ANTHROPOCENE ENCOUNTERS: NEW DIRECTIONS IN GREEN POLITICAL THINKING

Coined barely two decades ago, the Anthropocene has become one of the most influential and controversial terms in environmental science and policy. Yet it remains an ambivalent and contested formulation, giving rise to a multitude of unexpected, and often uncomfortable, conversations. This book traces in detail a broad variety of such "Anthropocene encounters": in science, philosophy, and literary fiction. It asks what it means to "think green" at a time when nature no longer offers a stable backdrop to political analysis. Do familiar political categories and concepts, such as democracy, justice, power, and time, hold when confronted with a world radically transformed by humans? The book responds by inviting more radical political thought, plural forms of engagement, and extended ethical commitments, making it a fascinating and timely volume for graduate students and researchers working in earth system governance, environmental politics, and studies of the Anthropocene.

FRANK BIERMANN is Research Professor of Global Sustainability Governance with the Copernicus Institute of Sustainable Development, Utrecht University, the Netherlands. He is the founding chair of the Earth System Governance Project, a global transdisciplinary research network launched in 2009, and editorin-chief of the new peer-reviewed journal *Earth System Governance*. In April 2018, he won a European Research Council Advanced Grant for a research program on the steering effects of the Sustainable Development Goals.

EVA LÖVBRAND is Associate Professor in Environmental Change at the Department of Thematic Studies and is also affiliated with the Centre for Climate Science and Policy Research, both at Linköping University, Sweden. Much of her work focuses on the ideas, knowledge claims, and expert practices that inform and legitimize global environmental politics and governance. Since 2015 she has been the co-convenor of the Earth System Governance Project's task force on the Anthropocene together with Frank Biermann.

The **Earth System Governance Project** was established in 2009 as a core project of the International Human Dimensions Programme on Global Environmental Change. Since then, the Project has evolved into the largest social science research network in the area of sustainability and governance. The Earth System Governance Project explores political solutions and novel, more effective governance mechanisms to cope with the current transitions in the socio-ecological systems of our planet. The normative context of this research is sustainable development; earth system governance is not only a question of institutional effectiveness, but also of political legitimacy and social justice.

The **Earth System Governance series** with Cambridge University Press publishes the main research findings and synthesis volumes from the Project's first ten years of operation.

Series Editor

Frank Biermann, Utrecht University, the Netherlands

Titles in print in this series

Biermann and Lövbrand (eds.), Anthropocene Encounters: New Directions in Green Political Thinking

ANTHROPOCENE ENCOUNTERS

New Directions in Green Political Thinking

Edited by FRANK BIERMANN Utrecht University, the Netherlands

EVA LÖVBRAND Linköping University, Sweden



CAMBRIDGE

Cambridge University Press 978-1-108-48117-5 — Anthropocene Encounters: New Directions in Green Political Thinking Edited by Frank Biermann , Eva Lövbrand Frontmatter <u>More Information</u>

CAMBRIDGE UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314-321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi - 110025, India

79 Anson Road, #06-04/06, Singapore 079906

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org Information on this title: www.cambridge.org/9781108481175 DOI: 10.1017/9781108646673

© Cambridge University Press 2019

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2019

Printed and bound in Great Britain by Clays Ltd, Elcograf S.p.A.

A catalogue record for this publication is available from the British Library.

ISBN 978-1-108-48117-5 Hardback ISBN 978-1-108-74041-8 Paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Contents

