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From the Anthropocene to the Ecozoic: Philosophy and Global Climate Change

Brian G. Henning

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Recently I had occasion to write an essay on the presidential addresses of the American Philosophical Association (APA) of the 1930s (1931–1940) (Henning 2015a). While grappling with the diverse philosophical themes represented in the thirty-odd addresses, I couldn't help but think also about the dramatic events unfolding during the tumultuous decade. After all, at the beginning of the 1930s the world was sinking into the depths of the Great Depression, with a full quarter of all wage earners in the United States unemployed. And by the end of the decade, virulent nationalist movements in Germany, Italy, and Japan had provoked the Second World War. Juxtaposing these crises with the addresses of the presidents of the APA was as revelatory for what was said as what was not.

On the one hand, the addresses delivered at the start of the decade— including by prominent philosophers such as Alfred North Whitehead (1931– 1932 term) and C. I. Lewis (1933–1934 term)—make not even passing reference to the global economic crisis.¹ Although images of bread lines no doubt featured in their morning papers may have affected them greatly, the state of global capitalism apparently did not merit philosophical discussion. The deafening silence regarding the Great Depression stands in contrast to many of the addresses in the closing years of the decade, which often focused on the growing geopolitical threats.² For instance, in his 1937–1938 Western Division presidential address, “History as the Struggle for Social Values,” J. A. Leighton boldly argues for the moral responsibility of philosophers to become engaged, as philosophers, in the defense of democracy:

Democracy is emerging in one of the most momentous secular crises in the history of culture. On us teachers falls, I think, a heavy share of the burden of democracy. If the confusion continues, and some rabble-rouser, greedy for power, arises, we may all be either shut up or shot. ... If philosophers remain content to pursue the owl's habit of reflection only in the soft evening twilight of abstract speculation, they are in for a long and dreadful night. Civilization is poised on a razor edge over an abyss. To say that we Americans have no responsibility and freedom of choice in this hour of decision is a counsel of cowardice and despair. ... I believe that you and I and all of us are confronted with the challenge to choose whether we shall knuckle down to tyranny controlled by demonic powers or march forward with resolute wills towards the dawn of an earth of worthy and comradely persons—a world set free.

¹ For a list of past presidents and their addresses, see <http://www.apaonline.org/?page=presidents>.

² As I note in “Philosophy in the Age of Fascism”: “Although from our twenty-first century vantage point, the eventual victory of the Allies might seem to have been inevitable, in the closing years of the 1930s, Japan had invaded and committed terrible atrocities in China, and Hitler and Mussolini were on the march across Europe. Eventual victory was not so certain then, and the existential threat to democracy was palpable in many of the addresses delivered during this period” (Henning 2015a, 88).

Many of the addresses of the second half of the 1930s similarly reveal that the struggle between democracy and tyranny was as much a war of ideas as of warring armies. And the presidents of the APA were calling on their fellow philosophers to enlist.³

This disparity in the philosophical responses to the twin crises of the 1930s brought me to consider the philosophical addresses of more recent APA presidents in the context of our current crises. The greatest existential threat of the twenty-first century is not economic calamity or the march of tyranny— although these remain all-too-real problems—but the inexorable rise of the seas fueled by global warming.⁴ Anthropogenic global climate change is a challenge the magnitude and nature of which humanity has never confronted.⁵ As we lurch toward the sixth mass extinction event, at stake is not a nation or ideology or even economic well-being, but the very fate of our species and millions of other species with which we have evolved. What sort of philosophical responses to this crisis do we find in the presidential addresses of the APA?

