



## Introduction: “Imagining Anew: Challenges of Representing the Anthropocene”

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In this cluster of essays, a group of scholars from different disciplines—History, Comparative Literature, American Studies, and Literature and Media Studies—offers reflections upon a broadly construed question: what does it mean for the humanities to address the concept of the Anthropocene? We have, quite intentionally, included essays that vary with regard to materials and approaches. What they share is a concern with the challenges of *representing* a concept at once wholly abstract and alarmingly material in aesthetically, rhetorically, and ultimately politically efficacious ways. They share as well a conviction that the humanities, in their attention to the creation and critique of aesthetic objects, can play a significant role in heightening public environmental awareness. The problem they collectively address is a curious, but pervasive one in environmentalism: why does it seem that widely accepted science and widely shared framing paradigms have such limited effect on the various public audiences that they attempt and need to reach? How, too, might that be changed?

The claim that we have entered a new geological epoch known as the Anthropocene was first made by Paul Crutzen and Eugene Stoermer in 2000 (and elaborated upon by Crutzen in an article published in *Nature* in 2002).<sup>1</sup> Originally defined as the age in which humanity came to have an impact upon long-term geological processes, it now stresses that our species has become a crucially significant factor in potentially cataclysmic climatological and biogeographical changes. Especially since the Industrial Revolution, humanity has exerted an increasingly powerful influence over the Earth’s ecosystems, changing not only the planet’s surface appearance, but also its chemistry and geology. Indeed, Will Steffen, Paul Crutzen and

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<sup>1</sup> P. J. Crutzen and E. F. Stoermer, “The ‘Anthropocene,’” *Global Change Newsletter* 41 (2000): 17–18; P. J. Crutzen “Geology of Mankind,” *Nature* 415, no. 6867 (2002): 23.

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John R. McNeill define “Anthropocene,” in its first “stage,” as a purely biogeochemical transformation, signified synecdochically by rising greenhouse gas emissions since the Industrial Revolution: “We use atmospheric carbon dioxide concentration as a single, simple indicator to track the progression of the Anthropocene.”<sup>2</sup> As we enter the second stage, the “Great Acceleration” that follows the Second World War, this lone “indicator” is joined by a dozen others, all of them escalating wildly: population, water use, paper consumption, and so on,<sup>3</sup> each with their own complex and significant impacts on the planet. The term “Anthropocene” thus seems at this point to justify its claim to categorization as a new, *quantifiably* distinct geological era.

In depicting its third stage, a future in which humans become “Stewards of the Earth System,” however, Steffen, Krutzen and McNeill depart decisively from this predominantly biogeochemical semiology. Having assigned cultural and political factors peripheral significance in the first two stages, now they seek to convince us that, “Signs abound to suggest that the intellectual, cultural, political and legal context that permitted the Great Acceleration after 1945 has shifted in ways that could curtail it.”<sup>4</sup> In defiance, perhaps, of the pessimistic prognoses the Anthropocene might reasonably inspire, they even indulge momentarily in a redemptive vision that splices Hegel with Earth systems theory: “Humanity is, in one way or another, becoming a self-conscious, active agent in the operation of its own life support system.”<sup>5</sup> A heedless, anthropocentric cultural politics got us into this mess; perhaps a reflexive, Anthropocenic cultural politics can get us out of it.

While we share their hopes, we would wish to supplement their gloomy trio of Anthropocenic futures—business-as-usual, mitigation, and geo-engineering—with alternatives that are more radical, if also more difficult to attain. The challenges are numerous and daunting. For example, as Steffen and his colleagues know all too well, pervasive social and political resistance to the scientific consensus on climate change remains a key barrier to effectively responding to these changes on a global scale. Here, perhaps, is where the humanities can and should help to make visible, tangible, and morally salient the narrative, historical, philosophical, and aesthetic dimensions of a sublimely mind-boggling idea. The concept of the Anthropocene asks that we think and imagine on a wholly different scale, vastly more global in scope, vastly more historical in extent, in the course of making decisions about countless matters of environmental concern. And it asks that we take seriously the specific responsibilities that arise from this shifting of perspectives.

To be sure, the idea of a new epoch of man has already been migrating from the sciences to other fields of discourse via popular scientific magazines and public events. In the last few years, for instance, the concept has been discussed in *The Economist* (26 May, 2011), in the *Global Change Magazine* 78 (19 March, 2012), and in the newsletter of the International Geosphere-Biosphere Programme. Moreover, the first book-length treatises written by

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<sup>2</sup> Will Steffen, Jacques Grinevald, Paul Crutzen, John McNeill, “The Anthropocene: Conceptual and Historical Perspectives,” *Philosophical Transactions of the Royal Society A* 369, no. 1938 (2011): 843, 614.

