency development, adult levels of ambivalence, drive regulation, superego development, and intellectual complexity.

Karen Hopenwasser minces no words in calling out our neglect of climate change as a global abuse of our young people. She labels our failure to imagine and care about the future of our children as a neglect of one of the basic imaginative capacities of caregivers safeguarding their young. She then shifts our focus to the dissociative response to trauma, which allows us to more fully comprehend how we neglect to attend to our environment and how numbing ourselves diminishes our imaginative capacity. Finally, she offers embodied cognition (the idea that our minds are not only connected to our bodies but also that our bodies influence our minds) and felt sense (an internal bodily awareness) as modes of human consciousness that will allow us to respond to our youth with greater care and intention.

Elizabeth Marks and Kelsey Hudson explore young people's ecologically related thoughts, emotions, behaviors, and physical sensations in clinical settings, and offer a cognitive behavioral framework for conceptualizing eco-distress with concrete guidance on developing eco-aware case conceptualizations. Two detailed case conceptualizations are provided – one showing impairing eco-distress and one showing constructive eco-distress – with each illustrating different outcomes. They conclude by emphasizing that, although it is not young people's responsibility to "feel better" about or "solve" the climate and environmental emergencies, cognitive behavioral principles can encourage cognitive, emotional, and behavioral flexibility in young people's climate-related responses.

To conclude Part I, Joshua Wortzel provides a map for moving the field forward by proposing a comprehensive future-oriented research agenda to skillfully fill the gaps in our understanding of climate distress in pediatric populations. The agenda is organized into five broad domains: defining

climate emotions, assessing their epidemiology, understanding their psychological meanings and consequences, developing interventions, and exploring the biological impacts of climate change on young people's mental health.

Part II – Multidisciplinary Perspectives on Youth Climate Distress – offers a more intimate look into how climate distress manifests in a variety of settings, including schools, families, psychotherapy, and community organizing. The distinct perspectives in Part II offer tools for adults working in a variety of disciplines both to formulate a more comprehensive understanding of how young people experience climate change psychologically and to respond accordingly. The multidisciplinary viewpoints offered throughout Part II challenge the existing narrative promoted by governmental agencies and fossil fuel industries – which privileges, distorts, and overemphasizes the importance of individual actions alone – and emphasize the significance of adults' responsibility and collective action.

Elizabeth Allured and Barbara Easterlin start off Part II by providing detailed examples of the ways that psychotherapeutic skills can be applied to young people suffering from climate distress, with a focus on Acceptance and Commitment Therapy and psychodynamic frameworks. This chapter will be particularly useful to mental health providers wanting to understand the nuances of working with this material in the context of other ongoing clinical concerns.

Aravinda Ananda and Margaret Babbott offer a beautiful narrative of therapeutic processes that can create meaningful engagement and community with young climate activists. They lay out the theoretical and spiritual underpinnings and actual practices of the Work That Reconnects and describe its use with their Earth Leadership Cohorts for young adults aged 18 to 30. True transition to an ecocentric culture that functions without oppression or exploitation demands full attention to its intersectional and justice aspects. Their thoughtful description of the evolution of their work in response to the lived experiences of their cohort members is a good point of entry for others seeking intersectional awareness and justice in climate work.

Samantha Ahdoot provides another clinical chapter, exploring the health and mental health impacts of climate change that present in pediatric settings. Topics discussed in routine visits, such as caring for an infant during a heatwave, can provide opportunities for pediatricians to provide climate health education, show empathy with climate distress, and offer suggestions for local climate engagement. Ahdoot lays out pediatricians' roles as clinicians, educators, and advocates and provides clear guidance on how to take action in each domain.

Andrea Rodgers and Kelsey Dunn from Our Children's Trust offer an exploration on legal remedies for responding to youth climate distress. Correction of the problem through climate justice in the courts can play a critical role in mitigating young people's climate-related physical, psychological, and moral injuries, and can counteract the effects of institutional betrayal. To support this position, Rodgers and Dunn report on young people who are taking their governments to court and provide in-depth descriptions of youth-led climate litigation efforts that use climate science to support claims of human rights violations. This chapter provides a comprehensive review of the obstacles that young people face in seeking and obtaining legal remedies, the human rights that are violated by the climate crisis, and the reasons why access to courts is a crucial aspect of climate distress mitigation.

