

CLIMATE CHANGE AND INTERGENERATIONAL JUSTICE: FOUNDATIONAL REFLECTIONS

*Burns H. Weston**

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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

* Visiting Distinguished Professor of International Law and Policy and Director, Climate Legacy Initiative, Vermont Law School; Bessie Dutton Murray Distinguished Professor of Law Emeritus and Senior Scholar, Center for Human Rights, The University of Iowa. I acknowledge with gratitude Tracy Bach, Richard Brooks, Steven Burton, Jonathan Carlson, Bruce Duthu, Richard Falk, Eleanora Masini, Marc Mihaly, Nancy Myers, Craig Pease, and Carolyn Raffensperger for their generous help with drafts of this Article. I wish also to acknowledge with thanks the gracious help of my Vermont Law School research assistants, Jonathan DeCarlo and Katherine Moll, and my University of Iowa research assistants, Jacob Larson and Suzan Pritchett.

1. U.N. Env’t Programme & World Meteorological Org., Intergovernmental Panel on Climate Change [IPCC], *IPCC Second Assessment, Climate Change 1995: A Report of the Intergovernmental*

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. At a minimum, each of us has a moral responsibility to ensure that today's children and 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 U.N.'s authoritative Intergovernmental Panel on Climate Change (IPCC), 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 emerges less obvious. Asked if future generations (children aside) have a *legal* right to protection

Panel on Climate Change, ¶ 6.7 (Dec. 1995), available at <http://www.ipcc.ch/pdf/climate-changes-1995/ipcc-2nd-assessment/2nd-assessment-en.pdf> [hereinafter *IPCC Second Assessment*]. The IPCC prepares regular Assessment Reports combining comprehensive information on “human induced climate change, potential impacts of climate change and options for mitigation and adaptation.” Intergovernmental Panel on Climate Change, IPCC Reports <http://www.ipcc.ch/ipccreports/index.htm> (last visited Apr. 30, 2008). For the most recent Assessment Report, see U.N. Env't Programme & World Meteorological Org., IPCC, *IPCC Fourth Assessment Report, Climate Change 2007: Synthesis Report* (2007), available at <http://www.ipcc.ch/ipccreports/ar4-syr.htm> [hereinafter *IPCC Fourth Assessment*]. 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, at <http://www.cambridge.cambridge.org/us/promotion.climatechange2007/default.html>. For a rousing account of the climate change threat based largely on the IPCC reports, authored by a popular science writer, see MARK LYNAS, *SIX DEGREES: OUR FUTURE ON A HOTTER PLANET* (2007). For confirmation of the large degree to which the world's poor will suffer greatly from climate change, especially in developing countries, see U.N. Dev. Programme, *Human Development Report 2007/2008, Fighting Climate Change: Human Solidarity in a Divided World*, 2 (2007), available at <http://hdr.undp.org/en/reports/global/hdr2007-2008>. “How the world deals with climate change today will have a direct bearing on the human development prospects of a large section of humanity. Failure will consign the poorest 40 percent of the world's population—some 2.6 billion people—to a future diminished opportunity.” *Id.*

2. See *IPCC Fourth Assessment*, *supra* note 1, at 1 (discussing adaptation and mitigation strategies).

from climate change harms and if present generations have corresponding *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 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

3. See, e.g., DAVID GAUTIER, *MORALS BY AGREEMENT* (1986); ROBERT NOZICK, *ANARCHY, STATE, AND UTOPIA*, at ix (1974) (proposing that any governmental interference beyond a minimal state is unjustified and that a “state may not use its coercive apparatus for the purpose of getting some citizens to aid others”); Wilfred Beckerman, *Sustainable Development and Our Obligations to Future Generations*, in *FAIRNESS AND FUTURITY: ESSAYS ON ENVIRONMENTAL SUSTAINABILITY AND SOCIAL JUSTICE* 71, 85–92 (Andrew Dobson ed., 1999) [hereinafter Beckerman, *Obligations*] (“[P]riority should be given to the relatively simple humanitarian objective of moving towards just institutions and a ‘decent’ society. This objective should replace egalitarianism or ‘sustainable development’ as our major obligation to future generations . . .”); Wilfred Beckerman, *The Impossibility of a Theory of Intergenerational Justice*, in *HANDBOOK OF INTERGENERATIONAL JUSTICE* 53, 53 (Joerg Chet Tremmel ed., 2006) [hereinafter Beckerman, *Intergenerational Justice*] (“[A]ny attempt to establish our moral obligations to future generations on the basis of their rights is a futile enterprise. . . . This is because future generations cannot be said to have any rights.”); Robert L. Heilbroner, *What Has Posterity Ever Done for Me?*, *N.Y. TIMES MAG.*, Jan. 19, 1975; Richard T. DeGeorge, *The Environment, Rights, and Future Generations*, in *RESPONSIBILITIES TO FUTURE GENERATIONS: ENVIRONMENTAL ETHICS* 157, 159 (Ernest Partridge ed., 1980) (“[Future generations] cannot be said to have rights in the same sense that presently existing entities can be said to have them.”); Ruth Macklin, *Can Future Generations Correctly Be Said to Have Rights?*, in *RESPONSIBILITIES TO FUTURE GENERATIONS*, *supra* (“[T]he ascription of rights is properly to be made to actual persons—not possible persons.”); Thomas H. Thompson, *Are We Obligated to Future Others?*, 1 *ALTERNATIVE FUTURES* 1 (1978); see also references cited *infra* note 13.

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

5. See DEREK PARFIT, *REASONS AND PERSONS* pt. 4 (1984) [hereinafter PARFIT, *REASONS AND PERSONS*]; Derek Parfit, *Energy Policy and the Further Future*, in *ENERGY AND THE FURTHER FUTURE: THE SOCIAL DISCOUNT RATE* (D. MacLean & P.G. Brown eds., 1983) [hereinafter Parfit, *Energy Policy*]; Thomas Schwartz, *Obligations to Posterity*, in *OBLIGATIONS TO FUTURE GENERATIONS* 3–13 (R.I. Sikora & Brian Barry eds., 1978) (discussing how population control policies may affect the composition of future generations); Thomas Schwartz, *Welfare Judgments and Future Generations*, 11 *THEORY AND DECISION* 181 (1979).

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 counterevidence 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. Additionally, the lessor secures from a lessee (a user and improver of the property who commonly subleases) a long-term rental cash flow and a promise of reversion 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 ninety-nine years, a term 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 it is possible, we may conclude, 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 where domestic law systems demonstrate concern for future interests. Short-term leasehold contracts require the 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,

6. For further discussion of libertarian theorizing, see *infra* Part III.

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.

one need look no further than U.S. 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 be safely 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

8. See National Forest Management Act (NFMA), 16 U.S.C. §§ 1600(1), (3), 1601(a)(1) (2000) (stating that the Nation's renewable resources are "subject to change over time" and must be analyzed in terms of "present and anticipated uses"); National Environmental Policy Act (NEPA), 42 U.S.C. § 4331(a) (2000) ("[I]t is the continuing policy of the Federal Government . . . to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."); Federal Land Policy and Management Act of 1976 (FLPMA), 43 U.S.C. § 1702(c) (2000) (defining "multiple use").

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 U.S.C. §§ 1251–1279 (2000) (regulating the environmental impacts of surface coal mining); Federal Water Pollution Control Act (CWA) § 101(b), 33 U.S.C. § 1251(b) (2000) ("It is . . . the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution . . ."); Resource Conservation and Recovery Act (RCRA) of 1976, 42 U.S.C. § 6902 (2000) ("The objectives . . . are to promote the protection of health and the environment and to conserve valuable material and energy resources . . . [and] to be the national policy of the United States that, wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. Waste that is nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment."); Clean Air Act (CAA), 42 U.S.C. § 7403 (2000) (calling for a national research and development program to study "the short-term and long-term effects of air pollutants" on human health and ecosystems); Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601(24) (2000) (defining "remedy" as any action taken "to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment").

9. Domestic law systems can, must, and sometimes do protect, at least, the interests of future unborn *citizens*. But what about future non-citizens? As Edith Brown Weiss asks, "Does 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.

majority of future generations, ergo perplexity over the meaning of intergenerational justice across large spans of time.

