Rethinking cosmopolitan solidarity:
Nuclear harm from a cosmic point of view

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It is obvious that the nuclear age has radically changed man’s relation to nature and to his fellow men.¹

Hans Morgenthau, 'Death in the Nuclear Age' (1961, 231)

Introduction

People tend to think of ‘harm’ as being limited to the individual human body or psyche.² For many cosmopolitans, such shared vulnerability forms the basis of a common or universal solidarity. And yet a crucial aspect of the cosmopolitan response to the emergence of nuclear harms is that they violate the global biosphere on which all life depends. Nuclear weapons, arguably more than any other form of harm, prompt the thought since an otherwise localized activity produces intergenerational and transnational—or even global—effects. The objective of this paper is to query the role of nuclear harm to the biosphere—and of ecology—for the expression of a cosmopolitan or common solidarity.³ Whilst in this paper I don’t go so far as to propose or defend a new, cosmopolitan environmental ethic (or whether one is at all possible), I do argue that remedying the absence of ecology from any viable

¹ Unfortunately, as with many of his peers, Morgenthau was of a mind to use gendered language. As other cases arise in other people’s writing throughout this paper, please refer back to this note on what I take—irrespective of the era—to be bad practice. For seminal feminist critiques of Morgenthau’s work in particular and the nuclear literature in general, see Tickner (1988) and Cohn (1987) respectively.

² It must be noted that there are a good many scholars who call on some notion of harm in relation to nonhuman animals or plants, however invariably in this view, plants and animals are variously found to either have basic human traits such as sentience or some form of discernible instrumental value to humans, and are therefore assigned to an enlarged category of ‘humanity’. Linklater’s (2011a) seminal account of the problem of harm in world politics limits moral considerability to human emotion and physical pain, suffering and vulnerability.

³ Notably, in recent interviews Paul Crutzen has revised his claims as to the precise beginnings of the Anthropocene epoch to coincide with the introduction of nuclear weapons into world politics in 1945 (see also Steffen et al. 2011, 849). Crutzen (2002) had earlier been said to be in the late eighteenth century, ‘when analyses of air trapped in polar ice showed the beginning of growing global concentrations of carbon dioxide and methane’, although the accuracy of this revision is contested by Zalasiewicz and others (2008). Whilst this contention is likely to have little bearing on the deliberations of the geological community in relation to the validity of the Anthropocene as a geological epoch, this explanation does have a significant amount of explanatory value for a broader trend that Steffen, Crutzen, and McNeill (2007) have termed the ‘Great Acceleration’.
cosmopolitanism is important given the diverse range of scholars such as Hans Morgenthau, Kenneth N. Waltz and Hannah Arendt who turn to cosmopolitan notions of community in response to the emergence of nuclear war.⁴

This paper therefore proceeds as follows. First, I briefly outline the contours of the cosmopolitan response to nuclear harms, with a particular emphasis on theorists who engage with questions relating to the international or the global aspects of political life. Second, I argue that disrupting long-held notions of shared vulnerability to the human body and psyche in this way poses fundamental problems for cosmopolitan international theory, which is otherwise focused on human duties, rights and obligations. Third—and lastly—I conclude by briefly speculating as to the value of a better scholarly understanding of nuclear harms might have for cosmopolitan international theory. In so doing, I intend for this paper to solicit comments on a larger project in its developmental phase that began its life within the field of international and global ethics, but which has seen me to enter into the terrain of environmental ethics for the first time.

**The cosmopolitan response to nuclear harms**

Several decades before planet Earth was scientifically accepted as operating as a single, self-regulating system (with interlinked processes and subsystems), a select yet diverse group of thinkers began positing that nuclear weapons had an intrinsically cosmopolitan character that would challenge the security and survival of all humanity. The most startling of admissions came from realists such as John Herz, Reinhold Niebuhr and Hans Morgenthau. For instance, in 1959 John Herz (1959, 303) wrote that nuclear weapons presented an ‘[...] unprecedented condition that has befallen mankind,’ before going on to add that, ‘the first thing to realize is that the situation confronts for the first time the whole human race as one group’. Likewise, writing in the early 1960s, Hans Morgenthau (1962, 174) concluded that, ‘[i]f a nation cannot resort to nuclear weapons without risking its own destruction, how can it support its interests?’ This realisation prompted Morgenthau (1962, 169) to go so far as to posit that the advent of nuclear weapons was the ‘first qualitative change in the history of

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international relations’, which had resulted in ‘a veritable revolution, the only one in recorded history, in the structure of international relations’ (Morgenthau 1962, 179).

