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To cite this article: N.A.J. Taylor (2018) The Problem of Nuclear Harm for Andrew Linklater, Lorraine Elliott and Other Contemporary Cosmopolitans, *Global Society*, 32:1, 111-126, DOI: [10.1080/13600826.2017.1395824](https://doi.org/10.1080/13600826.2017.1395824)

To link to this article: <https://doi.org/10.1080/13600826.2017.1395824>



Published online: 13 Nov 2017.



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# The Problem of Nuclear Harm for Andrew Linklater, Lorraine Elliott and Other Contemporary Cosmopolitans

N.A.J. TAYLOR

*In a paper that helped inaugurate the subfield of Environmental Philosophy in 1973, Richard Routley located the seed of Western anthropocentrism in the liberal harm principle. Yet, beginning in the late 1990s, Andrew Linklater began globalising the harm principle with no reference to Routley, or to the enduring debates about the moral status of the non-human world. In this article, I offer a preliminary sketch – no more than that – as to why Routley was right to reject the idea of a harm principle being contained within a non-anthropocentric environmental ethic, and that Linklater, Lorraine Elliott and their contemporary cosmopolitan colleagues – whatever the extent of their human-centredness – have been wrong to ignore him. I do so by intruding the problem of nuclear harm into Linklater’s cosmopolitan account of harm in world politics. Approaching the concept of harm through the prism of the nuclear age is interesting and important, I argue, since it both takes seriously Linklater’s intuition that the cosmopolitan response to the emergence of nuclear harms is evidence of a global harm narrative, and because it serves to ground Linklater’s otherwise abstract theorising in the harm par excellence of world politics.*

## Introduction

It is a commonplace to say that the subfield of Environmental Philosophy began only in 1973. Quite independently, the Norwegian philosopher Arne Naess published a widely referenced scientific article that attempted to characterise the two dominant strands of the ecology movement, at the same time that the Australasian philosopher Richard Routley delivered a much less cited though no less influential paper at conferences in New Zealand and Bulgaria that argued more forcefully that what was in fact needed was “a new, an environmental, ethic”. Whereas Naess sought to articulate “a philosophy of ecological harmony or equilibrium” from within the prevailing ethical theories,<sup>1</sup> Routley called for the complete rejection of approaches that merely perform “a change in the ethics, in attitudes, values and evaluations”.<sup>2</sup> Routley identified as his target the “basic (human) chauvinism” that has prevailed in the West, which he principally located (although not

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1. Arne Naess, “The Shallow and the Deep, Long-Range Ecology Movement: A Summary”, *Inquiry*, Vol. 16, No. 1–4 (1973), pp. 95–100 (p. 99).

2. Richard Routley, “Is There a Need for a New, an Environmental, Ethic?”, in *Proceedings of the XVth World Congress of Philosophy, Varna* (Bulgaria: Sofia Press, 1973), pp. 205–210 (p. 205).

exclusively) in the “restrictive” harm principle that not only requires human interests for it to operate but also for those interests to be harmed in some way.<sup>3</sup> For Routley then, the liberal harm principle was the seed that could only give rise to human-centredness. If there was to be a truly *environmental* ethic that afforded moral status to humans *and* the more-than-human world, Routley reasoned, then a harm principle was unlikely to be fertile ground for cultivating it.

Despite environmental philosophers having now responded to Routley’s call for more than 40 years,<sup>4</sup> there has emerged in the last decade or so an attempt to instead *globalise* the harm principle by the British international theorist Andrew Linklater.<sup>5</sup> Because various harms are inflicted upon and endured by all societies to varying degrees, Linklater’s contention is that the avoidance of unnecessary harm and suffering is one of the most realistic and realisable of all cosmopolitan ethical ideals. He therefore asks what we each may reasonably claim from others: is it a mere negative duty, for example, to do no harm, or is there a more positive obligation to actively assist others? Here, Linklater clearly favours Joel Feinberg’s theorisation of harm in relation to the criminal law, in which it is argued that the obligation to avoid harm extends from proscriptions regarding killing, assault, exploitation and so on to include the obligation to rescue others.<sup>6</sup> Thus, in applying Norbert Elias’s “civilizing processes” thesis to the problem of harm in world politics,<sup>7</sup> Linklater’s central agenda is to track the expansion and contraction of who is, and who isn’t, in the circle of moral concern over long historical periods.

In this way, the concept of harm is being pulled in two competing directions, with Routley on the one hand, and Linklater and his colleagues on the other. That is, whereas Routley’s ethical geometry demands that the liberal harm principle is discarded in order to construct an alternative, non-anthropocentric ethics, Linklater continues to extend the anthropocentrism of the liberal harm principle to encompass the category of humanity. This is because the prevailing Western ethical theory—to the extent that there is a unified theory—is fundamentally informed by the twin, liberal values of the “liberty” and “equality” of human beings. On this view, all non-human beings and things—including animals and plants—are denied moral considerability. Such ethical geometry follows contemporary attempts led by Peter Singer to “expand the moral circle” to include select

3. *Ibid.*, p. 207.

