THE ANTHROPOCENE

Perhaps no concept has become dominant in so many fields as rapidly as the Anthropocene. Meaning “The Age of Humans,” the Anthropocene is the proposed name for our current geological epoch, beginning when human activities started to have a noticeable impact on Earth’s geology and ecosystems. Long embraced by the natural sciences, the Anthropocene has now become commonplace in the humanities and social sciences, where it has taken firm enough hold to engender a thoroughgoing assessment and critique. Why and how has the geological concept of the Anthropocene become important to the humanities? What new approaches and insights do the humanities offer? What narratives and critiques of the Anthropocene do the humanities produce? What does it mean to study literature of the Anthropocene? These are the central questions that this collection explores. Each chapter takes a decidedly different humanist approach to the Anthropocene, from environmental humanities to queer theory to race, illuminating the important contributions of the humanities to the myriad discourses on the Anthropocene. This volume is designed to provide concise overviews of particular approaches and texts, as well as compelling and original interventions in the study of the Anthropocene. Written in an accessible style free from disciplinary-specific jargon, many chapters focus on well-known authors and texts, making this collection especially useful to teachers developing a course on the Anthropocene and students undertaking introductory research. This collection provides truly innovative arguments regarding how and why the Anthropocene concept is important to literature and the humanities.

CONTENTS

List of Figures vii
List of Contributors viii

Introduction: The Anthropocene and the Humanities 1
Seth T. Reno

PART 1
Approaches 11

1 The Deep Time Life Kit: Thinking Tools for the Anthropocene 13
Lisa Ottum

2 The Two Households: Economics and Ecology 26
Scott R. MacKenzie

3 Energy and the Anthropocene 38
Kent Linthicum

4 Environmental Racism, Environmental Justice: Centering Indigenous Responses to the Colonial Logics of the Anthropocene 50
Rebecca Macklin

5 The World Is Burning: Racialized Regimes of Eco–Terror and the Anthropocene as Eurocene 64
Nicolás Juárez
### Contents

6 TransPlantationocene  
*Nicholas Tyler Reich*  
87

7 The Anthropocene and Critical Method  
*Stephen Tedeschi*  
97

## PART 2  
**Contexts**  

8 “One Life” and One Death: Mary Shelley’s *The Last Man*  
*Matthew Rowney*  
147

9 Henry David Thoreau: A New Anthropocenic Persona  
*Robert Klevay*  
159

10 It’s the End of the World: Can We Know It?  
*Tobias Wilson-Bates*  
125

11 *Orlando* in the Anthropocene: Climate Change and Changing Times  
*Naomi Perez*  
134

12 Corporeal Matters: J.P. Clark’s *The Wives’ Revolt* and the Embodied Politics of the Anthropocene  
*Kimberly Skye Richards*  
147

13 What Global South Critics Do  
*Antonette Talaue-Arogo*  
147

14 Queering the Modest Witness in the Chthulucene: Jeff VanderMeer’s *Borne* (a New Weird Case Study)  
*Kristin Girten*  
159

15 Contemporary Cli-fi as Anthropocene Literature: Kim Stanley Robinson’s *New York 2140*  
*Seth T. Reno*  
171

*Index*  
183
FIGURES

1.1 Lisa Ottum, “Anthropocene Thinkfeel Axis” 18
CONTRIBUTORS

Kristin Girten is Associate Professor of English and Assistant Vice Chancellor for Arts and Humanities at the University of Nebraska Omaha. Her research and teaching focus on intersections between literature, philosophy, and science in the British Enlightenment and the twenty-first century, giving special emphasis to how women and other marginalized groups contribute to and feel the effects of such intersections. Her essay collection *British Literature and Technology, 1600–1830*, which she is coediting with Aaron Hanlon (Colby College), is forthcoming with Bucknell University Press. She is also completing a monograph focused on Epicureanism, the sublime, and the sensitive witness in British women’s literature, philosophy, and science of the long Enlightenment.