Reflecting on Morgenthau’s nuclear ethics, Steven P. Lee has since suggested that ‘there is a revealing parallel between those views and the view of liberals, and ethicists more generally, on the moral problem of nuclear weapons’. For Lee, ‘Morgenthau’s insight is that nuclear weapons create an inconsistency’ between the realist equivalents: usus in bello (i.e. the prudential justification for conduct in war) and usus ad bellum (i.e. the prudential justification for going to war) such that Morgenthau later concluded that ‘[t]he feasibility of an all-out atomic war has completely destroyed the rational relation between force and foreign policy’. Despite having earlier suggested that one solution might be to fight a limited nuclear war (perhaps in order to retain the coherence of his theory), Morgenthau (1961, 285) later concluded that ‘[n]uclear destruction destroys the meaning of death by depriving it of its individuality [and] the meaning of immortality by making both society and history impossible’. And so whereas, ‘[t]his longing [for the unity of humanity], in times past mainly [was] a spiritual or humanitarian impulse, in the nuclear age has been greatly strengthened by the desire, innate in all men, for self-preservation’. In terms that might justify characterising Morgenthau as the first ‘fallen realist’, he reached the stunning conclusion that:

The way out of the dilemma is to transcend the two equally unacceptable alternatives of surrender or fighting a suicidal atomic war, and that means taking nuclear power out of the arsenal of individual nations altogether [by] some kind of supra-national agency which we may call a world government, because this is what it would be.

As Campbell Craig (2003, 165) notes about the writings of Reinhold Niebuhr, Morgenthau and Kenneth Waltz, ‘[a]ll three eventually chose to favor an atheoretical program for great-power [nuclear] war avoidance over philosophical consistency.’ On the abandonment of Niebuhr and Morgenthau’s hard-line policy towards the Soviet Union, according to Craig, ‘[t]hey made this decision because they each concluded that a political philosophy that justified thermonuclear war in the name of human

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5 Lee (2006) is of course here speaking of ‘ethicists’ trained in Western moral philosophy—namely the Just War tradition—although elsewhere he does engage with other, non-Western secular and religious perspectives. Whilst Lee does not conceive of Just War Theory beyond the traditional distinction between the moral justification for going to war (jus ad bellum) and the morally justified conduct in war (jus in bello), a number of moral philosophers have sought to introduce a third category: the morality of war at termination (jus post bellum). However, the issue of ecosystem damage remains outside the scope of jus post bellum. On the point about justice after war, see Orend (2002) On the point about Lee’s awareness of non-Western nuclear ethics, see Hashmi and Lee (2004).


8 I refer here, of course, to Ken Booth (1994; 1997) who in describing himself in such terms, made no reference to Morgenthau’s own plight despite suggesting that nuclear weapons were central to his thinking.

survival had become, by definition, absurd'.\textsuperscript{10} For his part, until his death in 2013, Kenneth Waltz remained resolutely in support of his 1981 nuclear deterrence optimism thesis, which posits that nuclear weapons proliferation was useful in order to keep the peace.\textsuperscript{11} One notable feature of Waltz's ‘rational deterrence theory’ for present purposes, is that Waltz was concerned with keeping the peace in an international anarchical system where relations between rational states was always tenuous: nowhere in his writings on the subject did Waltz mention the ecological stewardship that might result from such an outcome, whether by design or as an ancillary benefit.\textsuperscript{12}

Writing as one of the forefathers of neoliberal international thought as well as the author of a seminal volume on nuclear ethics in the mid-1980s, Joseph S. Nye Jr. said nothing of attendant problems of ecology. In a recent attempt to inaugurate a ‘renewed research agenda’ for the subfield of nuclear ethics, Thomas E. Doyle II summarises Nye's five influential ‘nuclear-ethical maxims’ that combined Kantian duty-based and consequentialist principles. As Doyle notes, the emphasis was on the latter:

1. self-defense is a just but limited cause, 2. never treat nuclear weapons as normal weapons, 3. minimize harm to innocent people, 4. reduce risks of nuclear war in the near term, and 5. reduce reliance on nuclear weapons over time.\textsuperscript{13}