In this Article, 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 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 also argue 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 bequeath 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 (1) identity-determining choices we make today (for example, opting to postpone having a child or committing genocide) can do no harm to people who may never exist as a consequence;¹² or (2) future generations will inherit the capacity to adapt to

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 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 Second Assessment*, *supra* note 1, at 48.

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

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 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 IPCC.¹⁵ These arguments, I submit, should not be taken seriously, particularly when the stakes are high. 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 intergenerational 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 it.¹⁷ 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

13. See, e.g., BJØRN LOMBORG, *THE SKEPTICAL ENVIRONMENTALIST: MEASURING THE REAL STATE OF THE WORLD* 259 (Hugh Matthews trans., Cambridge Univ. Press 2001) (1998) (introducing author’s argument that unlikely “assumptions . . . about future technological change” has skewed global warming models); Beckerman, *Obligations*, *supra* note 3, at 71, 85; see also Beckerman, *Intergenerational Justice*, *supra* note 3 (arguing the “impossibility” of future unborn persons to have rights as a primary reason to dispense with intergenerational justice discourse).

14. See James Hansen et al., *Climate Impacts of Increasing Carbon Dioxide*, 213 *SCIENCE* 957 (1981) (describing the rise in global temperature between 1960s and 1990s); cf. Sharon Begley, *The Truth About Denial*, *NEWSWEEK*, Aug. 13, 2007, at 23 (“Since the late 1980s . . . [a] well-funded campaign by contrarian scientists . . . has created a paralyzing fog of doubt around climate change.”).

15. See, e.g., *IPCC Second Assessment*, *supra* note 1 (concluding that over the past century the global climate has changed and various factors including human influence have contributed to the change).

16. Writes Mark Lynas, “[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, *supra* note 1, at 263. 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.* at 263–64.

17. JOEL FEINBERG, *The Rights of Animals and Unborn Generations*, in *RIGHTS, JUSTICE, AND THE BOUNDS OF LIBERTY: ESSAYS IN SOCIAL PHILOSOPHY* 159, 182 (1980).

even forever. Nevil Shute's *On the Beach*¹⁸ and Cormac McCarthy's more recent *The Road* come to mind.¹⁹ 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 100% 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 U.S. 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,²¹ 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."²²

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, e.g., FEINBERG, *supra* note 17; Heilbroner, *supra* note 3, at 222. See also ALAN WEISMAN, *THE WORLD WITHOUT US* (2007), described by environmentalist Bill McKibben as "one of the grandest thought experiments of our time." For this review and others, see *The World Without Us*, <http://www.worldwithoutus.com/news.html> (last visited Apr. 30, 2008).

21. See *Gonzales v. Carhart*, 127 S. Ct. 1610, 1632–34, 1639 (2007) (upholding a ban of a partial birth abortion method Congress found too similar to infanticide); 18 U.S.C. §§ 1531(14)(G), (L) (Supp. 2003) (providing congressional findings in support of the ban of a partial birth abortion).

22. Edith Brown Weiss, *Intergenerational Fairness and Rights of Future Generations*, *INTERGENERATIONAL JUSTICE REV.* 1, 6 (2002) [hereinafter Brown Weiss, *Intergenerational Fairness*]; see also BROWN WEISS, *supra* note 9 ("The difficult issue is to define justice between countries in the context of generations."); Edith Brown Weiss, *The Planetary Trust: Conservation and Intergenerational Equity*, 11 *ECOLOGICAL L.Q.* 495, 498 (1984) ("[T]he human species holds the natural and cultural resources of the planet in trust for all generations of the human species."); Edith Brown Weiss, *Our Rights and Obligations to Future Generations for the Environment in Angora: What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 *AM. J. INT'L L.* 190, 198–207 (1990) [hereinafter Brown Weiss, *Our Rights and Obligations*]. 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]."

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 (or “ecojustice” as it is sometimes called) 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.

I. 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 minute.”²³ He concludes: “Thus, it appears natural to include future generations in our moral community.”²⁴ Except arguably in the case of children aborning,²⁵ this viewpoint appears to have won no adherents.

The meaning of “future generations” ranges from today’s children²⁶ to unborn persons distant in the future without limitation—so-called “remote future persons,” defined by one intergenerational theorist as “those that

23. Huey-li Li, *Environmental Education: Rethinking Intergenerational Relationship*, PHIL. OF EDUC. Y.B. (1994), available at http://www.ed.uiuc.edu/eps/pes-yearbook/94_docs/Li.htm.

24. *Id.*

25. See Convention on the Rights of the Child, G.A. Res. 44/25, art. 1, U.N. Doc. A/RES/44/25 (Nov. 20, 1989), reprinted in 28 I.L.M. 1456, 1459 (1989), available at <http://www.un.org/documents/ga/res/44/a44r025.htm> (“[A] child means every human being below the age of eighteen years unless under the law applicable to the child, majority is attained earlier.”). It should be noted that 193 states had ratified the Convention as of January 30, 2008, two more than are party to the U.N. Charter and lacking only Somalia and the United States among them. Press Release, General Assembly, States Parties to Rights of Child Convention Elect Nine Members to Monitoring Body, U.N. Doc. HR/4912 (Feb. 21, 2007). 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.

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

[sic] will come into existence after all those now living have ceased to exist.”²⁷ Indeed, a definition unrestricted in time appears to be the dominant view. The Earth Charter of March 2002,²⁸ for example, created through, reputedly, the most open and participatory process ever associated with the drafting of an international declaration,²⁹ affirms the need to “[s]ecure Earth’s bounty and beauty for present and future generations”³⁰ without temporal qualification of any kind.

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 U.S. Court of Appeals for the District of Columbia Circuit in July 2004,³¹ 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 “tens to hundreds of thousands of years after disposal, ‘or even farther into the future.’”³²

27. *Id.*; EDWARD A. PAGE, CLIMATE CHANGE, JUSTICE AND FUTURE GENERATIONS 53 (2006).

28. The Earth Charter, <http://www.earthcharterinaction.org/assets/pdf/EC.English.pdf> (last visited Apr. 30, 2008) [hereinafter Earth Charter]. For a history of the Earth Charter, see Earth Charter in Action, http://earthcharterinaction.org/about_charter.html (last visited Apr. 30, 2008) [hereinafter Earth Charter History].

29. According to the Earth Charter International Council:

[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).

Earth Charter History, *supra* note 28.

30. *Id.* princ. 4.

31. *Nuclear Energy Inst., Inc. v. Env'tl. Prot. Agency*, 373 F.3d 1251 (D.C. Cir. 2004).

32. *Id.* at 1267 (quoting NAT'L ACAD. OF SCIS. [NAS], TECHNICAL BASES FOR YUCCA MOUNTAIN STANDARDS 2 (1995)). 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). *Id.* at 1270. These findings indicated that there is “no scientific basis for limiting the time period of the individual-risk standard to 10,000 years or any other value.” *Id.* at 1267 (quoting NAS, *supra*, at 55). They also indicated 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]

Immanuel Kant put it this way: “[H]uman nature 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.”³³ 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 socioeconomic harms are believed likely to occur within 100 years or less.³⁴ Simply put, we do not have the luxury of delay. Indeed, as is well known to, for example, 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, we already are experiencing the initial impacts of climate change,³⁵

years at Yucca Mountain.” *Id.* (quoting NAS, *supra*, at 6). “NAS also explained that humans may not face peak radiation risks until tens to hundreds of thousands of years after disposal, ‘or even farther into the future[.]’” *Id.* at 1267 (quoting NAS, *supra*, 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.* at 1270–71 (quoting NAS, *supra*, at 6–7). 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*. *Id.* at 1282–83 (emphasis added). For thoughtful insight, see John S. Applegate & Stephen Dycus, *Institutional Controls or Emperor’s Clothes? Long-Term Stewardship of the Nuclear Weapons Complex*, [1998] 28 *Env’t. L. Rep.* (Env’t. L. Inst.) 10,631, 10,631–34 (discussing “the challenges that [the U.S. Department of Energy] faces in developing an effective long-term stewardship program”); Richard Routley & Val Routley, *Nuclear Energy and Obligations to the Future*, in *RESPONSIBILITIES TO FUTURE GENERATIONS*, *supra* note 3, at 277, 298 (“[O]n the basis of its effects on the future *alone*, the nuclear option is morally unacceptable.”).

