Ethics in the Anthropocene: a research agenda

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Introduction

The quantitative evidence that, collectively, humans are a geological force has raised significant challenges for planetary stewardship (Steffen et al., 2011a). The prospect that humans are in (or are on a trajectory to enter) the Anthropocene fundamentally challenges basic assumptions of modern thought, such as: dualisms separating humans from nature, conceptions of unique human agency, and the presumption of progressive norms, such as liberty, that the planet is capacious enough for individual acts to be thought of as disconnected from the peoples, species, and processes once rendered as "others." In response to evidence that the planet is not empty, but full, many social scientists have begun revisiting understandings of governance, agency, and human-environment interaction across a suite of disciplines, such as anthropology, economics, geography, and political science (i.e. Biermann, 2014; Irvine, 2014; Latour, 2014; Wapner, 2014; Brown and Timmerman, 2015; Castree, 2015; Lövbrand et al., 2015). These efforts find common cause with considerations of what the Anthropocene implies for history, law, labor, and the humanities (Chakrabarty, 2009; Szerszynksi, 2012; Purdy, 2015; Wark, 2015).

For some, however, modes of thought premised on a human/nature dualism are beyond redemption. This is not only because such dualisms helped to legitimate and facilitate the Anthropocene in ways that produced large social inequalities through the appropriation of "nature" (e.g. Malm, 2016; Haraway, 2015; Moore, 2015). Rather, it is because the Anthropocene itself is not merely a powerful combination of humans and nature but a novel

formulation of how humans are understood with respect to the Earth system (see Hamilton and Grinevald, 2015). This conceptual novelty has been mobilized by Hamilton et al. (2015: 5) to argue that, "there has been no biological adaptation and no cultural learning or transmission to prepare us for the kind of environmental/geological changes that loom." Pushing this line of argument further, Hamilton et al. (2015: 8) argue that, in the Anthropocene, "conventional ethics" seeking universal maxims for right action (deontology) or those that make calculations of human welfare (consequentialism) mistakenly apply old normative categories in a new era that demands new conceptual foundations for achieving human dignity. As Hamilton et al. (2015: 8) state:

> "It is not enough to describe as 'unethical' human actions that are causing the sixth mass extinction of species in the 3.7 billion-year history of life on the planet…Talk of ethics renders banal a transition that belongs to *deep time*, one that is literally Earth-shattering. In deep time, there are no ethics."

It is certainly the case that the magnitude of global environmental change in the Anthropocene warrants a close examination of existing ethical precepts. Current rates of carbon released into the atmosphere are unprecedented over the past 66 million years (Zeebe et al., 2016), rapid sea level rise will displace millions of people (Hauer et al., 2016) and, according to Wilson's (2016) calculations, heading off mass species extinction will require preserving half of the earth for biodiversity protection (see also Kolbert, 2015). Such forecasts add to the litany of converging crises regarding climate change, forced migration, water scarcity, and ocean acidification, to name only a few of the coalescing factors resulting from the "great acceleration"

of human impacts on the Earth system (Steffen et al., 2015). These novel concerns create the possibility that structurally entangled systems of economics, climate, and the supply-chains securing water, food, and energy could synchronously collapse (Homer-Dixon et al., 2015). Moreover, existing ethical precepts that legitimate the appropriation of the land and labor of "others" through economic systems that render massive harms to humans and non-humans banal are part of the problem. Yet, even if we agree on these points, Hamilton et al.'s (2015) claim that, "no cultural learning or transmission" offers preparatory guidance for the Anthropocene should not be taken lightly.

There are several reasons not to reject conventional ethics altogether, or to dismiss all forms of "cultural learning or transmission" based on fiat declarations about the implications of new geological time periods. First, this too hastily derides many cultural modes of learning and knowledge transmission that do not share modern divides of society from nature, such as those of many non-western cultures. Second, it does not allow for critical engagement with how conventional ethics already motivate calls for planetary stewardship (e.g. Rockström and Klum, 2015). Third, simply rejecting conventional ethics could legitimate and amplify historical inequalities if coupled with claims that previous ethical conventions are no longer applicable despite the obligations created by them. Fourth, any collapse, or significant reconfiguration of the Earth system, will play out over multiple spatial and temporal scales and upon the uneven and inequitable social and political contexts shaped by projects of human development that link humans, the Earth system, the rest of life's commonwealth, and social institutions (see Brown, 2008; Smith, 2008; Nixon, 2011; Sassen, 2014). For these reasons, the fact that the Anthropocene is functionally and stratigraphically distinct from the Holocene (see Waters et al., 2016) should not be conflated with the rejection of all previous modes of cultural learning.