Thus, whilst Nye did not directly address the ecological dimensions of nuclear harms, in his elucidating points (2) and (3), Nye did open the door to problematising both on the basis—broadly understood—that nuclear weapons might reasonably be said to be not ‘normal’. As a result, we can see that Nye (1986, 50) only problematizes the restrictive notion of ‘harm’ that limits moral considerability\textsuperscript{14} quite explicitly to ‘innocent people’, as opposed to some larger category of humanity, let alone what one might refer to as the nonhuman world. Despite the seminal status of Nye's book among nuclear ethicists, it leaves the ecological dimension of nuclear harm wholly unresolved. Certainly, Nye's latter

\textsuperscript{10} However Craig (2003, 116) controversially concludes that whilst Waltz held firm to his realist philosophy and advocated the spread of nuclear weapons to keep the peace, such a move was ‘theoretically devastating’ since it relied on the emotion of fear (a unit-level variable), and not the distribution of material power (a structural variable) which was antithetic to the mechanics of his own theory of international politics. (see also Rosenthal 1991; Russell 1990; Smith 1990).

\textsuperscript{11} Consistent within Waltz's (1979; 1981) writings on nuclear deterrence is his strong aversion to the word ‘proliferation’, which from the time of his earliest works on the subject in 1979, Waltz saw as relating to growth ‘by rapid production of parts, buds, or cells’. For Waltz's subsequent discussion of nuclear deterrence in relation to contemporary cases such as Iran, Libya, North Korea, and South Asia, see Sagan and Waltz (1995; 2003; 2012) and Rapp-Hooper and Waltz (2011).

\textsuperscript{12} It is worth noting that Waltz did concede that the rational solution to such threats was world government, or a world state. This was rejected because Waltz did not believe it practical. I thank Shannon Brincat for alerting me to this particular nuance in Waltz's line of argument.

\textsuperscript{13} Doyle (2010, 291) goes on to note how Nye's maxims have been central to policy formation under both Richard Nixon and Ronald Reagan, as well as the present Barack Obama administration.

\textsuperscript{14} The term, moral considerability, comes from Goodpaster (1978), and may be taken to mean moral standing in the course of ethical thinking. Goodpaster was himself advancing the idea that all things have a good of their own, independent of others, however his theory was limited to living creatures.
remains on nuclear war suggest that the bridge is worth building. For instance, speaking in a recent interview, neo-liberal Nye (2013) reasoned that:

    [...] a global ethic would require the combination of two things... [There is a] horizontal dimension of a global ethic: how do we treat others; how do others treat each other [...] There is [also] a vertical dimension, which is how we treat the planet and what we are leaving to future generations [...] Nuclear war is bad for both dimensions.

Hannah Arendt (1968) chose instead to emphasise the public display of violence and injustice associated with nuclear weaponry, which she saw as 'the most potent symbol of the unity of mankind', in eliciting a 'negative solidarity' based on the realisation of 'the remote possibility that atomic weapons used by one country according to the political wisdom of a few might ultimately come to be the end of all human life on Earth'. Jeffrey C. Isaac (1994, 224), in a review of Arendt's work alongside that of Camus, regards her statements here as 'the ultimate expression of modern powerlessness'. Indeed, for Arendt, alongside totalitarianism, nuclear war rendered 'meaningless' both traditions of justification for political violence: the Greek and Roman sacredness of life more than the self, and the Judeo-Christian respect for the bare fact of life itself. Writing in 1958, Arendt (2011) stated in no uncertain terms that the sacrifice inherent in political violence can only possibly be desirable if there is something to survive for, and that the very prospect of nuclear war calls into question 'the whole political and moral vocabulary in which we are accustomed to discuss these matters'. This is because, for Arendt (2007a), the prospect of nuclear war forces a 'more radical, more aggressive, and more desperate' question than merely 'what is the meaning of politics?', which becomes '[d]oes politics still have any meaning at all?' The impetus for this more forceful—and arguably more fundamental—line of argument is Arendt's awareness of:

    [...] the monstrous development of modern means of destruction over which states have a monopoly, but which never could have been developed without that monopoly and which can be employed only within the political arena. Here the issue is not just freedom but life itself, the continuing existence of humanity and perhaps of all organic life on earth.