Given the content of their philosophical addresses, it would seem that the presidents of the APA are no more philosophically concerned with global climate change than Whitehead and Lewis were with the Great Depression. Indeed, if the content of these addresses were one's only source, it would be nearly impossible to know that the Earth is in the midst of a slow-motion ecological crisis. Among the thirty-six addresses delivered since 2003, not a single president makes more than a passing reference to global warming or global climate change.⁶ Although, as this very volume demonstrates, philosophers are not blind to its significance, it would seem that too few consider climate change relevant to their philosophical work or their work relevant to climate change. Stephen Gardiner's 2004 observation that "Very few moral philosophers have written on climate change." remains stubbornly true.⁷

³ See especially the addresses by James H. Tufts (Pacific Division President 1934– 1935), "The Institution as an Agency of Stability and Readjustment in Ethics"; E. T. Mitchell (Western Division President 1935–1936), "Social Ideals and the Law"; J. A. Leighton (Western Division President 1937–1938), "History as the Struggle for Social Values"; Glen R. Morrow (Western Division President 1939–1940), "Plato and the Rule of Law"; and Edward O. Sisson (Pacific Division President 1939–1940), "Human Nature and the Present Crisis." Note that the Western Division has since been renamed the Central Division.

⁴ Decades-long stagnant wages culminating in the 2008 Great Recession reveals deep and likely systemic problems with the global capitalist economic system. In many ways, just as the Great Depression may be seen as a primary cause of World War II, it is likely that the excesses of capitalism are primary drivers of anthropogenic climate change (see Klein (2014). Herman E. Daly and John B. Cobb's *For the Common Good* (1989) is also an important resource. Philip Cafaro (2010, 2011) is among the handful of philosophers who has pointed out that the pursuit of economic growth must be abandoned. This study is in agreement with these positions, although it does not enter into the debate.

⁵ Stephen M. Gardiner's work on climate change as a "perfect moral storm" is very helpful here (Gardiner 2010). See also Dale Jamieson (2010, 149): "There are three important dimensions along which global environmental problems such as those involved with climate change vary from the paradigm: Apparently innocent acts can have devastating consequences, causes and harms may be diffuse, and causes and harms may be remote in space and time."

⁶ A key word search of the thirty-six presidential addresses since 2003 reveals three fleeting references: Nicholas Smith, "Modesty: A Contextual Account" (2007–2008 Pacific Division presidential address (http://www.apaonline.org/global_engine/download.asp?fileid=91467BC7-9407-4D84-B53B-56188A221F01); Linda Martín Alcoff, "Philosophy's Civil Wars" (2012–2013 Eastern Division presidential address (http://www.apaonline.org/global_engine/download.asp?fileid=DB5D29E5-9DC5-4D3D-A4BC-3550069C3147); and Elizabeth Anderson, "Moral Bias and Corrective Practices: A Pragmatist Perspective" (2014–2015 Central Division presidential address (http://www.apaonline.org/global_engine/download.asp?fileid=93FF3C8F-DDF0-4CDE-BDB2-91B5603BE414).

⁷ The inactivity of the APA is in contrast to, for instance, the American Academy of Religion (AAR). Much of the 2014 annual meeting of the AAR was dedicated to the topic of climate change, including a session with former President Jimmy Carter on "The Role of Religion in Mediating Conflicts and Imagining Futures: The Cases of Climate Change and Equality for Women," and plenary panels with, among others, the then chair of the Intergovernmental Panel on Climate Change (IPCC), Rajendra K. Pachauri, and 350.org founder Bill McKibben. More to the point, Linda Zoloth's presidential address was dedicated to the topic: "Interrupting Your Life: An Ethics for the Coming Storm."

The dual aim of this brief essay is, first, to add my voice to those calling on more philosophers to take up the important conceptual work of understanding and responding to anthropogenic global climate change and, second, accept this challenge myself by considering just one of the many roles that philosophers might play by critiquing what I take to be the underlying conceptual framework⁸ that has precipitated and which perpetuates the ecological crisis. Taking the latter first, I begin by considering what Eileen Crist calls the “Anthropocene discourse,” after which I consider an alternative framing offered by Thomas Berry. With Berry, I conclude that the challenge of global climate change can only be met by transitioning not to the “Anthropocene Epoch,” but to the “Ecozoic Era” in which humans take their place within, not over, the vital community of intrinsically valuable beings.