In this paper, we articulate a three part research agenda regarding how ethics both remain relevant to the Anthropocene and at the same time necessitate thinking through transitions implied by the increasing human impacts on the Earth system. This agenda: (1) Reassesses contemporary normative claims posed by calls for substantially enhanced planetary stewardship in the Anthropocene; (2) Identifies novel ethical problems that arise in the Anthropocene; and (3) Reconceives of traditional areas of ethical concern, particularly in the sub-field of environmental ethics. We conclude the paper with remarks on how these three areas are related to understandings of the Earth system in the Anthropocene and the norms governing social worlds.

Three Areas of Ethical Inquiry in the Anthropocene

In ethics, the modern scientific project that took shape after Francis Bacon is frequently critiqued for its aim of achieving "mastery over nature" through a combination of scientific knowledge, technological control, and narratives that position western societies as the rightful stewards of natural and social progress (Merchant, 2004). Critiques of this master-model have shown how it was not limited to nature, but frequently extended to oppress anything "other" based on class, race, or sex (Gaard 2001). The Anthropocene, however, presents a new and important vector for critique because it suggests that the "mastery of nature" project has in a certain sense been achieved, yet without the control of its outcomes promised by western narratives of progress. This fundamentally undermines the parenting cosmology that inaugurated the master-model. One upshot is that the disciplines and institutions developed in reference to it have, in a way, become orphaned. Their scientific and metaphysical parents have died; but they remain alive in pedagogy and practice.

The Anthropocene fundamentally undermines the master-model and forces questions regarding how human histories—not only the history of the west—are understood with respect to the history of the Earth. These twin concerns drive a host of crisscrossing dynamics in the Anthropocene. They undermine one important narrative associated with Eurocentrism and the colonial histories that conditioned how globalization took shape and the rationale for extending one version of "development" globally. Of course, even this history is not homogeneous and projects of wealth maximization, environmental control, and structural forms of violence varied considerably (Sachs, 1999; Smith, 2008; Escobar, 2012). The upshot is that modern modes of global governance refract social conflicts (see Murphy, 1994). A key component linking these diverse projects, however, is that the cumulative, if inequitably produced, effects not only impact the Earth system but also constrain the social and political options for governance responses. For instance, as Mitchell (2011) shows, understanding the foundational role of carbon in the formation of modern democracies is key to understanding the power relations of global geopolitics (see also Malm, 2016).

Our discussion of ethics below is constrained primarily to western ethical traditions, though in recognition that they did not develop in isolation (see also Latour 2011). But, as made evident above, we also do not employ the Anthropocene to sunder connections to previous modes of cultural learning, including ethics. . Rather, in what follows, we situate these ethical traditions at a crossroads for research that engages not only with the novel aspects of the Anthropocene, but also with the obligations implicit and explicit in the present distribution of resources and power. Hence, while contemporary science may form a basis for rejecting assumptions about the mastery of nature, it is by no means straightforward, or necessarily desirable, to use a scientific narrative as the sole or even central basis for ethics in the

Anthropocene. To do so risks reproducing colonial assumptions about the reference point for human stories being located in the west and its practices of knowledge production. There are many legitimate ways of knowing; and understanding ethics in the Anthropocene requires a disposition open to these rich alternatives. In what follows, we raise questions for an open research agenda and clarify why it is needed.

(1) Re-assessing present norms

Myopic moral horizons. The Anthropocene challenges the temporal and spatial horizons of ethical action, especially the habits of short-term thinking by a variety of actors. As such, ethics in the Anthropocene must acknowledge and grapple with how individuals and organizations conceive of, and take action in relation to, long-term environmental challenges and problems like climate change. At the same time, technologies for visualizing and modeling the Earth system across time and space—both in historical reconstructions and future projections—not only provide new insights regarding human actions, they also shape the way we understand human-Earth relationships (Mirzoeff, 2014). However, anthropological studies also reveal that many cultural groups have robust conceptions of, and responsibilities to, both the past and the future that are not premised on western science but on the ontologies of their own cultures (Scott, 1996; Berkes, 1999; Kohn, 2013). Because these groups are affected by global environmental change, moral horizons in the Anthropocene are affected by: (1) The multiple temporal and spatial scales at which impacts of human activities are understood, and (2) The multiple temporal and spatial horizons by which obligations are understood.