Despite the importance that Arendt placed on nuclear violence, Jonathan Schell has lamented the fact that Arendt (2007a) never gave nuclear weapons a sustained book-length treatment, which he finds remarkable given her life-long fascination with genocide and violence to cultural 'plurality'. For Schell, Arendt's most strident writing on the nuclear question can be found in her posthumously published works of otherwise dormant manuscripts, The Promise of Politics (2005). Described by Schell as a 'plum pudding' of incomplete thoughts and unrefined lines of argument about the meaning of politics, Arendt turns her attention quite directly to the nuclear question in stating that alongside totalitarianism, nuclear weapons 'ignite the question about the meaning of politics in our time' which is so central to Arendt's oeuvre. For Arendt (2007a), '[t]hey are fundamental experiences of our age, and if we ignore them it is as if we never lived in the world that is our world. It is here that Arendt goes further by most directly evoking the scientific fact of humanity's cosmic origins in both cosmic life and death processes and its literal bringing home to Earth via processes of nuclear technology:
[...] for it is not natural processes that are unleashed here. Instead, processes that do not occur naturally on earth are brought to earth to produce a world or destroy it. These processes themselves come from the universe surrounding the earth, and in bringing them under his control, man is here no longer acting as a natural organic being but rather as a being capable of finding its way about in the universe, despite the fact that it can live only under conditions provided by earth and its nature.\footnote{15}

More important still is the passage where Arendt (2007b) asserts that, in relation to this ‘horror of an energy that came from the universe’:

The emergence within politics of the possibility of absolute physical annihilation is that it renders such a retreat totally impossible. For here politics threatens the very thing that, according to the modern opinion, provides its ultimate justification—that is, the basic possibility of life for all of humanity.

To emphasise: whilst Arendt (2007b) does not give sustained attention to the nuclear question, she does enough to suggest that the nuclear age has installed the use of force between and within states as ‘the foremost political issue of our time’. Since, for Arendt (2007b), the ‘ancient mistrust’ of the domination so central to politics has ‘been transformed again’ by the prospect of nuclear war, such that ‘[o]ut of this fear arises the hope that men will come to their senses and rid the world of politics instead of humankind’. This is because in the nuclear age, the ‘production and destruction’ become ‘intertwined’ and ‘almost indistinguishable phases of the same ongoing process’, has been disrupted such that ‘since the discovery of atomic energy, this is no longer the case’. For Arendt (2007b), the nuclear age meant that a large part of the human predicament was now also ‘supernatural’ in that ‘unleash[ing]’ these otherwise cosmic processes on Earth had ‘produce[d] a world that is thoroughly nonnatural’.

This brief survey illustrates that even amongst otherwise contending voices of Arendt, Morgenthau, and Nye among others, the idea that nuclear harms are generally said to have prompted us to question why such diverse theorists evoke cosmopolitan notions of shared humanity in response to the intergenerational and transboundary dimensions of nuclear annihilation, and whether it is possible (or advisable) to add ecology to cosmopolitan international thought.\footnote{16}

\footnote{15}A note of clarification on this point is necessary, for in Arendt’s attempt to emphasize humanity’s shared nuclear origins in all matter, and in my discussions with various colleagues on related notions, I have heard others then take the nuance of Arendt’s claim beyond the limits of scientific credulity. Suffice to say, whilst it is true that the same processes that create nuclear fusion in thermonuclear weapons is precisely and exactly the same process as that which occurs inside all stars in the cosmos, the science has long suggested that nuclear fusion only occurs at much lower temperatures than those expected to have given rise to the Big Bang. Although it has not yet been established what caused the Big Bang, there is no suggestion that nuclear fusion is the source of all life—a process that is itself dependent on other factors such as the interplay of cosmic dust and the pervasive force of gravity.

\footnote{16}This is not to suggest that Arendt, Morgenthau and Nye engaged in a meaningful dialogue; Nye makes no mention of Arendt or Morgenthau in his monograph (or ecology for that matter), and both Morgenthau and Arendt were writing at a time which proceeded the emergence of the subfield of nuclear ethics by several decades, and so did not see occasion for either to cite the other’s work.
The absence of ecology from cosmopolitan international theory