<sup>3</sup> *Ibid.*, 617.

<sup>4</sup> *Ibid.*, 618.

<sup>5</sup> *Ibid.*, 619.

humanists have now been devoted to it (see Jens Kersten, Eckart Ehlers) and others are in the works. A new scholarly journal launched in November 2013, *Anthropocene Review*, promises to deliver analyses of the concept from a variety of disciplinary perspectives. In January 2013, Will Steffen introduced the term and the science behind it to a packed audience at the opening of the “Anthropocene Project” at the *Haus der Kulturen der Welt* in Berlin. Steffen spoke about the coherent set of scientific evidence that points to the fact that we are leaving the patterns of the Holocene—an unusually stable and warm period in Earth’s history that allowed our species to develop agriculture—and that we are entering an age where the human influence on the Earth is more prominent. The first cultural exhibit about the Anthropocene targeting a wide audience is scheduled to open in the fall of 2014 at the Deutsches Museum in Munich. As these instances indicate, our era is raising deeply consequential opportunities to think about how we imagine time and how we conceive of the relationship of human beings to the environment with and within which we live. Yet, as the idea of an Anthropocene era seems to accommodate itself to radically different epistemological standpoints and distinctly different value judgments, some pointed questions arise: what do those differences mean ethically and aesthetically and how do writers, artists, and others involved in cultural production deal with these divergences? In what ways does the Anthropocene offer the potential for understanding our position in the world differently? In particular, what does it mean to inhabit a collective existence that promises to deliver daunting challenges for a globalized future?

These and other questions were posed by participants in a small conference on “Culture and the Anthropocene” hosted by the Rachel Carson Center in Munich in June 2013 and co-organized by the Transatlantic Research Network for the Environmental Humanities.<sup>6</sup> Panel topics ranged from “Literary Modes of the Anthropocene” to “Cultural Landscapes and Narratives,” “Non-Human Agencies,” “Medial Images,” “Proto-Ecological Discourses,” and “Critical Theory.” A geologist debated the concept of the Anthropocene with a literary scholar, pointing to the urgent need for more transdisciplinarity in the production of knowledge in and about the Anthropocene. The challenges and opportunities of conceptualizing and representing the Anthropocene were addressed in a round table including a geographer, a lawyer, and a literary scholar,<sup>7</sup> leading to discussions about how we could better traverse the divides among problem-solving scientists, policy-oriented social scientists, and hermeneutic scholars in the humanities who interpret cultural documents within an historical frame of reference and are typically resistant to univocal or instrumentalizing readings. The conversations at this conference were extremely stimulating and will lead to a variety of publication projects; this particular cluster of essays, published now in *Environmental Humanities*, is an effort to help create the interdisciplinary audience in the environmental humanities envisaged at the conference. Two of the papers presented here originated at the Rachel Carson Center conference; the other two were solicited to complement them and to extend the coverage of media and methodologies in the collection. All of them address how we should think about the challenges of representing nature and the environment in the

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<sup>6</sup> [http://www.carsoncenter.uni-muenchen.de/events\\_conf\\_seminars/event\\_history/2013/2013\\_conf\\_ws\\_sem/130614\\_cult\\_anthrop/index.html](http://www.carsoncenter.uni-muenchen.de/events_conf_seminars/event_history/2013/2013_conf_ws_sem/130614_cult_anthrop/index.html)

<sup>7</sup> Wolfram Mauser (LMU München), Jens Kersten (LMU München), Ursula Heise (University of California, Los Angeles).

Anthropocene era and how such changes are—or all too often, are not—reflected effectively in socio-cultural awareness.

Tobias Boes' "Beyond Whole Earth: Planetary Mediation and the Anthropocene" offers an illuminating contrast between the cultural-symbolic impact and implications of two nearly simultaneous scientific breakthroughs, Yuri Gagarin's inaugural ascent of a human being into space in 1960 and Evgeni Shepelev's twenty-four-hour stay in 1961 (or perhaps 1960) inside the world's first artificial ecosystem, breathing oxygen reconstituted by algae from his own exhalations. He traces a shift from the totalizing, static "Whole Earth" images of the late twentieth century to the visibly composite acts of cognition that Google-generated representations of the globe now offer us—at least potentially able to depict temporality and thus to offer mental purchase on processes such as climate change. As Boes' critique of John Luther Adams' multimedia installation *The Place Where You Go to Listen* indicates, however, ridding ourselves of residual Romantic nostalgias that overlook our implication in planetary processes thrown out of balance by our mere presence may take more eco-awareness than even highly self-conscious artists yet possess. How, Boes asks, can we genuinely experience ourselves as a species having geophysical and biochemical impact upon our entire planet? "What we desperately need," he insists, "is a hermeneutics and a poetics (a theory of understanding and a theory of expression) that might accompany the scientific study of the changing Earth system."