Nicolás Juárez is a native, diasporic descendent of the Tsotsil Maya and a first-generation Chiapaneco living in the ancestral homelands, taken through genocide, of the Alabama-Coushatta, Caddo, Carrizo/Comecrudo, Coahuiltecan, Comanche, Kickapoo, Lipan Apache, Tonkawa, and Ysleta Del Sur Pueblo, among others. As a graduate student at the University of Texas Austin in Social Work, his research examines the libidinal economy of anti-blackness and settler colonialism and its implications for clinical mental health practice.

Robert Klevay is Associate Professor of English at Auburn University Montgomery, where his teaching and research focus on American and Classical literature. He specializes in American Transcendentalism and the work of Henry David Thoreau.

Kent Linthicum is Marion L. Brittain Postdoctoral Fellow at the Georgia Institute of Technology. His work has appeared in the *European Romantic Review, Nineteenth-Century Contexts, and Studies in English Literature*. His current book project
analyzes the ways eighteenth- and nineteenth-century literature facilitated the expansion of British coal and American slavery through the development of fossil fuel aesthetics.

Rebecca Macklin holds a PhD from the University of Leeds and is currently Mellon Postdoctoral Fellow at the University of Pennsylvania. Her writing has been published in journals including *Interventions, ARIEL,* and *Transmotion,* and she is currently working on a monograph, titled *Unsettling Fictions: Relationality and Resistance in Native American and South African Literature.* Her postdoctoral research is focused on Indigenous literatures, gender, and narratives of resource extraction.

Scott R. MacKenzie is Associate Professor of English at the University of Mississippi. He is author of *Be It Ever So Humble: Poverty, Fiction, and the Invention of the Middle-Class Home* (2013), which won the Walker Cowen Prize for a study on an eighteenth-century topic. He has also published articles in *PMLA, Eighteenth-Century Studies, ELH, Studies in Romanticism, European Romantic Review, Novel,* and other journals. His current project is concerned with the history of generalized scarcity.

Lisa Ottum is Associate Professor of English at Xavier University, where she teaches British literature, literature and the environment, literary criticism, and other courses. She is coeditor of *Wordsworth and the Green Romantics: Affect and Ecology in the Nineteenth Century* (2016), and she has published on a variety of Romantic-era texts, as well as twentieth- and twenty-first-century artifacts.

Naomi Perez holds a Bachelor of Arts in English from Troy University, a Master of Teaching Writing from Auburn University Montgomery, and a Master of Secondary Education in English Language Arts from Auburn University Montgomery. Her master’s thesis focuses on workplace inequalities for adjunct instructors of first-year composition. She currently works as a middle school English Language Arts teacher in central Alabama.

Nicholas Tyler Reich is a doctoral student and Russell G. Hamilton Scholar in Vanderbilt University’s Department of English, where he studies queer and trans* ecologies, literatures of the US Deep South and Appalachia, energy ontologies, film, and digital media. Their work has been published or is forthcoming in *ISLE: Interdisciplinary Studies in Literature and Environment, TSQ: Transgender Studies Quarterly, The Encyclopedia of LGBTQIA+ Portrayals in American Film,* and elsewhere.

Seth T. Reno is Distinguished Research Associate Professor of English at Auburn University Montgomery. He is author of *Early Anthropocene Literature in Britain, 1750–1884* (2020) and *Amorous Aesthetics: Intellectual Love in Romantic Poetry and*
List of Contributors


Kimberly Skye Richards holds a PhD in Performance Studies from the University of California Berkeley. Her research examines how Indigenous and anti-colonial artists and activists use embodied practices to disrupt the development of new extractive infrastructure, foster a “petro-political consciousness,” and inspire a just energy transition. She recently coedited an issue of Canadian Theatre Review on “Extractivism and Performance” (2020). She has also published in TDR: The Drama Review, Theatre Journal, Theatre Research in Canada, Sustainable Tools for Precarious Times, and An Ecotopian Lexicon: Loanwords to Live With.

Matthew Rowney is Assistant Professor of English at the University of North Carolina Charlotte. He is author of In Common Things: Commerce, Culture, and Ecology in British Romantic Literature (forthcoming), and he has published ecocritical articles in European Romantic Review and the Journal of Literature and Science.