At the heart of the inquiry is a concern with the manner in which contemporary cosmopolitan thought continues to neglect the ecological dimensions of harm. That is to say, thinking exclusively in terms of harm to humans has tended to detach the human from Earth’s biosphere, that is, dislodge them from the greater cosmos, in which they dwell, and of which they are a part. In the international and global ethics literatures the dominant strands of political and moral cosmopolitanism require that our lived reality as fragile beings, on a frail and faltering planet, appears to be put aside in favour of a restrictive view of moral considerability that remains exclusively human-centric. Questions posed in such a mode are often framed with respect to positive and negative duties under contemporary conditions of globalisation, in a world marked by separate political communities, or in accordance with the principles of justice, liberty and equality, as they pertain to humans. Where the human-biosphere relationship is discussed by international and global ethicists, the biosphere—our planet—is often rendered static and stable, and thus of little to no moral relevance at all. Literatures in the subfield of nuclear ethics focuses almost exclusively on the normative implications of nuclear deterrence for Just

17 The Russian scientist Vladimir Vernadsky (1998) first conceived planet Earth as a ‘system’—a biosphere—in 1926, although these works were not translated into English for many decades.

18 I take international ethics and global ethics to be similar, yet distinct modes of inquiry. Consulting two recent introductory texts suggests that both approaches may be considered to be the study of human duty in relation to strangers. For Richard Shapcott (2010, 11), ‘the fundamental question of international ethics [is] how should members of “bounded” communities, primarily nation-states, treat outsiders?’ By way of contrast, Kimberley Hutchings (2010, 1) defines global ethics as, ‘a field of theoretical inquiry that addresses ethical questions and problems arising out of the global interconnection and interdependence of the world’s population’. Here, it is worth noting how Shapcott consciously amplifies the importance of bounded political communities, whereas Hutchings (2010, 10) asserts (rightly, I believe) that ‘globalization processes have broken down the ethical significance, in principle, practice, or both, of the boundaries of political community’. Put more simply still, whilst Shapcott’s world is principally concerned with problematizing the moral relevance of insider/outsider distinctions, Hutchings proposes that we do so with a mind to also investigate the ethical content and dilemmas that humans owe to each other beyond such borders. Furthermore, according to Hutchings (2010, 10), cosmopolitan thought is defined by ‘a connection to the cosmos or universe, a material and spiritual order that transcends the actual social and material conditions of humanity’. For present purposes, suffice to say that Hutchings’ invitation to explore the normative aspects of the non-human ‘world’ must be taken further if we are to be in a position to address the central question of the project.

19 Shapcott (2010, 5) neatly expresses the scope of concern as relating to three types of relationships: (1) ‘what “we” do to “them” (and vice versa); (2) “what “they” do to each other”; and (3) “what “everyone” does to “everyone” else’.

20 The majority of the introductory or overview texts on international and global ethics do not dedicate sustained attention to the human-biosphere relationship or the nonhuman world. In fact, concerns such as those described here are given only a cursory mention throughout. Partly, the lack of engagement can be explained by the lack of interest and/or expertise of the relevant authors, although the absence of the nonhuman world remains worth noting. Three such texts that do include chapter-length treatments of the nonhuman world are by Heather Widdows (2011) and Nigel Dower (1998), as well as a contribution by Oran Young (2001) to an edited volume.

Widdows (2011, 229) dedicates a chapter on the ‘global environment and climate ethics’; however the author does concede that the nine proceeding chapters, which included an ‘ethical toolbox’ of methods, approaches and assumptions for the aspiring global ethicist, are too ‘human-centric and anthropocentric’ to account for global environmental change. Writing in Goiça and Warner’s edited volume, Oran Young (2001, 161) focuses his discussion on ‘the roles that ethical standards or codes of conduct actually play in global environmental politics’. Elsewhere, Dower (1998, 160) provides a more nuanced account of the environment, finding that ‘the ethical debates about the environment do not naturally mesh in with the issues concerning international relations [...] though they are very relevant because environmental problems are nowadays essentially global’. Whilst Widdows, Young and Dower’s accounts have much value, they too will not provide a pathway with which to proceed.
War thinking, although the core debates that took place in the early- to mid-1980s did come to establish the moral ontology of nuclear weapons were ‘different-in-kind’ (i.e. an altogether new form of evil) rather than merely ‘different-in-degree’ (i.e. and no more morally different than other weapons).\(^{21}\) Ken Booth (1997, 96) has argued for the reconceiving of nuclear strategy as a form of ‘applied ethics—a continuation of (moral) philosophy with an admixture of firepower’ (see also Booth 1979). Similarly as John McNeill (2010, 444) has contended, despite the unusual absence of the nonhuman world from discussions of nuclear politics and policy, ‘[o]ne cannot easily disentangle the many roots of modern environmentalism [from studies of the Cold War].’\(^{22}\) Similarly, many of the seminal texts in Environmental Ethics leave absent any detailed discussion of the particular problems associated with the ecological dimensions of nuclear weapons, although here the resources for redressing the absence of ecology from the prevailing notions of harm—so central to contemporary cosmopolitan thought—are more plentiful than they are in either the nuclear or global ethics literatures.\(^{23}\)