33. IMMANUEL KANT, *Idea for a Universal History with a Cosmopolitan Purpose*, in *KANT’S POLITICAL WRITINGS* 41, 50 (Hans Reiss ed., H. B. Nisbet trans., Cambridge Univ. Press 1970) (1784) (discussing Kant’s “Eighth Proposition”).

34. *IPCC Fourth Assessment Report*, *supra* note 1, at 6–7.

35. See Ana Nunez, *The Inuit Case Study*, http://www.ciel.org/Publications/Climate/CaseStudy_Inuit_Sep07.pdf (last visited Apr. 30, 2008) (unpublished study prepared for CIEL) (“Inuit hunters are now navigating new travel routes, trying to avoid areas of decreasing ice stability and changing their hunting practices to coincide with shifts in the migration times and routes of caribou, geese, and new species that are moving northwards.”); *Human Rights and Global Warming*, 127 *Period of Sessions Before the IACHR* (Mar. 1, 2007) (testimony of Sheila Watt-Cloutier to the Inter-American Commission on Human Rights) (transcript available at http://www.earthjustice.org/library/legal_docs/testimony-before-iachr-on-global-warming-human-rights-by-sheila-watt-cloutier.pdf) (discussing “how global warming and climate change are affecting the basic survival in many vulnerable regions and, in particular, of indigenous cultures throughout the Americas”); *Kenya’s Maasai Plead for Help Against Global Warming*, *TERRA.WIRE*, Nov. 10, 2006, <http://www.terradaily.com/2006/061110110020.4tgsq2gp.html> (“The Maasai are feeling the first and worst of climate change.”); Stephen Leahy, *Tiny Tuvalu Fights for Its Literal Survival*, *INTER PRESS SERVICE*, July 27, 2007, <http://ipsnews.net/news.asp?idnews=38695> (reporting that the South Pacific island nation of Tuvalu may only have fifty years or less before rising sea levels from climate change entirely engulfs and floods the tiny island nation); Jonathan Adams, *Rising Sea Levels Threaten Small Pacific Island Nations*, *INT’L HERALD*

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).”³⁶

Accordingly, given the closeness of the climate change threat and therefore the urgent need 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”³⁷—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.”³⁸

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:

TRIB., May 3, 2007, <http://www.iht.com/articles/2007/05/03/asia/pacific.php> (discussing the effects of global warming on low-lying atolls).

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

37. Carol Jacobs (Cayuga Bear Clan Mother), Presentation to the United Nations (July 18, 1995), in 1 AKWESASNE NOTES 116, 116–17 (1995), available at http://www.ratical.org/many_worlds/6Nations/PresentToUN.html.

38. See Oren R. Lyons, *The American Indian in the Past*, in EXILED IN THE LAND OF THE FREE: DEMOCRACY, INDIAN NATIONS AND THE U.S. CONSTITUTION 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 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.

Id.; see also N. BRUCE DUTHU, AMERICAN INDIANS AND THE LAW ch. 5 (2008) (“Stewards of the Natural World”).

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.³⁹

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:

(1) 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;

(2) it stirs us to personalize our understanding of what we have inherited from the past; and, thus reminds us 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

(3) 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,

39. Elise Boulding, *The Dynamics of Imaging Futures*, 12 WORLD FUTURE SOC'Y BULL., No. 5, Sept.-Oct. 1978, at 7.

potentially benefiting 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 Article, 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—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 (persons under age eighteen).⁴⁰ 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.⁴¹ They are, it has been said, “[the] representatives of future generations living today.”⁴² It also has been said that, in our presently endangered ecological moment, they are the new “canaries.”⁴³ 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.

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

40. See Convention of the Rights of the Child, *supra* note 25 (defining the term “child” for the purpose of the Convention).

41. WESTRA, *supra* note 26, 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.”).

42. Aleg Cherp, *Background Paper of Working Group 5: Intergenerational Justice and Environmental Sustainability*, presented to Berlin Intergovernmental Conference for Children in Europe and Central Asia, at 2 (2001), available at <http://web.ceu.hu/envsci/aleg/projects/Children.pdf>. For judicial endorsement of this view, see the Philippine case of *Oposa et al. v. Factoran*, G.R. No. 101083 (S.C., July 30, 1993), reprinted in 33 I.L.M. 173 (1994).

43. WESTRA, *supra* note 26, at 3.

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 ecological justice 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 Environment.⁴⁴ 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.”⁴⁵ 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,⁴⁶ in several regional seas conventions such as

44. Conference on the Human Environment, Stockholm, Swed., June 5–16, 1972, *Report of the United Nations Conference on the Human Environment*, 3, U.N. Doc. A/CONF.48/14/REV.1 (June 16, 1972) [hereinafter Stockholm Declaration], reprinted in 5 INTERNATIONAL LAW AND WORLD ORDER: BASIC DOCUMENTS V.B.3 (Burns H. Weston & Jonathan C. Carlson eds., 12th ed. 2006). For an earlier known formal recognition of the concept of intergenerational ecological justice, preceding the first global Earth Day on April 22, 1970, as well as the March 1970 equinoctial Earth Day celebrated by the U.N., see International Convention for the Regulation of Whaling, pmbl. Dec. 2, 1946, 161 U.N.T.S. 72 (“Recognizing the interest of the nations of the world in safeguarding for the future generations the great natural resources represented by the whale stocks . . .”), reprinted in 5 INTERNATIONAL LAW AND WORLD ORDER, *supra*, at V.H.2; see also Argument of the United States, Fur Seal Arbitration (U.S. v. Gr. Brit.), reprinted in 9 FUR SEAL ARBITRATION: PROCEEDINGS OF THE TRIBUNAL OF ARBITRATION (Gov’t Printing Office 1895).

45. Stockholm Declaration, *supra* note 44, princ. 1. Additionally, 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.* princ. 2.

46. See Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, Feb. 15, 1972, 26 U.S.T. 2403, 932 U.N.T.S. 3 (“Recognizing that the marine environment and the living resources which it supports are of vital importance to all nations . . .”); Convention Concerning the Protection of the World Cultural and Natural Heritage pmbl., Nov. 16, 1972, 27 U.S.T. 37, 1037 U.N.T.S. 151 (“Considering that parts of the cultural or natural heritage are of outstanding interest and therefore need to be preserved as part of the world heritage of mankind as a whole . . .”), reprinted in 5 INTERNATIONAL LAW AND WORLD ORDER, *supra* note 44, at V.B.4; Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) pmbl., opened for signature Mar. 3, 1973, 27 U.S.T. 1087, 1037 U.N.T.S. 151 (“Recognizing that wild fauna and flora . . .

the 1976 Barcelona Mediterranean Sea Convention,⁴⁷ in the 1982 U.N. World Charter for Nature,⁴⁸ and in the 1997 UNESCO Declaration on Responsibilities Towards Future Generations,⁴⁹ identical concern for the ecological legacy we leave to future generations was formally expressed.

It was, however, for the 1987 report of the U.N. World Commission on Environment and Development (WCED)⁵⁰—popularly known as the “Brundtland Commission Report on Our Common Future,” 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 a 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.”⁵¹ This statement, aided by the publication of *Our Common Future*⁵² 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.⁵³ The Vienna Declaration and

are an irreplaceable part of the natural systems of the earth which must be protected for this and generations to come . . .”), *reprinted in 4 INTERNATIONAL LAW AND WORLD ORDER, supra note 44, at V.H.10*; Charter of Economic Rights and Duties of States, G.A. Res. 3281, pmb., U.N. GAOR, 29th Sess, Supp. (No. 31), at 50, U.N. Doc. A/9631 (Dec, 12, 1975) (“Stressing the importance of . . . strengthening instruments of international economic co-operation as a means for the consolidation of peace for the benefit of all . . .”), *reprinted in 4 INTERNATIONAL LAW AND WORLD ORDER, supra note 44, at IV.F.5.*

47. Convention for the Protection of the Mediterranean Sea Against Pollution, Feb. 16, 1976, 1102 U.N.T.S. 27 (1976), *reprinted in 5 INTERNATIONAL LAW AND WORLD ORDER, supra note 44, at V.F.18a.* The preamble to this convention states that “[t]he Contracting Parties are fully aware of their responsibility to preserve this common heritage for the benefit and enjoyment of present and future generations.”

