

Rachel Carson Center Perspectives

How to cite:

Weik von Mossner, Alexa. "Imagining Geological Agency: Storytelling in the Anthropocene" In: "Whose Anthropocene? Revisiting Dipesh Chakrabarty's 'Four Theses,'" edited by Robert Emmett and Thomas Lekan, *RCC Perspectives: Transformations in Environment and Society* 2016, no. 2, 83–88.

RCC Perspectives: Transformations in Environment and Society is an open-access publication. It is available online at www.environmentandsociety.org/perspectives. Articles may be downloaded, copied, and redistributed free of charge and the text may be reprinted, provided that the author and source are attributed. Please include this cover sheet when redistributing the article.

To learn more about the Rachel Carson Center for Environment and Society, please visit www.rachelcarsoncenter.org.

Rachel Carson Center for Environment and Society
Leopoldstrasse 11a, 80802 Munich, GERMANY

ISSN (print) 2190-5088
ISSN (online) 2190-8087

© Copyright of the text is held by the Rachel Carson Center.

Image copyright is retained by the individual artists; their permission may be required in case of reproduction.

SPONSORED BY THE



Federal Ministry
of Education
and Research

Deutsches Museum 



Alexa Weik von Mossner

Imagining Geological Agency: Storytelling in the Anthropocene

The Anthropocene, we learn from Dipesh Chakrabarty's writings, poses a challenge to historians, postcolonial critics, and scholars in many other disciplines because it forces us to radically rethink the scope of human agency. For the same reason it also poses a challenge to storytelling and to the ways in which we engage with narratives that try to give us a sense of what it *means* when biological agents become geological agents. "We can become geological agents only historically and collectively," claims Chakrabarty, "when we have reached numbers and invented technologies that are on a scale large enough to have an impact on the planet itself."¹ It is an issue of scale, then, and the difficulties involved in considering the human on that level are in part due to what the literary scholar Lawrence Buell has called a "crisis of the imagination."² Biocultural critics like Brian Boyd have argued that storytelling serves evolutionary purposes, and given that over thousands of years humans have transformed their experiences, hopes, and fears into stories, it seems worthwhile to look closely at some of the ways in which we currently tell each other stories about global environmental change and human agency in the Anthropocene.³

As a literary and film scholar, I am particularly interested in *how* we tell each other these stories and what kind of narratives and imaginative limitations are posed by the spatial and temporal scale of some of the processes that mark the Anthropocene. I am also interested in what effects such storytelling can have on those who receive it. Chakrabarty has argued that "we cannot ever experience ourselves as a geophysical force,"⁴ and has also suggested that grasping this new level of agency would necessitate "[scaling] up our imagination of the human."⁵ Such scaling up has always been the business of speculative modes of literature and film, be they fiction or nonfiction. In recent years,

1 Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Inquiry* 35, no. 2 (2009): 206.

2 Lawrence Buell, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge, MA: Harvard University Press, 1995), 2. On this point, see also the conclusion of Ursula Heise's *Sense of Place and Sense of Planet: The Environmental Imagination of the Global* (New York: Oxford University Press, 2008).

3 Brian Boyd, *On the Origin of Stories: Evolution, Cognition, and Fiction* (Cambridge, MA: Belknap Press, 2009).

4 Dipesh Chakrabarty, "Postcolonial Studies and the Challenge of Climate Change," *New Literary History* 43, no. 1 (2012): 12.

5 Chakrabarty, "Four Theses," 206.

an emerging genre of climate change narratives⁶ has dramatized that fateful moment when anthropogenic forcing reaches “a tipping point at which this slow and apparently timeless backdrop for human actions transforms itself with a speed that can only spell disaster for human beings.”⁷ It is the moment when risk—defined by the late German sociologist Ulrich Beck as “the anticipation of catastrophe”⁸—mutates into actual hazard and catastrophe, often imagined as an apocalypse of some sort. Chakrabarty acknowledges that art and fiction might allow us to “extend our understanding to those who in future may suffer the impact of the geophysical force that is the human.”⁹ I want to suggest that storytelling—in fiction and nonfiction—can do not only that, but can also achieve something even more important: it can help us to *imaginatively experience* the impact of that geophysical force that is the human.