False Friends? There are a number of axioms that have provided rationale for social and economic systems in which accelerating human appropriation of resources has been part of a broader ethos of progress. Yet it is now widely recognized that this acceleration is producing harms as well, and in many cases undermining the stability of planetary life support systems. Among the axioms that have produced these contradictions are: (1) Liberal notions of human freedom in which a division between private actions and public responsibility fails to connect individual actions to the Earth system (Smith, 2011; Brown, 2012); (2) Theories of economic growth as an unqualified good that produce negative ecological and social consequences that undermine the presumed link between growth and progress (Brown and Garver, 2009, Smith, 2008); and (3) The presumption that the defining feature of the human-Earth relationship is one of property, a view criticized as a cornerstone of the master-model and of colonization (Hall, 2010; Losurdo, 2011). There are, no doubt, numerous other axioms that further serve to show how previous ethical dispositions matter in the Anthropocene, such as in the long-standing debate over human population growth and environmental limits (Sabin, 2013).

The West's Burden? Additionally, a deep ethnocentrism often links the above axioms. For instance, Eurocentric narratives often distinguish between pre-modern and modern periods, with the latter being associated with the era in which sources of metaphysical authority are allegedly replaced (or at least significantly repositioned) by positive sciences and secular law (Taylor, 2007). This divide has frequently been reproduced to establish what counts as cultural difference, either to legitimate the domination of others under forms of colonial or imperial rule or, alternately, for positioning others as ripe for a project of "development" that aligns with the normative claims of Eurocentric societies (Said, 1978; Chakrabarty, 2008). It is alleged that there

is a duty to bring others into modernity—a "civilizing mission" that echoes, not all that distantly, the duty to save souls from eternal damnation; Or, in another guise, to cultivate a "will to improve" through international development programs (Li, 2007). In the Anthropocene, these challenges remain salient, particularly the possibility for a repeat endeavor in which contemporary transitions to a "green economy" reposition the scientific and technical expertise of the global North over the global South (Escobar, 2012).

(2) Novel Concerns

Establishing Responsibility. The establishment of a new epoch in Earth's history, the Anthropocene, has been brought about—or least hastened and intensified—by a relatively small subset of humans claiming a vastly disproportionate share of the Earth's resources (Moore 2015). This raises pressing questions regarding who comprises this subset, what they owe to others, and how the material and institutional inequalities within and between nations should be addressed. Further, it has prompted consideration of how many species collectively shape the planet in ways well beyond human control (LeCain, 2015). Placing humans as one geological agent among many has challenged human exceptionalism—the claim that humans alone are subjects, and the rest of nature merely objects (see Latour 2014). And this has raised novel problems with respect to moral responsibility. On the one hand, simply being able to have effects on others is not sufficient to establish moral responsibility. For instance, volcanic eruptions are potentially devastating but not moral events. On the other hand, it is exceedingly difficult to establish responsibility for small, cumulative, and seemingly inconsequential actions by both individuals and communities that, when taken together, cause massive irreversible harm (Jamieson, 2014).

Ashford (2007) has argued that even if individual actions are only harmful in their cumulative effect, or if those actions simply magnify the harm, individuals are still responsible for them. By contrast, others argue we must understand what is reasonable to expect of people to understand with respect to how their actions may affect others (Lichtenberg, 2014). With respect to the latter, the Anthropocene poses new problems about living on a full planet in which individual actions can affect others through non-linear relationships.

History and fairness. Considerations of distributive justice cannot be separated from the past that produced them. Considerations of fairness have a second distributive component because the ecological relationships presently available for maintaining life's flourishing are constrained by the impacts of a dominant group—the one that has hastened our entry into the Anthropocene. Consequently, the starting place for ethics has not been cooperatively produced nor does it reflect an agreement from an ideal community as political liberalism may hold. Rather, the current milieu reflects the deeply unequal conditions that made contemporary capitalism, and liberal societies founded on it, possible: slavery, colonial rule, post-colonial imperialism, at times brutal state planning, and claims to sovereignty over an evolutionary store of social and ecological goods (Scott, 1998; Beckert, 2014; Worster, 2016). On the other hand, there have been real gains in terms of human rights, quality of life, and many other dimensions of human life as a result of the Western project of the last two centuries worth preserving. As Chakrabarty (2014) has argued, however, there is a clear methodological rift between how scientific accounts of the planet fit with global histories of human societies, such as those of capitalism. These kinds of rifts do not relieve moral burdens. Rather, they create new kinds of ethical concerns that arise in the very telling of planetary histories of the earth or global narratives of human history.