48. World Charter for Nature, G.A. Res. 37/7, Annex, U.N. GAOR, 37th Sess., Supp. (No. 51), at 17, U.N. Doc. A/RES/37/51 (Oct. 28, 1983), *reprinted in 5 INTERNATIONAL LAW AND WORLD ORDER, supra note 44, at V.B.11.*

49. Declaration on the Responsibilities of the Present Generations Towards Future Generations, G.C. Res. 31, art. 4, U.N.E.S.C.O., 29th Sess., U.N.E.S.C.O Doc. 29 C/Res. 31 (Nov. 12, 1997), *available at* <http://www.unesco.org/cpp/uk/declarations/generations.pdf> (“Resolv[ing] to strive to insure that the present generations are fully aware of their responsibilities towards future generations . . .”).

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

51. *Id.* at 8.

52. *See generally id.* (publishing the WCED report as an annex to U.N. G.A. Res. 42/427).

53. Conference on Environment and Development, Rio de Janeiro, Braz., June 13, 1992, *Report of the United Nations Conference on Environment and Development*, U.N. Doc. A/CONF.151/26 (vol. I) (Aug. 12, 1992), *reprinted in 5 INTERNATIONAL LAW AND WORLD ORDER, supra note 44, at V.B.16*; U.N. Dep’t of Int’l Econ. & Soc. Affairs, Div. for Sustainable Dev., *Agenda 21, Report of the*

Programme of Action adopted by the U.N. Conference on Human Rights in June 1993⁵⁴ and U.N. General Assembly resolutions relating to protection of our global climate have likewise given future generations high priority.⁵⁵

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),⁵⁶ was recently led to write that “[t]he concept of intergenerational justice may very well become an intellectual *leitmoif* of the new century.”⁵⁷ 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 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.⁵⁸

United Nations Conference on Environment and Development, vols. I–III, U.N. Doc. A/CONF.151/26 (June 3–14, 1992) [hereinafter *Agenda 21*], as reprinted in 5 *INTERNATIONAL LAW AND WORLD ORDER*, *supra* note 44, at V.B.17.

54. World Conference on Human Rights, June 14–25, *Vienna Declaration and Programme of Action*, ¶ 37, U.N. Doc. A/CONF.157/23 (July 12, 1993), reprinted in 32 *I.L.M.* 1661, 1663–87 (1993), available at <http://www.un.org/children/conflict/keydocuments/english/viennadeclaratio21.html>.

55. See, e.g., Protection of Global Climate for Present and Future Generations of Mankind, G.A. Res. 46/169, U.N. Doc. A/RES/46/169 (Dec. 19, 1991) (“Recalling its resolutions 45/53 of 6 December 1988, 44/207 of 22 December 1989 . . . and resolution 45/212 of 21 December 1990 . . .”).

56. 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. FRFG-International Justice-Who We Are, <http://www.intergenerationaljustice.org> (follow “Who We Are” hyperlink at left) (last visited Apr. 30, 2008) [hereinafter FRFG Website].

57. Joerg Chet Tremmel, *Introduction* to *HANDBOOK OF INTERGENERATIONAL JUSTICE 1* (Joerg Chet Tremmel ed., 2006) [hereinafter Tremmel, *Introduction*]. 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.” Joerg Tremmel, *Generational Justice—A Leading Concept for the New Century*, *INTERGENERATIONAL JUSTICE REV.* 3–4 (2002), http://www.intergenerationaljustice.org/images/stories/publications/gg7_20021106.pdf [hereinafter Tremmel, *Generational Justice*].

58. Tremmel, *Introduction*, *supra* note 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 complete political programme—from environmental and financial to educational policy.”⁵⁹

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.”⁶⁰ By “the accumulated capital” that shapes each generation’s legacy to the next, Tremmel has in mind: “*natural capital*” (“[t]he stock of environmental assets important for supporting human life, for the generation of well-being, and for amenity and beauty”); “[*human-made capital*” (“[m]achinery, infrastructure, and institutions as well as financial assets”);⁶¹ “*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”).⁶² His list corresponds, more or less, with what in recent years economic, political, and legal theorists have come to call “global public goods,”⁶³ 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)

59. *Id.* at 2.

60. Jörg Chet Tremmel, *Is a Theory of Intergenerational Justice Possible? A Response to Beckerman*, INTERGENERATIONAL JUSTICE REV. 6, 7 (2004) [hereinafter Tremmel, *A Response to Beckerman*]; accord NORTON, *supra* note 36, at 305.

61. Tremmel uses the term “man-made.” Tremmel, *Generational Justice*, *supra* note 57, at 4. I prefer “human-made” to avoid a use of gendered language that is historically distortive in this instance.

62. Tremmel, *A Response to Beckerman*, *supra* note 60, at 6; see also Tremmel, *Generational Justice*, *supra* note 57, at 4.

63. See generally GLOBAL PUBLIC GOODS: INTERNATIONAL COOPERATION IN THE 21ST CENTURY (Inge Kaul et al. eds., 1999) (“[A] globalizing world requires a theory of global public goods to achieve crucial goals such as . . . the reduction of environmental pollution.”). 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. 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.

than they would have been without the depletion.”⁶⁴ For another, the late John Rawls would have argued that present generations should not just maintain but also improve the legacy they receive before it devolves to the next generation.⁶⁵

Yet, though the concept of intergenerational justice did not emerge until after the first Earth Day but a few decades ago,⁶⁶ 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 U.N. Special Session on Children.⁶⁷ Particularly noteworthy was the work of the Berlin Intergovernmental Conference for Children in Europe and Central Asia in May 2001.⁶⁸ Its final report stressed a major theme of the Conference:

[It] 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 Conference⁶⁹ 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.⁷⁰

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

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

66. The first global Earth Day was April 22, 1970. The first U.N. Earth Day was the day of the March 2007 equinox, a month earlier.

67. See United Nations Children’s Fund [UNICEF], Special Session on Children, <http://www.unicef.org/specialsession> (providing details on the U.N. Special Session) (last visited Apr. 30, 2008).

68. The Governments of the Federal Republic of Germany, Bosnia, and Herzegovina, with the support of UNICEF, *Conference on Children in Europe and Central Asia: Setting an Agenda for Children in Europe and Central Asia, Preparing for the United Nations General Assembly Special Sessions on Children 8* (May 16–18, 2001) [hereinafter *Berlin Conference on Children*], available at http://www.unicef.org/ceecis/Final_Berlin_Report.pdf.

69. *Agenda 21*, *supra* note 53, as reprinted in 5 *INTERNATIONAL LAW AND WORLD ORDER*, *supra* note 44, at V.B.17.

70. *Berlin Conference on Children*, *supra* note 68, at 8. The major theme, one of four singled out for special notice in the report, emerged from one of the Conference’s six working groups. The working group on Intergenerational Justice and the Environment had to

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 U.N. pronouncements.⁷¹ It is important to acknowledge, however, the earlier contribution of the above-cited 1998 Aarhus Convention,⁷² which, though regional in scope,⁷³ has been characterized by former U.N. 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.”⁷⁴ Stressing the need for citizen 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.”⁷⁵

The concept of intergenerational justice appears also to rest comfortably with all disciplines. The FRFG, embracing multiple disciplines, sums it up thusly: “[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 least the same extent as the generation governing today.”⁷⁶ For its formulation, the FRFG

take into account the need to respect and protect the rights of future, unborn, generations of children . . . [to encourage] greater complementarity in applying the principles of Agenda 21, the Aarhus Convention, and the CRC, promot[e] a more child-centred and multi-disciplinary approach to environmental and intergenerational issues, [conduct] long term impact studies on developments that threaten the well-being and rights of future children . . . and extend the liability period for environmental damage in international conventions.