4. See John Arthur Passmore, *Man’s Responsibility for Nature: Ecological Problems and Western Traditions* (London: Duckworth, 1974); J. Baird Callicott, “Elements of an Environmental Ethic: Moral Considerability and the Biotic Community”, *Environmental Ethics*, Vol. 1, No. 1 (1979), pp. 71–81, available: <<https://doi.org/10.5840/enviroethics19791110>>; Roger Lamb, *The Last Man* (Brisbane, 2015).

5. See Andrew Linklater, *The Problem of Harm in World Politics: Theoretical Investigations* (Cambridge/New York: Cambridge University Press, 2011); Andrew Linklater, *Violence and Civilization in the Western States-Systems* (Cambridge: Cambridge University Press, 2017). After more than a decade’s sustained research into the problem of harm in world politics, a third—and final—volume in Linklater’s harm project is in development.

6. Joel Feinberg, *Harm to Others* (New York: Oxford University Press, 1984).

7. It may interest some readers to note that elsewhere I have critiqued Elias’s figurational sociology in relation to football (soccer) fan violence in Britain between 1863 and 1989. See N.A.J. Taylor, “Football Hooliganism and War: Nationalism and Masculinity as Boundaries in Collective Violence”, unpublished Master’s thesis, University of Sydney, 2008; N.A.J. Taylor, “Football Hooliganism as Collective Violence: Explaining Variance in Britain through Interpersonal Boundaries, 1863–1989”, *The International Journal of the History of Sport*, Vol. 28, No. 13 (2011), pp. 1750–1771, available: <<https://doi.org/10.1080/09523367.2011.594682>>.

non-human animals based on their ability to suffer,<sup>8</sup> and later revised and extended to include advances in plant botany.<sup>9</sup> Invariably, however, in this view, plants and animals are variously found to have either 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. According to Val Plumwood, such mere expansions to the ethical circle such as Singer's "does not really dispel speciesism; it only extends and disguises it".<sup>10</sup> In other words, by seeking an expansion to the ethical circle, Linklater entrenches the Western philosophical tradition of operating within what I call the *human frame*.

Recalling Routley's rejection of the harm principle, this article offers a preliminary sketch—and no more than that—of an altogether different approach to critically evaluating Linklater's cosmopolitan harm project. It does so by taking seriously Linklater's claim that the "emergence of a global harm narrative with cosmopolitan potentials" emphasises, but does not explore, the "critical importance" of that entire emancipatory project to understanding "the impact of earlier concerns about the possible effects of nuclear war on human society and the biosphere".<sup>11</sup> Towards this end, this article proceeds as follows. First, I survey the contours of the cosmopolitan response to the problem of nuclear harm, with an emphasis on theorists who engage with questions relating to the international or the global aspects of political life. For this, we survey the ecological content of a diverse range of cosmopolitan theorists, including Hans Morgenthau, Joseph Nye, Kenneth Waltz and Hannah Arendt. At least in relation to nuclear weapons and war, philosophers and strategists are inclined to agree that the nuclear attacks on Hiroshima and Nagasaki represented a harm that was fundamentally different in kind from all others that had gone before it.<sup>12</sup> Second, I intrude Richard Routley's 1973 "last man" thought experiment that has been used as a basis of rejecting anthropocentric notions of harm. In the third—and final—section, I critically evaluate the ecological credentials of contemporary cosmopolitans and find that none provide fertile ground for the task of globalising the harm principle in the ways they seek to, or for rejecting the harm principle, as Routley would demand they do. Specifically, 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

8. See Peter Singer, "All Animals Are Equal", *Philosophic Exchange*, Vol. 5, No. 1 (1974), p. 6; Peter Singer, *Animal Liberation: A New Ethics for Our Treatment of Animals* (New York Review, distributed by Random House, 1975); Peter Singer, *The Expanding Circle: Ethics and Sociobiology* (New York: Farrar, Straus & Giroux, 1981).

9. Matthew Hall, *Plants as Persons: A Philosophical Botany* (Albany, NY: SUNY Press, 2011).

10. Val Plumwood, *Environmental Culture: The Ecological Crisis of Reason* (London: Routledge, 2002), p. 148.

11. A. Linklater, "Human Interconnectedness", *International Relations*, Vol. 23, No. 3 (2009), pp. 481–497 (p. 322).

12. And yet the literature emerging on the problem of harm in world politics largely leaves unaddressed the spatial and temporal dimensions of nuclear harm that was first inflicted on 6 and 9 August 1945—an observation I have, together with colleagues, sought to redress. See N.A.J. Taylor and Robert Jacobs, "Editorial: Re-Imagining Hiroshima", *Critical Military Studies*, Vol. 1, No. 2 (2015), pp. 99–101, available: <<https://doi.org/10.1080/23337486.2015.1061235>>; N.A.J. Taylor and Robert Jacobs, "On Hiroshima Becoming History", in N.A.J. Taylor and Robert Jacobs (eds.), *Reimagining Hiroshima and Nagasaki: Nuclear Humanities in the Post-Cold War* (War, Politics and Experience series) (London: Routledge, 2017), pp. 1–12, available: <<https://www.routledge.com/Reimagining-Hiroshima-and-Nagasaki-Nuclear-Humanities-in-the-Post-Cold-War/Taylor-Jacobs/p/book/9781138201842>>.

and obligations. Doing so is interesting and important since, as Fred Dallmayr—himself a cosmopolitan—has reasoned, “given that the ‘man-nature’ split was first articulated at the onset of modernity ... it seems appropriate also to invoke philosophical remedies”.<sup>13</sup>

### 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. What follows is not a thoroughgoing survey of such cosmopolitan responses, but a brief account of some of the most surprising or else influential scholars in whom such an impulse may be located. For this, we survey the ecological content of a diverse range of cosmopolitan theorists, including Hans Morgenthau, Joseph Nye, Kenneth Waltz and Hannah Arendt. I argue that disrupting long-held notions of shared vulnerability of 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. This is not to suggest that Arendt and Morgenthau or Waltz and Nye engaged in any meaningful dialogue; for instance, 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 that preceded the emergence of the subfield of Nuclear (Weapons) Ethics by several decades, and so did not see occasion to cite the other’s work.