Which Anthropocene? The narratives framing the social and ecological challenges of this new geological era are central to orienting its normative disposition going forward (Berkhout, 2014). Indeed, there is already a contest between self-styled eco-modernists, who advocate for notions of a "good Anthropocene," and those who identify the Anthropocene in terms of crisis (see Dalby, 2016; Hamilton, 2015). Advocates of the good Anthropocene argue that, through innovation and technology, social and ecological challenges can be reframed as a moment to co-design the Earth system in a way that moves beyond the failed society/nature binaries. There are significant hurdles to this view; including the paradoxical effects of technological solutions that drive higher rates of consumption (see York, 2006; York et al., 2003). Conversely, the assumption of eco-modernists that the power to fundamentally alter the Earth system through new technologies—from geoengineering to nanotechnology—equates meaningfully with enhanced control is a tacit moral judgment not yet well defended, although it is increasingly being seriously entertained as climate tipping points loom (see Hamilton, 2013; Keith, 2013).

Telling it like it isn't? Debates over good versus bad Anthropocenes raise new questions for value theories over what kind of Earth is being valued. Contests over 'good' versus 'bad' Anthropocenes cannot be divorced from what is being valued in the first place. Rather than embrace a "good Anthropocene," some scholars would like any such epoch to be as short as possible—with a hasty return to the conditions of the Holocene a preferred goal. Critically, even once a value theory is agreed on, critical normative judgments remain regarding how to achieve it. As Kysar's (2010) remarkable analysis makes evident, traditional forms of environmental decision making, such as risk-analysis and cost-benefit analysis, cloak normative judgments in

the technical garb of objectivity. And there is an increasingly fraught relationship between maintaining rigor in the empirical descriptions of the planet offered by Earth System Science and the ways in which science is used in decision making (Latour, 2015; Harding, 2015). For instance, new methods of ecosystem valuation are constrained to models of ecological systems that fit economic assumptions, thus rendering putatively progressive forms of valuation blind to important and valuable ecological functions and services (Norgaard, 2010). Here, then, the Anthropocene raises novel ethical challenges regarding not only about the nature of new framings of human-Earth relationships, but also about how to transition to them.

How do we anchor ethics in the absence of a stable Holocene? The Anthropocene is a storm in which ethics and science are entangled: ethical systems moderate behaviors that shape the Earth system, while new categories often informed by science (i.e. planetary boundaries, 'a safe operating space for humanity,' novel ecosystems) shape ethical calls for planetary stewardship. **In his classic essay, "The Tragedy of the Commons," Hardin (1968: 1245) argued that the "morality of an act is a function of the state of the system at the time it is performed." In the Anthropocene, however, the state of the Earth system does not provide for the kind of functional stability assumed by, but largely unacknowledged within, conventional ethics. For instance, the ability of consequentialist ethics to reliably estimate consequences, let alone predict the full ramifications of actions in non-linear systems, is very limited. Likewise, deontological ethics presume upon stability in time and over space as a condition for articulating universal maxims. The human-induced flux on the Earth system characteristic of the Anthropocene challenges how, or if, conventional ethics may be reliably anchored.** Compounding this ethical challenge are the effects of political and economic

institutions that fund and legitimate scientific inquiry and findings regarding the state of the Earth in ways shaped by the worldview of their sponsors—variously private or public—such that power subtly shapes science through processes of co-production (see Jasanoff, 2004). **As a result, even though the Earth system has always been evolving, the new intersections between epistemology and ethics in the Anthropocene create novel moral challenges**.

(3) Rethinking Traditional Concerns

Re-thinking Anthropocentricism. There is a long-standing critique in environmental ethics that environmental problems are tied to *anthropocentrism*: the view that all and only humans count morally. The "*anthropo"* of Anthropocene has itself been interpreted as yet a further confirmation of this bias (Haraway, 2015). However, some ethicists, like Leopold (1966), held that cosmological uniqueness was not intrinsically bad. What was unethical was degrading the Earth and its ability to support life. Parsing benign forms of anthropocentrism from those that create a geologically tilted bias may be an important element of finding common ground among the world's axial religions (i.e. Christianity, Islam, and Judaism). This concern is linked to a second, wherein the register of human rights forms a key framework for securing opportunities for human flourishing, yet often without explicit reference to environmental harms those rights may produce (Eckstein, 2010). Human rights often reflect an interpretation of anthropocentrism that embeds predominantly Western ways of understanding the human condition. Yet, at the same time, they are often mobilized to achieve non-western ends (see Schmidt and Mitchell, 2014). Here, then, the form of anthropocentrism critiqued by traditional environmental ethics

needs to be repositioned as part of a deeper ethnocentrism which tries to synthesize diverse cultural views into one normative baseline for identifying and pursuing good lives.