Id. at 3–4; see also Convention on the Rights of the Child, *supra* note 25; Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, June 25, 1998, 38 I.L.M. 517 (1999) available at <http://www.un.org/Depts/Treaty/collection/notpubl/27-13eng.htm>, reprinted in 5 INTERNATIONAL LAW AND WORLD ORDER, *supra* note 44, at V.B.18, [hereinafter Aarhus Convention].

71. For details on the Berlin Intergovernmental Conference and its “Berlin Commitment,” see *Berlin Conference on Children*, *supra* note 68.

72. See Aarhus Convention, *supra* note 70.

73. As of September 2007, the Convention had been ratified by forty-one primarily European and Central Asian states and the European Community. The state parties are members of the Economic Commission for Europe and states have consultative status with the Commission. *Id.*

74. U.N. Econ. Comm’n for Eur. (UNECE), About the Aarhus Clearinghouse, <http://aarhusclearinghouse.unece.org/about.cfm> (last visited Apr. 30, 2008).

75. For details on the U.N. Special Session on Children, see UNICEF’s website at <http://www.unicef.org/specialsession/press/01pr47.htm>. For details on the Berlin Intergovernmental Conference and its “Berlin Commitment,” see *Berlin Conference on Children*, *supra* note 68.

76. See FRFG website, *supra* note 56.

expressly acknowledges the late German ethicist Hans Jonas who, in his influential book, *The Imperative of Responsibility*, admonished everyone to “[a]ct so that the effects of [our] action[s] are compatible with the permanence of genuine human life on earth.”⁷⁷ I concur. Who would not?

But how does the FRFG’s broad definition (or Jonas’s 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 global warming?

The above-quoted Final Report of the May 2001 Berlin Conference on Children is suggestive when it equates intergenerational ecological justice with “the obligation to leave behind a world that is better or at least as good as the one we inherit.”⁷⁸ 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.⁷⁹

A more juridically defined response, however, spelled out in her pioneering book *In Fairness to Future Generations*,⁸⁰ is provided by environmental law scholar Edith Brown Weiss. Dr. Brown Weiss cites three basic principles of intergenerational ecological “equity” (as she calls it): conservation of options, conservation of quality, and conservation of access.⁸¹ Intergenerational equity (or justice) is achieved, she argues, when

77. HANS JONAS, *THE IMPERATIVE OF RESPONSIBILITY: IN SEARCH OF AN ETHICS FOR THE TECHNOLOGICAL AGE* (Hans Jonas trans., 1st English ed. 1984) (emphasis added). Jonas’s 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.

78. *Berlin Conference on Children*, *supra* note 68, at 8.

79. PETER BROWN, *ETHICS, ECONOMICS AND INTERNATIONAL RELATIONS* 20–21 (2000).

80. 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.

81. *Id.* 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, see, for example, WYNDHAM ANSTIS BEWES, *THE LAW OF WASTE: A TREATISE ON THE RIGHTS AND LIABILITIES WHICH ARISE FROM THE RELATIONSHIP OF LIMITED OWNERS AND THE OWNERS OF THE INHERITANCE WITH REFERENCE TO THE TENEMENTS* 82 (Sweet & Maxwell 1894) (discussing Roman law in context of timber harvest).

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”;⁸²
- “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”;⁸³ and
- “provide[s] its members with equitable rights of access to the legacy from past generations” and “conserve[s] this access for future generations.”⁸⁴

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’s definition “comprise[s] both rights and duties, and these include both ‘intragenerational’ and ‘intergenerational’ aspects.”⁸⁵ Also appealing, particularly within the “two-hundred-year-present” framework strategically adopted in this Article, her definition lives well with both the ethical

82. BROWN WEISS, *supra* note 9, at 39; *see also* Brown Weiss, *Intergenerational Fairness*, *supra* note 22, at 1, 5.

83. BROWN WEISS, *supra* note 9, at 39; *see also* Brown Weiss, *International Fairness*, *supra* note 22, at 5 (cautioning that in implementing this principle, “trade-offs are inevitable”); *accord* BARRY, *supra* note 64.

84. BROWN WEISS, *supra* note 9, at 38; *see also* Brown Weiss, *Intergenerational Fairness*, *supra* note 22, 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. Aarhus Convention, *supra* note 70. 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) (introducing “a new kind of environmental agreement . . . link[ing] environmental rights and human rights”).

85. WESTRA, *supra* note 26, at 136 (emphasis added).

rationales that give intergenerational justice moral purpose and the jurisprudential theories that give it legal standing.⁸⁶

II. 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 seventeenth-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.’”⁸⁷ 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.”⁸⁸

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.”⁸⁹ 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.”⁹⁰ 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 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.⁹¹ Future generations, it has been said, should be “inheritors of God’s creation,” not mere survivors.

86. For additional virtues, see *infra* Part II.B.

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

88. *Id.*

89. ALFRED NORTH WHITEHEAD, *ADVENTURES OF IDEAS* 34 (1933).

90. FEINBERG, *supra* note 17, at 181–82.

91. *See, e.g.*, ARC-Alliance of Religions and Conservation, *Faiths & Ecology*, <http://www.arcworld.org/faiths.htm> (providing a comprehensive overview documenting the ecological views of Bahá’í, Buddhism, Christianity, Daoism, Hinduism, Islam, Jainism, Judaism, Shintaoism,

Additional answers to our why-does-it-matter question 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;⁹²
- because, as members of a community and a culture, we benefit from sacrifices and investments made by members of prior generations;⁹³
- 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;⁹⁴
- because each generation has a contract with the next generation to pass on the gifts it has inherited jointly from the past;⁹⁵
- 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;⁹⁶
- because no generation should be deliberately favored or disadvantaged over another;⁹⁷
- because no generation should have to envy the impersonal resources enjoyed by predecessor generations;⁹⁸

Sikhism, and Zoroastrianism); *see also* THE CLIMATE INSTITUTE (AUSTRALIA), COMMON BELIEF: AUSTRALIA'S FAITH COMMUNITIES ON CLIMATE CHANGE 5–39 (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).

92. BROWN WEISS, *supra* note 9, ch. 2.

93. NORTON, *supra* note 36, at 338.

94. RAWLS, *supra* note 65, at 293.

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

96. ONORA O'NEILL, TOWARDS JUSTICE AND VIRTUE 113–21 (1996); Henry Shue, *Climate, in A COMPANION TO ENVIRONMENTAL PHILOSOPHY* 450 (Dale Jamieson ed., 2001) (“Failing to deal with climate change constitutes inflicting harm on generations who could have been spared all such harm.”); *see also* Henry Shue, *Harming the Grandchildren*, Ethics and Climate Change Conference Abstracts, <http://depts.washington.edu/ponvins/ecc/abstracts.html> (last visited Apr. 30, 2008) (abstract of paper presented at conference) [hereinafter Shue, *Harming the Grandchildren*].

97. Tremmel, *Generational Justice*, *supra* note 57, at 7.

- 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;⁹⁹
- 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;¹⁰⁰
- 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;¹⁰¹
- 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;¹⁰²
- 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;¹⁰³
- 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;¹⁰⁴

98. PAGE, *supra* note 27, at 64–65.

99. *Id.* at 38.

100. FEINBERG, *supra* note 17, at 181–82; Routley & Routley, *supra* note 32.

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

102. Wilfred Beckerman, *Intergenerational Justice*, INTERGENERATIONAL JUSTICE REV. 1, 4 (2004). The author explains by quoting Routley & Routley, *supra* note 32, 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.

