

Climate Change and Intergenerational Justice: Foundational Reflections

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I. INTRODUCTION

This much we know with certainty: climate change exists, global warming included; it is today caused largely by human activity; and, with each passing day, it looms ever larger as a major threat to the worldwide human and natural environment. We also know with certainty that its worst effects will be severe if left unabated and that these will be felt primarily by today's children and the generations that follow them, especially if they are poor or otherwise without capacity to protect themselves.¹

Ask almost anyone about this perilous state of affairs and they will agree: each of us living today has a responsibility to prevent the looming catastrophe because each of us has, at a minimum, a moral responsibility to ensure that today's children and

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¹ See the four assessment reports of the Intergovernmental Panel on Climate Change: IPCC FIRST ASSESSMENT REPORT ON CLIMATE CHANGE (1990), IPCC SECOND ASSESSMENT REPORT ON CLIMATE CHANGE (1995), IPCC THIRD ASSESSMENT REPORT ON CLIMATE CHANGE (2001), and especially IPCC, FOURTH ASSESSMENT REPORT ON CLIMATE CHANGE (2007), each available at <<http://www.ipcc.ch/pub/reports.htm>>. The *Summary for Policymakers and Technical Summary* of each report may be obtained free of charge from the IPCC Secretariat. The complete reports in English may be ordered from Cambridge University Press, 110 Midland Ave., Port Chester, NY 10573 and <<http://www.cup.org>>. See also <<http://www.earthprint.com>>. For a rousing account of the climate change threat based largely on the IPCC reports, authored by a popular science writer, and published by *National Geographic* magazine, see MARK LYNAS, SIX DEGREES (2007). For confirmation of the large degree to which the world's poor will suffer greatly from climate change, especially in developing countries, see UNITED NATIONS DEVELOPMENT PROGRAM, HUMAN DEVELOPMENT REPORT 2007/2008—FIGHTING CLIMATE CHANGE: HUMAN SOLIDARITY IN A DIVIDED WORLD (2007), available at <<http://hdr.undp.org/en/reports/global/hdr2007-2008>>. A summary of this UNDP report may be found at the same website.

future generations inherit a global environment at least no worse than the one we received from our predecessors. It is true, of course, that we cannot fulfill this obligation completely. It is in fact beyond our capacity to do so. According to the UN's authoritative Intergovernmental Panel on Climate Change, the best we can do is to minimize the predicted harms.² It also is true that some individuals, groups, and institutions will not help to mitigate these harms. Not everyone is moved to action by the plight of others. But it is the rare person who will deny this intergenerational responsibility in principle. What parent, grandparent, or great-grandparent would disavow a climate legacy beneficial to their descendants? What child, grandchild, or great-grandchild will not feel at least a little resentful if such a legacy is denied them? Somewhere deep inside, all of us know that life is an energetic concurrence of the past, present, and future; that we are a temporary part of it; and that, whatever our past failings, we must reach beyond our egoistic selves to ensure its continuity with fairness to today's children and communities of the future. It is axiomatic—a “no brainer,” as we say.

When this responsibility-towards-future-generations axiom is considered from a legal perspective, however, it becomes less obvious. Asked if future generations, children aside, have a *legal* right to protection from climate change harms and, if so, whether present generations have *legal* obligations relative to them, some legal and moral theorists demur.³ Often of libertarian persuasion, they are concerned about the nature of the legal obligations that might be imposed upon present generations, and how these obligations would play out on their public and private institutions were the question to be answered in the affirmative. But their theoretical arguments, ontologically driven, are intrinsically sobering all the same. Future persons, they tell us, cannot have rights because they do not yet exist and therefore cannot *have* anything, including rights.⁴ Future human beings are indeterminate and contingent, not actual, without identity. We cannot know their number or their needs, desires, or

² See the IPCC reports cited in note 1, *supra*, the Fourth Assessment Report especially.

³ See, e.g., DAVID GAUTIER, MORALS BY AGREEMENT (1986); ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA (1974); Wilfred Beckerman, *Sustainability and Intergenerational Equality*, in FAIRNESS AND FUTURITY: ESSAYS ON ENVIRONMENTAL SUSTAINABILITY AND SOCIAL JUSTICE 71, 85 et seq. (Andrew Dobson ed., 1999); _____, *The Impossibility of a Theory of Intergenerational Justice*, in HANDBOOK OF INTERGENERATIONAL JUSTICE 53 (Joerg Chet Tremmel ed., 2006); Robert L. Heilbroner, *What Has Posterity Ever Done for Me?*, New York Times Magazine (Jan. 19, 1975); Richard T. DeGeorge, *The Environment, Rights, and Future Generations*, in RESPONSIBILITIES TO FUTURE GENERATIONS: ENVIRONMENTAL ETHICS 157 (Ernest Partridge ed., 1980); Ruth Macklin, *Can Future Generations Correctly Be Said to Have Rights?*, in *id.* at 151; Thomas H. Thompson, *Are We Obligated to Future Others?*, 1 ALTERNATIVE FUTURES 1 (SPRING 1978). See also references cited in *infra* note 13.

⁴ Writes DeGeorge, *supra* note 3, at 159: “Future generations by definition do not exist now. They cannot now, therefore, be the present bearer or subject of anything, including rights.” “Sentience,” writes Macklin, *supra* note 3, at 153, “is not only a sufficient condition for ascribing rights to persons; it is also a necessary condition.”

tastes. Indeed, we cannot even be sure that “they” will exist. As Derek Parfit and Thomas Schwartz have pointed out, our reproductive decisions will “repopulate” the future with persons different from those who otherwise might have existed; our decisions can determine even their composition and size.⁵ Therefore, mindful of the truism that legal rights do not exist absent corresponding legal duties and, *vice versa*, that legal duties do not exist absent corresponding legal rights, it follows, the skeptics say, that presently living persons cannot have *legal* obligations to future generations.⁶

Yet we can find abundant counter-evidence to this way of thinking in the workings of domestic law systems, most or all of which make protective provision for future—commonly unborn—interests of one sort or another. Take the institution of the long-term ground lease, for example. An alternative to a land sale, a taxable event, it allows a lessor (landowner) to retain ownership of a property to capture its appreciation in value over time while securing from a lessee (a user and improver of the property who commonly subleases) a long-term rental cash flow and a promise of reversion to the lessor of the property and all its improvements at the lease’s end—an incentive to the lessee to renew the lease well in advance of its expiration and for an additional long term. Increasingly central to economic development and commercial enterprise in the United States, the ground lease typically binds the lessor, the lessee, and all potential lessee tenants for up to 99 years—which is to say, beyond the probable lifetimes of most lessors and lessees and well in advance of the birth of many if not most of the lessee’s potential tenants.⁷ Indeed, because most ground leases provide for the right of assignment to third parties, the lessors and lessees at the beginning of the lease often are not the same persons bound by the lease many years—decades—later. Surely, we may conclude, it must be possible to establish a realistic theory and implementing strategy that makes present generations, as lessees of Planet Earth, legally accountable to the entire human family (including future generations), as lessor of the global commons (owned by no one but belonging to everyone), so as to ensure its continued vitality, diversity, and sustainability for eons to come. We are temporary lessees on a planetary ground lease whose worth is at least as great as a secure annual cash flow and appreciated value.

The ground lease is not, of course, the only instance when domestic law systems demonstrate concern for future interests. Short-term leasehold contracts require the

⁵ See DEREK PARFIT, REASONS AND PERSONS, pt. IV (1984); _____, *Energy Policy and the Further Future*, in ENERGY AND THE FUTURE (Peter Brown & Douglas MacLean eds., 1983); Thomas Schwartz, *Obligations to Posterity*, in OBLIGATIONS TO FUTURE GENERATIONS 3 (Brian Barry & R. I. Sikora eds., 1978); _____ *Welfare Judgments and Future Generations*, 11 THEORY AND DECISION 181 (1979).

⁶ For further discussion of libertarian theorizing, see *infra* Section IV.

⁷ Commercial entities, to be sure, are often the lessors and lessees in long-term ground lease contracts. However, individual human beings also act in these capacities and, in any event, the choices and decisions of commercial entities are always the choices and decisions of sentient beings.

return of property in good condition for use by future (possibly unborn) tenants; private and public trusts impose fiduciary duties on trustees to protect the trust corpus for future (possibly unborn) beneficiaries; legislation directs visitors of public parks and monuments not to despoil them for future (possibly unborn) users; and so forth. Indeed, one need look no further than US federal environmental statutes to prove the point. Several express concern for the ecological well-being of future generations explicitly and some implicitly, even if none of them make it easy for that concern to be effectual.⁸ For that matter, in all legal systems where custom, predictability/stability, and coherence are valued—in the Common Law system especially, where the doctrine of precedent (*stare decisis*) is controlling—it can safely be said that most if not all judicial decisions are as much about the future as they are about the past. In these and other intertemporal ways, domestic law systems embrace the idea that the law can, sometimes must, and often does safeguard the interests of future persons.⁹

Nevertheless, the idea that, in the context of global climate change, future generations can have legal rights and that present generations can have legal duties in relation to them has its detractors. Why? One reason, as we have seen, has to do with ideological persuasions and legal philosophy. Another has to do with the other-worldly remoteness of the majority of future generations, ergo perplexity over the meaning of intergenerational justice across large spans of time.

In this essay, motivated by the conviction that the law cannot be timid in the face of threats to life as we know it, I probe each of these domains to uncover the legal theory or theories upon which intergenerational justice already is or may be convincingly founded.¹⁰ This is a necessary task. To be intellectually persuasive and

⁸ See National Forest Management Act (NFMA), 16 USC §§1600(3) & 1601(a)(1) (2000); National Environmental Policy Act (NEPA), 42 USC §4331(a) (2000); Federal Land Policy and Management Act (FLPMA), 43 USC §1702(c) (2000). Other federal environmental statutes that do not contain express language protecting future generations are nonetheless susceptible of interpretation to this end. See Surface Mining Control and Reclamation Act (SMCRA), 30 USC §§1257-65 (2000); Clean Water Act (CWA), 33 USC §1251 (2000); Resource Conservation and Recovery Act (RCRA), 42 USC §6902 (2000); Clean Air Act (CAA), 42 USC § 7651(a)(5) (2000); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC § 9601(24) (2000).

⁹ Or the interests of future unborn *citizens*, at least. But what about future non-citizens? As Brown Weiss asks, “[d]oes one country have an obligation to the future nationals of another country?” EDITH BROWN WEISS, IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL EQUITY 26 (1989). The question is inescapable. In a world of separately sovereign states, climate change, a global—indeed galactic—phenomenon, commands that we think *interspatially* as well as *intertemporally*, across political boundaries as well as across time.

¹⁰ In the literature, the terms “intergenerational justice” and “intergenerational equity” are interchangeable. I prefer “intergenerational justice,” however, because, in addition to the fact that “equity” has lost some of its resonance since equity was combined with law into one
(continued...)

have popular support, legal rights and duties must be anchored in coherent theories of justice.

My project, thus, is to establish *in theory* that future generations can have a legal right to protection from climate change harms, both “abrupt” and “normal,” and that the ecological rights of future generations can define the ecological duties of present generations. Concluding this to be possible, I argue also that the ecological rights and duties of future and present generations, respectively, are best fulfilled by focusing public and private policy on an ecological legacy that is informed by the ecological values that future generations are meant to inherit and that present generations must bequeathe if we do not want climate change to choose our destiny for us. Central to my project is, of course, the previously cited truism that legal rights do not exist absent corresponding legal duties and, *vice versa*, that legal duties do not exist absent corresponding legal rights. This is key. If future generations cannot be said to have a legal basis for asserting ecological rights *vis-à-vis* present generations, then neither can it be said that present generations can have corresponding legal duties relative to future generations. I of course recognize the possibility and power of moral rights absent corresponding moral duties.¹¹ My focus, however, is the law.

I therefore take issue with the skeptics who contend that theoretical discourse of this sort is unnecessary either because (a) identity-determining choices we make today (e.g., opting to postpone having a child or committing genocide) can do no harm to people who may never exist as a consequence,¹² or because (b) future generations will inherit the capacity to adapt to climate change and thus not necessarily be worse off than persons living today.¹³ While there is validity to the first argument insofar as unborn individual persons or possibly even groups are concerned, it has no merit when it comes to whole generations of people save for some wildly improbable chain of

¹⁰ (...continued)
cause of action, it evokes the fundamentally relevant notion of “social justice.”

¹¹ Lawyers are not, of course, the only ones to worry about the normative implications of climate change harms relative to future generations. Philosophers (especially ethicists), scientists, and policy-makers, among others, do so also, albeit more from a moral than a legal perspective. The IPCC, for example, widely considered the most authoritative source on climate change science, has taken pains to point out that climate change raises “particular questions of equity among generations.” IPCC, *Summary for Policy Makers*, in THIRD ASSESSMENT REPORT 3 (2001). Such expressions are to be taken equally seriously.

¹² See *supra* notes 4 and 5 and accompanying text.

¹³ See e.g., BJØRN LOMBORG, THE SKEPTICAL ENVIRONMENTALIST: MEASURING THE REAL STATE OF THE WORLD 305 *et seq.* (2001); Beckerman, *supra* note 3, at 71, 85 *et seq.* See also Wilfred Beckerman, *The Impossibility of a Theory of Intergenerational Justice*, in HANDBOOK OF INTERGENERATIONAL JUSTICE 53 (Joerg Chet Tremmel ed., 2006) wherein the author argues the “impossibility” of future unborn persons to have rights as a primary reason to dispense with intergenerational justice discourse.

cataclysmic events. As for the second argument, the empirical evidence is shaky at best. Consider alone the economic and political resistance that until recently generally greeted “alternative energy” since NASA’s James Hansen warned of global warming in the early 1980s¹⁴—a form of psychological denial that makes itself felt still to the present day despite even the latest reports of the authoritative Intergovernmental Panel on Climate Change.¹⁵ These arguments, I submit, are not to be taken seriously, the less so when the stakes are high. As in fact they are. Climate change raises the specter of global ecological catastrophe. What is more, it is by no means assured that technological innovation will rescue us from it.¹⁶

Before proceeding to make the case for a theory upon which intergeneratioinal ecological rights and duties may be grounded, however, I wish to be clear about what my project is not. Two issues merit brief comment.

First, it is not about whether unborn generations have a right to come into existence—“the right to be born,” as philosopher Joel Feinberg puts it¹⁷. Regrettably, it is within the realm of possibility that this issue could arise in the context of a nuclear war or meltdown that, after a “nuclear winter” of long darkness and extreme cold, leaves all or part of our fragile planet so radioactively contaminated as to prevent life far into the future or even forever. Nevil Shute’s *On the Beach*¹⁸ and Cormac McCarthy’s more recent *The Road*¹⁹ come to mind. Apart from this possibility, however, and brain-teasing exercises in logic when philosophers imagine the end of our species,²⁰ it is not unreasonable to assume that future generations will exist with

¹⁴ See James Hansen, et al., *Climate Impacts of Increasing Carbon Dioxide*, 213 SCIENCE 957 (1981). Cf. Sharon Begley, *The Truth about Denial*, NEWSWEEK, Aug. 13, 2007, at 23.

¹⁵ See *supra* note 1.

¹⁶ Writes *National Geographic* science writer Mark Lynas, *supra* note 1, at 269: “[U]nless we decide to reduce greenhouse gas emissions within just a few years from now, our destinies will already be chosen and our path toward hell perhaps unalterable as the carbon cycle feedbacks . . . kick in one after another.” Lynas continues: “Like the tormented souls Dante meets at the Sixth Circle of Hell, once the “portals of the future close”—in Amazonia, Siberia, or the Arctic—we will find ourselves powerless to affect the outcome of this dreadful tale.” *Id.*

¹⁷ Joel Feinberg, *The Rights of Animals and Unborn Generations*, in JOEL FEINBERG, RIGHTS, JUSTICE, AND THE BOUNDS OF LIBERTY: ESSAYS IN SOCIAL PHILOSOPHY 159, 180-82 (1980)

¹⁸ NEVIL SHUTE, ON THE BEACH (1957), later adapted for the screenplay of a 1959 film of the same name featuring Gregory Peck, Ava Gardner, and Fred Astaire, and a 2000 television film also of the same name starring Armand Assante and Rachel Ward.