The most startling of admissions came from realists such as John Herz, Reinhold Niebuhr and Hans Morgenthau. For instance, as early as 1959, John Herz 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”.<sup>14</sup> Likewise, writing soon after, Hans Morgenthau 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 to go so far as to posit that the advent of nuclear weapons was the “first qualitative change in the history of international relations”, which had resulted in “a veritable revolution, the only one in recorded history, in the structure of international relations”.<sup>15</sup>

Reflecting on Morgenthau’s Nuclear (Weapons) 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”.<sup>16</sup> For Lee, “Morgenthau’s insight is that nuclear weapons create an

13. Fred Reinhard Dallmayr, *Return to Nature? An Ecological Counterhistory* (Lexington: University Press of Kentucky, 2011), p. 2.

14. John H. Herz, *International Politics in the Atomic Age* (New York: Columbia University Press, 1959), p. 303.

15. Hans Joachim Morgenthau, *The Restoration of American Politics* (Chicago: University of Chicago Press, 1962), pp. 174, 169 and 179.

16. Stephen P. Lee, “Hans Morgenthau and the Unconventionality of Nuclear Weapons: Then and Now” in G.O. Mazar (ed.), *Twenty-Five Year Memorial Commemoration of the Life of Hans Morgenthau* (New York: Semenenko Foundation, 2006), p. 2 and 4. Lee is of course here speaking of “ethicists”

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".<sup>17</sup> 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 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".<sup>18</sup> 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 [it] has been greatly strengthened by the desire, innate in all men, for self-preservation".<sup>19</sup> In terms that might justify characterising Morgenthau, not Ken Booth,<sup>20</sup> 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.<sup>21</sup>

As Campbell Craig 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 survival had become, by definition, absurd".<sup>22</sup> For his part, until his death in 2013,

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trained in *Western* moral philosophy—namely the Just War tradition—although elsewhere he does engage with other, non-Western secular and religious perspectives. While 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*), several 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 Brian Orend, "Justice after War", *Ethics & International Affairs*, Vol. 16, No. 1 (2002), pp. 43–56. On the point about Lee's awareness of non-Western Nuclear (Weapons) Ethics, see Sohail H. Hashmi and Steven P. Lee (eds.), *Ethics and Weapons of Mass Destruction: Religious and Secular Perspectives* (Cambridge: Cambridge University Press, 2004).

17. Sidney Hook et al., Snow, "Western Values and Total War", *Commentary*, Vol. 32, No. 4 (1961), p. 281. as cited in Lee, *op. cit.*

18. *Ibid.*, p. 285.

19. Morgenthau, *op. cit.*, p. 175.

20. See Ken Booth, "Security and Self: Reflections of a Fallen Realist", YCISS Occasional Paper Number 26, *Strategies in Conflict: Critical Approaches to Security Studies*, Centre for International and Strategic Studies, York University, Toronto, Canada, 12–14 May 1994, 1–26; and Ken Booth, "Security and Self: Reflections of a Fallen Realist", in Keith Krause and Michael C. Williams (eds.), *Critical Security Studies: Concepts and Cases* (Routledge, 1997), pp. 83–119.

21. Hook et al., "Western Values and Total War", p. 285.

22. Curiously, Craig concludes that while 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 Campbell

Kenneth Waltz<sup>23</sup> 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. 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 were 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. It is worth noting that Waltz did concede that the rational solution to such threats was world government, or a world state, but that contrary to colleagues, this too was rejected since he did not believe it practical. Waltz was, however, philosophically consistent to the end of his life, even at the political expense of unfashionably arguing that nuclear proliferation was favourable in contemporary cases such as Iran, Libya, North Korea and South Asia.<sup>24</sup>

Writing as one of the forefathers of neoliberal international thought as well as the author of the classic volume on Nuclear (Weapons) Ethics in the mid-1980s, Joseph S. Nye Jr. said nothing of attendant problems of ecology. In a recent attempt to map out a "renewed research agenda" for the subfield of Nuclear (Weapons) Ethics, Thomas E. Doyle II summarises Nye's five influential "nuclear-ethical maxims" that combined Kantian duty-based and consequentialist principles.<sup>25</sup> 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.