103. Emmanuel Agius, *Intergenerational Justice*, INTERGENERATIONAL JUSTICE REV. 24 (2005).

104. JONAS, *supra* note 77; Hans Jonas, *Technology and Responsibility: The Ethics of an Endangered Future*, in RESPONSIBILITIES TO FUTURE GENERATIONS, *supra* note 3, at 23, 34–35; *see also* Dieter Birnbacher, *Responsibility for Future Generations: Scope and Limits*, INTERGENERATIONAL

- because science and technology can work wonders only if they are guided by principles of intergenerational solidarity, cooperation, and sharing;¹⁰⁵
- because today's children and future generations will need a preserved environment to live, and live well;¹⁰⁶
- 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.¹⁰⁷

Each of the foregoing—essentially ethical—rationales for intergenerational justice, including those of Whitehead, Feinberg, and the above referenced worldwide religious communities,¹⁰⁸ is, I submit, compelling, separately and especially together. They raise and convincingly answer issues fundamental to twenty-first century morality and, in so doing, give legitimacy to efforts to prevent and minimize climate change harms to future generations.

The rationales 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, when exploring the moral and physical implications of failing to deal with climate change and with future

JUSTICE REV. 22 (2005); cf. ARC-Faiths and Ecology, The Dalai Lama on Protecting the Environment, <http://www.arcworld.org/faiths.asp?pageID=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.”) (last visited Apr. 30, 2008).

105. Emmanuel Agius, *Intergenerational Justice*, in HANDBOOK OF INTERGENERATIONAL JUSTICE, *supra* note 57, at 317.

106. See BARNES, *supra* note 95, at 5 (introducing a modern definition of “the commons”).

107. See RAWLS, *supra* note 65, at 284–98 (discussing “justice between generations” and their assumed “time preference”). 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. PAGE, *supra* note 27, at 164.

108. See ARC-Alliance, *supra* note 91; see also THE CLIMATE INSTITUTE (AUSTRALIA), *supra* note 91.

generations firmly in mind, put it this way:

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.¹⁰⁹

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 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 “when it tends to preserve the integrity, stability and beauty of the biotic community.”¹¹⁰

There remains, however, a potentially disconcerting question. Regarding climate change, is it not enough to evince concern for present generations who already 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?”¹¹¹ Brooks continues:

109. Shue, *Harming the Grandchildren*, supra note 96.

110. ALDO LEOPOLD, *A SAND COUNTY ALMANAC* 224–25 (1949).

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

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?¹¹²

Professor Brooks's point is not to be summarily dismissed. As noted at the outset, 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 that modernity directs us to live in the present.¹¹³ The future, we are commonly advised, will take care of itself.

We are thus left to ask: will efforts to protect present generations against climate change harms not also benefit future generations simultaneously? And will this self-focus not 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 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

112. *Id.*

113. See JED RUBENFELD, FREEDOM AND TIME: A THEORY OF CONSTITUTIONAL SELF GOVERNMENT 3 (2001) ("The demand to live in the present . . . is a matter, in the first instance, not of pleasure but of freedom.").

generations are likely to suffer, there is no guarantee that solutions for the 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:

(1) 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;¹¹⁴

(2) 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, mounting exponentially;

(3) 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 only the relatively minor effects of climate change felt in the present, but also the harsher effects of climate change that hold out, at least cumulatively, the real possibility of planetary catastrophe in the future;

(4) 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 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;

(5) 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

114. *See supra* note 1 and accompanying text.

unemployment, the insecurity of state pension or retirement systems, the public debt, etc.); and

(6) 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.

Thus, just as there are many good reasons to champion the interests and needs of present generations—as well as 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 shown above, 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 preserved environment to live in dignity.¹¹⁵ 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, 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 would be benefitted.¹¹⁶ So also, however, are the environments of present generations

115. See *supra* note 106 and accompanying text.

116. The application of the “polluter pays” principle in the intergenerational context is consistent with Brown Weiss’s “conservation of options” and “conservation of access” principles of

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.

III. 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 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 Article cannot hope to provide a fully developed theory of intergenerational justice. This would take a book or more.¹¹⁷ However, I do briefly explore several lines of philosophical thought to understand the providence they bring to such a theory.¹¹⁸ 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

intergenerational justice. See *supra* text accompanying notes 82 & 84. For elaboration, see generally BROWN WEISS, *supra* note 9, at 40–45, chs. III and IV.

117. Brown Weiss, for one, has done large service in this regard, specifically in relation to the global environment. BROWN WEISS, *supra* note 9. See also the works of Derek Parfit, defining the problems of how we can and should relate to future people. PARFIT, REASONS AND PERSONS, *supra* note 5; Derek Parfit, *Comments*, 96 ETHICS 832, 854–862 (1986); Parfit, *Energy Policy*, *supra* note 5; Derek Parfit, *Equality or Priority?*, in THE IDEAL OF EQUALITY (Matthew Clayton & Andrew Williams eds., 2000) [hereinafter Parfit, *Equality or Priority?*]; Derek Parfit, *Future Generations: Further Problems*, 11 PHIL. & PUB. AFF. 113, 113–19 (1982) [hereinafter *Future Generations*]; Derek Parfit, *On Doing the Best for Our Children*, in ETHICS & POPULATION 100 (Michael D. Bayles ed., 1976).

118. In this exploration, I am indebted to Edward Page for helpful insight. PAGE, *supra* note 27.

government as a promoter of socioeconomic and political well-being, although not to the exclusion of civil and political “freedom from” rights.

Thus, libertarian theorists do not favor social or political agendas that invite governmental intervention. In support of this view and 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 future generations cannot, and therefore do not have rights.¹¹⁹ 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;
- 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 discussed previously,¹²⁰ we, the living, have a *moral* but not a *legal* obligation to appraise our policies with those interests in mind.¹²¹

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*.¹²² The difference between future interests that summon moral duty and those that evoke legal entitlement is not a function of some metaphysic. Rather, it is a function 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.

119. See, e.g., GAUTIER, *supra* note 3; NOZICK, *supra* note 3, at 33 (“[N]o moral balancing act can take place among us; there is no outweighing of one of our lives by others.”); Ruth Macklin, *Can Future Generations Correctly Be Said to Have Rights?*, in RESPONSIBILITIES TO FUTURE GENERATIONS, *supra* note 3, at 151. But compare to the statutory language cited *supra* note 8.

120. See *supra* text accompanying notes 89–107.

121. See, e.g., Beckerman, *Intergenerational Justice*, *supra* note 3, at 54 (explaining that future generations may have “moral standing” if not legal rights). See also the authorities cited *supra* note 3.

122. See Christopher D. Stone, *Should Trees Have Standing? Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450, 464 (1972) (proposing the idea that proxies or surrogates may litigate or otherwise represent non-human biospheric entities).

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.”¹²³ As a result, the ontological argument does not by itself excuse us from assuming legal responsibility to them.¹²⁴ At the very least, we cannot on this basis disclaim our moral responsibility to 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 issues with which it has to deal.”¹²⁵ “[N]ovel powers to act require novel . . . rules and perhaps even a new ethics.”¹²⁶

I therefore turn to liberal theories of social justice that, as previously noted, have in common the 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 (for example, health, education, economic well-being, etc.) and likewise nurture and expand public goods (for example, clean air and other environmental goods, information/knowledge, law enforcement, etc.).¹²⁷

Some liberal theorists support these rights and goods on utilitarian grounds.¹²⁸ However, as the utility principle (famously defined by Jeremy Bentham as “the greatest happiness of the greatest number”¹²⁹) 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

123. Annette Baier, *The Rights of Past and Future Generations*, in RESPONSIBILITIES TO FUTURE GENERATIONS, *supra* note 3, at 171, 174.

124. KANT, *supra* note 33, at 50–51.

125. Jonas, *supra* note 104, at 28, 31 (emphasis omitted).

126. *Id.* at 35.

127. On public goods, see *supra* note 63.

128. See, e.g., LOMBORG, *supra* note 13 (endorsing utilitarianism at least implicitly); Beckerman, *Intergenerational Justice*, *supra* note 3 (same). See generally S. FRED SINGER, HOT TALK, COLD SCIENCE: GLOBAL WARMING’S UNFINISHED DEBATE (1998).

129. JEREMY BENTHAM, INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION 4–5 & n.1 (Prometheus Books 2007) (1780).