¹⁹ CORMAC McCARTHY, THE ROAD (2006). The novel was awarded the Pulitzer prize for fiction in 2007.

²⁰ See, for example, Feinberg, *supra* note 17; Heilbroner, *supra* note 3, at 222. See also (continued...)

100 percent certainty. My project is about the ecological conditions that future generations will face when they arrive.

Second, my project is not to be confused with the debate over reproductive rights that currently stalks US law and policy. While successful “right to life” advocates have reconfirmed that the American legal system is capable of honoring claims of rights on behalf of unborn plaintiffs, this debate is otherwise irrelevant to the question of intergenerational rights relative to climate change. In the climate change context, where the underlying legal (and moral) question is whether or not it is permissible to damage severely or even possibly destroy Planet Earth, the issue is not when life begins for an individual but, as indicated above, under what conditions it begins for a class of many. Writes environmental law scholar Edith Brown Weiss: “[I]ntergenerational rights are not in the first instance rights possessed by individuals. They are, instead, generational rights, which are held in relation to other generations— past, present and future.”²¹

With these caveats, I turn to the challenge at hand. It is my argument that, in the context of climate change at least, future generations can have legal rights in theory and that, as a consequence, they can claim legal entitlement to intergenerational ecological justice in practice.

But what is meant by “future generations”? And how is “intergenerational ecological justice” to be defined? I begin with these two rudimentary questions.

II. “FUTURE GENERATIONS” AND “INTERGENERATIONAL ECOLOGICAL JUSTICE” DEFINED

Not a little ink has been spilled on the meaning of “future generations” and “intergenerational ecological justice,” the latter especially. I strive here to be brief.

A. “Future Generations”

Given the continuum of human existence, writes a student of intergenerational relationships, “it seems problematic to define the future generation as the people who are not-yet-born because ‘future people’ are born into the present generation every

²⁰ (...continued)

ALAN WEISMAN, THE WORLD WITHOUT Us (2007), described by environmentalist Bill McKibben as “one of the grandest thought experiments of our time” at <<http://www.worldwithoutus.com>>.

²¹ Edith Brown Weiss, *Intergenerational Fairness and Rights of Future Generations*, INTERGENERATIONAL JUSTICE REV. (3)1, at 6 (1st Engl. ed., 2002). See also, BROWN WEISS, *supra* note 9; and, by the same author, *The Planetary Trust: Conservation and Intergenerational Equity*, 11 ECOLOGY L. Q. 495 (1984) and *Our Rights and Obligations to Future Generations for the Environment*, 84 AM. J. INT'L L. 198 (1990). In the literature generally, the adjectives “intergenerational” and “generational” are used interchangeably. Thus, “intergenerational fairness [or equity or justice]” and “intergenerational rights [or duties]” are sometimes labeled “generational fairness [or equity or justice]” and “generational rights [or duties].”

minute.”²² He concludes: “Thus, it appears natural to include future generations in our moral community.”²³ Except arguably in the case of children aborting,²⁴ this viewpoint appears to have won no adherents.

The meaning of “future generations” ranges from today’s children²⁵ to unborn persons distant in the future without limitation—so-called “remote future persons,” defined by one intergenerational theorist as “those that [sic] will come into existence after all those now living have ceased to exist.”²⁶ Indeed, a definition unrestricted in time appears to be the dominant view. The Earth Charter of March 2002,²⁷ for example, created through, reputedly, the most open and participatory process ever associated with the drafting of an international declaration,²⁸ affirms the need to “[s]ecure Earth's bounty and beauty for present and future generations”²⁹ without temporal qualification of any kind.

²² Huey-li Li, *Environmental Education: Rethinking Intergenerational Relationship* (1994), available at <[http://www.ed.uiuc.edu/EPS/yearbook/94_docs/LI.HTM#fn2](http://www.ed.uiuc.edu/EPS/PES-yearbook/94_docs/LI.HTM#fn2)>.

²³ *Id.*

²⁴ I.e., persons under age 18. See Article 1 of the 1989 UN Convention on the Rights of the Child, 1577 UNTS 3, which provides that “a child means every human being below the age of eighteen years unless under the law applicable to the child, majority is attained earlier.” The Convention, it should be noted, claims 193 states party adherents **as of January 30, 2008 [to be updated in final draft]**, two more than are party to the UN Charter and lacking only Somalia and the United States among them. From this statistical standpoint, it can be credibly argued that the Convention has entered into customary international law, which is widely understood to be legally binding on all states.

²⁵ See, e.g., LAURA WESTRA, ENVIRONMENTAL JUSTICE AND THE RIGHTS OF UNBORN AND FUTURE GENERATIONS: LAW, ENVIRONMENTAL HARM, AND THE RIGHT TO HEALTH xv-xvii, 1 (2006), referring to presently living children—denominated “the first generation” by Westra. Others refer to children as an “overlapping generation.”

²⁶ EDWARD A. PAGE, CLIMATE CHANGE, JUSTICE AND FUTURE GENERATIONS 53 (2006).

²⁷ See <<http://www.earthcharter.org/>> or <<http://www.earthchartersummits.org/TheEarthCharter.htm>>.

²⁸ According to the Earth Charter International Council, co-chaired by Steven C. Rockefeller (USA) and Razeena Wagiet (South Africa), “[t]he Earth Charter is a widely recognized, global consensus statement on ethics and values for a sustainable future. Developed over a period of ten years, in what has been called the most extensive global consultation process ever associated with an international declaration, the Earth Charter has been formally endorsed by over 2,500 organizations, including global institutions such as UNESCO and the World Conservation Union (IUCN).” Quoted at <http://earthcharterinaction.org/about_charter.html>.

²⁹ Earth Charter, *supra* note 27, Principle 4.

I am sympathetic to treating “future generations” from this distant or remote future persons perspective. In the ecological context (climate change of course included), there is no theoretically plausible reason why remote unborn persons should not be accorded deference in roughly the same manner as persons living today or soon to follow. In the case of *Nuclear Energy Institute, Inc. v. Environmental Protection Agency*, for example, decided by the US Court of Appeals for the District of Columbia Circuit in July 2004,³⁰ it is this long view that, for good reason, was presupposed both by the court and by all sides to the litigation. The case concerned the temporal standard to be applied to activate safely a federal repository for spent nuclear fuel and high-level radioactive waste at Yucca Mountain, Nevada. The time frame contested ranged from between 10,000 to “hundreds of thousands of years after disposal, ‘or even farther into the future.’”³¹

Immanuel Kant put it this way: “[H]uman nature,” he wrote, “is such that it cannot be indifferent even to the most remote epoch which may eventually affect our species, so long as this epoch can be expected with certainty.”³² Such distant horizons, however, are hard for the average person to grasp, let alone clasp empathetically. They also are not required for the pressing emergencies that current climate change trends portend. Unless rapidly and decisively addressed within the next decade (possibly sooner), many serious—potentially cataclysmic—ecological and

³⁰ 373 F.3d 1251, 362 U.S. App. D.C. 204.

³¹ *Id.* at 1267, quoting from NATIONAL ACADEMY OF SCIENCES, TECHNICAL BASES FOR YUCCA MOUNTAIN STANDARDS 2 (1995) [hereinafter “NAS Report”]. In this case, the three-judge panel unanimously voided a 10,000-year nuclear radiation safety guideline the EPA had written for the repository because, it found, the EPA, in violation of federal law, had “unabashedly rejected” the findings of the National Academy of Sciences (the federal government’s scientific adviser) that there is “no scientific basis for limiting the time period of the individual-risk standard to 10,000 years or any other value” (NAS Report, at 55); that “compliance assessment is feasible for most physical and geologic aspects of repository performance on the time scale of the long-term stability of the fundamental geologic regime—a time scale that is on the order of 10⁶ [one million] years at Yucca Mountain” (NAS Report, at 6); and “that humans may not face peak radiation risks until tens to hundreds of thousands of years after disposal, ‘or even farther into the future’” (NAS Report, at 2). Given these findings, the court observed, the Academy “recommend[ed] that compliance assessment be conducted for the time when the greatest risk occurs, within the limits imposed by the long-term stability of the geologic environment.” *Id.* In passing the Energy Policy Act of 1992, Congress required the EPA to set standards for Yucca Mountain consistent with the time frame for radiation risks *as determined by the NAS.*” [Emphasis added]. *Id.* For thoughtful insight, see Stephen Dycus & John S. Applegate, *Institutional Controls or Emperor’s Clothes? Long-Term Stewardship of the Nuclear Weapons Complex*, 28(11) ENVT'L L. REP. 10631 (1998); Richard & Val Routley, *Nuclear Energy and Obligations to the Future*, in RESPONSIBILITIES TO FUTURE GENERATIONS: ENVIRONMENTAL ETHICS 277 (Ernest Partridge ed., 1980).

³² Immanuel Kant, *Idea for a Universal History with a Cosmopolitan Purpose, Proposition 8*, in KANT’S POLITICAL WRITINGS 5 (Hans Reiss, ed., H. B. Nisbet, transl., 1970).

socio-economic harms are believed likely to occur within 100 years or less.³³ Simply put, we do not have the luxury of delay. Indeed, as is well known to the Inuit of the Arctic , the Maasai of Kenya's Rift Valley, and the citizens of Kiribati, the Marshall Islands, Tuvalu, Vanuatu, and other South Pacific nations, for example, we already are experiencing the initial impacts of climate change,³⁴ and its effects are likely to become much more pronounced within the next few decades.

It seems wise, therefore, not to try to make any single time horizon fit all circumstances, but, rather, to allow the circumstances to determine the time horizon most useful to the circumstantial need. "It seems reasonable," writes environmentalist philosopher Bryan Norton, "to use shorter time scales for consideration of some risks, and longer time scales for other issues (such as storage of nuclear wastes)."³⁵

Accordingly, given the closeness of the climate change threat and the urgent need, therefore, to mobilize against it, I favor conceiving of "future generations" in more or less proximate terms in this context, embracing persons potentially within one's personal awareness if not actual knowledge, possibly but not necessarily involving overlapping generations. In Native American parlance, they are "the coming faces"³⁶—constituents of the seven generations referenced in the Iroquois Nation maxim: "In our every deliberation, we must consider the impact of our decisions on the next seven generations."³⁷

³³ See, e.g., IPCC Fourth Assessment Report, *supra* note 1.

³⁴ Regarding the Inuit, see Center for International Environmental Law, *Climate Impact Case Studies: Inuit of Canada, Alaska, Greenland and Russia*, at <http://www.ciel.org/Publications/Climate/CaseStudy_Inuit_Sep07.pdf>; *Testimony before IACtHR on Global Warming & Human Rights by Sheila Watt-Cloutier*, at <http://www.earthjustice.org/library/legal_docs/testimony-before-iachr-on-global-warming-human-rights-by-sheila-watt-cloutier.pdf>. Regarding the Maasai, see, e.g., *Kenya's Maasai Plead for Help Against Global Warming*, AGENCE FRANCE PRESSE, English Wire, Nov. 10, 2006, at <<http://www.terrordaily.com/2006/061110110020.4tgsq2gp.html>>. Regarding the Pacific island nations, see, e.g., Stephen Leahy, *Tiny Tuvalu Fights for Its Literal Survival*, INTER PRESS SERVICE, July 27, 2007, at <<http://ipsnews.net/news.asp?idnews=38695>>; Jonathan Adams, *Rising Sea Levels Threaten Small Pacific Island Nations*, INT'L HEARLD TRIB., May 3, 2007, at <<http://www.iht.com/articles/2007/05/03/asia/pacific.php>>.

³⁵ BRYAN G. NORTON, SUSTAINABILITY: A PHILOSOPHY OF ADAPTIVE ECOSYSTEM MANAGEMENT 326 (2005).

³⁶ Carol Jacobs (Cayuga Bear Clan Mother), *Presentation to the United Nations July 18, 1995*, available at <http://www.ratical.org/many_worlds/6Nations/PresentToUN.html>.

³⁷ See Oren Lyons, *The American Indian in the Past*, in EXILED IN THE LAND OF THE FREE: DEMOCRACY, INDIAN NATIONS AND THE U.S. CONSTITUTION ch. 1, at 33 (Oren Lyons & John Mohawk eds., 1992): "The Gayaneshakgowa, the Iroquois Great Law of Peace, is . . . important in human history. It is the earliest surviving governmental tradition in the world that we know (continued...)

To energize the rapid response needed to meet the climate change challenge, however, a deliberative time frame shorter than even seven generations seems required. For this reason, I draw upon the strategic outlook that renown sociologist and futurist Elise Boulding recommended for policy-makers and others contemplating the future:

I propose . . . thinking in a time-span which I call the “two-hundred year present.” . . . [It] begins one hundred years ago today, on the day of the birth of those among us who are centenarians, celebrating their one hundredth birthday today. The other boundary of this present moment is the hundredth birthday of the babies being born today. It is a continuously moving moment, always reaching out one hundred years in either direction from the day we are in. We are linked with both boundaries of this moment by the people among us whose lives began or will end at one of those boundaries, *three and a half generations each way in time*. It is our space, one we can move around in directly in our lives, and indirectly by touching the lives of the linkage people, young and old, around us.³⁸

Conceiving our temporal space in this way, I believe, demystifies the meaning of “past” and “future” generations. It signals not some far off abstracted beings, but—assuming good health for all—our parents, grandparents, and great-grandparents, on the one hand, and our children, grandchildren, and great-grandchildren on the other. As such, it has at least three distinct advantages:

- it helps to remove vagueness of generational identity, thereby strengthens the conviction that future generations can and should have rights, and consequently facilitates our seeing how theories of social justice can be transferred from the *intragenerational* to the *intergenerational* setting in a chain of consecutively beneficial concern from generation A to generation B and so on through and beyond generations Z and AA;
- it stirs us to personalize our understanding of what we have inherited from the past; and, thus reminded that all futures have pasts that influence, it simultaneously moves us to an active interest in a future past—our present—that we pass on to adjacent next generations; and

³⁷ (...continued)

of based on the principle of peace; it was a system that provided for peaceful succession of leadership; it served as a kind of early United Nations; and it installed in government the idea of accountability to future life and responsibility to the seventh generation to come. All these ideas were prevalent among the Haudenosaunee before the arrival of the white man, according to the oral history of the elders of that society.”

³⁸ Elise Boulding, *The Dynamics of Imaging Futures*, 12 WORLD FUTURE SOCIETY BULL., No. 5, at 7 (Sept.-Oct. 1978).

- it in no way prejudices remote future persons because the outer boundary of the present (roughly 100 years) is a continuously moving moment that, with the passing of each generation, makes proximate what previously was remote, potentially benefitting remote unborn persons as they become proximate unborn persons and so on *ad infinitum*.

Thinking in this temporal frame, in sum, the odds are greater that we will strive for a legacy as good or better than the one we have inherited. In the context of climate change, this could make all the difference, particularly if we succeed at equitably distributing the burdens of adjustment that are associated with uneven capabilities and conditions in the developed and developing worlds. But we dare not tarry. The theory that technological innovation will conquer all and bring material happiness to future generations, a theory of progress with us since the Enlightenment, is now in doubt.

In the remainder of this essay, therefore, I adopt, for strategic reasons only, a proximate definition of "future generations" that reflects our personal linkage, both direct and indirect, with the future—i.e., three and a half generations of persons yet to be born from this day forward at a minimum.

I do so, however, with qualification: I include children in my definition (i.e., persons under age eighteen.³⁹ With rare exception, children are little better positioned than unborn persons to determine their future. Like unborn generations, though they be "lives in being," they require conservators, guardians, trustees, or other proxies or surrogates to represent their interests before the bar of legal—and oftentimes public—opinion.⁴⁰ They are, it has been said, "[the] representatives of future generations living today."⁴¹ It also has been said that, in our presently endangered ecological moment, they are "the new 'canaries'."⁴² For these reasons, they are as much deserving of protective justice though administered *intragenerationally* as unborn persons are deserving of protective justice administered *intergenerationally*. The distinction between them is one without significant difference except in time.

³⁹ See *supra* note 24.