Antonette Talaue-Arogo is Associate Professor of Literature at De La Salle University Manila, where she obtained her PhD in 2016. She was also a participant in the School of Criticism and Theory at Cornell University (2009). Her research interests include critical theory, especially postcolonialism and cosmopolitanism, continental philosophy, and translation studies.

Stephen Tedeschi is Associate Professor of English at the University of Alabama. He is author of Urbanization and English Romantic Poetry (2017), and he has published articles in European Romantic Review, Keats-Shelley Journal, Keats-Shelley Review, and Essays in Romanticism. His current book project centers on Percy Bysshe Shelley’s poetics.

Tobias Wilson-Bates is Assistant Professor of English at Georgia Gwinnet College. His research examines novels as participating both conceptually and materially in the techno-cultural discourses that shaped the nineteenth century. At the center of his work is the concept of the “time machine,” an idea he reads as emerging from the combination of narrative modes with assumptions of scientific and technological objectivity.
INTRODUCTION

The Anthropocene and the Humanities

*Seth T. Reno*

In the 1990s, no one had heard about the “Anthropocene” other than a handful of geologists and climate scientists. At that time, it wasn’t even a widely used term. Most scholars credit Paul Crutzen with popularizing the term—he’s an atmospheric chemist who won a Nobel Prize in 1995 for his work on the ozone layer. At an academic conference in 2000, Crutzen became agitated at presenters repeatedly referring to the Holocene—that’s the geological epoch that began about 11,700 years ago at the end of the last Ice Age. Crutzen famously blurted out, “Stop saying the Holocene! We’re not in the Holocene anymore.” Instead, he proposed, we’re in the “Anthropocene.”¹ A few months later, he co-wrote an article with Eugene Stoermer on “The Anthropocene” in the *International Geosphere-Biosphere Programme Newsletter*, and then a follow-up essay in *Nature*, “The Geology of Mankind” (2002). These articles have been cited over 10,000 times in various publications, and they effectually started the field of Anthropocene studies.²

Two decades later, the Anthropocene pops up everywhere. There are new academic journals devoted solely to the Anthropocene, as well as numerous special issues of journals in fields like literature, history, and political science. Popular American novelist and YouTube personality John Greene has a successful podcast called *The Anthropocene Reviewed*. NPR and other major news outlets regularly run stories on the Anthropocene. Books on the Anthropocene have proliferated with academic and commercial presses, so much so that some scholars consider the concept to be “worn-out and déclassé.”³ The Anthropocene concept is widespread. It’s everywhere. Everyone knows about the Anthropocene.

But not really. In my experience, and that of my colleagues at universities around the world, the vast majority of college students haven’t heard of it. When I attend academic conferences and talk to others in academia, it seems that most college teachers may have heard the term used somewhere but have no clear
idea what Anthropocene studies is or what researchers in this area do. Despite widespread usage, the Anthropocene concept is still most familiar to scientists and academics doing specialized research in geology, the environmental sciences, and the environmental humanities—hardly the majority of people on this planet, or even in academia. Maybe this will change in the coming decades, especially if the Anthropocene becomes a formal geologic epoch (it’s not yet), but maybe not. How many people do you know who could carry on a conversation about the Holocene epoch?

As I often ask my students: So what? Why should you or anyone else care about the Anthropocene? My response, unsurprisingly, is that there are many good reasons, especially for college students and instructors, not least to have some cultural currency with this interdisciplinary concept. Entering the mid-twenty-first century, we’ll all be hard-pressed to find a career trajectory that’s not interdisciplinary in some way; most students graduating college over the next few decades will change fields multiple times over the course of their lifetimes, in response to rapidly developing technologies and a rapidly changing global climate. Understanding how to adapt, and how to live, in this changing world will be essential. And the Anthropocene concept is necessarily interdisciplinary; to study it, we need to know a bit about geology, climate science, environmental justice, and literature, especially in the form of stories—the story of the Anthropocene itself. The Anthropocene is the proposed name for a new geologic epoch, but it’s also the story of humans’ relationship to the natural world, how we became geophysical agents capable of modifying Earth’s ecosystems, raising global temperatures and sea levels, melting massive glaciers, changing the very physical makeup of the planet, and causing the Sixth Mass Extinction. How’d we get here? Where might we go? How do we feel about and make sense of this new epoch that we’ve created? These are some of the questions that this book addresses.