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*.”¹³⁰

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 the rights are distributive or reciprocity-based in character or whether their guiding principle is equality, priority, sufficiency, or some other value. This convergence applies to today’s living children—“the first generation”—as well as to unborn persons. To avoid confusion, however, I 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.¹³¹ 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 it is the result of an ideal contract freely and rationally negotiated.¹³² As such,

130. Wolf, *supra* note 101, at 284.

131. See, e.g., RAWLS, note 65, at 310–15; JOHN RAWLS, JUSTICE AS FAIRNESS: A RESTATEMENT 50 (2001) (discussing “the problem of distributive justice”); DWORKIN, *supra* note 96.

132. It may be noted that Rawls’s “original position”—“veil of ignorance” thought experiment and Dworkin’s auction and insurance market devices are classic examples of hypothetical contractualism, each of which are designed to achieve neutrality, ergo fairness, in moral and legal decision-making. RAWLS, *supra* note 64, at 17–22, 136–42; DWORKIN, *supra* note 98, at 65–71, 73–83. Dworkin’s theory is an attempt to improve upon Rawls’s 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’s “original position”—“veil of ignorance” scenario). Hereinafter, however, I rely extensively on Rawls’s approach but not Dworkin’s, which is difficult to apply in the

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, proxies or surrogates must be 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), they focus 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 justice.¹³³ 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's tripartite definition of intergenerational ecological justice.¹³⁴ 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 have duties

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 27, 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*, “and we have some duty, out of simple justice, to leave that structure at least as rich as we found it.” RONALD DWORKIN, *A MATTER OF PRINCIPLE* 232–33 (1985). 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.

133. For examples of useful expositions see NOZICK, *supra* note 3, at 149–231; Parfit, *Equality or Priority*, *supra* note 117, at 81.

134. See BROWN WEISS, *supra* note 9, at 38; see also Brown Weiss, *Intergenerational Fairness*, *supra* note 22.

in relation to them. The central question is how fair distribution should be measured. This is what Rawls called the “fair share” or “just saving” question—what and how much present generations should save for the benefit of future generations.¹³⁵ The exact measure of “fair share” is, of course, open to differing interpretations.¹³⁶

2. Reciprocity-Based Justice

Reciprocity-based theories of social justice likewise support the Brown Weiss’s 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.”¹³⁷

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. 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.¹³⁸ Nor is it hard to see how such environmentally defined self-interest can serve simultaneously the interests of unborn generations.

135. Space limitations prevent discussion of this complex issue in this Article. For a helpful summary and critique of Rawls in this regard, however, see Wolf, *supra* note 101, at 286–91. For calling my attention to this arbitration and its treatment of intergenerational ecological justice, I am deeply indebted to Professor Jonathan C. Carlson, my long-time Iowa colleague, collaborator, and friend.

136. *Id.*

137. *Luke* 6:38.

138. 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.

It is the interpretation of the contribution principle that values mutuality over self-advantage, however, that resonates most with notions of intergenerational ecological justice and Brown Weiss's definition of it. The history, from the 1997 Kyoto Protocol¹³⁹ to the 1994 U.N. Convention on Climate Change,¹⁴⁰ 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.

Again, what matters most for present purposes 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 shape theories of substantive and procedural distributive justice. As Rawls put it, "we are not to gain from the cooperative labors of others without doing our fair share."¹⁴¹

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, by invoking a "stewardship model" of intergenerational reciprocity,¹⁴² 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

PAGE, *supra* note 27, 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.

139. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, FCCC/CP/1997/L.7/Add.1, *reprinted in* 37 I.L.M. 32 (1998) and 5 INTERNATIONAL LAW AND WORLD ORDER, *supra* note 44, V.E.20d.

140. United Nations Framework Convention on Climate Change, *opened for signature* May 9, 1992, 1771 U.N.T.S. 107 (*entered into force* Mar. 21, 1994), *reprinted in* 5 INTERNATIONAL LAW AND WORLD ORDER, *supra* note 44, V.E.19.

141. RAWLS, *supra* note 65, at 112. The exact measure of "fair share" is of course open to differing interpretation.

142. See PAGE, *supra* note 27, at 119–24 (explicating the "stewardship model").

reciprocity,¹⁴³ made famous by Rawls in relation to familial consanguinity,¹⁴⁴ 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 agree 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)."¹⁴⁵ 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.¹⁴⁶

In sum, from this twin reciprocity-based perspective 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 ecological justice in particular. Each theory 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

143. See *id.* at 117–21 (clarifying the "chain of concern model").

144. See RAWLS, *supra* note 65, at 288 (discussing the assumption that each "generation cares for its immediate descendants, as fathers say care for their sons").

145. Tremmel, *A Response to Beckerman*, *supra* note 60, at 6.

146. See *supra* text accompanying note 18.

different to match the reciprocity—the mutual tolerance and forbearance—that underwrites justice among contemporaries.¹⁴⁷ Future generations can pay forward to pay back, but they cannot pay backward.

In the discussion of distributive and reciprocity-based theories of social justice, I disregard these two propositions because it is argued that 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 and 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 on neither identity nor reciprocity *stricto sensu* as a precondition of intergenerational justice. It is *respect-based justice*. Without discounting that intergenerational justice can be grounded on 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: (1) the relational metaphysics and “process philosophy” of British philosopher and mathematician Alfred North Whitehead;¹⁴⁸ and (2) the idea of human 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.¹⁴⁹ I turn first and briefly to Whitehead.

147. PAGE, *supra* note 27, at 100.

148. See generally ALFRED NORTH WHITEHEAD, *PROCESS AND REALITY: AN ESSAY IN COSMOLOGY* (1929); WHITEHEAD, *supra* note 89. 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).

149. See Burns H. Weston, *Human Rights*, in 20 *ENCYCLOPAEDIA BRITANNICA* 656 (15th ed. 2005) (providing the history as well as the meaning and scope of human rights), available at <http://international.uiowa.edu/centers/human-rights/resources/publications/recurrent.asp>.

1. Relational Metaphysics and Process Philosophy

Whitehead's relational metaphysics—and his consequent vision of the past, present, and future as a unified whole—invites a perspective on social ethics and 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.¹⁵⁰

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."¹⁵¹ And this fact, in turn, spells inescapable interdependencies with commensurate rights and obligations—a perspective long held and advocated by indigenous peoples. Thus, article 11(1) of the 2007 U.N. Declaration on the Rights of Indigenous Peoples proclaims the right of indigenous peoples "to maintain, protect and develop the *past, present and future* manifestations of their cultures."¹⁵² And thus also does its article 25 proclaim their right "to maintain and strengthen their

150. Agius, *supra* note 103, at 327–28.

151. *Id.* at 328.

152. United Nations Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, art. 11, U.N. GAOR, 61st Sess., U.N. Doc. A/RES/61/295 (Sept. 13, 2007) (emphasis added), available at <http://www.un.org/Depts/dhl/resguide/r61.htm>.

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.*¹⁵³

Most if not all of the world's religions, important to a man of faith such as Whitehead and reputedly influential with him,¹⁵⁴ 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.¹⁵⁵ 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."¹⁵⁶ Faith-based exhortations supportive of intergenerational ecological justice and from all across the religious spectrum are seemingly endless.¹⁵⁷

153. *Id.* art. 25 (emphasis added).

154. See, e.g., Paul Weiss, *Recollections of Alfred North Whitehead*, in 10 PROCESS STUD. 44, 44–56 (1980), available at <http://www.religion-online.org/showarticle.asp?title=2486>. Whitehead, it merits notice, was the son of an Anglican minister.

155. In 2007, following the release of the Australian Climate Institute's "dialogue on the morality of climate change," 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, <http://www.arcworld.org/faiths.asp?pageID=99> (last visited Apr. 30, 2008); see also THE CLIMATE INSTITUTE (AUSTRALIA), *supra* note 91, at 5–39 (reporting "a dialogue on the morality of climate change").

156. What Do Muslims Teach About Ecology, <http://www.arcworld.org/faiths.asp?pageID=32> (last visited Apr. 30, 2008). The author is a biologist and Islamic scholar who was appointed by the Muslim World League to compile the *Islamic Faith Statement* for ARC. Islamic Faith Statement, <http://www.arcworld.org/faiths.asp?pageID=75> (last visited Apr. 30, 2008).