⁴⁰ Writes Laura Westra, *supra* note 25, at 147: "[F]or a long time, children cannot speak on their own behalf or represent themselves, and cannot always guess exactly what their future choices and preferences might be. These are also the characteristics of future generations"

⁴¹ *Intergenerational Justice and Environmental Sustainability*, Working Group 5 Background Paper, Berlin Intergovernmental Conference for Children in Europe and Central Asia, available at <<http://64.233.183.104/search?q=cache:C2iaxmlY70J:www.ceu.hu/envsci/aleg/projects/Children.pdf+ intergenerational+justice+and+children&hl=en&ct=clnk&cd=2>>. For judicial endorsement of this view, see the Philippine case of *Minors Oposa v. Sec'y of the Dep't of Envtl. and Natural Res.*, 33 I.L.M. 173 (S.C., July 30, 1993) (Phil.).

⁴² WESTRA, *supra* note 25, at 3.

I recognize, of course, the potential for confusion here (especially when referencing others who intend “future generations” to mean future *unborn* persons only). The terms “future generations” and “future unborn generations” do not necessarily embrace the same range of people. To avoid confusion, therefore, I use the term “future unborn generations” or “unborn generations” whenever fact or logic dictate reference to future generations exclusive of living children.

B. “Intergenerational Ecological Justice”

The concept of intergenerational justice ecological appears to have first emerged in modern environmental times in preparatory meetings for the 1972 Stockholm Conference on the Human Environment which adopted, in June of that year, the much celebrated Stockholm Declaration on the Human Environment⁴³. The preamble of the Stockholm Declaration several times proclaims the “goal” of defending and improving the human environment “for present and future generations,” and its Principle 1 expresses “the common conviction” that humanity “bears a solemn responsibility to protect and improve the environment for present and future generations.”⁴⁴ Around the same time, in the 1972 London Ocean Dumping Convention, the 1972 World Cultural and Natural Heritage Convention, the 1973 Endangered Species Convention, and the 1974 Charter of Economic Rights and Duties of States,⁴⁵ in several regional

⁴³ UN Conference on the Human Environment, *Report of the UN Conference on the Human Environment*, Stockholm, June 16, 1972, UN Doc. A/CONF.48/14/REV.1, at 3 (!973), UN Doc. A/CONF.48/14, at 2-65, and Corr. 1 (1972); reprinted in 11 ILM 1416 (1972) and INTERNATIONAL LAW AND WORLD ORDER: BASIC DOCUMENTS V.B.3 (Burns H. Weston & Jonathan C. Carlson eds., 1994—), hereinafter “5 WESTON-CARLSON”). Earlier known formal recognition of the concept of intergenerational ecological justice, preceding the first Earth Day on March 21, 1970, is found in the multilateral Convention for the Regulation of Whaling, Dec. 2, 1946, 161 UNTS 72, Preamble, ¶2, reprinted in 5 WESTON & CARLSON V.H.2. See also the decision in the 1893 Bering Sea Fur Seals Arbitration. See Fur Seal Arbitration (Washington: Gov’t Printing Office, 1895).

⁴⁴ See also Principle 2 of the Stockholm Declaration which declares that “[t]he natural resources of the earth, including the air, water, land, flora and fauna, and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.” *Id.*

⁴⁵ Convention on the Prevention of Marine Pollution by Dumping from Ships and Aircraft, Feb. 15, 1972, 932 UNTS 3, 26 UST 2403, TIAS No. 8165, reprinted in 11 ILM 262 (1972); Convention for the Protection of the World Cultural and Natural Heritage, Nov. 16, 1972, 1037 UNTS 151, 27 UST 37, TIAS No. 8226, reprinted in 11 ILM 1358 (1972) and 5 WESTON & CARLSON V.B.4; Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Mar. 3, 1973, 993 UNTS 243, 27 UST 1087, TIAS No. 8249, reprinted in 12 ILM 1085 (1973), and 5 WESTON & CARLSON V.H.10; Charter of the Economic Rights and Duties of States, Dec. 12, 1974, G.A. Res 3281, UN GAOR, 29th Sess, Supp No 31, at 50, UN Doc A/9631 (1975), reprinted in 4 WESTON & CARLSON IV.F.5.

seas conventions such as the 1976 Barcelona Mediterranean Sea Convention,⁴⁶ in the 1982 UN World Charter for Nature,⁴⁷ and in the 1997 UNESCO Declaration on Responsibilities Towards Future Generations,⁴⁸ identical concern for the ecological legacy we leave to future generations was formally expressed.

It was, however, for the 1987 report of the UN World Commission on Environment and Development (WCED)⁴⁹—popularly known as the “Brundtland Commission Report on Our Common Future” (in recognition of former Norwegian Prime Minister Gro Harlem Brundtland’s role as WCED Chair)—to give the concept of intergenerational justice its first concrete meaning. Seeking to recapture the spirit of the 1972 Stockholm Conference by joining the environment and development as an holistic issue, it famously stated that socioeconomic development, to be sustainable, must ensure that “it meets the needs of the present without compromising the ability of future generations to meet their own needs.”⁵⁰ This statement, aided by the publication of *Our Common Future*⁵¹ and the subsequent work of the WCED, helped to lay the groundwork for the 1992 Earth Summit which produced the Rio Declaration on Environment and Development and its companion Agenda 21, each of which made the well-being of “present and future generations” a high priority.⁵² The Vienna Declaration and Programme of Action adopted by the UN World of Conference on

⁴⁶ Convention for the Protection of the Mediterranean Sea Against Pollution, Feb. 16, 1976, 1102 UNTS 27, reprinted in 15 ILM 290 (1976) and 5 WESTON & CARLSON V.F.18a. The preamble to this convention states that the Contracting Parties are “[f]ully aware of their responsibility to preserve this common heritage for the benefit and enjoyment of present and future generations”

⁴⁷ World Charter for Nature, Oct. 28, 1982, GA Res. 37/7 (Annex), UN GAOR, 37th Sess., Supp. No. 51, at 17, UN Doc. A/37/51 (1983), reprinted in 22 ILM 455 (1983) and 5 Weston & Carlson V.B.11.

⁴⁸ UNESCO Declaration on the Rights of Responsibilities of the Present Generations Towards Future Generations, adopted Nov. 12, 1997 by the General Conference of UNESCO at its 29th Session, available at <http://portal.unesco.org/en/ev.php-URL_ID=13178&URL_DO=DO_TOPIC&URL_SECTION=201.html>.

⁴⁹ GRO HARLEM BRUNDTLAND, ET AL., *OUR COMMON FUTURE: THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT* (1987).

⁵⁰ *Id.* at 8.

⁵¹ See *supra* note 49.

⁵² Rio Declaration on Environment and Development, June 13, 1992, UN Doc. A/CONF. 151/26 (vol. I) (1992), reprinted in 31 ILM 874 (1992) and 5 WESTON & CARLSON V.B.16; Agenda 21, June 13, 1992, UN Doc. A/CONF.151/26 (vols. I, II & III) (1992), summarized in 5 WESTON & CARLSON V.B.17.

Human Rights in June 1993⁵³ and UN General Assembly resolutions relating to protection of our global climate have likewise given future generations high priority.⁵⁴

The concept of intergenerational justice has been much cited also in both official and scholarly circles. Which doubtless is why political economist and future generations scholar Jörg Tremmel, founder of the German-based Foundation for the Rights of Future Generations (FRFG),⁵⁵ was recently led to write that "[t]he concept of intergeneratioinal justice may very well become an intellectual *leitmoif* of the new century."⁵⁶ Dr. Tremmel continues:

Since the earliest days of the environmental movement, the rights and interests of future generations have been invoked in argumentative discourse. These days, however, barely a budget debate passes in a parliament anywhere in the world without the Minister of Finance justifying his [sic] planned cuts on the grounds of generational or "financial sustainability." In many European countries, youth movements for intergenerational justice have formed and members of the younger generation use moral issues on talk-shows to put their opponents from the older generation under intense pressure.⁵⁷

Tremmel cites such issues as the high rate of youth unemployment, the insecurity of state pension or retirement systems, the public debt, and environmental degradation as primary among the concerns of intergenerational justice. Each, he observes, are examples of present-day discrimination against future generations, reflecting "a

⁵³ Adopted June 25, 1993 by acclamation. UN Doc. A/CONF.157BrundtlandI) (13 Oct 93), at 20-46, reprinted in 32 ILM 1661(1993) and 3 WESTON & CARLSON III.U.2.

⁵⁴ See, e.g. the following resolutions, all titled "Protection of Global Climate for Present and Future Generations of Mankind": GA Res. 46/169, UN Doc. A/RES/46/169 (Dec. 19, 1991); GA Res. 45/212, UN Doc. A/RES/45/212 (Dec. 21, 1990); GA Res. 44/207, UN Doc. A/RES/44/207 (Dec. 22, 1989); and GA Res. 43/53, UN Doc. A/RES/43/53 (Dec. 6, 1988).

⁵⁵ Established in 1997, the FRFG is a think tank founded by a group of European students who worried about the future and wanted to promote intergenerational justice in terms of both ecology and economy. Accredited by the German state of Hessen, it has supporting members throughout the world. See the FRFG's website at <<http://www.frfg.org>>.

⁵⁶ Joerg Chet Tremmel, *Introduction*, in HANDBOOK OF INTERGENERATIONAL JUSTICE 1 (Joerg Chet Tremmel ed., 2006). Elsewhere Tremmel writes: "The concept of Generational Justice is a leading contender in the race to become the intellectual leitmotif of the dawning century. The demand for a new system of ethics, one that takes into consideration the rights of coming generations, is becoming increasingly urgent." Tremmel (on behalf of the Board of Directors of the Foundation for the Rights of Future Generations), *Generational Justice—A Leading Concept for the New Century*, INTERGENERATIONAL JUSTICE REV. (3)3, 4 (1st Engl. ed., 2002).

⁵⁷ Tremmel (2006), *supra* note 56, at 1.

complete political programme—from environmental and financial to educational policy.”⁵⁸

It is this “complete political programme” that informs Tremmel’s definition of “intergenerational justice.” Such justice exists, he writes, “when the accumulated capital, which the next generation inherits, is at least as high as what the present generation inherited.”⁵⁹ By “the accumulated capital” that shapes each generation’s legacy to the next, Tremmel has in mind: *natural capital* (the stock of environmental assets important for supporting human life, for the generation of well-being, and for amenity and beauty); *human-made capital*⁶⁰ (machinery, infrastructure, and institutions as well as financial assets’); *cultural capital* (institutions such as democracy and market economy, constitutions and legal codes); *social capital* (existing solidarity within society, stable relationships between individuals and groups, values); and *human capital* (“health, education, skills, knowledge”).⁶¹ His list corresponds, more or less, with what in recent years economic, political, and legal theorists have come to call “global public goods,”⁶² urgently to be safeguarded, even expanded, if the world is to avoid catastrophe or conflict or both.

There are some who would modify Tremmel’s definition of “intergenerational justice.” Moral and political philosopher Brian Barry, for example, believes that it would be unfair to leave all non-renewable resources undiminished for the sake of future generations and thus favors leaving future generations “no worse off (in terms of productive capacity) than they would have been without the depletion.”⁶³ For another, the late John Rawls would have argued that present generations should not

⁵⁸ *Id.*

⁵⁹ Jörg Chet Tremmel, *Is a Theory of Intergenerational Justice Possible? A Response to Beckerman*, INTERGENERATIONAL JUSTICE REV. (2)7, 7 (2d Engl. ed., 2004). *Accord*, NORTON, *supra* note 35, at 305 (2005).

⁶⁰ Tremmel uses the term “man-made.” We prefer “human-made” to avoid a use of gendered language that is historically distortive in this instance.

⁶¹ See Tremmel (2006), *supra* note 56, at 12, and Tremmel, *supra* note 59, at 6. See also Tremmel (2002), *supra* note 56, at 4.

⁶² See generally GLOBAL PUBLIC GOODS: INTERNATIONAL COOPERATION IN THE 21ST CENTURY (Inge Kaul, Isabelle Grunberg & Marc A. Stern eds., 1999). American economist Paul A. Samuelson is credited as the first economist to develop the theory of public goods. In his classic 1954 paper *The Pure Theory of Public Expenditure*, 36 Rev. Econ. & Stats. 4:387-89 (1954), he defined public goods (what in his paper he called a “collective consumption goods”) as, “[goods] which all enjoy in common in the sense that each individual's consumption of such a good leads to no subtractions from any other individual's consumption of that good. . . .” Public goods are thus understood to be *non-rivalrous* and *non-excludable* in character.

⁶³ BRIAN BARRY, DEMOCRACY, POWER AND JUSTICE 519 (1989).

just maintain but also improve the legacy they receive before it devolves to the next generation.⁶⁴

Yet, though the concept of intergenerational justice did not emerge until after the first Earth Day but a few decades ago,⁶⁵ there is general agreement on its core meaning today. This is perhaps best evidenced in the six regional meetings leading up to and including the landmark May 2002 UN Special Session on Children.⁶⁶ Particularly noteworthy was the work of the Berlin Intergovernmental Conference for Children in Europe and Central Asia in May 2001.⁶⁷ As stressed in the Berlin Conference's final report, a major theme of the Conference

broke new ground in linking the three concepts of justice between generations, environmental sustainability and the rights of children. Efforts towards linking children issues with Agenda 21 of the Rio Conference⁶⁸ have been underway for some time. But the idea of looking at the environment from the perspective of intergenerational justice—the obligation to leave behind a world that is better or at least as good as the one we inherit and understanding what this means in terms of protecting the rights of future, as yet unborn, children opened a number of new horizons. The need to ensure that options are kept open for future generations and transmitting social values and institutions that are non-discriminatory and protective of the rights of children, was found to have profound implications.⁶⁹

⁶⁴ JOHN RAWLS, A THEORY OF JUSTICE 293 (1971).

⁶⁵ See *supra* note 43. The first Earth Day was Mar. 21, 1970.

⁶⁶ For details on the UN Special Session, see UNICEF's website at <http://www.unicef.org/special_session/press/01pr47.htm>.

⁶⁷ Final Report of the Conference on Children in Europe and Central Asia: Setting and Agenda for Children in Europe and Central Asia (Berlin, May 16-18, 2001), available at <http://www.unicef.org/ceecis/Final_Berlin_Report.pdf>.

⁶⁸ *Supra* note 52 [footnote added].

⁶⁹ *Supra* note 67. The major theme, one of four singled out for special notice in the Berlin Conference's Final Report, emerged from one of the Conference's six working groups: a Working Group on Intergenerational Justice and the Environment whose mandate was to "[take] into account the need to respect and protect the rights of future, unborn, generations of children," and to this end to encourage "greater complementarity in applying the principles of Agenda 21 [*supra* note 52], the [1998] Aarhus Convention [on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 2161 UNTS 447, reprinted in 38 ILM 517 (1999) and 5 Weston & Carlson V.B.18], and the [1989 Convention on the Rights of the Child, 1577 UNTS 3, reprinted in 28 ILM 1448 (1989) and 3 Weston & Carlson III.D.3], promotion of a more child-centred and multi-disciplinary approach to environmental and intergenerational issues, long term impact studies on developments that (continued...)

The “main outcome” of the Conference was its “Berlin Commitment for Children in Europe and Central Asia,” adopted by consensus and invoking the term “intergenerational justice” for the first time, it is believed, in official UN pronouncements.⁷⁰ It is important to acknowledge, however, the earlier contribution of the above-cited 1998 Aarhus Convention,⁷¹ which, though regional in scope,⁷² has been characterized by former UN Secretary-General Kofi Annan as “the most ambitious venture in the area of environmental democracy so far undertaken under the auspices of the United Nations.”⁷³ Stressing the need for citizen’s participation in environmental issues and for access to environmental information held by public authorities, the Convention also links environmental values and human rights by “[r]ecognizing . . . that every person has the right to live in an environment adequate to his or her health and well-being, and the duty, both individually and in association with others, to protect and improve the environment for the benefit of present and future generations.”⁷⁴

The concept of intergeneratioinal justice appears also to rest comfortably with all disciplines. The FRFG, embracing multiple disciplines, sums it up thus: “[I]ntergenerational justice means that today’s children and future generations must be capable to [sic] meet their own needs and fulfill their rights and aspirations to at

⁶⁹ (...continued)

threaten the well-being and rights of future children . . . , and extend the liability period for environmental damage in international conventions. *Id.* at 4.