1. The Anthropocene Discourse

Later this year (2016) the International Union of Geological Sciences (IUGS) will announce whether after roughly 12,000 years the Holocene Epoch of the Quaternary Period has prematurely ended and the Anthropocene Epoch has begun.⁹ Were it not for the cumulative impact of human activity, the relatively temperate Holocene that defines the “normal” for our species would have continued for perhaps another 50,000 years.¹⁰ However, the argument goes, the collective impact of human activity has now reached a geological order of magnitude, ushering in a wholly new epoch. “Welcome to the Anthropocene,” writes the popular magazine *The Economist*:

The Earth is a big thing; if you divided it up evenly among its 7 billion inhabitants, they would get almost 1 trillion tonnes each. To think that the workings of so vast an entity could be lastingly changed by a species that has been scampering across its surface for <1% of 1% of its history seems, on the face of it, absurd. But it is not. Humans have become a force of nature reshaping the planet on a geological scale—but at a far-faster-than-geological speed.

A single engineering project, the Syncrude mine in the Athabasca tar sands, involves moving 30 billion tonnes of earth—twice the amount of sediment that flows down all the rivers in the world in a year. That sediment flow itself, meanwhile, is shrinking; almost 50,000 large dams have over the past half-century cut the flow by nearly a fifth. That is one reason why the Earth’s deltas, home to hundreds of millions of people, are eroding away faster than they can be replenished.¹¹

Following Eileen Crist, I’m interested in considering “the shadowy repercussions of naming an epoch after ourselves” (2013, 129). Crist’s thesis is that the concept of the “Anthropocene” is not a neutral, scientific description, “but instead a reflection and reinforcement of the anthropocentric actionable worldview that generated ‘the Anthropocene’—with all its looming emergencies—in the first place” (129–30). With Crist I would

⁸ I find Karen J. Warren’s definition of a conceptual framework to be helpful: “A *conceptual framework* is a set of basic beliefs, values, attitudes, and assumptions which shape and reflect how one views oneself and one’s world. A conceptual framework functions as a socially constructed *lens* through which one perceives reality. It is affected and shaped by such factors as sex-gender, race/ethnicity, class, age, affectional orientation, marital status, religion, nationality, colonial influences, and culture” (Warren 2000, 46, author’s emphasis). For the purposes of this essay “narrative,” “worldview,” “story,” and “conceptual framework” will largely be used interchangeably.

⁹ The term “Anthropocene” was popularized by chemist and Nobel laureate Paul Crutzen. By the time this essay appears in print, the IUGS will have made its determination. Visit its website to learn more <http://www.iugs.org/>.

¹⁰ John Houghton, the founding co-chair of the Intergovernmental Panel on Climate Change, notes that natural variations in the earth’s orbit (called Milankovich cycles after the Serbian mathematician that discovered them) would eventually usher in a new ice age and the end of the temperate Holocene. “It so happens that we are currently in a period of relatively small solar radiation variations and the best projections for the long term are of a longer than normal interglacial period leading to the beginning of a new ice age perhaps in 50,000 years’ time” (Houghton 2009, 87).

¹¹ “Welcome to the Anthropocene,” *The Economist*, <http://www.economist.com/node/18744401>.

contend that global climate change and the ecological crises it is precipitating are the result of an anthropocentric worldview and narrative that have for millennia sanctioned human dominion over a world denuded of all (intrinsic) value.

Rather than challenging the narrative of human dominance and control over every aspect of nature, the Anthropocene discourse effectively enshrines it in seemingly neutral, objective language. “The vocabulary that we are ‘changing the world’—so matter-of-factly portraying itself as impartial and thereby erasing its own normative tracks even as it speaks—secures its ontological ground by silencing the displaced, killed, and enslaved whose homelands have been assimilated and whose lives have, indeed, but changed forever; erased, even” (Crist 2013, 133). Part of the effect of the Anthropocene discourse’s euphemistic language is to present the threat of global climate change not as the predictable result of an axiologically and metaphysically mistaken worldview, but as an environmental challenge to be “managed” through the application of ever more aggressive forms of technology, geoengineering the very climate if necessary.¹² It would seem that much of the popular sustainability movement aims to protect, not challenge, our consumption-based model of happiness.¹³