While Nye did not directly address the ecological dimensions of nuclear harms, in his elucidating points (2) and (3), he did open the door to problematising both on the basis—broadly understood—that nuclear weapons might reasonably be said to

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Craig, *Glimmer of a New Leviathan: Total War in the Realism of Niebuhr, Morgenthau, and Waltz* (New York: Columbia University Press, 2003), pp. 165 and 116. See also Joel H. Rosenthal, *Righteous Realists: Political Realism, Responsible Power, and American Culture in the Nuclear Age* (Baton Rouge, LA: LSU Press, 1991); Greg Russell, *Hans J. Morgenthau and the Ethics of American Statecraft* (Baton Rouge, LA: Louisiana State University Press, 1990); Michael Joseph Smith, *Realist Thought from Weber to Kissinger* (Baton Rouge, LA: Louisiana State University Press, 1990).

23. Kenneth Waltz, "What Will the Spread of Nuclear Weapons Do to the World?", in ed. by John Kerry King (ed.), *International Political Effects of the Spread of Nuclear Weapons* (National Foreign Assessment Center, Central Intelligence Agency) : for sale by the Supt. of Docs., U.S. Govt. Print. Off., 1979), pp. 165–197; Kenneth Neal Waltz, *The Spread of Nuclear Weapons: More May Be Better* (London: International Institute for Strategic Studies, 1981).

24. For variations of this argument, see Scott Douglas Sagan and Kenneth Neal Waltz, *The Spread of Nuclear Weapons: A Debate* (New York: W.W. Norton & Company Incorporated, 1995); Scott Douglas Sagan and Kenneth Neal Waltz, *The Spread of Nuclear Weapons: A Debate Renewed: With New Sections on India and Pakistan, Terrorism, and Missile Defense* (New York: W.W. Norton & Company Incorporated, 2003); Scott Douglas Sagan and Kenneth Neal Waltz, *The Spread of Nuclear Weapons: An Enduring Debate* (New York: W.W. Norton & Company Incorporated, 2012); Mira Rapp-Hooper and Kenneth N. Waltz, "What Kim Jong-Il Learned from Qaddafi's Fall: Never Disarm", *The Atlantic*, 24 October 2011, available: <<http://www.theatlantic.com/international/archive/2011/10/what-kim-jong-il-learned-from-qaddafis-fall-never-disarm/247192/>> [accessed 18 April 2014].

25. Thomas E. Doyle II, "Reviving Nuclear Ethics: A Renewed Research Agenda for the Twenty-First Century", *Ethics & International Affairs*, Vol. 24, No. 3 (2010), pp. 287–308.

be not “normal”.<sup>26</sup> As a result, we can see that Nye only problematises the restrictive notion of “harm” that limits moral considerability<sup>27</sup> quite explicitly to “innocent people”, as opposed to some larger category of humanity, let alone what one might refer to as the non-human world. Despite the central status of Nye’s book among nuclear ethicists, it leaves the ecological dimension of nuclear harm wholly unresolved. Certainly, Nye’s latter remarks on nuclear war suggest that the bridge is worth building. For instance, speaking in a recent interview, neoliberal Nye 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.<sup>28</sup>

Hannah Arendt 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”.<sup>29</sup> Jeffrey C. Isaac, in a review of Arendt’s work alongside that of Camus, regards her statements here as “the ultimate expression of modern powerlessness”.<sup>30</sup> 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 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”.<sup>31</sup> This is because, for Arendt,<sup>32</sup> the prospect of nuclear war forces a “more radical, more aggressive, and more desperate” question than merely “what is the meaning of politics?”,

26. Joseph S. Nye, *Nuclear Ethics* (New York: Free Press, 1986), p. 50.

27. The term “moral considerability” comes from Kenneth E. Goodpaster, 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, but his theory was limited to living creatures. See Kenneth E. Goodpaster, “On Being Morally Considerable”, *The Journal of Philosophy*, Vol. 75, No. 6 (1978), pp. 308–325.

28. Joseph S. Nye Jr, “Thought Leader: Joseph Nye”, Thought Leaders Forum: Carnegie Council for International Affairs, 2013, available: <<https://www.carnegiecouncil.org/studio/multimedia/20130606b/i>> (accessed 2 May 2014).

29. Hannah Arendt, *The Origins of Totalitarianism: Totalitarianism* (San Diego: Harcourt, Brace & World, 1968).

30. Jeffrey C. Isaac, *Arendt, Camus, and Modern Rebellion* (New Haven: Yale University Press, 1994), p. 224.

31. Hannah Arendt, “Europe and the Bomb”, in *Essays in Understanding, 1930–1954: Formation, Exile, and Totalitarianism* (New York: Knopf Doubleday Publishing Group, 2011), pp. 418–422, available: <[http://books.google.com.au/books/about/Essays\\_in\\_Understanding\\_1930\\_1954.html?id=5872U7QQI8oC&redir\\_esc=y](http://books.google.com.au/books/about/Essays_in_Understanding_1930_1954.html?id=5872U7QQI8oC&redir_esc=y)>.

32. Hannah Arendt, ‘Introduction into Politics’, in *The Promise of Politics* (New York: Schocken Books, 2007), p. 101.

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.<sup>33</sup>

Despite the importance that Arendt placed on nuclear violence, Jonathan Schell has lamented the fact that Arendt 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*.<sup>34</sup> 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, “[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.<sup>35</sup>

More important still is the passage where Arendt 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

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33. *Ibid.*, p. 109.

34. *Ibid.*

35. *Ibid.*, p. 157. A note of clarification on this point is necessary, for in Arendt’s attempt to emphasise 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 credibility. Suffice to say, while it is true that the processes that create nuclear fusion in thermonuclear weapons are precisely the same as those that occur 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.