This book is written for nonspecialists interested in but unfamiliar with the Anthropocene concept. But not exclusively. All of the chapters contain original research and arguments that engage with and develop key issues in Anthropocene studies. But they do so in accessible, jargon-free language suitable as an entry point for college teachers and students. Interested in new approaches to Henry David Thoreau? Check out Robert Klevay’s chapter. Developing a course on the Environmental Humanities and want to design a unit on the Anthropocene? Check out chapters by Lisa Ottum, Kent Linthicum, and Stephen Tedeschi. Want to expand your reading lists with literature from the Global South? Read chapters by Rebecca Macklin, Kimberly Skye Richards, and Antonette Talauè-Arogo. Want to learn about contemporary cli-fi novels? Read chapters by Kristin Girten and Seth Reno. If you’re a student, you can turn to any chapter as an introduction to a particular approach, author, or text as part of your studies.

All of the chapters in this book are short and focused (~4,000 words), designed to provide a concise overview or model of a particular approach or text, as well as a compelling and original intervention in the study of the Anthropocene. Part 1,
“Approaches,” focuses on specific humanist approaches to the Anthropocene—the environmental humanities, economics, the energy humanities, environmental racism, queer theory, and literary criticism—though many of the chapters also engage literary texts. Part 2, “Contexts,” focuses mainly on specific authors and literary works, though you’ll also see overlap with the theoretical and historical approaches from Part 1. Authors include Mary Shelley, Henry David Thoreau, H.G. Wells, Virginia Woolf, J.P. Clark, Gina Apostol, Jeff VanderMeer, and Kim Stanley Robinson. There is no overarching argument to the collection, but, as a whole, this book shows how the Anthropocene is simultaneously a geologic epoch, a scientific term, and a cultural concept with no single, definitive narrative.

There are some central questions that drive this collection: Why is the Anthropocene important to the humanities and to literature in particular? How can humanists approach the Anthropocene? How can we teach the Anthropocene? Is there a literature of the Anthropocene? If so, how do we read it? Each chapter addresses one or more of these questions and offers an avenue into thinking about how literature and the humanities are central to understanding and living in this new epoch.

The Anthropocene: Definitions, Dating, and Debates

Meaning “The Age of Humans,” the Anthropocene is the proposed name for the current geological epoch, beginning when human activities started to have a noticeable impact on Earth’s geology and ecosystems. Paul Crutzen popularized the term in 2000, spurring two decades of debate, with most scholarship centered on defining the characteristics of the Anthropocene and in establishing its dates. Crutzen initially proposed that the Anthropocene began with the Industrial Revolution, citing James Watt’s patent of the steam engine in 1784 as a possible cultural marker, while other scientists have since argued for the Orbis spike of 1610, the start of the nuclear age in 1945, and the “bomb spike” of 1964. These “spike” labels refer to what geologists call a “golden spike,” or a Global Boundary Stratotype Section and Point (GSSP). This is an official geological marker with a set of specific international requirements that include identifying global change in rock layers of Earth.

Each of these proposed starting points offers a distinct narrative of the Anthropocene. The “Orbis spike” refers to a dramatic decrease in CO$_2$ levels in the Americas after the Columbian Exchange and a century of genocide resulted in unprecedented forest growth (see Figure 0.1). This narrative locates the origins of the Anthropocene in slavery, imperial colonialism, and global trade, all of which reshaped the trajectory of Earth’s biosphere.$^5$ In contrast, the start date of 1784 coincides with the Industrial Revolution in Britain—an apt marker for the start of the global fossil fuel era—as well as the British Agricultural Revolution and the rise of capitalism and globalization. While these cultural phenomena do not
have a specific start date or unambiguous geological marker, there is a clear rise in CO₂ beginning in the eighteenth century, which is a direct result of fossil fuels, and the Industrial Revolution in particular marks virtually every aspect of life on Earth (see Figure 0.2). The more recent dates are the Trinity Nuclear Test in 1945 (the first detonation of an atomic bomb) and the “bomb spike” of 1964, the latter
of which shows a dramatic increase in radionuclides as a result of nuclear testing (see Figure 0.3). These twentieth-century markers center on what scholars call the Great Acceleration—that is, the concurrent accelerations of CO$_2$ emissions, global industrialization, species extinctions, and other related effects of intensified global warming since around 1950—as well as nuclear fallout, which will be detectable in Earth’s crust for millions of years. A mid-twentieth-century date is the leading candidate for the official start of the Anthropocene.