Storytelling does this through psychological activities that narratologists and psychologists of fiction call *transportation* and *performance*. “A narrative,” explains psychologist Richard Gerrig, “serves to transport an experiencer away from the here and now.”¹⁰ While it cannot force us to experience its imaginary world, it does extend what we might call an invitation. If we accept that invitation, we begin to shift our attention in a way that leads to the illusion of transportation: our actual surroundings seem to disappear (because we no longer pay much attention to them) as we begin to imagine the alternative world created for us by the literary or audiovisual text. Gerrig insists that there is nothing passive about this process, because experiencers, and especially readers, “must use their own experiences of the world to bridge gaps in texts. They must bring both facts and emotions to bear on the construction of the world of the text” and “give substance to the psychological lives of characters.”¹¹ We cannot help but fall back on what we already know from our real worlds when we engage with the alternative world of a story, and this is true even for speculative modes of narrative that imagine potential future worlds. There exist countless gaps that we continuously

6 For overviews and critical discussions of some of the recent climate change novels (sometimes dubbed “cli-fi”), see Adam Trexler and Adeline Johns-Putra, “Climate Change in Literature and Literary Criticism,” *Wiley Interdisciplinary Reviews: Climate Change* 2, no. 2 (2011): 185–200, and Sylvia Mayer, “Explorations of the Controversially Real: Risk, the Climate Change Novel, and the Narrative of Anticipation,” in *The Anticipation of Catastrophe: Environmental Risk in North American Literature and Culture*, ed. Sylvia Mayer and Alexa Weik von Mossner (Heidelberg: Universitätsverlag Winter, 2014), 21–38.

7 Chakrabarty, “Four Theses,” 205.

8 Ulrich Beck, *World at Risk* (Cambridge: Polity Press, 2007), 7.

9 Chakrabarty, “Postcolonial Studies and the Challenge of Climate Change,” 12.

10 Richard J. Gerrig, *Experiencing Narrative Worlds: On the Psychological Activities of Reading* (Boulder, CO: Westview Press, 1998), 3.

11 *Ibid.*, 17.

fill during reading and watching, and our active “performance” of storyworlds—the act of imagining—is crucial for our understanding. It is something of a negotiation between the experienter’s real world and the alternative world presented by a writer or filmmaker. Gerrig insists that all this holds true for both fiction and nonfiction, and so *all* stories about the Anthropocene keep pushing against the boundaries of what is currently imaginable.

It is indeed quite interesting to see how often texts and films that attempt to imagine the risks of the Anthropocene mix and fuse fictional and nonfictional modes of narration. Not only do some writers of eco-science fiction, such as Kim Stanley Robinson and Dale Pendell, insist that their speculative narratives are based on scientific projections (Roland Emmerich’s blockbuster disaster film *The Day after Tomorrow* is another, more notorious, example).¹² At the other end of the spectrum we find a climate-change documentary like Franny Armstrong’s *The Age of Stupid*, which uses a dystopian frame narrative to give additional meaning to the documentary portion of the film and engage viewers emotionally in a story about human hubris and resulting disaster.¹³ Even more surprising, perhaps, is the fact that a renowned climatologist like James Hansen includes a science-fiction story set in the year 2525 in his popular-science book *Storms of My Grandchildren*. While that story “may read like far-fetched science fiction,” insists Hansen, “its central hypothesis is a tragic certainty—continued unfettered burning of all fossil fuels will cause the climate system to pass tipping points, such that we hand our children and grandchildren a dynamic situation that is out of control.”¹⁴ He thus tries to do exactly what Chakrabarty suggests fiction might be able to do, namely “extend our understanding to those who in future may suffer the impact of the geophysical force that is the human.”¹⁵ Unfortunately, however, Hansen’s science-fiction story ends up being so far-fetched and its protagonists so bloodless that it seems unlikely that it will engage readers’ imaginations and emotions in the intended way.

12 See, in particular, Kim Stanley Robinson’s *Science in the Capital* trilogy: *Forty Signs of Rain* (New York: Spectra, 2004), *Fifty Degrees Below* (New York: Spectra, 2005), and *Sixty Days and Counting* (New York: Spectra, 2007); Dale Pendell, *The Great Bay: Chronicles of the Collapse* (Berkeley: North Atlantic Books, 2010); and *The Day after Tomorrow*, directed by Roland Emmerich (Twentieth Century Fox, 2004).