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.<sup>36</sup>

To emphasise: while Arendt 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”. For Arendt, 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”.<sup>37</sup> For Arendt, 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”.<sup>38</sup>

This brief survey illustrates that even among otherwise contending voices of Arendt and Morgenthau, as well as Waltz and Nye, the idea that nuclear harms are generally said to have prompted us to question why such diverse theorists evoke cosmopolitan notions of shared vulnerability in response to the intergenerational and transboundary dimensions of nuclear annihilation, and whether it is possible (or advisable) to add ecology to Linklater and Elliott’s respective cosmopolitan visions of an ethics of harm.

### Routley’s Response: The “Last Man” Thought Experiment

Although Routley published relatively very little on the nuclear age, and has certainly never been taken up seriously in the nuclear literature, he remains among only a handful of professional environmental philosophers to substantively address the nuclear question.<sup>39</sup> As Routley’s biographer and former student Dominic Hyde has argued, Routley’s writings on the nuclear energy option in the 1970s included more general statements about the vulnerability to “atmosphere heating”, which may well be one of the first inquiries into the ethics of what we now know as climate change.<sup>40</sup> Although Routley’s paper that helped inaugurate

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36. *Ibid.*, p. 110.

37. *Ibid.*, p. 153.

38. *Ibid.*

39. For instance, passing reference is made to Routley’s nuclear thinking in a noticeably small number of texts, such as Benham Taebi’s. See Benham Taebi, “Nuclear Power and Justice between Generations: A Moral Analysis of Fuel Cycles”, doctoral thesis, Delft University of Technology, Delft, Netherlands, 2010. Of all the environmental philosophers, Kristin Shrader-Frechette has—by some margin—been the most active and over the longest period, although she makes scant mention of Routley, presumably on the basis of his strident rejection of the liberal harm principle and consequentialist ethical framework. In addressing the more general problem of “the ethics of extinction”, a notable exception to this tendency can be found in Robin Attfield’s recent work, which draws parallels between ecological collapse and nuclear, as well as biological or chemical, weapons use. Attfield goes on to note how nuclear harms are “global in the distinct sense of being mediated by global systems, and [are] thus [one of the] globally systemic problems”. See Robin Attfield, *The Ethics of Environmental Concern* (Athens: University of Georgia Press, 2011), p. 20.

40. Dominic Hyde, *Eco-Logical Lives: The Philosophical Lives of Richard Routley/Sylvan and Val Routley/Plumwood* (Cambridge, UK: White Horse Press, 2014), pp. 126–127.

the subfield of Environmental Philosophy did not directly address the problem of nuclear harm, it did have something of relevance for Linklater and his contemporary cosmopolitan colleagues who have since sought to globalise the liberal harm principle. So, what did Routley's original formulation of the "last man thought experiment" say, and what did it attempt to show? Routley states:

The last man (or person) surviving the collapse of the world system lays about him, eliminating, as far as he can, every living thing, animal or plant (but painlessly if you like, as at the best abattoirs). What he does is quite permissible according to basic chauvinism, but on environmental grounds what he does is wrong. Moreover, one does not have to be committed to esoteric values to regard Mr. Last Man as behaving badly (the reason being perhaps that radical thinking and values have shifted in an environmental direction in advance of corresponding shifts in the formulation of fundamental evaluative principles).<sup>41</sup>

Thus, the last man is framed by Routley as a "counter example" to the dominant "freedom principle" in Western ethics, by which Routley means to refer to the principle of individual liberty as the "core principle embedded in Western [ethical] systems". Here Routley leaves his reader with no doubt that the chauvinistic principle to which he refers is in fact the liberal harm principle. Ultimately then, under Routley's alternative proposal, "the class of permissible actions that rebound on the environment is more narrowly circumscribed on an environmental ethic than it is in the Western super ethic". Following his engagement with the limiting case paradigms, Routley sees as "none too adequate" the prospect of reformulating the freedom, or harm principle, in which environmental grounds—and only environmental grounds—are sufficient cause to deem those actions morally impermissible. The reason, according to Routley, is the "onus of proof", which would encourage the environmentally attuned philosopher to "scrap it altogether".<sup>42</sup>

Believed to have convinced us that the last man behaved badly in relation to the environment by committing a moral wrong, Routley further modifies his limiting case paradigm such that the "last man" in the singular is replaced by the "last people" in the plural.<sup>43</sup> The reasons for the shift between the examples are many and significant.<sup>44</sup> I won't go into them here, but suffice to say that doing so enables a comparison of moral values of mixed kinds—that is, between instrumental and intrinsic value. Routley appears to introduce a distinction between what is and is not to be warranted moral valuation as well as the circumstances by which Mr Last Man in fact finds himself as the last person on Earth. At no stage within his exposition of either the last man or last people examples does Routley mention the use of nuclear means. In fact, one of the key shifts between the last man and last people thought experiments is the targeted killing of the fish of the seas and only

41. Routley, *op. cit.*, p. 207.

42. *Ibid.*, pp. 208–209.

43. *Ibid.*, pp. 207–208.