List of Figures List of Contributors	<i>page</i> vii viii	
Acknowledgments		
1 Encountering the "Anthropocene": Setting the Scene FRANK BIERMANN AND EVA LÖVBRAND	1	
Part I The Conceptual Politics of the Anthropocene: Science, Philosophy, and Culture	23	
2 The "Anthropocene" in Global Change Science: Expertise, the Earth, and the Future of Humanity NOEL CASTREE	25	
3 The "Anthropocene" in Philosophy: The Neo-material Turn and the Question of Nature MANUEL ARIAS-MALDONADO	50	
4 The "Anthropocene" in Popular Culture: Narrating Human Agency, Force, and Our Place on Earth ALEXANDRA NIKOLERIS, JOHANNES STRIPPLE, AND PAUL TENNGART	67	
Part II Key Concepts and the Anthropocene: A Reconsideration	85	
5 Power, World Politics, and Thing-Systems in the Anthropocene ANTHONY BURKE AND STEFANIE FISHEL	87	
6 Time and Politics in the Anthropocene: Too Fast, Too Slow? VICTOR GALAZ	109	
7 Democracy in the Anthropocene: A New Scale AYSEM MERT	128	

v

vi	Contents	
8	Global Justice and the Anthropocene: Reproducing a Development Story JEREMY BASKIN	150
Pai	rt III The Practices of Political Study in the Anthropocene	169
9	The "Good Anthropocene" and Green Political Theory: Rethinking Environmentalism, Resisting Eco-modernism ANNE FREMAUX AND JOHN BARRY	171
10	Coproducing Knowledge and Politics of the Anthropocene: The Case of the Future Earth Program SILKE BECK	191
11	The Ethics of Political Research in the Anthropocene PAUL WAPNER	212
12	Epilogue: Continuity and Change in the Anthropocene JAMES MEADOWCROFT	228
Index		243

Figures

2.1	Humanity's proximity to planetary boundaries	page 34
2.2	The principal meanings of the word "nature" in contemporary	
	Anglo-European societies	38
6.1	Comparing temporal scales: "deep time" versus "political time"	112
6.2	Contrasting the temporal assumptions of a selection of disciplines	
	in environmental social sciences and political science	122
9.1	A postmodernist-most-modernist mapping of the ecological field	176
10.1	The knowledge arena: sustainability science as a collective learning proces	s 203

Contributors

Manuel Arias-Maldonado is an associate professor of Political Science at the University of Málaga, Spain. His research focuses on environmental political theory, with an emphasis on the relationship between sustainability and democracy, the concept of nature, and more lately, the Anthropocene. He has been a visiting scholar at the Institute of International Studies at Berkeley; the Rachel Carson Center in Munich; and the Department of Environmental Studies at New York University. His books include *Real Green. Sustainability after the End of Nature* (2012) and *Nature and Society. Socionatural Relations in the Anthropocene* (2015). He is coeditor, with Zev Trachtenberg, of *Rethinking the Environment for the Anthropocene. Political Theory and Socionatural Relations in the New Geological Epoch* (forthcoming).

John Barry is professor of Green Political Economy in the School of History, Anthropology, Philosophy, and Politics at Queens University Belfast, Ireland. His areas of research include green moral and political theory; green and heterodox political economy; the greening of citizenship; and civic republicanism. His books include *Environment and Social Theory* (2nd edition, 2007) and *Citizenship, Sustainability and Environmental Research* (2000). His latest book is *The Politics of Actually Existing Unsustainability: Human Flourishing in a Climate-Changed, Carbon-Constrained World* (2012). He is currently working on a book provisionally entitled *The Story of Unsustainable Growth: Understanding Economic Growth as Ideology, Myth and Religion and What Replaces It.*

Jeremy Baskin is a senior research fellow in the School of Government at the University of Melbourne, Australia. After extensive involvement in social activism in South Africa and a period working with the postapartheid government there, and then with private sector organizations globally, he was a latecomer to academia. He completed his PhD on *Solar Geoengineering, the Anthropocene and the End of*

viii

List of Contributors

ix

Nature in 2017. His current research interests cover climate policy and emerging technologies, environmental justice, and Southern perspectives on science and development. He is currently working on a project looking at the rise in distrust of experts and expertise in contemporary democracies and its effect on policymaking.

Silke Beck is deputy chair at the Department of Environmental Politics, Helmholtz Centre for Environmental Research, Leipzig, Germany. Her research focuses on the relationship between expertise and decision-making in response to global environmental change.