13 *The Age of Stupid*, directed by Franny Armstrong (Spanner Films, 2009).

14 James Hansen, *Storms of My Grandchildren: The Truth about the Coming Climate Catastrophe and Our Last Chance to Save Humanity* (London: Bloomsbury, 2009), 251.

15 Chakrabarty, “Postcolonial Studies and the Challenge of Climate Change,” 12.

Hansen is ready to admit that “science fiction isn’t my area of expertise,”¹⁶ and so we might forgive him that, as a climatologist, he cannot create characters or storyworlds that excite our minds and engage our emotions. His fictional narrative fails to transport readers into an alternative world, so that they can perform and imaginatively experience the potential future effects of humanity’s collective geological agency. That is, however, what more experienced and talented writers and filmmakers can achieve. “Literature,” writes ecocritic Richard Kerridge, “can provide an all-out apocalyptic vision of catastrophe, to shock and scare us deeply.”¹⁷ It can also make us aware of the gross environmental inequalities that mark the Anthropocene and the almost invisible relationship between perpetrators and victims that postcolonial studies scholar Rob Nixon has aptly called “slow violence.”¹⁸ Reading transforms the mind through processes of transportation, cognitive estrangement, strategic empathizing, and other narrative techniques. Speculative fiction works particularly well because, in the words of science-fiction scholar Tom Moylan, “imaginatively and cognitively engaging with such works can bring willing readers back to their own worlds with new or clearer perceptions, possibly helping them to raise their consciousness.”¹⁹

Empirical research has demonstrated the crucial role of transportation in the persuasiveness of narrative texts,²⁰ but for scholars outside literary and film studies it is often easier to accept the influence of nonfiction narratives on societal processes. However, we should not underestimate the importance of fictional narratives in changing attitudes, understanding, and ultimately behavior. As social scientists David Lewis, Dennis Rodgers, and Michael Woolcock have argued with respect to “the fiction of development,” fictitious narratives can communicate knowledge in ways that are different from nonfiction discourse but just as valuable and often much more approachable and engaging.²¹ Psychological

16 Hansen, *Storms of My Grandchildren*, 251.

17 Richard Kerridge, “Ecological Approaches to Literary Form and Genre: Urgency, Depth, Provisionality, Temporality,” in *The Oxford Handbook of Ecocriticism*, ed. Greg Garrard (Oxford and New York: Oxford University Press, 2014), 372.

18 Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge, MA: Harvard University Press, 2011).

19 Tom Moylan, *Scraps of the Untainted Sky: Science Fiction, Utopia, Dystopia* (Boulder, CO: Westview Press, 2000).

20 See, for example, Melanie Green and Timothy Brock, “The Role of Transportation in the Persuasiveness of Public Narratives,” *Journal of Personality and Social Psychology* 79, no. 5 (2000): 701–21.

21 Lewis, Rodgers, and Woolcock write that “not only are certain works of fiction ‘better’ than academic or policy research in representing central issues relating to development, but they also frequently reach a wider audience and are therefore more influential.” David Lewis, Dennis Rodgers, and Michael Woolcock, “The Fiction of Development: Literary Representation as a Source of Authoritative Knowledge,” *Journal of Development Studies* 44, no. 2 (2008): 198.

studies have shown that fiction is indeed better than nonfiction in raising readers' capability for empathy and social concern,²² and there is evidence that even an in many ways problematic feature film, such as *The Day after Tomorrow*, can have remarkable effects on the climate risk perceptions of its viewers.²³ That same film, however, is also a grave reminder of the fact that popular narratives are often firmly circumscribed by genre conventions, and, on a more fundamental level, by the fact that human storytelling traditions tend to focus on the individual agency of human protagonists and feature plotlines that are limited to these protagonists' life spans.²⁴