44. See Lamb, *op. cit.*; N.A.J. Taylor, "Nuclear Ethics as Ecological Ethics", Paper presented at the British International Studies Association Annual Conference, London, 2015, p. 9; N.A.J. Taylor, "The Problem of Nuclear Harm: An Ethical Ecology", unpublished thesis submitted for the degree of Doctor of Philosophy at the University of Queensland, 2017.

wild animals, something nuclear harms—understood ecologically—cannot do. Routley's last man example therefore attempts:

- (1) to convince us that the existing ethics is inadequate when confronted with the last man example;
- (2) to advance the moral argument without declaring the method or means of harm;
- (3) to prompt us to construct a new, environmental, ethic; and
- (4) to dissuade us from constructing such an altogether new ethic with (even a modified version of) the freedom-limiting, liberal harm principle in it.

### The Ecological Credentials of Contemporary Cosmopolitans

At the heart of the enquiry thus far has been a concern with the way in which contemporary cosmopolitans such as Linklater and Elliott continue 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, thereby dislodging them from the greater cosmos, *in* which they dwell, and *of* which they are a part. As we might expect in these times of planetary crisis, a relatively small number of scholars have questioned the ecological credentials of Linklater's global harm principle. Most notably, in an attempt to account for the presence of so-called *environmental* harms in world politics, Lorraine Elliott has in this very journal contributed the most influential work, at least in so far as impacting upon Linklater's own theorisation of harm in world politics is concerned. In contrast to Linklater, Elliott's approach is to conceptualise global environmental politics as a politics of transnational harm, and to conceive of such harms as an ethical problem, specifically as they become implicated in injustice:

[harm and its consequences] are unevenly distributed and (this is the important feature) that unevenness is unjust, not simply because some are more likely to cause it and others are more likely to suffer it but because the causing and the suffering are increasingly linked in a complex web of responsibility and displacement.<sup>45</sup>

In this way, Elliott seeks to locate a cosmopolitan ethic of concern for others within existing international environmental law, which she concludes "is more rhetorically cosmopolitan than it is cosmopolitan in outcome or consequence".<sup>46</sup> Yet Elliott, as with Linklater, might be said to be subconsciously anthropocentric in her approach in so far as she confines the discussion of environmental harm to that which results in destruction and damage to the environment only in so far as it impacts upon humans. As Elliott reasons:

Environmental degradation, in turn, harms people through the impact of pollution on their health and their lives, through destroying or diminishing the resources available to them and through damaging the ecosystems in which they live.<sup>47</sup>

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45. Lorraine Elliott, "Cosmopolitan Environmental Harm Conventions", *Global Society*, Vol. 20, No. 3 (2006), pp. 345–363 (p. 346), available: <<https://doi.org/10.1080/13600820600816365>>.

46. *Ibid.*, p. 346.

47. *Ibid.*, p. 347.

Elliott and Linklater are therefore wedded to a deeply anthropocentric notion of ethics that continues to loom large in the West, albeit in somewhat different registers or shades. Rejecting, as I do, these human-centred expansions of the ethical circle contra Peter Singer,<sup>48</sup> Audra Mitchell curiously securitises Linklater's formulation of harm so as to account for the cosmos, but does so in a manner that leaves such *cosmic* harms devoid of an author who may be readily assigned moral responsibility.<sup>49</sup> Left absent from Mitchell's formulation is also the generative aspect of cosmic harms, as in the formation of the Earth itself in otherwise potentially harmful cosmic, nuclear processes. Much earlier, Ken Booth evokes the term "cosmic dangers" – rather than the more precise (though no less slippery) moral and legal term *harm* – to characterise policies of nuclear deterrence whereby "small sections of the world's population had no hesitation in justifying policies that included the threat of destroying civilised life in, at least, most of the Northern Hemisphere".<sup>50</sup> As yet, it appears that none of these efforts have successfully added ecology into Linklater's theory of harm in world politics, although the charge of anthropocentrism (or human-centredness) was notably absent from a recent forum on Linklater's cosmopolitan ethical ideal in the *Review of International Studies*, edited by John M. Hobson.<sup>51</sup>

Indeed, 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. Here 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 the study of human duty in relation to strangers. For Richard Shapcott, "the fundamental question of international ethics [is] how should members of 'bounded' communities, primarily nation-states, treat outsiders?"<sup>52</sup> Shapcott usefully captures 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".<sup>53</sup> By way of contrast, Kimberley Hutchings 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".<sup>54</sup> Here, it is worth noting how Shapcott consciously amplifies the importance of bounded political communities, whereas Hutchings asserts (rightly, I believe) that "globalization processes have broken down the ethical significance, in principle, practice, or both, of the boundaries of political community".<sup>55</sup> Put more simply still, while Shapcott's world is principally concerned with problematising the moral relevance of insider/outsider

48. Singer, *The Expanding Circle*, *op. cit.*

49. Audra Mitchell, "Only Human? A Worldly Approach to Security", *Security Dialogue*, Vol. 45, No. 1 (2014), pp. 5–21, available: <<https://doi.org/10.1177/0967010613515015>>.

50. Ken Booth, "Security and Self: Reflections of a Fallen Realist", in Keith Krause and Michael Charles Williams (eds.), *Critical Security Studies: Concepts and Cases* (Oxford: Routledge, 1997), pp. 83–119 (p. 111).