Frank Biermann is a research professor of Global Sustainability Governance with the Copernicus Institute of Sustainable Development, Utrecht University, the Netherlands. He is the founding chair of the Earth System Governance Project, a global transdisciplinary research network launched in 2009, and editor-in-chief of the new peer-reviewed journal *Earth System Governance*. In April 2018, he won a European Research Council Advanced Grant, the highest personal award from European institutions, for a research program on the steering effects of the Sustainable Development Goals. His most recent books are *Earth System Governance: World Politics in the Anthropocene* (2014) and *Governing through Goals: Sustainable Development Goals as Governance Innovation* (coedited, 2017).

Anthony Burke is Professor of International and Political Studies at University of New South Wales, Canberra, Australia, and a senior fellow of the Earth System Governance Project. He is an author of the *Planet Politics* manifesto (2016) and has research interests in critical security studies, political theory, and global ecological change and governance. His recent books include *Uranium* (2017), *Ethics and Global Security: A Cosmopolitan Approach* (with Katrina Lee-Koo and Matt McDonald, 2014), and *Global Insecurity: Futures of Global Chaos and Governance* (edited with Rita Parker, 2017).

Noel Castree is a professor of Geography at the University of Manchester, United Kingdom, and a visiting professorial research fellow at the University of Wollongong, Australia. His research into the political economy of environmental change has been informed by Marxian and Polanyian approaches to capitalism. He has published widely, with a focus on the commodification of nature in general and neoliberal environmental policy in particular. His recent research focuses on global change research and the politics of knowledge creation, circulation, and consumption. He is author of the books *Nature: The Adventures of an Idea* (2005) and *Making Sense of Nature* (2014). He is managing editor of the journal *Progress in Human Geography* and a fellow of the British Academy of Social Science.

CAMBRIDGE

х

Cambridge University Press 978-1-108-48117-5 — Anthropocene Encounters: New Directions in Green Political Thinking Edited by Frank Biermann , Eva Lövbrand Frontmatter <u>More Information</u>

List of Contributors

Stefanie Fishel is Lecturer in Politics at the University of the Sunshine Coast, Australia. Her research focuses on bodies and biomes and their metaphorical and material relationship to global politics. She is the author of *The Microbial State: Global Thriving and the Body Politic* (2018). Past publications include "Theorizing Violence in the Responsibility to Protect" in *Critical Studies on Security* (2013); "Microbes" in *Making Things International 1: Circuits and Motion* (2015); "Remembering Nukes: Collective Memories and Countering State History" in *Critical Military Studies* (2015); and "Planet Politics: A Manifesto from the End of IR" in *Millennium: Journal of International Studies* (2016).

Anne Fremaux has completed her doctoral thesis entitled "Towards a Critical Theory of the Anthropocene: A Post-Growth Green Republican Analysis" at Queens University Belfast, Ireland. Her publications include *La nécessité d'une écologie radicale. La pensée à l'épreuve des problèmes environnementaux* (2011) and *L'Ère du levant* (2016).

Victor Galaz is an associate professor of Political Science and deputy director at the Stockholm Resilience Centre, Stockholm University, Sweden. He is also a senior academy researcher and program director at the Royal Swedish Academy of Sciences and a senior fellow of the Earth System Governance Project. His research focuses on the governance challenges posed by complexity in the earth system, including "planetary boundaries" and notions about the Anthropocene, and the earth system governance challenges posed by rapid technological change. His publications include *Global Environmental Governance*, *Technology and Politics: The Anthropocene Gap* (2014) and the edited *Handbook on Global Challenges, Governance and Complexity* (forthcoming).

Eva Lövbrand is an associate professor at the Department of Thematic Studies: Environmental Change at Linköping University, Sweden. Her work revolves around the ideas, knowledge claims, and expert practices that inform environmental politics and governance. Climate change has served as her prime empirical example, but in recent years she has also explored how the Anthropocene is figured and narrated as a political problem. Her work has been extensively published in journals such as *Global Environmental Politics*, *Science, Technology and Human Values*, *Critical Policy Studies*, *Review of International Relations*, and *Global Environmental Change*. She is coeditor of the volumes *Environmental Politics and Deliberative Democracy: Exploring the Promise of New Modes of Governance* (2010) and *Research Handbook on Climate Governance* (2015).