⁷⁰ For details on the Berlin Intergovernmental Conference and its “Berlin Commitment,” see Conference on Children in Europe and Central Asia, Setting an Agenda for Children in Europe and Central Asia Organized by the Governments of the Federal Republic of Germany and Bosnia and Herzegovina with the Support of UNICEF in Preparation for the UN General Assembly Special Session on Children (May 16-18, 2001), at 8, available at UNICEF’s website at <http://www.unicef.org/ceecis/Final/Berlin_Report.pdf>.

⁷¹ See *supra* note 69.

⁷² As of September 2007, the Convention had been ratified by 41 primarily European and Central Asian states and the European Community, the states parties being members of the Economic Commission for Europe and states having consultative status with the Commission. See <http://www.unece.org/env/pp/ctreaty_files/ctreaty_2007_03_27.htm>.

⁷³ Quoted at <<http://aarhusclearinghouse.unece.org/about.cfm>>.

⁷⁴ For details on the UN Special Session, see UNICEF’s website at <http://www.unicef.org/special_session/press/01pr47.htm>. For details on the Berlin Intergovernmental Conference and its “Berlin Commitment,” see Conference on Children in Europe and Central Asia, Setting an Agenda for Children in Europe and Central Asia Organized by the Governments of the Federal Republic of Germany and Bosnia and Herzegovina with the Support of UNICEF in Preparation for the UN General Assembly Special Session on Children (May 16-18, 2001), at 8, available at UNICEF’s website at <http://www.unicef.org/ceecis/Final/Berlin_Report.pdf>.

least the same extent as the generation governing today.”⁷⁵ For its formulation, the FRFG expressly acknowledges the late German ethicist Hans Jonas who, in his influential *The Imperative of Responsibility*, published in 1979, admonished everyone to “[a]ct so that the effects of [our] action[s] are compatible with *the permanence of genuine human life on earth*.⁷⁶ I concur. Who would not?

But how does the FRFG’s broad definition (or Jonas’ famous appeal that inspired it) translate to specific concrete issues of environmental law and policy? What is its text when confronted with the question of whether or not it is just, morally or legally, for today’s children and future generations to have to inherit a legacy of nuclear and hazardous waste, loss of biodiversity, ozone depletion, and/or global warming?

The above-quoted Final Report of the May 2001 Berlin Intergovernmental Conference for Children in Europe and Central Asia is suggestive when it equates intergenerational ecological justice in terms of “the obligation to leave behind a world that is better or at least as good as the one we inherit.” Environmental philosopher Peter Brown argues, in the tradition of John Locke, that all peoples, including future peoples, have three categories of rights: “bodily integrity,” “moral, political and religious choice,” and “subsistence rights,” the protection of all three of which, he further argues, is the responsibility of present generations and their governments.⁷⁷

A more juridically defined response, however, spelled out in her pioneering book *In Fairness to Future Generations*,⁷⁸ is provided by previously cited environmental law scholar Edith Brown Weiss. Dr. Weiss cites three basic principles of intergenerational ecological “equity” (as she calls it):⁷⁹ *conservation of options, conservation of quality,*

⁷⁵ See FRFG website, *supra* note 55.

⁷⁶ See HANS JONAS, THE IMPERATIVE OF RESPONSIBILITY: IN SEARCH OF ETHICS FOR THE TECHNOLOGICAL AGE (German 1979; Hans Jonas English transl. 1984) (emphasis added). Jonas’ book is credited with having catalyzed the environmental movement in Germany. Renown for his work on the social and ethical problems created by technology, he argued that human survival depends on our efforts to care for our planet and its future.

⁷⁷ PETER BROWN, ETHICS, ECONOMICS AND INTERNATIONAL RELATIONS 20-21 (2000).

⁷⁸ BROWN WEISS, *supra* note 9. *In Fairness to Future Generations* received the Certificate of Merit Award in 1990 from the American Society of International Law, and has been published in French, Japanese, Spanish, and Chinese.

⁷⁹ While Brown Weiss does not say so, the three principles clearly rest comfortably with the Civil Law doctrine of usufruct from which the Common Law doctrine of waste was derived. In general, the doctrine of usufruct concerns the right to use, enjoy, and profit from personal or real property vested in another provided that such use, enjoyment, and profit does not alter the substance of the property in question. On the incorporation of this Civil Law doctrine into the Common Law and its early evolution therein, see WYNDHAM ANSTIS BEWES, THE LAW OF WASTE: A TREATISE ON THE RIGHTS AND LIABILITIES WHICH ARISE FROM THE RELATIONSHIP OF LIMITED (continued...)

and *conservation of access*. Intergenerational equity (or justice) is achieved, she argues, when each living generation

- “does not unduly restrict the options available to future generations in solving their problems and satisfying their own values”—and thereby recognizes that future generations are “entitled to diversity [of natural and cultural resources] comparable to that enjoyed by previous generations”;⁸⁰
- “maintain[s] the quality of the earth so that it is passed on in no worse condition than [it] received it”—and thereby recognizes that future generations are “entitled to a quality of the planet comparable to the one enjoyed by previous generations”;⁸¹ and
- “provide[s] its members with equitable rights of access to the legacy from past generations” and “conserve[s] this access for future generations.”⁸²

These principles of intergenerational ecological justice are widely endorsed in the environmental literature and appear now to be widely accepted as the general norm.

I endorse this tripartite definition of intergenerational justice as well. I do so, however, less because it has proven popular (though that is important) than because of its virtues. As Westra has observed, Brown Weiss’ definition “comprise[s] both rights and duties, and these include both ‘intragenerational’ and ‘intergenerational’ aspects.”⁸³ Also appealing, particularly within the “two-hundred-year-present” framework strategically adopted in this essay, her definition lives well with both the ethical rationales that give intergenerational justice moral purpose and the

⁷⁹ (...continued)

OWNERS AND THE OWNERS OF THE INHERITANCE WITH REFERENCE TO THE TENEMENTS (1894).

⁸⁰ BROWN WEISS, *supra* note 9, at 39, elaborated at 40-42. See also Brown Weiss, *supra* note 21, at 1, 5.

⁸¹ BROWN WEISS, *supra* note 9, at 39, elaborated at 42-43. See also Brown Weiss, *supra* note 21, at 5 (wherein, also, she cautions that in implementing this principle, “trade-offs are inevitable”). Accord BARRY, *supra* note 62, at 519 *et seq.*

⁸² BROWN WEISS, *supra* note 9, at 38, elaborated at 43-45. See also Brown Weiss, *supra* note 21, at 5. This “conservation of access” principle, it may be noted, foreshadows the above-mentioned 1998 Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, *supra* note 69. For helpful insight into the Aarhus Convention, see Jeremy Wates, *The Aarhus Convention: Promoting Environmental Democracy*, in SUSTAINABLE JUSTICE: RECONCILING ECONOMIC, SOCIAL AND ENVIRONMENTAL LAW 393 (Marie-Claire Cordonier Segger & C. G. Weeramantry eds., 2005)

⁸³ WESTRA, *supra* note 25, at 136.

jurisprudential theories that give it legal standing. Other virtues are noted in Section IV(B), *infra*.⁸⁴

III. THE ETHICAL AND PRAGMATIC RATIONALES FOR INTERGENERATIONAL JUSTICE

To define "intergenerational justice" is not to answer why it is needed. Indeed, there doubtless are some who would argue that it matters not at all. As 17th Century English essayist Joseph Addison famously imagined of a miserly college alumnus asked to contribute generously to the well-being of his successors: "'We are always doing something for Posterity,' says he, 'but I would fain see Posterity doing something for us.'"⁸⁵ Addison, I hasten to add, was contemptuous of such people, finding them of "poor and base heart, void of all generous principles and love to mankind."⁸⁶

In the contemporary literature, many of the answers given to why intergenerational justice matters would have pleased Joseph Addison. Prominent among them are those of philosophers Alfred North Whitehead and Joel Feinberg. The self-contained independent person with concern for no one else, Whitehead held, is a concept that, at risk to self-interest, fails to comprehend human society as a web of interdependent relations with the past, present, and future, and thus is "without any validity for modern civilization."⁸⁷ Feinberg, in a much cited essay, put it this way: "[Despite] their present facelessness and namelessness . . . , we can tell . . . that the shadowy forms in the spatial distance belong to human beings . . . ; and this imposes a duty on us not to throw bombs in their direction."⁸⁸ The identity and interests of future persons may be vague, he contended, but the realization that future persons have interests that are affected by present action is enough to remind the presently living that we have a duty to minimize harm to those who are yet to live. Significantly, most if not all of the world's religions espouse these same views: Bahá'í, Buddhism, Christianity, Daoism, Hinduism, Islam, Jainism, Judaism, Shintaoism, Sikhism,

⁸⁴ See text at [insert page number upon final proofs].

⁸⁵ Joseph Addison, THE SPECTATOR, No. 583, Friday, Aug. 20, 1714, reprinted in THE WORKS OF JOSEPH ADDISON, COMPLETE IN THREE VOLUMES 373 (1864). Addison was co-founder of The Spectator.

⁸⁶ *Id.*

⁸⁷ See ALFRED NORTH WHITEHEAD, ADVENTURES OF IDEAS 34 (1933) and MODES OF THOUGHT 46, 100 (1938).

⁸⁸ FEINBERG, *supra* note 17, at 181-82.

Zoroastrianism.⁸⁹ Future generations, it has been said, should be “inheritors of God’s creation,” not mere survivors.

Other answers to our why-does-it-matter question, some of them also prominent, are conveniently grouped as follows:

- because the earth, its natural and cultural environment especially, does not belong to one generation only, but, instead, is held by past, present, and future generations in common, as a species forming the community of humankind as a whole;⁹⁰
- because, as members of a community and a culture, we benefit from sacrifices and investments made by members of prior generations;⁹¹
- because each generation has a duty to maintain and improve civilization to such extent as is required to uphold and further just institutions for the benefit of the next;⁹²
- because each generation has a contract with the next generation to pass on the gifts it has *jointly* inherited from the past;⁹³
- because each generation has a duty not to inflict dramatic harm upon succeeding generations who can do no harm, ergo will do no harm, to their predecessors;⁹⁴

⁸⁹ For a comprehensive overview, see, e.g., ARC-Alliance of Religions and Conservation, Faiths & Ecology at <<http://www.arcworld.org/faiths.htm>>, documenting the ecological views of Bahá’í, Buddhism, Christianity, Daoism, Hinduism, Islam, Jainism, Judaism, Shintoism, Sikhism, and Zoroastrianism [hereinafter “ARC-Faith & Ecology”]. See also THE CLIMATE INSTITUTE (AUSTRALIA) LTD, COMMON BELIEF: AUSTRALIA’S FAITH COMMUNITIES ON CLIMATE CHANGE 8-39 (Dec. 2006), reporting “a dialogue on the morality of climate change” among Anglicans, Bahá’ís, Baptists, Buddhists, Catholics, Evangelical Christians, Greek Orthodox, Hindus, Jews, Lutherans, Muslims, and Sikhs, among others (including The Salvation Army).

⁹⁰ BROWN WEISS, *supra* note 9, at ch.2.

⁹¹ NORTON, *supra* note 35, at 338.

⁹² RAWLS, *supra* note 64, at 293.

⁹³ PETER BARNES, CAPITALISM 3.0: A GUIDE TO RECLAIMING THE COMMONS 12 (2006).

⁹⁴ ONORA O’NEILL, TOWARDS JUSTICE AND VIRTUE 115 (1996); Henry Shue, *Climate*, in A COMPANION TO ENVIRONMENTAL PHILOSOPHY 450 *et seq.* (Dale Jamieson ed., 2001). See also Henry Shue, *Harming the Grandchildren*, as quoted in Ethics and Climate Change Conference Abstracts at <<http://depts.washington.edu/ponvins/ecc/abstracts.html>>.

- because no generation should be deliberately favored or disadvantaged over another;⁹⁵
- because no generation should have to envy the impersonal resources enjoyed by predecessor generations;⁹⁶
- because the impact of environmentally degrading policies at the hands of present generations tends often to be long-term and therefore threatens and harms future generations only;⁹⁷
- because, even if they do not have them now, future generations will have properties tomorrow shaped substantially by the values practiced by present generations today, and that is reason enough;⁹⁸
- because present actions may not only deprive future generations of benefits they might otherwise have enjoyed, but also inflict upon them disadvantages and problems they would not seek;⁹⁹
- because the policies of present generations will affect not only the interests of future generations, but, as well, their rights and, what is more, the obligations their affected rights will impose on their contemporaries;¹⁰⁰

⁹⁵ Tremmel (2002), note 56, at 7.

⁹⁶ PAGE, *supra* note 26, at 64-5, citing Ronald Dworkin, *What Is Equality?: Part 2: Equality of Resources*, 10(4) PHILOSOPHY AND PUBLIC AFFAIRS 283, 284 *et seq.*(1981) and RONALD DWORKIN, SOVEREIGN VIRTUE: THE THEORY AND PRACTICE OF EQUALITY 68 *et seq.* (2000).

⁹⁷ *Id.* at 38.

⁹⁸ FEINBERG, *supra* note 17, at 181-82; Richard & Val Routley, *supra* note 31.

⁹⁹ Clark Wolf, *Intergenerational Justice*, in A COMPANION TO APPLIED ETHICS 279, 280 (R.G. Frey & Christopher Heath Wellman eds., 2003).

¹⁰⁰ Wilfred Beckerman, *Intergenerational Justice*, INTERGENERATIONAL JUSTICE REV. (2)1, 4 (2d Engl. ed., 2004). The author explains by quoting Richard & Val Routley, *supra* note 31, at 292: "Future items *will* have properties even if they do not have them now, and that is enough to provide the basis for moral concern about the future. Thus the thesis of obligations to the future does not presuppose any special metaphysical position on the existence of the future." Any jurist reading this argument for intergenerational moral behavior surely must ask why it could or should not be sufficient for legal concern about the future as well.

- because future generations are under-represented in legal and political processes and thus disadvantaged relative to the power of present generations to affect adversely their quality of life;¹⁰¹
- because advancing science and technology have expanded the sphere of human control and thereby given present generations greater capacity and consequent responsibility to offset future dangers and risks;¹⁰²
- because science and technology can work wonders only if they are guided by principles of intergenerational solidarity, cooperation, and sharing;¹⁰³
- because today's children and future generations will need a clean, healthy, ecologically-balanced, and sustainable environment to live and live well;¹⁰⁴
- because, at the very least, even if all individuals do not want offspring, all societies need and therefore have affection for their children, grandchildren, great-grandchildren, and thus care about their future well-being at a minimum.¹⁰⁵

Each of the foregoing—essentially ethical—rationales for intergenerational justice, including those of Whitehead, Feinberg, and the cited worldwide religious communities,¹⁰⁶ is, I submit, compelling, separately and especially together. They raise and convincingly answer issues fundamental to Twenty-first Century morality

¹⁰¹ Emmanuel Agius, *Intergenerational Justice*, INTERGENERATIONAL JUSTICE REV. (3) 24 (3d Engl. ed., 2005).

¹⁰² JONAS, *supra* note 76; Hans Jonas, *Technology and Responsibility: The Ethics of an Endangered Future*, in RESPONSIBILITIES TO FUTURE GENERATIONS: ENVIRONMENTAL ETHICS 23 (Ernest Partridge ed., 1980), reprinted from RELIGION AND THE HUMANIZING OF MAN (James M. Robinson ed., 2d ed. 1973). See also Dieter Birnbacher, *Responsibility for Future Generations: Scope and Limits*, INTERGENERATIONAL JUSTICE REV. (3)22 (3d Engl. ed., 2005). Cf. *The Dalai Lama on Protecting the Environment* in ARC-Faiths & Ecology, *supra* note 89, at <<http://www.arcworld.org/faiths.asp? page ID=64>>: "It is not difficult to forgive destruction in the past which resulted from ignorance. Today however we have access to more information, and it is essential that we re-examine ethically what we have inherited, what we are responsible for, and what we will pass on to coming generations."