And yet as inhabitants of planet Earth, humans must individually and collectively face the shared vulnerability to ‘planetary boundaries’. That is to say, all complex life depends on the ‘Earth system’ continuing to operate within the planet’s critical thresholds, of which global warming is only the most widely known and appreciated.\(^{24}\) Thus, in denying all beings and matter beyond the human body an

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21 For an interesting discussion of various consequentialist and deontological permutations, see Hardin and Mearsheimer (1985) For the seminal hybrid approach, see Nye (1986). It is worth noting how, in a recent monograph of ‘critical scholarship’ on Just War thinking, it was suggested that there is in fact a ‘questionable moral difference between the use of conventional and nuclear weapons’, although this claim only appeared in the book’s sleeve and is not repeated by the author. However the contributor of the chapter on nuclear war, Alexy Royden (2014, 125), instead asks whether ‘a conventional ballistic missile attack is a more just means of responding to global threats’ than are nuclear weapons.

22 Whilst he does not choose to define his meaning of the biosphere in relation to the Cold War, McNeill (2010, 423 and 422) uses the concept only once to refer to ‘human relations with the biosphere’, by which it appears he means for it to stand-in for all ‘environmental dimensions of the conflict’.

23 The vast majority of overview and reference works include no sustained discussion on nuclear weapons at all, largely because the nuclear danger is seen as less probable than climate change, or as having been diminished following the Cold War. This observation is curious since environmental ethics might be said to have come into being following the publication of Rachel Carson’s (1962) Silent Spring and Paul Ehrlich’s (1968) The Population Bomb, both of which were inspired by ‘explosions’ of different kinds. Indeed, writing earlier, Arendt (2007a) highlights the emergence of ‘explosions’ in human affairs, whereby ‘supernatural’ and ‘natural processes’ such as the release of atomic energy (whether peaceful or not) have ruptured the traditional proposition that the ability to destroy and the ability to produce’ is no longer ‘unconditional’ since ‘the first atomic bomb was a horror of an energy that came from the universe.’ Notable exceptions include recent work by Robin Attfield (2011), Clare Palmer (1997) and Kristin Shrader-Frechette (2002). For instance, in addressing the more general problem of ‘the ethics of extinction’, Robin Attfield draws parallels between ecological collapse and nuclear, as well as biological or chemical weapons use. Attfield (p.20) goes on to note how nuclear harms are ‘global in the distinct sense of being mediated by global systems, and [is] thus [one of the] globally systemic problems’. Elsewhere, Clare Palmer directly engages the problem of nuclear power and weapons, while Kristin Shrader-Frechette discusses Chernobyl from a global environmental justice perspective.

24 The term ‘planetary boundaries’ was introduced in 2009 to refer to a series of nine ‘critical thresholds’ for thinking about ‘abrupt global environmental change’. Rockström (2009; 2009) and his colleagues warned that if any one (or more) of these planetary boundaries were to be transgressed, it ‘may be deleterious or even catastrophic due to the risk of crossing thresholds that will trigger non-linear, abrupt environmental change within continental- to planetary-scale system’.
inherent or intrinsic value—and any moral status—we tend also to overlook what George Wald famously described in 1964 as the ‘necessary condition[s] for life’, such as clean air and safe drinking water.25 Harm to the biosphere by humans,26 even from an instrumental anthropocentric perspective, is therefore also harm to our present and future selves.27 In rethinking the human in these terms, it is in fact the Earth that looms large.28 Despite this, the moral purview of all but a few global ethicists remains one in which, according to Val Plumwood, ‘the rationalist hyper-separation of human identity from nature’ has pervaded Western moral thought since the Enlightenment; because of their pretence to universalism, contemporary cosmopolitans in particular may be said to have neglected to bring ‘nature’ back in, or indeed to have conceived of it as being ‘in’ in the first place.29 For cosmopolitan thought to remain relevant and desirable in a world punctuated by global environmental change, it must respond to (or provide compelling reasons as to why it remains silent about) the most truly universal of all challenges that face all life on this planet: catastrophic ecosystem decline. That is to say, if the cosmopolitan ideal is to have any sustained value at all, it must maintain the utopian goal of moral and political universalism from an altogether new, cosmic perspective.30 Thus the bar to clear for those professing universalism—however thick or thin—is now even higher. None of what has been said so far should be taken to mean that centuries of cosmopolitan thought must be forgotten, erased and discarded; rather, I argue that contemporary cosmopolitanism needs to be challenged for its human-centeredness, reclaimed from its distinctly Western (and often liberal) formulations, and refashioned into something altogether more global and ecological.