Thomas Lekan's essay on "Fractal Earth: Visualizing the Global Environment in the Anthropocene" begins at nearly the same spot—with a reflection upon Bill McKibben's cover image for his 2010 *Eaarth* in response to our tradition of picturing the connectedness of the whole planet in the Earthrise and Blue Planet images that were produced in the context of the 1972 Apollo 17 mission. Lekan shows how these images of the whole earth are unsuitable representations of today's predicament of non-linear developments at every scale, not only because they derive from the Cold War era, but also because they signal a grand narrative of connectivity that has become obsolete. Instead, he argues, the image politics of fractal topographies are more suitable forms of representation for the global environments in the Anthropocene. In his critical visual genealogy of the whole earth images that played such a pivotal role in 1970's environmentalism, Lekan highlights their imperialist inflection and indebtedness to the aerial photography and documentary tradition of the fifties. Fractals, in contrast, provide visualizations of an environmental imagination that does not depend on a grand narrative and that works across different scales and conceptions of agency.

Alexa Weik von Mossner's essay on science fiction and the risks of the Anthropocene discusses Dale Pendell's novel *The Great Bay* (2010), which features the future history of a flooded California after the Collapse in 2021 as a result of human activity on the Earth. Taking her cue from Ulrich Beck's work on the world risk society, Weik shows how science fiction can be a literary mode of imagining possible future worlds. She contends that Pendell's work in particular constitutes an interesting case because of its ambitious temporal scope. The novel covers the time period from 2012 to 16,000 N.C., reaching significantly beyond conventional historical frames of human life, a fact that makes for challenging aesthetic problems about how to narrate these large-scale geological and environmental transformations. Weik shows how Pendell addresses these challenges by presenting the reader with a wide variety of textual

genres, thus offering what Weik calls a “panoptic view” of the future state of the world. This narrative strategy thereby envisions the risks of the Anthropocene by going (temporally) far beyond the frequently used apocalyptic fictional elements in popular scientific discourse on climate change, relating a post-apocalyptic narrative that is eerily fascinating and disturbing.

Wolfgang Struck’s “Genesis, Retold: In Search of an Atlas of the Anthropocene” focuses upon another mode of aesthetic and conceptual representation, the atlas, as that form has been reshaped in a world that is globally self-aware in quite a different manner than the time when Gerardus Mercator first coined the term “atlas” to describe a collection of maps. Struck looks at projects by Sebastião Salgado (photographic) and Judith Schalansky (textual/visual) to consider a fundamental dilemma of the Anthropocene mode: its stage as well as its actors are too large not only for scientific research, but even for artistic representation. To see the whole seems to escape us, with the result that such efforts can prove to be nostalgic and unreflectively primitivist despite their own intent. The nature of viewing our world from the outside versus viewing from the inside; the consequences, gains and losses of each approach; whether both perspectives are equally available to us today: these are the questions that the new atlases of Salgado and Schalansky allow us to ask. To extend the span of human attentiveness and to incorporate a mobility of representation despite the fixity and finitude of image and page are, the essay argues, the objectives these imaginative projects for the twenty-first century pursue.

The essays here, like articles that have appeared in earlier issues of this journal, point to an increasing urgency for supplementing the scientific discussion of the Anthropocene, enriching and empowering it by tying it to cultural interpretations of who we are as human beings. Thinking culture along with the Anthropocene opens a route for vital discussions about the essence, disciplinary constellation, and methodological complexity of the emerging zone of inquiry that we have begun to call the environmental humanities. As Boes puts it in his essay, “As we hurl forward into the Anthropocene, our continued survival will hinge in part on our ability to conceive of new ways of imagining the Earth (and by extension also the human species) in both the statistical and the autopoietic fashion necessitated by modern climate science.” Our four authors offer their interlacing voices on this imperative in the hope of helping to spark debates about urgent environmental matters across disciplines, across publics, and across social practices.

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