¹⁰³ Emmanuel Agius, *Intergenerational Justice*, in HANDBOOK OF INTERGENERATIONAL JUSTICE 317 (Joerg Chet Tremmel ed., 2006).

¹⁰⁴ BARNES, *supra* note 93, at 5.

¹⁰⁵ RAWLS, *supra* note 64, at 284-98. Rawls premises this rationale—a psychological generalization he calls the "motivational assumption" (*id.* at 292)—on a "chain of concern" model of distributive justice that assumes self-interested as well as empathetic fairness from one generation to the next.

¹⁰⁶ See *supra* note 89 and accompanying text.

and, in so doing, give legitimacy to efforts to prevent and minimize climate change harms to future generations.

They are compelling also from a pragmatic point of view. When all is said and done, concern for intergenerational justice is critical to any feasible as well as legitimate solution to global climate change.

The importance of this fact cannot be overstated. If we do not etch a profile in courage marked by respect for future generations, it is likely that we will have more than our conscience to chide us. Oxford University moral philosopher Henry Shue put it this way recently when exploring the moral and physical implications of failing to deal with climate change, future generations firmly in mind:¹⁰⁷

1. Failing to deal with climate change constitutes, not failing to help future generations, but inflicting harm on them;
2. Failing to deal with climate change constitutes inflicting harm on generations who could have been spared all such harm;
3. Failing to deal with climate change constitutes not simply continuing to make it worse, but unnecessarily creating opportunities for it to become significantly worse by feeding upon itself through positive feedbacks that would otherwise not have occurred; and
4. Failing to deal with climate change constitutes not only unnecessarily creating opportunities for the planetary environment to become significantly worse, but also unnecessarily creating opportunities for it to become catastrophically worse.

In sum, potentially severe “inconvenient truths” await disregard of intergenerational appeals for climate justice, morally or legally defined. Assuming we care about the sustainability of our planet and/or the survival of our species (or of only our own societies or descendants), they point to the conclusion that our self-interest depends on our achieving ecological justice for future generations. It also is the right thing to do. “A thing is right,” wrote Aldo Leopold in *A Sandy County Almanac*, “which tends to preserve the integrity, stability and beauty of the biotic community.”¹⁰⁸

There remains, however, a potentially disconcerting question. Regarding climate change, is it not enough to evince concern for present generations who already

¹⁰⁷ Summary of Henry Shue, *Harming the Grandchildren* (keynote address at Conference on Ethics and Climate Change, University of Washington, Apr. 2007), as quoted in *Ethics and Climate Change Conference Abstracts* at <<http://depts.washington.edu/ponvins/ecc/abstracts.html>>.

¹⁰⁸ ALDO LEOPOLD, A SAND COUNTY ALMANAC 224 (1949).

are being harmed by climate change? Might it not be persuasively argued, environmental law scholar Richard Brooks asks, *advocatus diaboli*, "that no special attention has to be given to future generations because such protection is implied in the protection of present generations"?¹⁰⁹ Brooks continues:

Let's take the First Amendment Freedom of Speech clause. Assume it protects the present generation. Does it also protect a future person whose freedom of speech might be harmed? Does a present case involving the freedom of speech carry implications for a future person's freedom of speech? The argument may be made that environmental harms to future generations are different because there is no present threat but only a future one. But even if this is correct (and one might doubt it), doesn't law deal with future threats, both in common law and constitutionally, even if there isn't a present serious threat? For example, in common law, injunction of a nuisance may involve minimal present harm but threaten future harm. Moreover, doesn't the rationale of deterrence accept the future effect of a law, irrespective of whether there is a present deterrence?

Professor Brooks' point is not to be summarily dismissed. As noted at the outset of this essay, in all legal systems that prioritize custom, predictability/stability, and coherence at least in theory, legal decision-making is as much about the future as it is about the past. This certainly is true of the American legal system.

Furthermore, in our pursuit of happiness, authenticity, and freedom, constitutional law scholar Jed Rubenfeld reminds us, modernity directs us to live in the present.¹¹⁰ The future, we are commonly advised, will take care of itself.

We thus are left to ask: will not efforts to protect present generations against climate change harms also benefit future generations simultaneously? And will not this self-focus buy us happiness, authenticity, and freedom for being helpful to others at the same time? The answer: "Yes, sometimes in the near term, depending on the harm and the corrective chosen."

But as Rubenfeld cautions, and Brooks would agree, modernity's imperative rests on an inadequate, deforming picture of the relationship between human happiness, authenticity, and freedom on the one hand and time on the other, utterly disregarding that these goal values—indeed, being human itself—necessarily engage the past and future as well as the present. What is more, confirming Rubenfeld, near-sightedness has its consequences. Without accounting for the harms that mostly future generations are likely to suffer, there is no guarantee that solutions for the

¹⁰⁹ Richard O. Brooks, *Time and the Rights of Future Generations*, Memorandum to Professors Burns H. Weston and Tracy Bach, Vermont Law School (Nov. 5, 2007) (on file with the author and the Climate Legacy Initiative).

¹¹⁰ See JED RUBENFELD, FREEDOM AND TIME (2001).

present will be adequate for the future, hence no guarantee that genuine human happiness, authenticity, and freedom can be realized.

At least six other pragmatic reasons explain why it is better to be far-sighted (sometimes even beyond three and a half generations forward) and why, therefore, it is essential to place future generations and intergenerational justice front and center in our worldview:

- future generations will be more severely damaged by climate change than present generations—indeed, they will be its greatest victims, especially in the relatively near future before physical and psychological adaptations can set in for the lucky;¹¹¹
- while climate change harms obviously will not affect future generations until they actually populate Earth, the threats to them already exist, in potentially cataclysmic ways, and are mounting exponentially;
- climate change solutions that plan for the well-being of future generations are better positioned to combat climate change than those that plan for the well-being of present generations because they likely will be constructed to combat not just the relatively minor effects of climate change felt in the present but, as well, the harsher effects of climate change that hold out, at least cumulatively, the real possibility of planetary catastrophe in the future;
- it defies common sense to expect that domestic law systems as presently constituted, even when faced with urgent problems such as climate change that recognize no political boundaries, will rule instinctively let alone swiftly in favor of planetary over national interests; and accordingly there is no reason to expect that, absent some historic shift, they can or should be invested with significant authority to frame humanity's legal climate change agenda and strategy;
- it is disregard of the interests of future generations and intergenerational justice that has in large part led to nuclear and hazardous waste, loss of biodiversity, ozone depletion, and global warming (not to mention high rates of youth unemployment, the insecurity of state pension or retirement systems, the public debt, etc.); and
- just as there is nothing more practical than a good theory, so is there nothing more pragmatic than ethical behavior, and particularly when the brief for such behavior is powerful, as in the instant case of ecological justice for future generations, and when it is pursued in societies committed to democratic governance in both word and deed.

¹¹¹ See *supra* Section 1, at [insert page number upon final proofs].

Thus, just as there are many good reasons to champion the interests and needs of present generations—and, as well, the value that attention to them can have for future generations (in common law systems especially)—so also are there many good reasons to champion the interests and needs of future generations. There are in fact abundant reasons why the interests and needs of future generations must be accorded large deference and just treatment, even if this is costly to present generations. As seen, some of these reasons are ethical, some pragmatic.

Indeed, there are reasons that are both ethical and pragmatic at the same time. Recall, for example, the above-noted claim that intergenerational justice matters for the ethical reason that today's children and future generations need a clean, healthy, ecologically-balanced, and sustainable environment to live in dignity.¹¹² To fulfill this need—and, one must add, the need of today's children and future generations to fulfill the ecological obligations that they will have to *their* future generations—all members of the present community of nations, rich and poor alike, must share in the burdens of climate change adjustment. This universal sharing of responsibility is unlikely to happen, however, unless it is equitable in its conception and execution, made to reflect the uneven capabilities and conditions of the developed and developing worlds. If so done, then it is not unreasonable to expect that present-day wealthy industrialized economies should accept a "polluter pays" duty—to make up for past greenhouse-gas-emission sins—by providing low-cost and otherwise generous transfers of capital, technology, and skills to help the poor and emerging economies modernize without having to rely heavily upon carbon-based energy—a matter of profound self-interest. In the end, the ecological options and access to resources of future generations are benefitted.¹¹³ So also, however, are the environments of present generations and, not coincidentally, the economies of their wealthy members—a win-win outcome that is as pragmatic as it is ethical. This, I would argue, is the stuff of which human happiness, authenticity, and freedom are made. It also is the stuff of which every major theory of social justice is made.

IV. FOUNDATIONAL THEORIES OF INTERGENERATIONAL JUSTICE

It is a familiar view that ethical and pragmatic values are essential components of effective social justice. But they are not sufficient. Ethical and pragmatic arguments supporting the idea that future generations *should* have rights (and present generations duties corresponding to them) do not of themselves answer whether future generations *can* or *do* have rights (or present generations duties corresponding to them). In the context of climate change, inevitable conflicts between the interests of present and future generations cannot be consistently or reliably resolved by resort to what are essentially intuitive judgments. Needed is a theory (or theories) of justice

¹¹² See text accompanying note 104, *supra*.

¹¹³ The application of the "polluter pays" principle in the intergenerational context is consistent with Brown Weiss' "conservation of options" and "conservation of access" principles of intergenerational justice. See text accompanying notes 80 and 82, *supra*. For elaboration, see BROWN WEISS, *supra* note 9, at 40-45, chs. III and IV.

upon which intergenerational justice (and all the ethical and pragmatic rationales for it) may be convincingly founded. Social rights and duties are necessarily based in coherent theories of social justice.

This essay cannot hope to provide a fully developed theory of intergenerational justice. This would take a book or more.¹¹⁴ However, I do briefly explore several lines of philosophical thought to understand the providence they bring to such a theory.¹¹⁵ Ultimately I favor a theory of intergenerational justice that behooves a world public order of human dignity, one that is spatially and temporally inclusive in reach and rooted in the value of respect.

Presently theories of social justice tend to divide between "libertarian" and "liberal" theories. Libertarian theories of social justice, sometimes called "conservative," maintain that government should protect private property and enforce only people's "negative" rights ("freedoms from"). Liberal theories, by contrast, favor "positive" rights ("rights to"), accepting government as a promoter of socioeconomic and political well-being, although not to the exclusion of civil and political "freedom from" rights.

Libertarian theorists thus do not favor social or political agendas that invite governmental intervention; and in support of this view in the intergenerational context most assert that it is conceptually impossible for future generations to be protected by social justice norms—which is to say that future generations cannot and therefore do not have rights.¹¹⁶ Their argument is summarized in the following syllogism:

- any coherent theory of social justice involves conferring rights on people;
- future generations, being unborn, are not yet people;

¹¹⁴ Brown Weiss, for one, *supra* note 9, has done large service in this regard, specifically in relation to the global environment. See also the works of Derek Parfit, defining the problems of how we can and should relate to future people, are particularly to be noted: REASONS AND PERSONS, *supra* note 5; THE IDEAL OF EQUALITY (Matthew Clayton & Andrew Williams eds., 2000); *On Doing the Best for Our Children*, in ETHICS AND POPULATION 100 (Michael D. Bayles, ed.1976); *Future Generations: Further Problems*, 11 PHILOSOPHY & PUBLIC AFFAIRS 113 (1982); *Energy Policy and the Further Future*, *supra* note 5; *Comments*, 96 ETHICS 96 832 (1986); *Equality or Priority*, in IDEALS OF EQUALITY 1 (Andrew Mason ed., 1998). See also PAGE, *supra* note 26.

¹¹⁵ In this exploration, I am indebted to PAGE, *supra* note 26, for helpful insight.

¹¹⁶ See, e.g., DAVID GAUTIER, MORALS BY AGREEMENT (1986); ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA (1974); Ruth Macklin, *Can Future Generations Correctly Be Said to Have Rights?*, in RESPONSIBILITIES TO FUTURE GENERATIONS: ENVIRONMENTAL ETHICS 151 (Ernest Partridge ed., 1981). See also references cited in *supra* note 8.

- therefore the interests of future generations cannot be promoted or protected according to any theory of justice.

From this perspective, intergenerational justice is a conceptual impossibility that precludes further discourse. All that is conceded in defense of future generations is that they will have interests of one sort or another and that, for one or more of the reasons cited in preceding Section III,¹¹⁷ we, the living, have a *moral* but not a *legal* obligation to appraise our policies with those interests in mind.¹¹⁸

I disagree with this line of reasoning. If future interests can generate moral obligations to be fulfilled by present-day duty-bearers, it also is true that proxy or surrogate rights-holders, lawfully appointed, can cause future interests to be treated as *legally recognized rights*.¹¹⁹ The difference between future interests that summon moral duty and those that evoke legal entitlement is a function not of some metaphysic. It is a function, rather, of precisely that which distinguishes the "ought" from the "is" in law: some at least minimal degree of simultaneously authoritative and effective control or enforcement. This is well known to all legal systems.

Furthermore, as philosopher Annette Baier has observed, "[t]he ontological precariousness of future generations that some see as a reason for not recognizing any rights of theirs is not significantly greater than that of the future state of present persons."¹²⁰ This being so, the ontological argument does not of itself excuse us from assuming legal responsibility to them.¹²¹ At the very least; we cannot on this basis disclaim our moral responsibility to at least explore the theory or theories upon which the ecological rights of future generations might be established. "[T]he critical vulnerability of nature to Man's technological intervention—unsuspected before it began to show itself in damage already done," Hans Jonas has admonished, "requires a commensurate ethics of foresight and responsibility, which is as new as are the

¹¹⁷ See text accompanying notes 87-105, *supra*.

¹¹⁸ See, e.g., Beckerman (2006), *supra* note 13. See also the authorities cited in note 3, *supra*.

¹¹⁹ See Christopher D. Stone, *Should Trees Have Standing? Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972) for the idea that proxies or surrogates may litigate or otherwise represent non-human biospheric entities.

¹²⁰ Annette Baier, *The Rights of Past and Future Generations*, in RESPONSIBILITIES TO FUTURE GENERATIONS: ENVIRONMENTAL ETHICS 171, 174 (Ernest Partridge ed., 1981).

¹²¹ Immanuel Kant, *Idea for a Universal History with a Cosmopolitan Purpose, Proposition 8*, in KANT'S POLITICAL WRITINGS 5 (Hans Reiss, ed. H. B. Nisbet, transl., 1970).

issues with which it has to deal. * * * Novel powers to act require novel . . . rules and perhaps even a new ethics."¹²²

I turn, therefore, to liberal theories of social justice that have in common, as previously noted, acceptance of government as a facilitator of rights as well as a commitment to individual liberty comparable to libertarian theories. Liberal theorists believe that government should promote and enforce positive rights (e.g., health, education, economic well-being, etc.) and likewise nurture and expand public goods (e.g., clean air and other environmental goods, information/knowledge, law enforcement, etc.).¹²³

Some liberal theorists support these rights and goods on *utilitarian* grounds.¹²⁴ However, as the utility principle (famously defined by Jeremy Bentham as "the greatest happiness of the greatest number"¹²⁵) is conceived by utilitarians as the *sole* measure of right and wrong, it is not a favored approach to climate change ethics. Dominant, instead, are *contractarian* theories of social justice, which view just norms, institutions, and procedures as those arrived at by free and rational agreement among all relevant parties—"the ideal contract." Of course, unanimity of agreement is typically unachievable and, indeed, phenomenally impossible when it comes to unborn contractual parties. Accordingly, most contractarian theories, particularly those that concern themselves with intergenerational justice, argue that just social arrangements "are those that *could be* the object of a free and rational agreement [and therefore] are often called *hypothetical contractarian conceptions of justice*."¹²⁶

A. Two Prominent Contractarian Theories of Social Justice

Significantly, there is among the most prominent contractarian theories of social justice, a convergence of opinion that future generations have a legal as well as moral right to an environmental legacy that leaves them no worse off, more or less, than the generation preceding them. While perhaps not equally useful to the interests of future generations, it seems not to matter whether they are distributive or reciprocity-based in character or whether their guiding principle is equality, priority, sufficiency, or some other value. This convergence, I hasten to add, applies to today's living children—"the

¹²² Jonas, *supra* note 102, at 28, 31, 35.