James Meadowcroft holds a Canada Research Chair in Governance for Sustainable Development at Carleton University, Canada. He is a professor in both the Department of Political Science and the School of Public Policy and CAMBRIDGE

Cambridge University Press 978-1-108-48117-5 — Anthropocene Encounters: New Directions in Green Political Thinking Edited by Frank Biermann , Eva Lövbrand Frontmatter <u>More Information</u>

List of Contributors

xi

Administration. His research is focused on the ways governments are adjusting their practices and policies to cope with problems of the environment and sustainable development. Meadowcroft has written widely on environmental politics and policy, democratic participation and deliberative democracy, sustainable development strategies, environmental limits, and socio-technical transitions. Recent work focuses on energy and the transition to a low carbon society, and includes publications on carbon capture and storage, smart grids, the development of Ontario's electricity system, green technology, and negative carbon emissions. He has recently coedited (with Daniel J. Fiorino) *Conceptual Innovation in Environmental Policy* (2017).

Ayşem Mert is Associate Senior Lecturer at the Department of Political Science, Stockholm University, Sweden, and adjunct faculty at the Vrije Universiteit Amsterdam, the Netherlands. She is also a research fellow with the Earth System Governance Project. Previously, she worked for the Centre for Global Cooperation Research (Duisburg, Germany), the Amsterdam Global Change Institute, and the Institute for Environmental Social Sciences and Geography at Freiburg University, Germany. Her research focuses on discourses of democracy and environment at transnational and global levels; political story-telling; and public–private cooperation and partnerships, using mixed and interpretive methods. She is the author of *Environmental Governance through Partnerships: A Discourse Theoretical Study*.

Alexandra Nikoleris is a postdoctoral researcher at the Department of Environmental and Energy Systems Studies at Lund University, Sweden. She specializes in the study of energy systems and the role of visions and imaginaries of sustainability transitions. She has published in *Research Policy, Climatic Change*, and *Carbon Management*, among other journals.

Johannes Stripple is an associate professor at the Department of Political Science, Lund University, Sweden. His research is concerned with the politics of climate change and its governance through a range of sites, from the United Nations and financial markets to the urban and the everyday. He has recently coedited *Governing the Climate: New Approaches to Rationality, Politics and Power* (Cambridge University Press, 2014) and *Towards a Cultural Politics of Climate Change: Devices, Desires and Dissent* (Cambridge University Press, 2016).

Paul Tenngart is an associate professor in Comparative Literature at the Centre for Literature and Languages, Lund University, Sweden. He has published four monographs on Swedish and French poetry, one book on literary theory, and articles on literary translation, proletarian fiction, and ecopoetry. He has also edited two volumes on politics and literature.

xii

List of Contributors

Paul Wapner is Professor of Global Environmental Politics in the School of International Service at American University, United States. His work focuses on environmental political thought. His most recent research examines the ethical dimensions of climate change and specifically "climate suffering" – the lived experience of those on the frontlines of climate intensification. He is the author of *Living through the End of Nature: The Future of American Environmentalism* and *Environmental Activism and World Civic Politics*, and coeditor of *Principled World Politics: The Challenge of Normative International Relations* (with Lester Ruiz), *Global Environmental Politics: From Person to Planet* (with Simon Nicholson), and *Reimagining Climate Change* (with Hilal Elver). Wapner is a lead faculty member of the Earth System Governance Project, serves on the boards of the Lama Foundation and RE-volv, and leads workshops for professors and activists on contemplative environmentalism.