Avoiding a tyranny of science. How should scientific accounts of human impacts on the Earth system be understood in reference to concerns that eco-feminist, indigenous, and post-colonial scholars have been identifying for decades? In addition to the problems with the master-model noted above, the realities of the poor are often not considered in responses to environmental degradation (Guha, 2000). The worry here is that scientific accounts could reframe concerns in the Anthropocene in ways that further delegitimize alternate forms of cultural knowledge and embodied practices and, in so doing, reproduce and reinforce injustices (Zylinska, 2014). In their recent intervention, Finney and Edwards (2016)—from their respective positions on international and North American commissions of stratigraphy—argued that new geological time periods should not be conflated with political statements. Echoing this sentiment in our opening departure from Hamilton et al. (2015), here we may add that using Earth system science to augur for entirely new normative categories makes the strange claim that marking a sedimentary layer satisfies the philosophical conditions for *when to reject* old norms and pursue new ones.

A Kaleidoscope of Change. A perennial concern of environmental ethics and justice has been with both the temporal impacts and distribution of harms, such as for future generations, and the spatial impacts of actions, such as soon to disappear island nations or poorer populations that unequally bear the burdens of pollution and other forms of degradation. In the Anthropocene, the comparison of goods and harms faces a unique difficulty because, especially in rapidly changing emergent systems, temporal and spatial relationships are subject to unexpected, even sudden,

substantial, and novel change (Helbing, 2013). Hence, while the Earth system has never been static—and indeed persists as a far-from equilibrium system—a new era in which the outer bounds of variability are altered creates serious ethical difficulties. Rapid rates of change may exceed the adaptive capacity of social-ecological systems, pushing them beyond tipping points and transforming relationships. For this reason, the transformation of relationships over time and space create a novel and important area for rethinking traditional ethical inquiry in light of global environmental change.

Proximate Care/Distant Indifference? What works well for one context—culture, place, or people—may not work in another. While the emergence of post-materialist norms and behaviors may appear feasible in the affluent strata of western societies, there are populations all over the world that continue to struggle to meet their basic needs in terms of health, food, water, education, and quality of life. Moreover, post-materialist norms in one place often result from the off-shoring of industrial manufacturing and consequent pollution and exploitive labor conditions. Yet, as development scholars now point out, the promise that modernization will provide jobs and wages for the unemployed in developing regions is simply not a reality for large numbers of individuals (Ferguson, 2015). The upshot is that the presumed trajectory through modernization to post-materialism is not only untenable; it fails to even be a tide that reaches, let alone lifts all boats.

The Earth System, Pluralism, and Value Judgments

In 1987, *Our Common Future* stated that "the earth is one but the world is not" (World Commission, 1987). With this remark, one of the founding texts of sustainable development anticipated a significant normative challenge in the Anthropocene. Namely, how to respond ethically to previous political projects that presumed upon a stable planet to connect multiple social worlds to one Earth now that accounts of the Earth system are marked by emergence and surprise. This paper has presented numerous dimensions to this problem. Of course, scientific assessments of the Earth system do not tell us what we ought to do. By the same token, however, the empirical picture the Earth system is critical because it identifies a problem of vast temporal and spatial scope and identifies human actions as contributing to it. Here we take up several interrelated ethical themes regarding science, power, and ways that human histories are situated in relation to geological narratives.

One of the central ethical questions that arises is how the alignment of "many worlds" to "one earth" might proceed without entrenching unequal power relationships that align science with social orders that benefit traditionally powerful actors. This question has figured centrally in assessments of how the practices through which accounts of the Earth are offered—satellite imagery, paleo-climatic reconstructions, oceanic observation, and so on—form a common picture of human impacts on planetary systems in the Anthropocene (Lövbrand et al., 2010). They also form a common picture of the "human" that social scientists are increasingly mobilizing to add their insights to (see Castree et al., 2014). To date, placing humans within the Anthropocene has frequently made use of several narrative techniques—from Martin Rudwick's (2007; 2014) accounts of geohistory, to the 'geologian' Thomas Berry's (1999) call for a shift to a mutually enhancing "Ecozoic" relationship between humans and the planet. Conceptual antecedents of the Anthropocene have also functioned to connect, for instance, Teilhard de