¹²³ On public goods, *see supra* note 62.

¹²⁴ See, e.g., LOMBORG , Beckerman (1999 and 2006), *supra* notes 3 and 13, each of whom endorse utilitarianism at least implicitly. *See also* S. FRED SINGER, HOT TALK, COLD SCIENCE: GLOBAL WARMING'S UNFINISHED DEBATE (1998).

¹²⁵ JEREMY BENTHAM, INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION ch. 1 (2007), an unabridged republication of the edition published by Clarendon Press, Oxford, in 1970, in turn a reprint of "A new edition, corrected by the author," published in 1823. The work originally appeared in 1780.

¹²⁶ Wolf, *supra* note 99, at 284.

first generation”—as well as to unborn persons. To avoid confusion, however, I here consider this matter in terms of future *unborn* generations only. Most social justice theorists do not include lives-in-being when arguing for or against the idea of intergenerational rights.

1. *Distributive Justice*

Theories of distributive justice, which date back at least to Aristotle, are today most prominently associated with John Rawls and Ronald Dworkin.¹²⁷ They are concerned with how social goods are allocated among society’s diverse members, and may be understood in both substantive and procedural terms.

Substantive theories of distributive justice, as they might be called, commonly assert that the distributive allocation must be fair to all, as if the result of an ideal contract freely and rationally negotiated.¹²⁸ As such, whether fairness is measured by equality (to everyone the same welfare, resources, or capabilities), priority (to each according to one’s contribution or need), or sufficiency (to everyone enough to pursue one’s aims and aspirations without major distress or dissatisfaction), they are result-oriented and consequently speak to both sides of the contractual equation—the rights-holders and the duty-bearers—to ensure fair results. In the intergenerational context, recalling that legal duties do not exist absent corresponding legal rights, this requires

¹²⁷ See, e.g., RAWLS, note 64; JOHN RAWLS, JUSTICE AS FAIRNESS: A RESTATEMENT (2001); DWORKIN,, *supra* note 96.

¹²⁸ It may be noted that Rawls’ “original position”-“veil of ignorance” thought experiment (RAWLS, *supra* note 64, at §§ 1-4, 9, 11-17, 20-30, 33-35, 39-40), and Dworkin’s auction and insurance market devices (DWORKIN, *supra* note 96, at 70, 73), are classic examples of hypothetical contractualism each of which are designed to achieve neutrality, ergo fairness, in moral and legal decision-making. Dworkin’s theory is an attempt to improve upon Rawls’ theory by overcoming some of its shortcomings, in particular to prevent profiteering or suffering in the distribution of goods due to one’s undeserved natural abilities or disabilities (unknown and therefore beyond the control of the physically able or handicapped in Rawls’ “original position”-“veil of ignorance” scenario). Hereinafter, however, I rely extensively on Rawls’ approach but not Dworkin’s, which is difficult to apply in the intergenerational setting. Dworkin’s central contention that the demands of distributive justice are most effectively revealed by appraising the interaction of mature adults in idealized markets is perhaps useful in helping to clarify how best to ensure intergenerational equality of personal and impersonal resources even while being insensitive to the needs and interests of children. See PAGE, *supra* note 26, at 62-67. Further, concerned to improve the public good, but recognizing that the market does not always succeed, he does advocate robust state support for art and culture to benefit future as well as present generations. “We inherited a cultural structure,” he writes in A MATTER OF PRINCIPLE 232-33 (1985), “and we have some duty, out of simple justice, to leave that structure at least as rich as we found it.” But Dworkin’s scheme requires a complex taxation and capital transfer system to achieve its desired results, not easily managed in the intergenerational setting. His theorizing about the rights of future generations appears not to have gone beyond his concern for the arts and culture. And it is not clear that his call for a strong state-supported cultural structure does not reflect more a politically liberal preference than a quest for neutrality.

proxies or surrogates authorized to represent the interests of the unborn rights-holders.

Procedural theories of distributive justice, in contrast, are process-oriented. They are concerned with the fairness and transparency of resource allocation decisions. Akin to notions of “due process” (United States), “fundamental justice” (Canada), “procedural fairness” (Australia) and “natural justice” (other common law jurisdictions), their focus is on the administration of distributive justice. In the intergenerational setting, they require, like substantive theories, lawfully appointed agents competent to act on behalf of the unborn to ensure that moral rights and duties are accorded legal status.

There are numerous variants of distributive justice¹²⁹. At their core, however, especially when they are considered in combined substantive-procedural terms and when sufficiency is the guiding value, they give foundational support to Brown Weiss’ tripartite definition of intergenerational ecological justice.¹³⁰ Their warp and woof is fairness—in the quantity and quality of diverse resources distributed, and in the access to them given by one generation to the next. Assuming persons or institutions authorized to represent future generations, the central question is not whether future generations have rights and present generations duties in relation to them. The central question is how fair distribution is measured, what Rawls called the “fair share” or “just saving” question—what and how much present generations should save for the benefit of future generations. The exact measure of “fair share” is of course open to differing interpretation.¹³¹

2. Reciprocity-based Justice

Reciprocity-based theories of social justice likewise support the Brown Weiss definition of intergenerational ecological justice. As implied from their denomination, their unifying premise is that only those who contribute to the well-being of others are entitled to the full sweep of rewards that society has to offer. The idea is as old as the Bible at least: “Give, and it shall be given to you. . . . For whatever measure you deal out to others, it will be dealt to you in return.”¹³²

A self-interested interpretation of this contribution principle is that the good that one gives to others must be good also for oneself. Otherwise, norms of reciprocity will fail to generate consensus and cooperation among the otherwise competing parties.

¹²⁹ Useful expositions may be found in, e.g., ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA (1974); Derek Parfit, *Equality or Priority*, *supra* note 114, at 1; DEREK PARFIT, THE IDEAL OF EQUALITY, *id.* at 81.

¹³⁰ See text accompanying notes 80-86, *supra*.

¹³¹ Space limitations prevent discussion of this complex issue in this essay. For a helpful summary and critique of Rawls in this regard, however, see Wolf, *supra* note 99, at 286-91.

¹³² Luke 6:38.

This interpretation is not now especially favored among Western theorists. Nevertheless, it is not hard to see how, among rational beings, the self-interest that resides in conserving resources, safeguarding ecological diversity, or curbing climate change for one's own sake or the sake of one's family, descendants, or country—each involving potentially multiple generations—can generate consensus and cooperation.¹³³ Nor is it hard to see how such environmentally defined self-interest can serve simultaneously the interests of unborn generations.

It is the interpretation of the contribution principle that values mutuality over self-advantage, however, that resonates most with notions of intergenerational ecological justice (or “ecojustice”) and Brown Weiss’ definition of it. The history of the 1997 Kyoto Protocol¹³⁴ to the 1994 UN Convention on Climate Change¹³⁵ is illustrative of how this is so. Both the slowness of states to ratify the Protocol (a period of seven years) and the refusal of the United States even to ratify it were the result, in major part, of differing views of fair reciprocity relative to the percentage reductions of greenhouse gas emissions that, at the time, were required of the developing and developed countries respectively.

What again matters most for present purposes, however, are two key points that merit special notice. Together, they underpin the relationship between climate change and that part of reciprocity-based justice that is concerned with the entitlements of future persons and the obligations of living persons.

First, notions of fairness are at the heart of both the self-interest and mutuality representations of reciprocity-based justice just as notions of fairness permeate and

¹³³ There are of course people who either do not procreate or do not care about the well-being of their descendants. Arguably, therefore, it is unfair to expect such people to sacrifice their present well-being in the same way that we expect people with descendants to do. Edward Page responds to this issue persuasively as follows: “Perhaps the strongest response is that, since even the childless and loveless derive *present* benefits from additional people in society, such as those related to extra contributions coming into the pension system, it could be argued that the former are also bound by a duty of fair play to treat the well-being of the next generation as a public good.” PAGE, *supra* note 26, at 117. In any event, the issue seems a minor one when compared to the enormity and pervasiveness of the climate change threat to the human and natural environment worldwide. Arguably, therefore, it may be discounted for practical even if not theoretical purposes.

¹³⁴ FCCC/CP/1997/7/Add.1., reprinted in 37 ILM 32 (1998) and 5 INTERNATIONAL LAW AND WORLD ORDER: BASIC DOCUMENTS V.E.20d (Burns H. Weston & Jonathan C. Carlson eds., 1994—), hereinafter “5 WESTON-CARLSON”).

¹³⁵ 1771 UNTS 107, reprinted in 5 WESTON-CARLSON V.E.19.

shape theories of substantive and procedural distributive justice. As Rawls put it, "we are not to gain from the co-operative labors of others without doing our fair share."¹³⁶

Second, this reciprocity-based fairness is applicable intergenerationally as well as intragenerationally. Reciprocity is of course not to be found coming from people not yet born except when they are represented by authorized agents living in the present. At the same time, while this latter arrangement is helpful, it is not required for reciprocity-based justice to be realized. For example, invoking a "stewardship model" of intergenerational reciprocity,¹³⁷ it is reasonable to contend that intergenerational rights and duties be held in relation to generations past and present as well as future so that each generation gives to the next a fair share of the fair share it received from the generation preceding. Similarly, invoking a "chain of concern model" of intergenerational reciprocity,¹³⁸ made famous by Rawls in relation to familial consanguinity ("fathers looking out for the interests of their sons"),¹³⁹ one can reasonably argue that intergenerational rights and duties are held for one's blood descendants for the same purpose. As Tremmel has written, seemingly invoking the stewardship and chain of concern models of intergenerational reciprocity simultaneously, "it is possible to apply the principle of reciprocity indirectly. Most people would argue that it is 'just' to give back to future generations what we received from former generations (just like we owe back our children what we received from our parents)."¹⁴⁰ Each of these modeled arguments can of course lead to a cascade of reciprocal rights and duties that surpasses even the "two-hundred year present" that is our operational temporal space here.¹⁴¹

From this twin reciprocity-based perspective, in sum, one can challenge directly the skeptics who downgrade the ethical-legal status of unborn generations on the grounds that they are existentially incapable of responding to present attempts to safeguard the human and natural environment against the hazards of climate change. Intergenerational justice defined as fair reciprocity is as viable a theoretical warrant as intergenerational justice based on distributive justice, perhaps even more so.

B. A Preferred Contractarian Theory of Social Justice

We have seen that both distributive and reciprocity-based theories of social justice support the concept of intergenerational justice in general and intergenerational

¹³⁶ RAWLS, *supra* note 64, at 112. The exact measure of "fair share" is of course open to differing interpretation.

¹³⁷ For helpful explication of the "stewardship model," see PAGE, *supra* note 26, at 119-24.

¹³⁸ For helpful explication of the "chain of concern model," see *id.* at 117-21.

¹³⁹ See RAWLS, *supra* note 64, at 292; JOHN RAWLS, POLITICAL LIBERALISM 274 (1993).

¹⁴⁰ Tremmel, *supra* note 60, at 6.

¹⁴¹ See text at *supra* note 18.

ecological justice in particular. Each validates that future generations can have legal as well as moral claims of right against present generations and that, *ipso facto*, present generations can have legal as well as moral obligations of duty relative to future generations.

In the intergenerational setting, however, both suffer from a need to defend against the “non-identity” and “non-reciprocity” problems that, in this setting, some critics find inherent in each. I refer to the claim that we cannot know the identity of unborn persons upon which issues of ethics and justice are said to depend; and the claim that the reciprocity that underwrites justice between non-contemporary generations (assuming such is possible in the absence of identifiable future persons) is qualitatively too different to match the reciprocity—the mutual tolerance and forbearance—that underwrites justice among contemporaries.¹⁴² Future generations can pay forward to pay back, but they cannot pay backward.

In my discussion of distributive and reciprocity-based theories of social justice, I disregarded these two propositions because, in my judgment, each is a non-issue in the intergenerational ecological justice setting. In most if not all of the relevant scholarly literature, each is formulated with reference to the well-being of particular people, not of whole generations. Also, each tends to be formulated with reference to a remote, unfathomable future exclusively, with little or no attention paid to the knowable proximate. In short, the non-identity and non-reciprocity arguments do not negate distributive and reciprocity-based theories of social justice as foundations upon which to ground intergenerational ecological justice. They serve, rather, to divert responsible attention from creative legal approaches to preferred ecological futures.

Nevertheless, it is helpful to highlight, if only as a precautionary measure, an additional contractarian theory of social justice that depends neither on identity nor on reciprocity *stricto sensu* as a precondition of intergenerational justice. I refer to *respect-based justice*. Without discounting that intergenerational justice can be grounded in distributive and reciprocity-based social justice theory, it provides yet stronger support in this regard because it embraces, among other perspectives, a transgenerational global community, partnership, or social contract for intergenerational justice founded on the notion of human solidarity.

Respect-based justice builds on two distinct but conceptually related intellectual traditions: (a) the relational metaphysics and “process philosophy” of British philosopher and mathematician Alfred North Whitehead;¹⁴³ and (b) the idea of human

¹⁴² PAGE, *supra* note 26, at 100.

¹⁴³ See especially, ALFRED NORTH WHITEHEAD, PROCESS AND REALITY (1929); also WHITEHEAD (1933 & 1938), *supra* note 87. In contrast to traditional philosophies, Whitehead asserted the interrelationship of matter, space, and time. The end result is his conclusion that “nature is a structure of evolving processes. The reality is the process.” ALFRED NORTH WHITEHEAD, SCIENCE AND THE MODERN WORLD: LOWELL LECTURES 90 (1925).

rights, the core value of which is respect, conceived as the honoring of difference, freedom of choice, equality of opportunity, and aggregate well-being in value processes.¹⁴⁴ I turn first and briefly to Whitehead.

1. Relational Metaphysics and Process Philosophy

Whitehead's relational metaphysics and his consequent vision of the past, present, and future as a unified whole invite a perspective on social ethics that offers an ethical foundation on which to ground intergenerational justice. Summarizes moral philosopher and theologian Emmanuel Agius:

Whitehead's philosophical understanding of the universe as an interconnected web of relations, as well as the ontological nature of the relational self [whereby each person is constituted by her/his relations and with no other existence than as a synthesis of those relations] offer a new paradigm of human society. In contrast to the individualism of the liberal tradition, process philosophy defines human society as a relational "structure of experience." Every epochal structure of experience is related to an antecedent and succeeding structures. . . . To see . . . present events within a given society in isolation from the past and the future is to avoid the present reality of its relational character. * * * [Furthermore,] [e]very society is relational [in that] its structure of experience extends to other communities. There is a network of relations between all the nations of the world. * * * [But] our interdependence does not end with the nation or even the global community. Relations extend not only over space but also across time; the scope of our relationships is broadened to include the whole family of humankind, which includes past, present, and future generations. . . .¹⁴⁵

In other words, "every generation," according to Whitehead, "is related to all preceding and succeeding generations which collectively form the community of [humankind] as a whole."¹⁴⁶ And this fact, in turn, spells inescapable interdependencies with commensurate rights and obligations—a perspective long held and advocated by indigenous peoples. Thus does Article 11(1) of the 2007 UN Declaration on the Rights of Indigenous Peoples proclaim the right of indigenous peoples "to maintain, protect and develop the *past, present and future* manifestations of their cultures . . ."¹⁴⁷ And

¹⁴⁴ On the history as well as the meaning and scope of human rights, see Burns H. Weston, *Human Rights*, 20 ENCYCLOPAEDIA BRITANNICA 714 (15th ed. 1998 prtg.), updated and revised in Encyclopaedia Britannica Online at <<http://www.eb.com:180/cgi-bin/g?DocF=macro/5002/93.html>>; available also on the website of The University of Iowa Center for Human Rights, at <<http://www.uichr.org>>.

¹⁴⁵ Agius, *supra* note 103, at 327-28.

¹⁴⁶ *Id.* at 328.