As Dale Jamieson rightly notes, a management approach to global ecological crises such as anthropogenic climate change ultimately fails because it does not properly understand the nature of the problem and, therefore, proposes inadequate solutions. “Science has alerted us to a problem, but the problem also concerns our values. It is about how we ought to live, and how humans should relate to each other and to the rest of nature. These are problems of ethics and politics as well as problems of science” (Jamieson 2010, 142). Global warming is fundamentally a moral problem in that it concerns how we conceive of ourselves and our relationship to nature; it concerns the nature of value; and it concerns humanity’s conceptions of progress and the good life. It is not enough to economically internalize the costs of greenhouse gas-intensive activities (such as burning fossil fuels or eating grain-fed animals) or to create low-carbon forms of energy and transportation, although these changes are certainly needed. Ultimately, “management approaches are doomed to failure ... [because] the questions they can answer are not the ones that are most important and profound. The problems posed by anthropogenic global climate change are ethical as well as economic and scientific” (146). I would suggest that explaining and defending the importance of this claim is a crucial first step in demonstrating to scientists, economists, and policymakers the importance of philosophy to addressing global climate change. As Jamieson insightfully notes, “Economics may be able to tell us how to reach our goals efficiently, but it cannot tell us what our goals should be or even whether we should be concerned to reach them efficiently” (147). Of course, the analysis and scrutiny of the ultimate aims of human existence and its place within the wider cosmos has been a central task of philosophy for millennia. And for nearly half a century environmental ethicists have sought to expand this conversation to include the nonhuman world as well.

To sum, my concern is that the Anthropocene discourse embraces and codifies a management approach to our ecological problems. To be sure, many who make use of the Anthropocene discourse do so out of a desire to reverse its effects. But by leaving unchallenged and even geologically enshrining human dominion over nature, it takes off the table the very changes needed to address the crisis. As Crist puts it, “The very concept of the Anthropocene crystallizes human dominion, corraling the already-pliable-in-that-direction human mind into viewing our master identity as manifestly destined, quasi-natural, and sort of awesome” (Crist 2013, 141).¹⁴ If

¹² “For the Anthropocene discourse our purposeful effects must be rationalized and sustainably managed, our inadvertent, negative effects need to be technically mitigated—but the historical legacy of human dominion is not up for scrutiny, let alone abolition” (Crist 2013, 131).

¹³ For more on this see chapters 3 and 4 of my *Riders in the Storm* (Henning 2015b).

¹⁴ “The Anthropocene discourse delivers a Promethean self-portrait: a genius if unruly species, distinguishing itself from the background of merely-living life, rising so as to earn itself a separate name (anthropos, meaning ‘man,’ and always implying

we are truly to address the roots of the ecological crises we have created, we must resist the “Promethean self-portrait” provided by the Anthropocene discourse. (131)

2. The Ecozoic Era

But what, one might reasonably ask, is the implication of rejecting the Anthropocene discourse? First, rejection of the Anthropocene discourse does not entail the rejection of the claim, supported by a considerable body of scientific evidence, that human activity is collectively a geological force shaping the planet. This would now seem indisputable. Indeed, following the cultural historian Thomas Berry (1914–2009), I would go even further and contend that the collective impact of human activity is bringing about not merely the end of a geological epoch, but of a geological era.¹⁵ Decades before Paul Crutzen’s talk of the Anthropocene epoch, Berry defended the claim that human activity is not just bringing about the end of the Holocene Epoch (which began some 11,700 years ago), or even the end of the Quaternary Period (which began 2.588 million years ago). Rather, Berry contends that we are witnessing, and bringing about, the end of the Cenozoic Era (which began 65.5 million years ago). My aim in introducing Berry’s claim is not to enter into the geological debate that will soon be decided by the IUGS, but as a means to recognize the magnitude of the changes taking place, while simultaneously rejecting the anthropocentric narrative underlying the Anthropocene discourse. In a sense, envisioning what comes after the “terminal Cenozoic Era” was the primary objective of much of Berry’s long life. Indeed, as we will see, Berry thought such envisioning is the “Great Work” of this generation and the next. If this is true, philosophers have a significant role to play in such work.¹⁶