51. John M. Hobson, "A Critical-Sympathetic Introduction to Linklater's *Odyssey: Bridge over Troubled (Eurocentric?) Water*", *Review of International Studies*, Vol. 43, No. 4 (2017), pp. 581–601, available: <<https://doi.org/10.1017/S0260210517000250>>.

52. Richard Shapcott, *International Ethics: A Critical Introduction* (Cambridge: Polity Press, 2010), p. 11.

53. *Ibid.*, p. 5.

54. Kimberley Hutchings, *Global Ethics: An Introduction* (Cambridge: Polity, 2010), p. 1.

55. *Ibid.*, p. 10.

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, 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”.<sup>56</sup> For present purposes, suffice to say that Hutchings’ invitation to explore the normative aspects of the non-human “world” must be taken further if it is to be useful in adding ecology to Linklater’s problem of harm in world politics.

Arguably then, the moral purview of all but a few global (or cosmopolitan) 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.<sup>57</sup> 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.<sup>58</sup> 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-centredness, reclaimed from its distinctly Western (and often liberal) formulations, and refashioned into something altogether more *global* and *ecological*.

Recent work by Anthony Burke has variously attempted or asserted such a cosmopolitanism. For instance, Anthony Burke has begun work on a refashioned “security cosmopolitanism” and, together with colleagues, an ambitious “planet politics” that calls for a new international legal framework that “the cosmopolitan and enmeshed nature of this world”.<sup>59</sup> Particularly useful for present purposes is

56. *Ibid.*

57. Plumwood, *op. cit.*, p. 8. There are several writers working on the periphery of international and global ethics (in international relations, or on global environmental governance, for example) who have developed sophisticated accounts of the human-biosphere relationship, although not always in terms that would be classified as cosmopolitan.

58. For early attempts at performing such a revision to global politics, see Richard A. Falk, *On Humane Governance: Toward a New Global Politics* (Pennsylvania: Pennsylvania State University Press, 1995); Edgar Morin, *Homeland Earth: A Manifesto for the New Millennium*, trans. Anne Brigitte Kern (New York: Hampton Press, Incorporated, 1999). For a more recent attempt, see Anthony Burke, Simon Dalby et al., “Planet Politics: A Manifesto for the End of IR”, Paper presented at “Failure and Denial in World Politics”, Millennium Conference, London, 2015, p. 15; Anthony Burke, Stefanie Fishel et al., “Planet Politics: A Manifesto from the End of IR”, *Millennium—Journal of International Studies* (2016), doi: 10.1177/0305829816636674.

59. See Anthony Burke, “Security Cosmopolitanism”, *Critical Studies on Security*, Vol. 1, No. 1 (2013), pp. 13–28; Anthony Burke, “The Good State, from a Cosmic Point of View”, *International Politics*, Vol. 50, No. 1 (2013), pp. 57–76; Anthony Burke, Katrina Lee-Koo and Matt McDonald, *Ethics and Global Security: A Cosmopolitan Approach* (Routledge Critical Security Studies series) (Abingdon/New York: Routledge, 2014); Burke, Dalby et al., *op. cit.*; Anthony Burke, “Security Cosmopolitanism: The Next Phase”, *Critical Studies on Security*, Vol. 3, No. 2 (2015), pp. 190–212, available: <<https://doi.org/10.1080/21624887.2015.1065109>>; Burke, Fishel et al., *op. cit.*

Burke's promissory note to propose and defend "re-visioned cosmopolitanism" that serves "to displace all egoisms and anthropocentrisms with a viewpoint that exposes their myopia and hubris, and cultivates an ethic that appreciates the miraculous fragility of life on earth", while at the same time eschews the predominant statist ontology associated with much cosmopolitanism.<sup>60</sup> "This enables us to consider what might be 'cosmic' about cosmopolitanism", reasons Burke, thereby opening the door to a "universalism that is not owned and manipulated by humans instrumentally, that might decentre the state, if not the human, from our vision".<sup>61</sup> In developing this sentiment further into a planetary manifesto together with colleagues, Burke locates the impulse for a non-anthropocentric ethics and politics not in Routley's intervention of 1973 but in more contemporary debates surrounding the Anthropocene:

Humans must be concerned with more than just managing their own survival in the decades to come. The Anthropocene confronts us with the condition in which we must redefine the very notion of the human and its freedom. There is, no more, a "human condition" as such. We need a new humanism, or posthumanism, that can grapple with the reality that we exist as subjects who must rely upon an environment that does not need us as much as *we need it*.<sup>62</sup>

Burke's intentions seem to marry quite well with what has been described elsewhere as an "anthropocosmic" or "cosmotheandric" perspective,<sup>63</sup> in which the charge by Bruno Latour and others that much contemporary cosmopolitanism "entails no cosmos and hence no politics either" is seen as in need of remedy.<sup>64</sup>

To attain a cosmic perspective on the human predicament, it will be helpful to bring the biosphere into the foreground of our thinking.<sup>65</sup> Doing so does not require decentring the human from our moral consideration, but rather involves the more modest task of "affirming the interconnectedness and mutual constitution [of humanity in the biosphere]".<sup>66</sup> 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

60. Burke, "The Good State, from a Cosmic Point of View", *op. cit.*, pp. 59 and 68.

61. *Ibid.*, p. 71.