¹⁴⁷ UN Declaration on the Rights of Indigenous Peoples, Sept. 13, 2007, GA Res. 61/295, (continued...)

thus also does its Article 25 proclaim their right "to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard."¹⁴⁸

Most if not all of the world's religions, important to a man of faith such as Whitehead and reputedly influential with him,¹⁴⁹ take the same stance as well. The Book of Genesis, for example, reminds Christians and Jews that they are part of the created order, that their first calling by God is to be stewards of the earth and the rest of creation, and that the Earth is not subject to Man's/Woman's absolute ownership but is, rather, given to Man/Woman to use and protect.¹⁵⁰ Similarly, the Holy Qu'ran instructs Muslims that Allah created humans to be guardians or trustees (*khalifa*) of His creation, "that nature does not belong to us to do with as we wish, but is entrusted Allah to our safe-keeping."¹⁵¹ Faith-based exhortations

¹⁴⁷ (...continued)

UN GAOR, 61st Sess., Supp. No. ___, at ___, UN Doc. A/RES/295 (2007), available also at <<http://www.un.org/Depts/dhl/resguide/r61.htm>> (emphasis added).

¹⁴⁸ *Id.* Emphasis added.

¹⁴⁹ See, e.g., Paul Weiss, *Recollections of Alfred North Whitehead* in 10 PROCESS STUDIES 44 (Spring-Summer, 1980). Whitehead, it merits notice, was the son of an Anglican minister.

¹⁵⁰ See Genesis 1:28-29, 2:15. In 2007, following the release of the Australian Climate Institute's "dialogue on the morality of climate change" (see *supra* note 89) and citing Genesis 1:28-29, Canberra's Anglican Bishop George Browning, Chair of the worldwide Anglican Communion Environmental Network, had this to say:

[W]hen we exploit God's creation to breaking point, we break the most fundamental commandment known to us: out of our greed and selfishness, we knowingly cause the degradation of the world's ecosystems instead of protecting the design that issues from the Creator's generosity. Wilfully causing environmental degradation is a sin. * * * The Christian faith is certainly about personal salvation. But it is . . . first and foremost a concern for the whole of the created order—biodiversity and business; politics and pollution; rivers, religion and rainforests. The coming of Jesus brought everything of God into the sphere of time and space, and everything of time and space into the sphere of God. * * * Therefore, if Christians believe in Jesus they must recognise that concern for climate change is not an optional extra but a core matter of faith.

Anglicans on Climate Change, in ARC-Faiths & Ecology, *supra* note 89, at <<http://www.arcworld.org/faiths.asp?pageID=99>>.

¹⁵¹ Hyder Ihsan Mahasneh, "Man and the Khalifa," in *Islamic Faith Statement*, at ARC-Faith & Ecology, *supra* note 89, at <<http://www.arcworld.org/faiths.asp?pageID=75>>. The author is a biologist and Islamic scholar who was appointed by the Muslim World League to compile the *Islamic Faith Statement* for ARC.

supportive of intergenerational ecological justice and from all across the religious spectrum are seemingly endless.¹⁵²

Respect-based justice builds also on Whitehead’s “common good,” a central theme of social ethics and his “process philosophy.” Within Whitehead’s system, however, the common good is not merely the sum of individual goods (as individualistic and liberal theories of society would have it). It is, rather, “a state of equilibrium in the interplay of individual goods”¹⁵³ that resides in all of humankind. In Whitehead’s system, the common good is the good of humankind as a whole which includes, as noted above, past, present, and future generations. Also, it embraces the entire earth-space environment, so that social justice, in Whiteheadian terms, assumes an obligation to share the “common heritage”—i.e., Earth’s natural resources, its fresh water systems, the oceans, the atmosphere, and outer space, all of which belong to all generations in intertemporal partnership—and thus prohibits any generation from excluding another from its fair share of that heritage.

In sum, social justice in Whitehead’s relational worldview “demands a sense of solidarity with the whole family of humankind,”¹⁵⁴ including unborn generations. If personal identity is a factor, it is in an ethos of species identity; if reciprocity is at all pertinent, it is in the mutual caring that arises from species identity. And at the heart of it all, as in the case of distributive and reciprocity-based theories of justice, is the fundamental ideal of “justice as fairness,”¹⁵⁵ the skein that runs throughout the Brown Weiss definition of intergenerational ecological justice, certifying both the rights of future generations (children and the unborn) and the duties of those living in the present.

2. Human Rights Doctrine and Philosophy

Human rights date back to antiquity (albeit by other names¹⁵⁶), and as a consequence of political and social revolutions in the 17th, 18th, and 20th centuries, they found their way into the legal systems of modern states. But it was not until the rise of Nazi Germany and the Holocaust that the idea of individual human rights truly

¹⁵² See, e.g., the many sources quoted in the authorities cited in note 87, *supra*. Note also that a general philosophy of intergenerational justice has been expressed in both Western and non-Western secular thought for many centuries. See, e.g., Alexander Gillespie, *International Environmental Law, Policy and Ethics* 110-11 (1997); Christopher G. Weeramantry, *Universalising International Law* 434-35, 438-44 (2004); (discussion focused on concerns for sustainable development in ancient non-Western civilizations, but clearly including considerations of respect for the interests of future generations).

¹⁵³ Agius, *supra* note 103, at 328.

¹⁵⁴ *Id.* at 330.

¹⁵⁵ The phrase is drawn from RAWLS (2001), *supra* note 127.

¹⁵⁶ E.g., “the law of the Gods,” “natural rights,” etc. For historical explication, see Weston, *supra* note 144.

came into its own to become a moving force on the international as well as national plane. Soon thereafter, during the 1950s and 1960s when colonial empires began to give way to self-governing impulses and when governing elites in general did the same relative to minority demands for equality, it evolved to embrace groups as well as individuals, writ in such notions as the “family of man” and the “family of nations.” Later, during the 1970s and 1980s, spurred by the first Earth Day in March 1970 and NASA’s “blue marble” photo of “spaceship earth” in December 1972, it evolved further still to embrace the human species as a whole across both space and time. Hence such contemporaneously claimed group rights as the right to self-determination and the right to a clean, healthy, ecologically balanced, and sustainable environment, (supplementing earlier proclaimed civil and political rights, on the one hand, and social, economic, and cultural rights, on the other).¹⁵⁷ Today, mindful that many if not most of these rights are being profoundly challenged by atmospheric pollution and consequent climate change, intergenerational rights are now additionally proclaimed and increasingly recognized, legally as well as morally. It can be said that they constitute a new “third wave” (as opposed to “third generation”) right.¹⁵⁸

Whitehead’s relational worldview reverberates in this respect-based setting. His holistic “human solidarity” outlook across space and time is at the core of intergenerational human rights discourse. A relatively recent opinion of the President of the Inter-American Court of Human Rights underscores this interface. “Human solidarity manifests itself,” Judge Cançado-Trindade observed, “not only in a spacial dimension—that is, in the space shared by all the peoples of the world—but also in a temporal dimension—that is, among the generations who succeed each other *in the time*, taking the past, present and future altogether.”¹⁵⁹ He then added, acutely: “It is the notion of human solidarity, understood in this wide dimension, and never that

¹⁵⁷ For historical amplification, see *id.* See also note 189, *infra*.

¹⁵⁸ The idea of generations of rights was the brainchild of French-Czech jurist Karel Vasak, formerly Director of the Division of Human Rights and Peace, later Legal Advisor to UNESCO and the World Tourism Organization, and still later the first Secretary-General of the International Institute of Human Rights in Strasbourg. For historical detail, see Weston, *supra* note 144. As my past human rights scholarship repeatedly attests, I adopted this manner of characterizing the evolution of civil-political, social-economic-cultural, and solidarity or group rights, perhaps because of a love of history, notwithstanding criticisms of it derived from the fact that “generations” come and go and that human rights do not. Now, however, because the use of “generations” obviously risks confusion in intergenerational rights discourse, I hereafter choose the term “wave” in lieu of “generation” to trace the evolution of human rights over time. It is a choice that fits well also my belief that both the terminology and substance of intergenerational rights are here to stay.

¹⁵⁹ Bámaca-Valésquez v. Guatemala, 2000 Inter-Am. Ct. H.R. (ser. C) No. 70, at 92 (Nov. 25, 2000) (separate opinion of Judge Cançado-Trindade, ¶23).

of State sovereignty, which lies on [sic] the basis of the whole contemporary thinking on the rights inherent to the human being.”¹⁶⁰

Arguably more important for my immediate purpose, however, is that, in keeping with Whitehead’s transgenerational worldview, human rights theory does not require grappling with the interdependent non-identity and non-reciprocity issues that haunt, however unconvincingly, other theories of social justice in the intergenerational context. Respect of others—deceased, living, or unborn—is possible without personal acquaintance or knowledge; and, if genuine, it ordinarily is practiced free of charge, without reciprocal preconditions. It is possible to respect some one or thing without detailed familiarity or expectation of return. Empowerment to do good unto others—dead, living, or unborn—requires no license.

The instant case of intergenerational justice in the context of climate change perfectly illustrates the point. It is possible for present generations to choose a legacy of respect for the ecological rights of future generations that is without expectation of return save possibly the spiritual satisfaction of having so chosen. Indeed, unless it can be shown that humans do not care about the future beyond their lifetimes, a proposition that flies in the face of common experience, it is essential that they do so. The business of present generations choosing a legacy to bequeath to future generations is the indispensable first step toward the realization of intergenerational justice. “The [fundamental] question at issue,” writes Norton, “is a question about the present; it is a question of whether the community will, or will not, take responsibility for the long-term impacts of its actions” and in so doing “rationally choose and implement a bequest package—a trust or legacy—that they will pass on to future generations.”¹⁶¹

One must hope so. And one must hope, too, that such a bequest would entail a commitment to the widest possible intergenerational sharing of all the values of human dignity,¹⁶² qualified only by the limitation that the rights of present and future

¹⁶⁰ *Id.*

¹⁶¹ NORTON, *supra* note 35, at 334-35.

¹⁶² The values of human dignity to which I refer are the “welfare values” of wealth, well-being, skills, and enlightenment, on the one hand, and the “deference values” of power, respect, rectitude, and affection, on the other. For this typology, we are intellectually indebted to the germinal work: HAROLD D. LASSWELL & ABRAHAM KAPLAN, *POWER AND SOCIETY: A FRAMEWORK FOR POLITICAL INQUIRY* (1950). Lasswell and Kaplan write, at 55-56: “By ‘welfare values’ we mean those whose possession to a certain degree is a necessary condition for the maintenance of the physical activity of the person. * * * Deference values are those that consist in being taken into consideration (in the acts of others and of the self).” A complementary way to speak about and act upon what fundamentally is required to be human is to invoke the language of “human capabilities” developed by Amartya Sen and Martha Nussbaum—*i.e.*, “life,” “bodily health,” “bodily integrity,” “senses, imagination, and thought,” (continued...)

generations in any particular instance may be restricted to the extent necessary to secure the comparable rights of the other and the aggregate common interest of generations past, present, and future.¹⁶³ Ideally, these values would include all those proclaimed as rights in the 1948 Universal Declaration of Human Rights,¹⁶⁴ the 1966 Covenant on Economic, Social and Cultural Rights, and the 1966 Covenant on Civil and Political Rights¹⁶⁵—the so-called International Bill of Human Rights and its embrace of life, liberty, and the pursuit of happiness (including but not limited to property or habitat, water, food, health, economic security, culture, and community). Ideally, too, they would include those values that have been emerging as rights ever since—in particular, the right to a clean, healthy, ecologically balanced, and sustainable environment.¹⁶⁶

When addressing specifically the two fundamental questions that provoke this essay, however, a legacy of respect must be defined in terms of those values that can help to mitigate or prevent the climate change and related environmental harms that are certain or likely to damage future lives and interests. This is best done, I believe, by putting respect-based justice into service on behalf of future generations everywhere possible according to the following two dangling propositions:¹⁶⁷

¹⁶² (...continued)

"emotions," "affiliation" ("friendship" and "respect"), "other species," "play," and "control over one's environment" ("political" and "material"). See, e.g., Martha C. Nussbaum, *Capabilities, Human Rights, and the Universal Declaration*, in THE FUTURE OF INTERNATIONAL HUMAN RIGHTS 25 (Burns H. Weston & Stephen P. Marks eds. & contribs., 1999); Amartya K. Sen, *Equality of What?*, in I THE TANNER LECTURES ON HUMAN VALUES 195 (1980), reprinted in AMARTYA K. SEN, CHOICE, WELFARE AND MEASUREMENT 353-69 (1982). For early advocacy of a capabilities approach to human rights, see Bernard Williams, *The Standard of Living: Interests and Capabilities*, in THE STANDARD OF LIVING 94, 100 (G. Hathorn ed., 1987).

¹⁶³ See Weston, *supra* note 144. This formulation is modeled on that of MYRES S. McDougall, HAROLD D. LASSWELL & LUNG-CHU CHEN, HUMAN RIGHTS AND WORLD PUBLIC ORDER: THE BASIC PRINCIPLES OF AN INTERNATIONAL LAW OF HUMAN DIGNITY 90 (1980).

¹⁶⁴ Universal Declaration of Human Rights, 10 June 1948, G.A. Res. 217A, UN GAOR, 3d Sess., Pt. I, Resolutions, at 71, UN Doc. A/810 (1948), reprinted in 3 WESTON & CARLSON III.A.1.

¹⁶⁵ International Covenant on Economic, Social and Cultural Rights, concluded Dec. 16, 1966, entered into force Jan. 3, 1976. 993 UNTS 3, reprinted in 6 ILM 360 (1967) and 3 WESTON & CARLSON III.A.2; International Covenant on Civil and Political Rights, concluded, Dec. 16, 1966, entered into force Mar. 23, 1976. 993 UNTS 171, reprinted in 6 ILM 368 (1967) and 3 WESTON & CARLSON III.A.3.

¹⁶⁶ See note 189, *infra*.

¹⁶⁷ For the inspiration that led to these formulations, I am indebted to Axel Gosseries, *Constitutionalizing Future Rights?*, INTERGENERATIONAL JUSTICE REV. (2)10, 11 (2d Engl. ed., (continued...))

- each generation has towards the previous one the right to respect for its right to _____; and
- each generation has towards the next one the obligation to respect its right to _____.

The virtue of these propositions is twofold. First, they conceive the rights of future generations as correlates of the duties of present generations and thus demonstrate how a respect-based theory of social justice, put into practice by present generations, can ignore the “non-identity” problem. Second, they conceive the rights of future generations as payback for the accumulated capital received by present generations from predecessor generations and thus demonstrate how a respect-based theory of social justice, though not required to do so, can ignore the “non-reciprocity” problem. These are not attributes that distinguish distributive and reciprocity-based theories of justice relative to intergenerational justice even though, as emphasized, they are nonetheless capable of providing it foundational support.

There remains, of course, the completion of the above dangling propositions, and to this end I again invoke the three principles of intergenerational justice developed by Edith Brown Weiss:¹⁶⁸

- each generation has towards the previous one the right to respect for its right to (i) *conservation of options*, (ii) *conservation of quality*, and (iii) *conservation of access*; and
- each generation has towards the next one the obligation to respect its right to (i) *conservation of options*, (ii) *conservation of quality*, and (iii) *conservation of access*.

For all the reasons stated heretofore, I endorse these propositions of respect-based intergenerational justice.

But why, it may be asked, should anyone else accept them? Professor Brown Weiss lists four reasons. The three principles, she writes,¹⁶⁹

- “allow future generations the flexibility to operate within their own value system and do not require one generation to predict the values of another”;

¹⁶⁷ (...continued)
2004).

¹⁶⁸ See text at notes 80-82.

¹⁶⁹ Brown Weiss, *supra* note 9, at 5.

- “promote equity among generations by respecting both the rights of future generations not to be deprived by the present generation’s preferences for its own well being and the rights of the present generation to use the environment free from unreasonable constraints to protect indeterminate future needs”;
- “[are] reasonably definite and clear in application to foreseeable [sic] situations”; and
- “[are] shared by different cultural traditions, and generally [are] acceptable to different political and economic systems.”

It is these four virtues, among others, that, in my view, make Brown Weiss’ definition of intergenerational justice compelling.

Still, who is to say that these virtues—or, more importantly, the principles of intergenerational justice to which they refer—should be endorsed by the rest of the humankind? They are, after all, the product of a Western scholar from the industrialized world.