Acknowledgments

The "Anthropocene encounters" that this book reports on are the result of a longstanding collaboration of numerous scholars who jointly explored the manifold political trajectories of the Anthropocene; at times through in-person meetings at conferences and workshops and, more often, through intense correspondence. At the core of this collaboration stands the Anthropocene task force under the auspices of the global research alliance, the Earth System Governance Project. This task force was part of a larger research network on the conceptual foundations of earth system governance that was set up and led by James Meadowcroft, a long-standing member of the Lead Faculty of the Earth System Governance Project. We owe our gratitude, therefore, first and foremost to James – without his infectious enthusiasm, his unstoppable energy, and his intellectual stimulus, this project would probably not have taken off in the first place. We also thank him for his reflections on the other chapters that he reports in the concluding chapter of this book.

Thanks also to the many colleagues who have commented on previous drafts and initial outlines. First drafts of most chapters to this volume have been presented at numerous international and national conferences, workshops, and seminars. In particular, we thank participants at a lunch seminar during the 2015 Canberra Conference on Earth System Governance, and at roundtables and panels at the 2017 Lund Conference on Earth System Governance, for their valuable input and comments.

In addition, a large number of public research institutions, foundations, and think tanks have supported the research for this volume. In particular, we wish to thank the following institutions, agencies, and colleagues:

Frank Biermann has conducted research for this volume while based as a senior research fellow with the Institute for Advanced Sustainability Studies, Potsdam, Germany. He wishes to thank this institute – in particular its director, Ortwin Renn – for the very warm welcome and excellent research environment that the institute could offer. Eva Lövbrand's contributions to this volume are the result of fruitful collaboration with colleagues within the two research programs: "Mistra

xiii

xiv

Acknowledgments

Geopolitics: Sustainable Development in a Changing Geopolitical Era" and "The Seedbox: An Environmental Humanities Collaboratory," funded by the Swedish Foundation for Strategic Environmental Research (Mistra) and the Swedish Research Council Formas. Noel Castree would like to acknowledge audiences at the universities of Melbourne, Oslo, and Wollongong, who commented constructively on spoken versions of his chapter. Anne Fremaux wishes to thank the organizers and participants of a workshop from the European Consortium for Political Research in April 2016 on "Environmental Political Theory in the Anthropocene" (with special thanks to Luigi Pellizzoni for bringing Adorno and critical theory into the debate). Victor Galaz's research for this project has been supported by the Mistra foundation, Sweden, through a core grant to the Stockholm Resilience Centre, a cross-faculty research center at Stockholm University; through grants from the Futura Foundation; and through the Global Economic Dynamics and the Biosphere Programme at the Royal Swedish Academy of Sciences. Galaz is further grateful to all colleagues participating in the T-Lab "The Biosphere Code" in Stockholm in 2015 (especially Fredrik Moberg) for helping him to develop some of his ideas about algorithmic governance. Paul Wapner would like to thank the National Endowment of the Humanities (United States) for financial support and Jessie Mehrhoff for valuable research assistance.

Special thanks to Henok Debessai of Linköping University, who did a marvelous job in the final editorial stages of this project. We are also very grateful to Tom Peek of Utrecht University, who did a fantastic job in compiling the index data for this book while serving as assistant manager of the 2018 Utrecht Conference on Earth System Governance at the same time. At Cambridge University Press, we are especially grateful to Emma Kiddle, commissioning editor for Earth, Environmental and Planetary Science, who shared our enthusiasm for this topic and smoothly guided our manuscript through the review process while starting a harvesting series for the Earth System Governance Project with Cambridge University Press at the same time, along with a new separate series of shorter books, the Cambridge Elements in Earth System Governance. Many thanks also to the reviewers who helped improve our manuscript with invaluable advice and critique.

The book is, in the end, just a snapshot on the state of debate on the Anthropocene and its manifold implications – including for the field of green political thinking. Undoubtedly, the debate will continue, and more research and reflection is urgently needed. Our network will hence continue. The Earth System Governance Project is currently in the process of reinventing itself, after ten years of operation, and developing a new strategic science and implementation plan for the 2019–2028 period. We are confident that reflections on the Anthropocene and its implications for green political thinking will remain a key topic for debate also in the new phase of earth system governance research, and we hope that the contributions to this volume will help to drive the debate further.