However, scholars in the humanities and social sciences are less interested in golden spikes than the social, political, economic, and philosophical events and perspectives that have produced this new Age of Humans. While geologists are primarily concerned with determining a definitive stratigraphic boundary between the Holocene and Anthropocene, many humanists and social scientists challenge the unified notion of “Anthropos” by examining the unequal distribution of power, resources, and capital across the world. For many of these scholars, the very term “Anthropocene” is troubling, as only a handful of industrialized nations have produced the global ecological damage that characterizes this new epoch. Many scholars have therefore suggested alternative names, such as Capitalocene (to foreground capitalism), Plantationocene (to foreground colonialism and race), and Eurocene (to foreground the central role of European imperial colonialism). Meanwhile, humanities scholars are also rethinking the divisions of human and natural histories, as well as the human/nonhuman binary dominant in Western attitudes, through critical analyses of literary, scientific, artistic, and political texts. What stories do we tell about the Anthropocene, and who is telling those stories?

For each of the “big three” dates (1610, 1784, and 1950), the major characteristics of the Anthropocene are fairly clear: dominance of the human species on Earth, in terms of population growth, land use, and resource consumption; widespread biodiversity loss and the sixth mass extinction; and increase of carbon dioxide in Earth’s atmosphere, resulting in the accelerated effects of global warming (glacial ice melting, sea level rise, acidification of oceans, water shortages and food

![Figure 0.3](image-url)
scarcity, widening social and economic inequality, and a planet increasingly hostile to human life). Chapters in this collection explore the Anthropocene in different ways, sometimes by focusing on a particular narrative about environmental change, but more often by showing how these changes coincide with the cultural phenomena of imperial colonialism, industrialization, and capitalism as driving forces of the modern world and of the Anthropocene itself.

How to Use This Book

While there is much overlap and connection between the fifteen chapters in this book, each chapter is a standalone piece that can be read and used independently. Each chapter ends with a reference list intended as “further reading” for scholars, teachers, and students in developing research projects, lesson plans, and courses (or course units). In order to write in an accessible manner, many citations and contextual/scholarly information are included in endnotes and references rather than in the body of the chapter itself. Chapter titles are also straightforward, giving readers a clear sense of the central approach and/or literary text. Regardless, I think it may be helpful to say a few words in summary of each part of this collection to orient readers.