Berry is convinced that in precipitating the end of the Cenozoic we have arrived at a critical point in the Earth’s history. As he puts it, humanity has the choice whether to embrace a “nonviable Technozoic-Industrial era” or set about the work of transitioning to an “Ecozoic-Organic era” (Berry 2015, 60). The similarity between Berry’s understanding of the Technozoic era and the previous discussion of the Anthropocene discourse is notable. The aim of the Technozoic era is to extend human dominion over the earth and then out into the rest of the solar system and beyond. Although this possibility may seem like science fiction, it is increasingly clear that many within the scientific and corporate communities are actively working to realize this possibility.¹⁷ Just how far down this path we’ve already proceeded became clear to me recently when participating in the Blumberg Dialogues on Astrobiology, cohosted by the Library of Congress and NASA <<http://www.loc.gov/today/pr/2015/15-082.html>>. During the course of the dialogues it became clear that many within industry and science are actively pursuing a path toward “colonizing” the solar system. The devastating legacy of colonialism on our own planet seemed not to have even occurred to most of the scientists and NASA staff attending the dialogues. Similarly, the idea that there should be some form of ethical review of efforts to discover and interact with microbial life on other planets—perhaps analogous to institutional review boards (IRBs) or institutional animal care and use committees (IACUCs)—was met with a mixture of lip service and resistance. This experience made starkly apparent that as our species increasingly moves out into the rest of the solar system we bring our environmental ethics (or the lack thereof) with us. At present, the dominant

‘not-animal’), and whose unstoppable and in many ways glorious history ... has yielded an ‘I’ on a par with Nature’s own tremendous forces” (Crist 2013, 131).

¹⁵ In order of descending length of duration, the units of geochronology are as follows: Eon, Era, Period, Epoch, Age, and Chron.

¹⁶ In my recent book *Riders in the Storm: Ethics in an Age of Climate Change* (Henning 2015b), written with an undergraduate audience in mind, I develop many of these themes more extensively, including a discussion of the shortcomings of the sustainability and stewardship narratives and the need for Berry’s richer alternative.

¹⁷ See, for instance, “Asteroid Mining May Be a Reality by 2025,” Mike Wall, Space.com, August 11, 2015 <<http://www.space.com/30213-asteroid-mining-planetary-resources-2025.html>>.

anthropocentric worldview places virtually no moral limits to human use and exploitation of the Earth, our solar system, and beyond. In contrast to this Technozoic trajectory, Berry contends that the Ecozoic era is to be built on a new narrative, a new conceptual framework that invites humans to reconceive of what they are and how they are related to the cosmos.

As Berry presents it, the key to transitioning to the Ecozoic era is for humans to shed their arrogant and illusory anthropocentrism and to become finally an integral part of the Earth community:

What is needed is a bonding of all the various forms of life on the planet Earth into a single, yet differentiated, community. Even beyond the living forms, there is the urgency to establish a comprehensive community of all the constituents of the planet, both the geological and biological components. Even beyond this, there is the necessity for humans to recognize the unity of the universe itself. There is ultimately only a single community. No community at any level can survive that is not founded in the unity of the universe. Every component of the universe is a subsystem of the universe system. (Berry 2015, 83)¹⁸

Humanity must begin to recognize that it is a part of the wider community of beings, not apart from it or lords over it. In a sense, then, the key to bringing about the Ecozoic era is not merely for humans to include nonhumans in their moral community, but to recognize more fundamentally that the human community is a part of the wider planetary, solar, and cosmic communities.