A novel like Pendell's *The Great Bay*, which spans 14,000 years (from the moment of "collapse" of human civilization in 2021), tries to get around this narrative problem and succeeds in evoking the long-term repercussions of human geophysical agency while at the same time diminishing individual human lives to a collage-like assemblage of brief snapshots. In a way, the book is therefore a response to Heise's complaint, in *Sense of Place and Sense of Planet*, that most climate change novels are too "conventional in their narrative strategies,"²⁵ frequently falling back "on apocalyptic narrative" and simplistic story lines that concentrate on the lives of generic science-fiction protagonists.²⁶ Heise calls for stylistic and formal innovation while also suggesting that the modernist tradition of narrative collage offers possibilities for capturing the vast dimensions of global ecological transformations.²⁷ Pendell's *The Great Bay* certainly attempts such an innovative mode of narration as it tells its story about the year of the collapse and the 14 millennia that follow it. At the same time, however, the narrative's fragmentary structure also creates problems and ultimately fails in its attempt to create an engaging story because its human protagonists are no more than brief and unimportant occurrences that

22 See, for example, Raymond Mar et al., "Exploring the Link between Reading Fiction and Empathy: Ruling out Individual Differences and Examining Outcomes," *Communications* 34 (2009): 407–28, and Dan R. Johnson, "Transportation into Literary Fiction Reduces Prejudice against and Increases Empathy for Arab-Muslims," *Scientific Study of Literature* 3, no. 1 (2013): 77–92.

23 For a discussion of the film's narrative strategies in conjunction with several reception studies see Alexa Weik von Mossner, "Facing *The Day after Tomorrow*: Filmed Disaster, Emotional Engagement, and Climate Risk Perception," in *American Environments: Climate, Cultures, Catastrophe*, ed. Christof Mauch and Sylvia Mayer (Heidelberg: Universitätsverlag Winter, 2012), 97–115.

24 This holds true for much of nonfiction narratives, and even more so for the most pervasive fictional story prototypes. According to literary scholar Patrick Colm Hogan, such narrative prototypes are "structured and animated" by universal human emotions and can therefore be found across cultures and epochs; see *The Mind and Its Stories: Narrative Universals and Human Emotion* (Cambridge: Cambridge University Press, 2003), 5.

25 Heise, *Sense of Place and Sense of Planet*, 207.

26 *Ibid.*, 206.

27 *Ibid.*, 76–77.

leave readers cold, and for the most part disinterested in their fates.²⁸ Geological time is not human time, and narrative events are only truly meaningful to us when they are experienced by someone—ideally someone we know well enough to care about.

Storytelling in and about the Anthropocene is thus, in very literal ways, affected by the imaginary and conceptual challenges that Chakrabarty has laid out in his writings. And yet the very idea of the Anthropocene—regardless of whether it will become an official geological epoch or not—continues to be immensely productive for storytelling, inspiring artists to look for innovative and more adequate modes and media for conveying what it means—and what it can mean—when humans wield a geological force. Over time, the creative energy involved in the production and mental performance of such stories might bring us at least a little closer to scaling up our imagination of the human.

Selected Sources

Kerridge, Richard. “Ecological Approaches to Literary Form and Genre: Urgency, Depth, Provisionality, Temporality.” In *The Oxford Handbook of Ecocriticism*, edited by Greg Garrard, 361–75. Oxford and New York: Oxford University Press, 2014.

Mayer, Sylvia. “Explorations of the Controversially Real: Risk, the Climate Change Novel, and the Narrative of Anticipation.” In *The Anticipation of Catastrophe: Environmental Risk in North American Literature and Culture*, edited by Sylvia Mayer and Alexa Weik von Mossner, 21–38. Heidelberg: Universitätsverlag Winter, 2014.

Trexler, Adam and Adeline Johns Putra. “Climate Change in Literature and Literary Criticism.” *Wiley Interdisciplinary Reviews: Climate Change* 2, no. 2 (2011): 185–200.

Weik von Mossner, Alexa. “Facing *The Day After Tomorrow*: Filmed Disaster, Emotional Engagement, and Climate Risk Perception.” In *American Environments: Climate, Cultures, Catastrophe*, edited by Christof Mauch and Sylvia Mayer, 97–115. Heidelberg: Universitätsverlag Winter, 2012.

———. “Science Fiction and the Risks of the Anthropocene: Anticipated Transformations in Dale Pendell’s *The Great Bay*.” *Environmental Humanities* 5 (2014): 203–16.

28 For a more detailed analysis of Pendell’s novel, see Alexa Weik von Mossner, “Science Fiction and the Risks of the Anthropocene: Anticipated Transformations in Dale Pendell’s *The Great Bay*,” *Environmental Humanities* 5 (2014): 203–16.