Chardin's domain of evolutionary self-knowledge—the noösphere—to Vernadsky's notion of the self-organizing biosphere (see Steffen et al., 2011b). Another approach to crafting a new narrative is the "Big History" project, head-quartered at the Big History Institute at Macquarie University (https://school.bighistoryproject.com/) that sees human history through the lens of cosmic evolution and contemporary evolutionary science. Recently, Lisa Sideris (2015) has offered a detailed critique of many of these narrative projects for how they seek to naturalize Earth's—or even the universe's—history into narratives that ground judgments regarding social or political order. She critically demonstrates the ways these narratives contrast with, and often do not capture how, the direct experiences that people have with their environments affect the values that take shape through them.

There are many legitimate histories and forms of knowledge production that arise from diverse cultures the world over that affect understandings of what we ought to do given the plight of the planet. Indeed, the use of history to produce global knowledge is not neutral (Hulme, 2010). For instance, cultural practices shaped the production of the "normal" climate that provides the baseline for estimating anthropogenic climate change (Hulme et al., 2009). It is no secret that debates over the relationships of science to public policy occupy the space wherein uncertainty and risk are interwoven with histories of colonialism, conservation, development, politics, and climate change—and the study of them (Ferguson, 1990; Escobar, 2012). What we are identifying is that to gain purchase on these complex cases, like others in which the boundaries between facts and values is blurred, ethical judgments cannot be avoided (see also Williams, 1985).

In the Anthropocene, legitimate contests over histories include those over conventional ethics and previous forms of the cultural transmission of knowledge. The fact that an array of

findings regarding global environmental change and human impacts on the Earth system raise new difficulties is not, of itself, an argument for rejecting all previous forms of cultural knowledge transmission. Indeed, the modern project of mastering nature gave rise the form of scientific knowledge that is part of the heritage for the Anthropocene sciences themselves. In fact, the claim that the novelty of the Anthropocene equates to entirely new ethics can itself be seen as a kind of new Enlightenment claim—where western knowledge claims a unique normative position not with respect to nature, but with respect to the Earth system.

Conclusion

There are many ethical issues at stake in approaching, understanding, and making decisions regarding the intersection of human histories and geological time. Furthermore, the existing routes to global coordination, and the path dependencies created by previous efforts in environmental governance, constrain the field of options (Dryzek, 2014). As Conca (2015) astutely observes, many global institutions for environmental governance operate on an "unfinished foundation." For example, the United Nations institutions that address environmental issues focus primarily on issues of development and international law and all but ignore how the other two pillars of the UN mandate—to ensure peace and promote human dignity—should be mobilized to address humanity's escalating impact on planetary systems. These too are ethical concerns. As Jennings (2016) suggests, forums for "civic governance" should actively cultivate virtues, such as humility, for decision making in the Anthropocene**. Virtue theorists, such as Jamieson (2014) and Williston (2015) have argued that large-scale uncertainties and struggles to address collective action problems can be helpfully addressed through non-**

contingent dispositions of character, such as justice, truthfulness, and hope. As Brown and Schmidt (2010) also argue, virtues directed towards "compassionate retreat" present a way to meet obligations to humans and non-humans that were created by attempts to control the Earth system even as efforts are made to retreat from that misguided aim.

Albert Schweitzer (1987: 314) once noted that, "resignation is the vestibule through which we enter ethics." Something similar holds for the Anthropocene, where previous ethical norms require reassessment and novel problems arise in what are often metaphysical blind spots. It is increasingly evident that the ideas found in the 'orphan' disciplines—of which we have only considered ethics—that helped propel the planet into this new geological era must be rethought. Although existing ethical systems may be inadequate for the Anthropocene, we cannot simply discard as inadequate all previous forms of cultural knowledge transmission. With our brief foray into the types of problems and research questions that the Anthropocene poses, we hope to stimulate a broader discussion on how we might begin to grapple with ethics in the Anthropocene.

Acknowledgments

The authors would like to thank the following people for their generous input: David Christian, Kesha Fevrier, Wes Jackson, Bruce Jennings, Maria Juncos, Brendan Mackey, Kevin Manaugh, Stephano Menegat, Greg Mikkelson, Robert Nadeau, Sophia Sanniti, Colin Scott, Henry Shue, Lisa Sideris, Will Steffen, Louise Vandelac, Julianne Warren, and Frank Zelko. The authors would also like to thank the anonymous reviewers for their constructive comments. The Social Sciences and Humanities Research Council of Canada supported this research.

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