Maria Ojala and Xiaoxuan Chen review the literature on constructive hope and meaning-focused coping, which are tools that have been found to mitigate the negative emotional effects of climate activism and other climate experiences that cannot be fully solved by problem solving alone. Ojala and Chen discuss the practical implications of these studies, gifting us with specific advice on using and encouraging meaning-focused coping.

Tara Crandon, Hannah Thomas, and James Scott offer a Systems Theory perspective on how young people's development can be impacted by the spheres in which they are embedded: the micro, meso, macro, exo, techno, and chronological matrices of their lives. The chart within their chapter gives a profoundly helpful overview of the exacerbating and protective influences at each level, as well as recommendations for how to help young people at each layer of their experience that are supported by case studies and a deeper exploration of each element of the theory.

Judith Van Hoorn, Susie Burke, and Ann Sanson focus on the experience of parenting young people during the climate and environmental emergencies. Drawing from multidisciplinary research in parenting science, child and youth development, and disasters, they provide guidance on how a wide variety of individuals in parenting and caregiving roles can help young people cope with the direct and indirect effects of climate change, focusing on factors that exacerbate social inequalities. Specific strategies are offered to help children manage climate emotions, foster a sense of agency and hope, and support active engagement.

To address climate distress in schools, educator Matt Carmichael provides a rich supply of examples and resources for individuals in educational settings, which he gleaned from recent in-depth interviews with educators who are incorporating climate emotions into their work with young

people. Through thematic analysis of these interviews, Carmichael identifies common themes in this work: Young people clearly experience difficult emotions when learning about climate change, need adults to respond to disturbing truths and to process their own emotions about them, and can benefit from meaningful connection to others and to the outdoors. Young people are less naive and defensive about climate-related topics than adults, and can experience institutional betrayal if the threats to their future are not acknowledged and addressed.

Jennifer Uchendu and Elizabeth Haase focus on youth-led climate activism and organizing from both personal and conceptual perspectives. Jennifer Uchendu, founder of SustVibes and a leading force of global young climate activist and organizing work, chronicles her personal journey in youth climate organizing through an intimate narrative. Generalizing this experience, Uchendu and Haase outline different types of activism and highlight organizing principles that have been adopted by youth climate activist groups. The authors offer a helpful literature review on the risks and benefits of activism for youth mental health that will be useful for a variety of individuals seeking to support young people currently engaged in, or hoping to engage in, activism and organizing.

Drawing from the work of the Dark Mountain Project, Jeppe Graugaard provides another valuable chapter for those working in the educational setting. This chapter focuses on creative ways that young people can escape the “runaway narrative” of the unsustainable late-capitalist cultural predicament into which they have been born. Graugaard explains that new beliefs, new ways of making meaning, and new narratives about living a good and just life are fundamental to helping the next generation transition away from unsustainable and unjust social structures. Art and the artist become central to this endeavor, as it is through imagination and improvisation that we do something new.

Kyle X. Hill and Lynn Mad Plume guide us in acknowledging the intersecting crises of climate change and Indigenous youth mental health and wellness within the context of the profound social, cultural, and ecological disruptions resulting from settler colonialism. Hill and Mad Plume’s narrative examines the disruptions that settler colonialism, White supremacy and capitalism have created for Indigenous belief and knowledge systems and on Indigenous young people and their communities, ultimately disrupting all of our relationships to the land. Throughout the chapter, the authors recognize how appropriate attention to Indigenous Traditional Ecological Knowledge represents a profound opportunity for restorative justice for Indigenous Peoples as well as for global climate adaptation efforts.

Our volume concludes with a commentary by Sarah Jaquette Ray and Britt Wray, two of the leading and most innovative voices in this area. Ray and Wray call out the “mental healthification” and Westernization of climate distress as well as the professionalization of those legitimized to respond to it, focusing on the importance of people-centered approaches to describing and defining climate-related suffering. They encourage us to see emotions as the base of effective climate responses, just as emotions have always been the source of political movements. They foresee great progress ahead through this approach, with emotions like institutional betrayal and moral injury contributing to the development of heightened critical consciousness of our social structure. They identify queer, Indigenous, feminist, posthumanist, and disability lenses (among others) as providing theory, scholarship, and practices that can facilitate challenges to heteropatriarchal and unsustainable models of family, community, and social structure and connection. Their work establishes an important framework for those for whom this book will be a starting point of innovative exploration and program development.