Many will recognize more than a passing similarity between Berry's position here and Aldo Leopold's land ethic (although as far as I can tell Berry does not make more than passing references to Leopold and seems to have come to his own views independently of Leopold). In his *ursprung* 1949 essay "The Land Ethic," Leopold argues that the gradual expansion of the moral community is a sort of ethical evolution (1949, 202–03). He contends that the key to bringing about the next stage in ethical evolution is for humanity to reenvision how it conceives of itself and its relationship to nature. "[A] land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect of the community as such" (204). It is, Leopold writes, an "evolutionary possibility and an ecological necessity" that we recognize that we are a part of the wider "biotic community" (203). Or, as Berry puts it:

We misconceive our role if we consider that our historical mission is to "civilize" or to "domesticate" the planet [or the solar system!], as though wildness is something destructive rather than the ultimate creative modality of any form of earthly being. We are not here to control. We are here to become integral with the larger Earth community. The community itself and each of its members has ultimately a wild component, a creative spontaneity that is its deepest reality, its most profound mystery. (Berry 2000, 48)

The aim is not to become more benevolent "stewards" of nature. We are not here to manage, control, or fix nature, but to become "integral with the larger Earth community." The notion of "integrity" or becoming "integral" is central to this transition.¹⁹ The call for humans to become "integral" is also echoed by Crist, who notes that, "Integration calls for embracing our planetary membership" (2013, 144):

¹⁸ "In reality there is a single integral community of the Earth that includes all its component members whether human or other than human. In this community every being has its own role to fulfill, its own dignity, its inner spontaneity. Every being has its own voice. Every being declares itself to the entire universe. Every being enters into communion with other beings. This capacity for relatedness, for presence to other beings, for spontaneity in action, is a capacity possessed by every mode of being through the entire universe" (Berry 2000, 4).

¹⁹ It is noteworthy in this context that in his recent Papal Encyclical, *Laudato Si'* (2015), Pope Francis gives a central role to the notion of "integral ecology." "An integral ecology is also made up of simple daily gestures which break with the logic of

Integration within an organism, an ecosystem, a bioregion, a family, or a community signals a state of being within which gifts of wellness can flow. Being integral, along with the kin quality of possessing integrity, means working harmoniously together, enhancing and complementing one another, supporting mutual flourishing, respecting distinct identities and appropriate boundaries, and experiencing union-in-diversity. (Crist 2013, 143)

Again, the compatibility of this position with Leopold's land ethic is notable. The goal is to overcome the conqueror mentality and to embrace a land ethic in which an activity is right insofar as it preserves the integrity, stability, and beauty of the biotic community and wrong when it tends otherwise (Leopold 1949, 224). Thus, the Great Work²⁰ of this moment in humanity's history is to conceive of ways of living that are "mutually enhancing" rather than mutually destructive (Berry 2000, 3; 2015, 97).

Although here I can do little more than note it, it is important to recognize that this transition to the Ecozoic era requires a fundamental rejection of the dualistic and reductionistic metaphysics which have for centuries (arguably for millennia) bifurcated humans from the rest of nature and refused to recognize nature's intrinsic value. Part of this realization is bound up in the recognition that "the universe is composed of subjects to be communed with, not of objects to be exploited" (Berry 2015, 38).²¹ Contrary to the narrative created by, for instance, modern metaphysics, nature is not best understood as a vast machine.²² With Alfred North Whitehead I have argued that the metaphor of organism is far more adequate in describing the reality revealed by contemporary science. Indeed, Whitehead's "philosophy of organism" is among the richest, and most neglected, philosophical projects of the twentieth century. Reacting to the scientific revolutions of evolutionary biology, relativity theory, and quantum mechanics, Whitehead develops systematically a metaphysics that fundamentally repudiates the mechanistic account of nature as valueless, vacuous actuality in favor of a nondualistic, nonreductive relational ontology that conceives of interdependence, value, and beauty as the most pervasive features of reality.²³ Every being is constituted by its relationship to the whole and is a unique achievement of beauty and value for itself, for others, and for the whole. My own work attempts to develop a kalocentric or beauty-centered form of ethics out of this conceptual framework.²⁴

In this context it is not necessary to get lost in the details of such a position, for at stake here is the proper framing of the problem. What Berry, and in a sense Leopold and Crist, are contending is that the transition to an

violence, exploitation and selfishness. In the end, a world of exacerbated consumption is at the same time a world which mistreats life in all its forms" (166). See my "Stewardship and the Roots of the Ecological Crisis: Reflections on *Laudato Si'*" (Henning 2015c).