Helpful in this regard is the previously noted work of John Rawls¹⁷⁰ and, in particular, his proposed thought experiment, akin to Kant’s “categorical imperative,”¹⁷¹ in which a group of thinking men and women of diverse characteristics (race, class, creed, etc.) come together in their private capacity (*i.e.*, not as state representatives) in some “original position” to construct a just society with their personal self-interests in mind, but without knowing their own position in it (economic, social, racial, etc.). Behind this “veil of ignorance,” these “original position” decision-makers, rationally contemplating their own self-interest, freely choose a society that is fair to all. It is neither unreasonable nor irrational to assume that they would include a set of environmental values from which all would benefit as much as possible and, by the same token, suffer the least possible disadvantage.

Nor is it unreasonable or irrational to assume that the same “original position” decision-makers would demonstrate and promote respect for groups as well as individuals and that among the groups would be future generations of people. In defense of her three principles of intergenerational environmental justice, Professor Brown Weiss, following Rawls,¹⁷² shows us how:

¹⁷⁰ See RAWLS, *supra* note 64, at §§ 1-4, 9, 11-17, 20-30, 33-35, 39-40.

¹⁷¹ See IMMANUEL KANT, GROUNDWORK FOR THE METAPHYSICS OF MORALS (German orig. ed., 1785; Thomas K. Abbott transl., Lara Denis ed., 2005), CRITIQUE OF PURE REASON (German orig. ed., 1781; Norman Kemp Smith new ed., 2007).

¹⁷² See RAWLS, *supra* note 64, at 287.

[A]ssume the perspective of a [rational] generation that is placed somewhere along the spectrum of time, but does not know in advance where it will be located. Such a generation would want to inherit the common patrimony of the planet in as good condition as it has been for any previous generation and to have as good access to it as previous generations. This requires that each generation pass the planet on in no worse condition than it received it and provide equitable access to its resources and benefits.¹⁷³

In this statement of respect for the ecological rights of future generations, Brown Weiss and Rawls are at one. Writes Rawls in 1993, updating his 1971 account of the principled choices available to persons in the "original position": "[T]he correct principle is that which the members of any generation (and so all generations) would adopt as the one their generation is to follow and as the principle they would want preceding generations to have followed (and later generations to follow), no matter how far back (or forward) in time."¹⁷⁴

Especially noteworthy, however, is Brown Weiss' supplemental observation that "[i]mprovements made by prior generations in the natural and cultural resource base of the planet [also] must be conserved for all future generations."¹⁷⁵ This notion of conserving improvements for future generations, she emphasizes, "is consistent with a view of human society as a partnership extending to all generations," the purposes of which "include sustaining the life-support systems of the planet and attaining a healthy and decent environment for the human community, requires each generation to conserve the improvements of its predecessors."¹⁷⁶ Brown Weiss adds: "If one generation fails to conserve the planet at the level of quality received, succeeding generations have an obligation to repair this damage, even if it is costly to do so,"¹⁷⁷ thus arguing forcefully for "a minimum level of equality among generations," a generational entitlement to a planet and cultural resource base at least as good as the one enjoyed by the generation preceding¹⁷⁸.

Embedded in these statements is a contractarian viewpoint akin to Whitehead's process philosophy of human solidarity across space and time as basis of justice for the global common good. Brown Weiss' underlying and overriding point, with which I agree, is that we humans are "integrally linked with other parts of the natural

¹⁷³ BROWN WEISS, *supra* note 9, at 24.

¹⁷⁴ RAWLS (1993), *supra* note 139, at 274.

¹⁷⁵ BROWN WEISS, *supra* note 9, at 24.

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *Id.* at 24-25.

system"¹⁷⁹ and that we also are inherently linked to one another over time, one generation to another, past to present and present to future, in a continuing partnership of shared responsibility for "the common patrimony of earth."¹⁸⁰ She writes:

In describing a state as a partnership, Edmund Burke observed that "as the ends of such a partnership cannot be obtained in many generations, it becomes a partnership not only between those who are living but between those who are living, those who are dead, and those who are to be born." The purpose of human society must be to realize and protect the welfare and well-being of every generation.¹⁸¹

This requires, Brown Weiss concludes, "sustaining the life-support systems of the planet, the ecological processes, environmental conditions, and cultural resources important for the survival and well-being of the human species, and a healthy and decent human environment."¹⁸²

Embedded, too, is an endorsement of international human rights law and policy—the apotheosis of respect-based justice in the modern world—both as a foundation upon which to build intergenerational justice and as a basis for defining its full meaning. The historic Universal Declaration of Human Rights,¹⁸³ elaborating on the human rights provisions of the UN Charter, proclaims its "recognition of the inherent dignity and of the equal and inalienable rights of *all members of the human family* [as] the foundation of freedom, justice and peace in the world."¹⁸⁴ And multiple subsequent human rights instruments—from the International Covenant on Economic, Social and Cultural Rights¹⁸⁵ and the International Covenant on Civil¹⁸⁶ and Political Rights to the Convention on the Rights of the Child¹⁸⁷ and beyond—are at one in articulating, Brown

¹⁷⁹ Brown Weiss, *supra* note 21, at 199.

¹⁸⁰ *Id.*

¹⁸¹ BROWN WEISS, *supra* note 9, at 23, citing EDMUND BURKE, REFLECTIONS ON THE REVOLUTION IN FRANCE 139-40 (1790) in 2 WORKS OF EDMUND BURKE 368 (1905).

¹⁸² *Id.*

¹⁸³ *Supra* note 164 (emphasis added).

¹⁸⁴ *Id.*, Preamble.

¹⁸⁵ *Supra* note 165.

¹⁸⁶ *Id.*

¹⁸⁷ *Supra* note 69.

Weiss observes, "a fundamental belief in the dignity of all members of the human society and in [an] equality of rights which extends in time as well as space."¹⁸⁸

Such expressions of human solidarity are inspiring. However, it is not a convincing justification of the rights to which future generations are entitled simply to argue that international human rights law itself settles the matter. First, not all states, certainly not the United States, have ratified even some of the core international human rights instruments. Second, much of international human rights law, particularly as it relates to civil and political rights, may be said to be Western inspired, fueling the debate over the universality of human rights that has surfaced between different cultures in recent years.¹⁸⁹ Third, all human rights instruments are filled with ambiguity and indeterminacy—sometimes deliberately to ensure signature and ratification—and thus require interpretation to inform the content of universalism even when the concept of it has been accepted.¹⁹⁰ Finally, when their plenipotentiaries are not signing human rights treaties and voting for human rights resolutions as mere gestures for temporary public relations purposes, states, including states that profess the universality of human rights, typically hedge their bets by resort to reservations, declarations, and statements of understanding so as to ensure that certain practices deemed central to their legal or other cultural traditions will not be rendered unlawful or otherwise anachronistic.¹⁹¹

How, then, are human rights—a dialectic about inter-personal and inter-group respect across space and time—to be justified as a foundation upon which to build intergenerational justice and as a basis for defining its full meaning? The answer, I believe, lies once again in a Rawlsian “veil of ignorance” social construct that can elicit as much as possible a culturally, ideologically, and politically unbiased result: a

¹⁸⁸ Brown Weiss, *supra* note 9, at 26.

¹⁸⁹ For extended treatment of the universalism vs. cultural relativism debate, see Burns H. Weston, *The Universality of Human Rights in a Multicultured World: Toward Respectful Decision-Making*, in THE FUTURE OF INTERNATIONAL HUMAN RIGHTS 65 (1999). See also Burns H. Weston, *Human Rights and Nation-Building in Cross-Cultural Settings*, forthcoming in the MAINE LAW REVIEW.

¹⁹⁰ As Philip Allot has reminded us, “in all societies governments have been reassured in their arrogance by the idea that, if they are not proved actually to be violating the substance of particularized human rights, if they can bring their willing and acting within the wording of this or that formula with its lawyerly qualifications and exceptions, then they are doing well enough.” PHILIP ALLOTT, EUNOMIA: NEW ORDER FOR A NEW WORLD 288 (1990).

¹⁹¹ As Upendra Baxi observes, “[a]ny international human rights lawyer worth her or his calling knows the riot of reservations, understandings, and declarations that parody the texts of universalistic declarations. The ‘fine print’ of reservations usually cancels the ‘capital font’ of universality. In this sense, claims concerning the universality of human rights are diversionary, embodying the politics of, rather than for, human rights.” Upendra Baxi, *Voice of Suffering, Fragmented Universality, and the Future of Human Rights*,

generation not knowing where along the spectrum of time it is situated but acting rationally in its own self-interest would likely hope for a bequest of accumulated social capital from its predecessor that would most guarantee the fairest distribution of basic wants (rights) and needs (capabilities) among all human beings and thereby ensure that all would benefit as much as possible and, by the same token, suffer the least possible disadvantage. Herein lies, I believe, the theoretical justification for human rights, from antiquity to the present day, as a foundation upon which to build intergenerational justice and as a basis for defining its full meaning, a kind of share-and-share-alike Golden Rule that all generations would choose to satisfy the fundamental requirements of socioeconomic and political justice, the minimum conditions for a life of dignity.

Thus is revealed, I believe, the strength of a respect-based theory of intergenerational justice. Supplementing the similarly capable distributive and reciprocity-based theories of social justice but avoiding their weaknesses, it persuasively establishes, entirely on its own, the legal foundation for intergenerational ecological justice upon which claims for the protection of future generations against climate change harms may comfortably rest. Indeed, it lays the legal foundation upon which even the claim of right to a clean, healthy, ecologically balanced, and sustainable global environment itself may comfortably rest.¹⁹²

V. CONCLUSION

The subtitle to this essay, “Foundational Reflections,” is intended to convey a necessary modesty. Many environmentalists, philosophers, historians, economists, students of politics, and others have evinced profound insight as well as concern about the environment that our children and future generations will or should inherit. Lawyers, however, have not been especially active in this realm, leaving it to only a select few—Edith Brown Weiss especially—to do theoretical battle on behalf of our common environmental future.¹⁹³ It therefore behooves the legal profession, myself included, to approach this battle with humility and to pledge respectful collaboration across disciplinary lines.¹⁹⁴ As is well known, a variety of transformational ideas born of transdisciplinary synthesis have animated the environmental movement of the last

¹⁹² This right (or a more syntactically circumscribed rendition thereof) has emerged in recent years as one of several group rights called “third generation” solidarity rights. *Accord*, ALEXANDER KISS & DINAH SHELTON, GUIDE TO INTERNATIONAL ENVIRONMENTAL LAW 237-41 (2007). Better called “third wave” human rights (see note 158, *infra*), they include the right to self-determination, the right to development, the right to peace, and the right to human disaster relief, and, now, the rights of future generations. The third wave right to a clean, healthy, ecologically balanced, and sustainable global environment (CHEBSE) to which future generations are legally entitled will be the subject of another essay forthcoming later this year.

¹⁹³ Most notable, of course, is Edith Brown Weiss, much relied upon in this essay.

¹⁹⁴ A recent praiseworthy example may be found in RICHARD O. BROOKS, ROSS JONES & ROSS A. VIRGINIA, LAW AND ECOLOGY: THE RISE OF THE ECOSYSTEM REGIME (2002).

approximately four decades. I have in mind a geographically expanded attention to regional and global problems, a species expanded attention to non-humans, and an organically expanded attention to ecosystems, each of which has been most successful when transdisciplinary out-of-the-box thinking has prevailed. The time is now—nay, long past due—for the same dynamic to be brought seriously to bear for the sake of future generations in a temporally expanded view of ecological well-being. Indeed, as the UN’s Intergovernmental Panel on Climate Change has made abundantly clear, there is literally no time to waste.¹⁹⁵

This essay is so dedicated, concluding that there is ample theory to establish that future generations can have legal as well as moral rights to protection from climate change harms, and that the ecological rights of future generations define the ecological duties of present generations. Remaining is the all important imperative to build upon this theory an ecological legacy, national and international, from which our children, grandchildren, great-grandchildren, and other future generations can benefit and of which we, the living, can be proud.

This is no small task, to be sure. It requires, of course, in addition to the litigation of select cases, the interpretation of existing laws and the adoption of new ones (constitutional amendments, statutes, regulations, treaties, declarations, resolutions, etc.), all dedicated to the unambiguous acceptance into positive law of the right of future generations to a clean, healthy, ecologically balanced, and sustainable global environment, and the corresponding duty of present generations to safeguard and fulfill that right. Environmental guardianships, trusts, insurance schemes, even the development of a Law of the Global Commons—these projects and more must be on the agenda, and at all levels of social organization from local to global. But it requires yet more fundamentally a coming to grips with the philosophical, scientific, economic, legal, and psychological-political perspectives and tools upon which the construction of intergenerational justice depends—the clarification of societal goals that reflect the preciousness of all life, the policy-sensitive identification of ecological thresholds and irreversibilities, the development of holistic techniques of risk assessment and cost-benefit measurement, the careful crafting of precaution in the face of scientific uncertainty and human fallibility, and, not least, the systematic nurturing of an ethic of species identity, accompanied by a sense of moral urgency to put it into effect—for example, in the rapid cultivation of an enlightened self-interest that accepts the world’s unequal development as a universally shared problem threatening to environmental sustainability as well as social well-being, hence demanding of immediate, universally shared responsibility.¹⁹⁶

¹⁹⁵ See note 1, *supra*.

¹⁹⁶ See Lothar Gündling, *Our Responsibility to Future Generations*, 84 AM. J. INT’L L. 207, (1990).

Happily, the legal profession has begun to mobilize along these lines and is doing so, as it should, with accelerating speed.¹⁹⁷ This is encouraging. However, given the enormity and immediacy of the climate change threat, rapid mobilization is not enough. Needed above all is intellectual and political daring and, yes, intellectual and political heroism, too—"not occasional heroism, a remarkable instance of it here and there, but constant heroism, systematic heroism, heroism as governing principle."¹⁹⁸ No matter how persuasive its theoretical underpinnings, intergenerational ecological justice is not self-executing and will not happen without it.

¹⁹⁷ I am pleased to note, by way of example, the Climate Legacy Initiative of the Environmental Law Center of Vermont Law School and The University of Iowa Center for Human Rights (<http://www.vermontlaw.edu/cli>). Especially noteworthy, too, is the work of the Science and Environmental Health Network (<http://www.sehn.org/>); also the Constitutional Law Foundation (<http://www.conlaw.org>), the Cousteau Society (<http://www.cousteau.org>), and Earthjustice (<http://www.earthjustice.org>). New pertinent scholarship of note, supplementing and supporting the work of Edith Brown Weiss, include FUTURE GENERATIONS AND INTERNATIONAL LAW (Emmanuel Agius, Salvino Busuttil, Tae-Chang Kim, Katsuhiko Yazaki, eds., 1998); RENÉ JEAN DUPUY, LA COMMUNAUTÉ INTERNATIONALE ENTRE LE MYTHE ET L'HISTOIRE (1986); Alexander C. Kiss, *La notion de patrimoine commun de l'humanité*, 175 RECUEIL DES COURS 113 (Hague Acad. Int'l L., 1982); H.E. Judge C.G. Weeramantry, *Achieving Sustainable Justice through International Law*, in SUSTAINABLE JUSTICE, *supra* note 82, at 15. Also noteworthy is the launching of a new multidisciplinary journal, THE INTERNATIONAL JOURNAL OF THE COMMONS. Less futuristic and innovative, but also encouraging is the American Bar Association's publication of GLOBAL CLIMATE CHANGE AND U.S. LAW (Michael B. Gerard, ed., 2007). For an early ecological exploration with a juridical bent, alas still timely after more than three decades, see RICHARD A. FALK, THIS ENDANGERED PLANET (1971). Cf. also RICHARD A. FALK, A STUDY OF FUTURE WORLDS (1975). For an early action plan initiative on behalf of future Generations, see JACQUES YVES COUSTEAU, A BILL OF RIGHTS FOR FUTURE GENERATIONS (Proceedings, No. 34) (Orion Society, 1979), available at <<http://www.eurocbc.org/page721.html>>.

¹⁹⁸ RUSSELL BANKS, CONTINENTAL DIVIDE 40 (1985).