To attain a cosmic perspective on the human predicament it will be helpful to bring the biosphere into the foreground of our thinking. Doing so does not require decentring the human from our moral consideration, but rather involves the more modest task of ‘affirming the interconnectedness and

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25 As Wald (1964, 597–8) notes: ‘If, as we suppose, life first appeared in an organic medium in the absence of oxygen, it must first have been supported by fermentations—Pasteur’s “life without air”’. Crucially for those considering the human predicament, Wald (p608) goes on to conclude that: ‘What is perhaps more interesting is the dawning realization that this problem involves universal elements, that life in fact is probably a universal phenomenon, bound to occur wherever in the universe conditions permit and sufficient time has elapsed.’

26 Ken Booth (1997, 111) prefers to evoke the term ‘cosmic dangers’—or harms—to characterize policies of nuclear deterrence whereby ‘small sections of the world’s population had no hesitation in justifying policies that included the threat of destroying civilized life in, at least, most of the Northern Hemisphere’.

27 Alongside a wide-ranging thesis that claims ‘how well we come through the era of globalization (perhaps whether we come through it at all) will depend on how we respond ethically to the idea that we live in one world’, Peter Singer (2004, 13) evokes the image of humanity—a moral category that, for him, includes all sentient beings—as dwelling within ‘one atmosphere’.

28 For the formulation of this sentiment I am particularly indebted to Tu Weiming’s notion of an ecological turn within neo-Confucian thought, and his notion of anthropocosmic (or, humanity, Earth and Heaven/cosmos) relations. See Tu (1989; 2001).

29 There are several writers working on the periphery of international and global ethics (in International Relations, or on global environmental governance, for e.g.) who have developed sophisticated accounts of the human-biosphere relationship, although not always in terms that would be classified as cosmopolitan. See (Brown 2000; Eckersley 2004; Falk 1972).

30 For a sophisticated—and radical—attempt at performing such a revision to global politics, see Morin (1999).
mutual constitution [of humanity in the biosphere]’ (Mickey 2007, 226). In what follows, I make the case for refashioning cosmopolitan thought in these terms by constructing what I variously call nuclear and biospheric harms.\textsuperscript{31} Nuclear weapons, in particular, represent a form of harm which is seldom theorised from the more fundamental perspective of the harm caused: the weaponisation—and with it the immanent destruction—of Earth’s zones of life.\textsuperscript{32} This task involves reimagining nuclear harms as biospheric harms, and not just humanitarian ones—a perspective that differs considerably from the present groundswell of states and civil society actor initiatives that are designed to ‘refram[e] the issue of nuclear weapons by introducing the humanitarian impacts and humanitarian concerns at the very centre of the discourse’.\textsuperscript{33} Whilst it must be said that a concern for humanitarian principles might well be viewed as an advance on the statist nuclear arms control and nonproliferation discourses that have heretofore dominated the scholarly and policy discourse, the various debates have seldom considered to any great extent the ecological dimensions of the harms caused.\textsuperscript{34} For instance, although nuclear weapons have been tested two thousand and fifty-four times (2054) in the atmosphere, above and below the surfaces of the oceans and the Earth’s crust since the time of Hiroshima and Nagasaki,\textsuperscript{35} popular texts tend to characterise the nuclear issue in purely human-centric terms, specifically in terms of the use of nuclear weapons by humans against humans. For instance, Nina Tannenwald’s (2007, 2) award-winning investigation into the ‘nuclear taboo’ which appeared as recently as 2007 asks: ‘[w]hy have nuclear weapons not been used since Hiroshima and Nagasaki in 1945?’ In this view, nuclear “use” is conceived of as including only harm to humanity, as evidenced in death, injury and suffering, and not in a more expansive sense necessary to consider the

\textsuperscript{31} Elsewhere, I have developed and deployed the notion of harming and being harmed by the biosphere in a variety of settings. For a representative sample, see Taylor (2011; 2012a; 2012b; 2012c).