In Part 1, “Approaches,” you will find seven chapters that offer seven different theoretical approaches to the Anthropocene. The first three chapters illustrate broad contributions of the humanities to Anthropocene studies. In the opening chapter, “The Deep Time Life Kit,” Lisa Ottum explains how a humanist approach to the Anthropocene can help us make sense of living in a time of environmental crisis, when we are asked on a daily basis to respond to a barrage of often conflicting information and stimuli. How does it feel to live in the Anthropocene? How might we channel those feelings into useful narratives to effect change, both personally and globally? She offers a set of “Anthropocene mantras” to help us understand, and cope with, the unique stress of living through the birth of a new geological epoch. The second chapter by Scott MacKenzie, “The Two Households: Economics and Ecology,” reveals the intertwined developments of modern economic and ecological theory in the eighteenth century, which shed new light on the concept of the Capitalocene. While we often think of economics and ecology as oppositional, MacKenzie shows that eighteenth-century writers and theorists such as David Hume, Gilbert White, Thomas Malthus, and Edmund Burke thought of these fields as mutually constitutive, which continues to inform economic theory in the twenty-first century. Kent Linthicum’s chapter on “Energy and the Anthropocene” provides a critical overview of the field of Energy Humanities, with case studies of three literary texts corresponding to the big three dates of the Anthropocene and their dominant energy source: wood in William Shakespeare’s *The Tempest* (1611), coal in Jane Austen’s *Mansfield Park* (1814), and petroleum in Wole Soyinka’s “Telephone Conversation” (1962).
The next two chapters by Rebecca Macklin and Nicolás Juárez investigate environmental racism in the Anthropocene, but from different angles. Macklin draws from Indigenous studies and world literary studies to explore issues and instances of environmental racism and environmental justice in twentieth-century Native American literature, particularly the works of Simon Ortiz and Linda Hogan. She reveals how the lasting legacies of European colonialism and settler colonialism shape both the land of North America and Indigenous experiences of the Anthropocene. Juárez, on the other hand, takes a broader approach to environmental racism by showing how Black chattel slavery and Native American genocide mark each of the “big three” dates for the Anthropocene. He advocates for the alternative term Eurocene, which emphasizes the central role of European colonialism and conquest in producing the Anthropocene and our modern world. At its heart, Juárez suggests, is the question of who counts as human, and who gets to decide. Similarly, in his chapter “Trans*Plantationocene,” Nicholas Reich discusses the Plantationocene, an alternative term that emphasizes how people of color, especially Black people in the US, are disproportionately marginalized and displaced by the Anthropocene. But Reich adds transgender people to the conversation, fusing approaches of critical race studies, queer theory, and gender studies, and thereby modeling a new kind of Anthropocene reading that uncovers the lives and voices of those most affected by the global climate emergency. He grounds this approach in an analysis of the 2015 film Tangerine.

In the final chapter of Part 1, Stephen Tedeschi offers an extensive critical review of major approaches to and studies of the Anthropocene in literature and the humanities, providing readers with a variety of methods and models. And he argues that what this renaissance of literary criticism suggests is a future where literature and the humanities provide us with “survival skills” for living in the Anthropocene, pointing to the pleasures of thinking and feeling above the economic- and capital-based pleasures that have produced the environmental catastrophe in which we now live. He sees something of a return to the aesthetic experience on the horizon, an appreciation of the beauty of life—something that requires careful attention, critical thinking, and the imagination.

In Part 2, “Contexts,” each chapter treats one particular author and/or literary text, using the Anthropocene concept as a lens to analyze the text, or using the text to analyze the Anthropocene concept (and sometimes both). The author/text is named in the titles to most chapters, excepting two: Tobias Wilson-Bate’s chapter, “It’s the End of the World: Can We Know It?” focuses on H.G. Wells’ novel The Time Machine (1895), and Antonette Talaue-Arogo’s chapter, “What Global South Critics Do,” focuses on Gina Apostol’s novel Insurrecto (2018). The chapters in Part 2 are organized chronologically, spanning the early nineteenth century through the late-2010s. The first three chapters (Rowney, Klevay, and Wilson-Bates) analyze nineteenth-century texts, the next two (Perez and Richards) analyze twentieth-century texts, and the final three (Talaue-Arogo, Girten, and Reno) analyze twenty-first-century texts.
Ideally, readers of this book who are nonspecialists—teachers, scholars, and students—will find an accessible introduction to how and why the Anthropocene concept is important to literature and the humanities. The chapters offer a wide variety of ideas, texts, and models for course development, reading lists, and research projects. Readers who are specialists in literature and the environmental humanities will find truly innovative arguments that offer new and important contributions to the field of Anthropocene studies. The Anthropocene isn’t going anywhere—we’re in it—and what the field, and world, needs more of right now is the humanities.

Notes
8 In 2019, the Anthropocene Working Group, part of the International Commission of Stratigraphy, completed a binding vote to move forward with identifying a mid-twentieth-century golden spike to determine the start of the Anthropocene as a formally defined geological unit within the Geological Time Scale. See “Working Group on the ‘Anthropocene’” (http://quaternary.stratigraphy.org/working-groups/anthropocene/). At the time of completing this book in mid-2021, a 2022 vote is planned to determine the Anthropocene golden spike, and the frontrunner is 1952. For useful overviews


References