62. Burke, Fishel et al., *op. cit.*, p. 23.

63. See Raimon Panikkar, *The Cosmotheandric Experience: Emerging Religious Consciousness* (New York: Motilal Banarsidass Publisher, 1998); Weiming Tu, "The Ecological Turn in New Confucian Humanism: Implications for China and the World", *Daedalus*, Vol. 130, No. 4 (2001), pp. 243–264; N.A.J. Taylor, "Anthropocosmic Thinking on the Problem of Nuclear Harm: A Reply to Seth D. Clippard and a Plea to Mary Evelyn Tucker and Tu Weiming", *Journal for the Study of Religion, Nature and Culture*, Vol. 10, No. 1 (2016), pp. 58–65.

64. Bruno Latour, "Whose Cosmos, Which Cosmopolitics? Comments on the Peace Terms of Ulrich Beck", *Common Knowledge*, Vol. 10, No. 3 (2004), p. 450.

65. I have confessed as to the reasons for my own ecological awakening in one of my more recent pieces of auto-ethnography. See N.A.J. Taylor, "The Biosphere and Me", *Journal of Narrative Politics*, Vol. 1, No. 2 (2015), pp. 153–166.

66. Sam Mickey, "Contributions to Anthropocosmic Environmental Ethics", *Worldviews: Global Religions, Culture, and Ecology*, Vol. 11, No. 2 (2007), pp. 226–247 (p. 226).

discourse”.<sup>67</sup> While 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. For instance, although nuclear weapons have been tested 2054 times in the atmosphere, above and below the surfaces of the oceans and the Earth’s crust since the time of Hiroshima and Nagasaki, Nina Tannenwald’s notion of the “nuclear taboo” characterises the vulnerability in purely human-centric terms: “[w]hy have nuclear weapons not been used since Hiroshima and Nagasaki in 1945?”<sup>68</sup> 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 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.

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.<sup>69</sup> Thus, in denying all beings and matter beyond the human body an 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.<sup>70</sup> Harm to the biosphere by humans, even from an instrumental anthropocentric perspective, is therefore also harm to our present and future selves.<sup>71</sup> In rethinking the human in these terms, therefore, it is in fact the Earth that looms large.

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67. 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. A Nuclear Weapons Convention was achieved in 2017 as a result of this process.

68. Nina Tannenwald, *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons since 1945* (Cambridge University Press, 2007), p. 2.

69. 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 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 systems”. See Johan Rockström et al., “A Safe Operating Space for Humanity”, *Nature*, Vol. 461, No. 7263 (2009), pp. 472–475.

70. As Wald 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 goes on to conclude: “What is perhaps more interesting is the dawning realisation 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”. See George Wald, “The Origins of Life”, *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 52, No. 2 (1964), pp. 595, 597–598 and 600.

71. Alongside a wide-ranging thesis that claims, “how well we come through the era of globalisation (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 evokes the image of humanity—a moral category that, for him, includes all sentient beings—as dwelling within “one atmosphere”. See Peter Singer, *One World: The Ethics of Globalization* (Yale University Press, 2004), p. 13.

## In Lieu of a Conclusion

The meaning of harm and its relationship to shared vulnerability was transformed with the nuclear attacks on Hiroshima and Nagasaki on 6–9 August 1945. Over the course of the subsequent seven decades, the emergence of other, nuclear harms relating to accidents and waste have reaffirmed how it is not only the human body that is violated, but also the global biosphere on which all life depends. Throughout this article, I have argued that this ecological dimension to the human condition problematises our existing moral categories of harm and cosmopolitanism, as well as the related distinction between (so-called) humanity and nature. Indeed, the notion that harms to the biosphere contribute to the construction of a common or universal solidarity invites nuclear cosmopolitans to interpret anew their prevailing understanding of human relations with the non-human world. Nuclear harms violate the human body, and thereby also the human frame that myopically constrains so much contemporary cosmopolitan thought. Although this article has not attempted to remedy the problem of nuclear harm, it has drawn on the earlier work of Richard Routley to offer a preliminary sketch of what appears to be a fruitful line of inquiry for future research for those intent on conceiving of politics and ethics on a planetary scale.

## Acknowledgements

This article finds its origins in a string of conversations beginning as early as 2011 (notably with Tim Aistrope, Shannon Brincat, Jan Fadnes, Marianne Hanson, Dominic Hyde, Roger Lamb, Audra Mitchell, Holmes Rolston III and Richard Shapcott). Despite such energy, however, the manuscript was not submitted for publication until March 2016, and while only relatively minor revisions were requested in June 2016, I neglected to properly action it until September 2017. Therefore, perhaps in this instance more than any other, all errors and omissions are indeed the sole responsibility of the author.

## Disclosure Statement

No potential conflict of interest was reported by the author.

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**N.A.J. Taylor** is among those inaugurating a new, nuclear, humanities. Recent works include the edited book, *Reimagining Hiroshima and Nagasaki: Nuclear Humanities in the Post-Cold War* (Routledge, 2017), and the special issue “Re-imagining Hiroshima” (*Critical Military Studies*, 2015). Forthcoming works under contract include the authored book, *Antipodean Nuclear Feminisms* (Palgrave Macmillan, c. 2019), and the edited book, *Reimagining Monte Bello, Emu and Maralinga: Australia's Nuclear Culture* (Unlikely: Journal for Creative Arts, c. 2018).