\textsuperscript{32} I am indebted here to the work of Peter Sloterdijk (2009, 23) into ‘atmo-terrorism’. For Sloterdijk, who it must be noted was instead writing more broadly on the use of lethal gases in contemporary warfare, ‘[…] the gas terrorist’s assault on the air induces desperation in those attacked, who, unable to refrain from breathing, are forced to participate in the obliteration of their own life’.

\textsuperscript{33} In 2013 the Norwegian Government hosted an intergovernmental and global civil society conference on the humanitarian impact of nuclear weapons. This was followed by a conference in Narayit, Mexico in February 2014, and a third conference in Austria in December 2014.

\textsuperscript{34} Despite the enormity of the harms caused by nuclear weapons, it was not until the Second Indochina War of 1961-75 that the ‘environmental impact’ of warfare was more widely understood, although not in relation to nuclear weaponry but chemical and conventional ones. Leading figures in this development were natural scientists such as Arthur W. Galston, Eghert W. Pfeiffer, and Arthur H. Westing as well as chemists J. Perry Robinson and Matthew Mesekon—all of whom travelled to Indochina on numerous occasions during the conflict there. For some notable examples of this work, see (Westing 1976; Westing 1977; Neilands 1971; Robinson and Leitenberg 1971; Robinson 1979). For personal reflections of this work, see (Westing 2012, 3–12).

ecological dimensions of nuclear harms. This situation has arisen because, in the sanitised world of the nuclear security intellectual, testing is not use, and the effects of nuclear weapons are not biospheric.36

**By way of conclusion: introducing the broader research project**

This paper sought to query the role of nuclear harm to the biosphere—and of ecology—for the expression of a cosmopolitan or common solidarity. I argued that remediing the absence of ecology in contemporary cosmopolitan thought is important given the diverse range of scholars who turn to cosmopolitan notions of community in response to the emergence of nuclear war. Additionally, I demonstrated that the boundary issue of nuclear harm demonstrates both the temporal and spatial dimensions of harm that have so far been neglected (or excluded).

Where I intend to go with this line of reasoning is to develop a larger research project in which to probe the meaning of cosmopolitan solidarity in the nuclear age. The objective of the broader research project is to remedy the absence of ecology from the problem of harm in world politics. I ask: What can nuclear harms tell us about cosmopolitan or universal solidarity with the global biosphere? I argue that nuclear harms reaffirm our material and spiritual connection to the global biosphere within a greater cosmos by drawing on East Asian ‘anthropocosmic’ thought (or, the trinity of humanity, Earth, and cosmos), which potentially offers an alternative path with which to traverse the traditional anthropocentric/non-anthropocentric divide. This is demonstrated by way of a detailed engagement with two types of nuclear harm prohibitions—the civil society-led nuclear-free zones and state-sanctioned zones of exclusion—for their anthropocosmic insights.

**Addendum:** I would like to express my deepest thanks to both the conference convenor Philip Cafaro and my respondent Charles Sentell for their patience in receiving this draft. Due to undergoing some unexpected surgery during the process of an international relocation from Australia to NYC, my paper was both rushed and late. I apologise to readers for the incompleteness or errors that have therefore crept into the text.

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36 Let me say a word on a philosophical point that will no doubt be pressing down on many readers already, but which I will arguably otherwise only have begun to have satisfactorily addressed as the project advances. This outstanding question concerns how we are to understand the moral relationship of human beings to, and the intrinsic value and moral status of, the non-human world. Despite the critical importance of that question, for present purposes, all that might need to be said is that any ethical approach that seeks to centre any one or more objects as being of primary moral concern—such as anthropocentrism, biocentrism, and eco-centrism—fails to account for the critical interconnectedness of the biosphere’s various individual components, processes and subsystems. In the global biosphere, the one affects the many. Perhaps enough has been said already to suggest that as the project progresses I will have come to advocate a moral framework that centres neither humanity nor the nonhuman world, but rather asserts the interconnectedness to the fruitful understanding of each of its constituent parts. Rather than reject all anthropocentrism, as some environmental ethicists would have us do, following Tu (1989; 2001) I seek to devise an anthropocosmic approach that avoids all centrism. See also Mickey (2007).
Bibliography


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