²⁰ "Our own special role, which we will hand on to our children, is that of managing the arduous transition from the terminal Cenozoic to the emerging Ecozoic Era, the period when humans will be present to the planet as participating members of the comprehensive Earth community. This is our Great Work and the work of our children" (Berry 2000, 7–8).

²¹ "That future can exist only when we understand the universe as composed of subjects to be communed with, not as objects to be exploited.... Intimacy with the planet in its wonder and beauty and the full depth of its meaning is what enables an integral human relationship with the planet to function. It is the only possibility for humans to attain their true flourishing while honoring the other modes of earthly being" (Berry 2000, x–xi). See also Berry 2015, 17–18 and 96.

²² For more on this see Henning and Scarfe (2013).

²³ Although there was nothing systematic about Berry's work, he did at times explicitly embrace a form of pansubjectivism. "Indeed, since the universe is a singular reality, consciousness must, from its beginning, be a dimension of reality, even a dimension of the primordial atom that carries within itself the total destiny of the universe" (Berry 2015, 65). However, like much of Berry's work, such passages are better taken as suggestive than systematic. See also, "Throughout its vast extent in space and its long sequence of transformations in time, the universe constitutes a single multiform sequential celebratory event. Every being in the universe is intimately present to, and is influencing, every other being in the universe" (Berry 2015, 23).

²⁴ For more on a kalocentric approach to ethics, see Henning (2005, 2009). I am currently working on a new monograph on what might be called "environmental metaphysics," which extends and expands on this earlier work.

Eozoic era requires that humans reconceive of themselves and their relationship to the broader natural world. This is not about inventing a new technology or a novel economic model. But neither is it “a change simply in some specific aspect of our ethical conduct” (Berry 2000, 105). What is required is far more fundamental. “What is demanded of us now is to change attitudes that are so deeply bound into our basic cultural patterns that they seem to us as imperative of the very nature of our being, a dictate of our genetic coding as a species” (Berry 2000, 105). In a very real sense, then, the Great Work before us is no less than “to reinvent the human—at the species level, with critical reflection, within the community of life-systems, in a time-developmental context, by means of story and shared dream experience” (Berry 2000, 159). Philosophers have a critical role to play in this work.²⁵

By way of conclusion, I appropriate with modification Leighton’s passionate call for philosophers to respond to the greatest existential threat of their age: Global climate change is emerging as one of the most momentous crises in the history of our species. On us teachers fall, I think, a heavy share of the burden of responding to the crisis. If the thirst for unnecessary consumption continues, we may all be either inundated or extinct. If philosophers remain content to pursue the owl habit of reflection only in the soft evening twilight of abstract speculation, they are in for a long and dreadful night. Much of life on Earth is poised on a razor edge over an abyss. To say that we philosophers have no responsibility in this hour of decision is a counsel of cowardice and despair. I believe that you and I and all of us are confronted with the challenge to choose whether we shall knuckle down to the tyranny of anthropocentrism or march forward with resolute wills toward the dawn of an Earth community in which all forms of life are respected—a biotic community set free.

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²⁵ Not only do philosophers need to become more engaged in addressing climate change, but there needs to be the inclusion of more diverse philosophical voices as well. For instance, despite more than forty years of scholarly work developing biocentric and ecocentric approaches to environmental ethics, very few of the edited collections on climate ethics include such perspectives. For instance, the 2010 Oxford volume, *Climate Ethics: Essential Readings*, edited by Stephen M. Gardiner, Simon Caney, Dale Jamieson, and Henry Shue, seems to include no biocentric or ecocentric approaches. On the other hand, Cambridge’s *The Ethics of Global Climate Change*, edited by Denis G. Arnold, does include an essay by Clare Palmer, “Does Nature Matter? The Place of the Nonhuman in the Ethics of Climate Change.” Hopefully this marks the trend toward more balanced analyses of the ethics of climate change.

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