157. See, e.g., WHITEHEAD, *supra* note 89. 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) (focusing on concerns for sustainable development in ancient non-Western civilizations, but clearly including considerations of respect for the interests of future generations).

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"¹⁵⁸ 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"—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 this regard, Whitehead could have been influenced by the argument famously put forward by the United States in the 1893 *Bering Sea Fur Seals Arbitration* between the United States and Great Britain, contending that both national and international jurisprudence place limits on claimed property rights.¹⁵⁹ The United States bid the arbitrators¹⁶⁰ to consider two legal principles:

First. No possessor of property, whether an individual man, or a nation, has an absolute title to it. His title is coupled with a trust for the benefit of mankind.

Second. The title is further limited. The things themselves are not given him, but only the usufruct or increase. He is

158. Agius, *supra* note 103, at 328.

159. See Argument of the United States at 2–8, *Fur Seal Arbitration (U.S. v. Gr. Brit.)*, reprinted in 9 *FUR SEAL ARBITRATION*, *supra* note 44 (involving U.S. legislation aimed at protecting populations of fur-bearing animals, including fur seals, from over-exploitation and interpreted by the U.S. Treasury to permit seizure of Canadian (British) vessels engaged in the hunting and killing of seals on the high seas at least sixty miles from the nearest U.S.-owned land at a time when today's exclusive economic zone (EEZ) was non-existent and the three-mile territorial sea rule applied). For calling my attention to this arbitration and its treatment of intergenerational ecological justice, I am indebted to Professor Jonathan C. Carlson, my long-time Iowa colleague, collaborator, and friend.

160. Pursuant to an arbitration treaty between the United States and Great Britain, concluded February 29, 1892, the United States appointed U.S. Supreme Court Justice John M. Harlan and U.S. Senator John T. Morgan as arbitrators; the British appointed Lord Hannen and Sir John Thompson as arbitrators; and the President of the French Republic, the King of Italy, and the King of Norway and Sweden each appointed neutral arbitrators.

but the custodian of the stock, or principal thing, holding it in trust for the present and future generations of man.¹⁶¹

Thereafter, in a passage that could have been written with present-day greenhouse gases and climate change in mind, the United States expressed the ideal of intergenerational justice as Whitehead might have written it:

The second proposition above advanced, namely, that the title which nature bestows upon man to her gifts is of the usufruct only, is, indeed, but a corollary from that which has just been discussed, or rather a part of it, for in saying that the gift is not to this nation or that, but to mankind, all generations, future as well as present, are intended. The earth was designed as the permanent abode of man through ceaseless generations. Each generation, as it appears upon the scene, is entitled only to use the fair inheritance. It is against the law of nature that any waste should be committed to the disadvantage of the succeeding tenants. The title of each generation may be described in a term familiar to English lawyers as limited to an estate for life; or it may with equal propriety be said to be coupled with a trust to transmit the inheritance to those who succeed in at least as good a condition as it was found, reasonable use only excepted. That one generation may not only consume or destroy the annual increase of the products of the earth, but the stock also, thus leaving an inadequate provision for the multitude of successors which it brings into life, is a notion so repugnant to reason as scarcely to need formal refutation.¹⁶²

Regrettably, but perhaps understandably from an 1893 perspective, the arbitrators did not accept this argument. It was a “novel” argument, they said, insufficiently grounded in international law, so that the practical result of giving effect to it would be to rule that an international tribunal, bound by the terms of a treaty establishing it, can make new law and apply it retrospectively.

Essential to understand, however, is that the arbitrators did not reject, as a theoretical foundation for intergenerational ecological justice, the *idea* of intergenerational trusteeship (or partnership or stewardship) as expressed by counsel for the United States. They rejected only the United States’ claim

161. Argument of the United States at 59, *Fur Seal Arbitration* (U.S. v. Gr. Brit.), *reprinted in* 9 *FUR SEAL ARBITRATION*, *supra* note 44.

162. *Id.* at 65–66 (footnotes omitted).

that it was, in 1893, part of positive international law and therefore within the arbitrators' substantive jurisdiction to invoke and apply it. Possibly the same result would obtain today; possibly other decision-makers now at the beginning of the twenty-first century would likewise see the argument of the United States as not yet written into positive law. But if so, it would be because their jurisprudence or that of their solons will not yet have achieved a temporally sophisticated understanding of distributive or reciprocity-based theories of social justice upon which to ground intergenerational rights and duties—or that they will not yet have caught up with a readily available Whiteheadian respect-based theory of social justice to do the same.

Also, at a time when global climate change threatens severely, it would be an unwise—potentially disastrous—posture in the extreme, failing to comprehend, as Whitehead argues, that human society is a web of interdependent relations with the past, present, and future.¹⁶³ Social justice in Whitehead's relational worldview “demands a sense of solidarity with the whole family of humankind,”¹⁶⁴ 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 social justice, is the fundamental ideal of “justice as fairness,”¹⁶⁵ 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,¹⁶⁶ and as a consequence of political and social revolutions in the seventeenth, eighteenth, and twentieth 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 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

163. See WHITEHEAD, *supra* note 89, at 34.

164. *Id.* at 330.

165. RAWLS, *supra* note 131, at 5.

166. Examples, albeit by other names, include “the law of the Gods,” and “natural rights.” For historical explication, see Weston, *supra* note 149, at 656–57.

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 global Earth Day in April 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 arise 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).¹⁶⁷ 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” (or “third generation”) right.¹⁶⁸

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—and in so doing reaffirms, it may be noted, the United States’ argument in the *Bering Sea Fur Seals Arbitration* as well. “Human solidarity manifests itself,” Judge Cançado-Trindade observed, “not only in a spatial 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.”¹⁶⁹ He then added, acutely: “It is the notion of human

167. See *id.*; BROWN WEISS, *supra* note 9, at 24.

168. I opt for the expression “third wave” only for the obvious reason that it is less susceptible to confusion in intergenerational justice discourse. In no way do I otherwise resist the “third generation” characterization, much less the historical acuity that brought it into being. 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, Weston, *supra* note 149, at 658. 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.

169. *Bámaca-Valésquez v. Guatemala*, Case No. 70, Inter-Am. C.H.R. 92 (Nov. 25, 2000) (separate opinion of Judge Cançado-Trindade, ¶ 23), available at http://www.corteidh.olr.cr/docs/casos/articulos/seriec_70_ing.pdf.

solidarity, understood in this wide dimension, and never that of State sovereignty, which lies on [sic] the basis of the whole contemporary thinking on the rights inherent to the human being.”¹⁷⁰

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 for 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.”¹⁷¹

One must hope so. And one must also hope that such a bequest would entail a commitment to the widest possible intergenerational sharing of all the values of human dignity,¹⁷² qualified only by the limitation that the

170. *Id.*

171. NORTON, *supra* note 36, at 334–35.

172. 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: “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).” *Id.* at 55–56. 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,” “Emotions,” “Affiliation” (“Friendship” and “Respect”), “Other Species,”

rights of present and future 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.¹⁷³ Ideally, these values would include all those proclaimed as rights in the 1948 Universal Declaration of Human Rights,¹⁷⁴ the 1966 Covenant on Economic, Social and Cultural Rights, and the 1966 Covenant on Civil and Political Rights¹⁷⁵—part of the so-called International Bill of Human Rights and its embrace of life, liberty (including but not limited to property, health, 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.¹⁷⁶ 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 by putting respect-based justice into service on behalf of future generations everywhere according to the following incomplete propositions¹⁷⁷:

- (1) “each generation has towards the previous one the right to respect for its right to—,” and

“Play,” and “Control Over One’s Environment” (“Political” and “Material”). Bernard Williams, *The Standard of Living: Interests and Capabilities*, in *THE STANDARD OF LIVING* 94, 100 (G. Hathorn ed., 1987) (providing an early advocacy view of a capabilities approach to human rights); see also Martha C. Nussbaum, *Capabilities, Human Rights, and the Universal Declaration*, in *THE FUTURE OF INTERNATIONAL HUMAN RIGHTS* 25, 42–47 (Burns H. Weston & Stephen P. Marks eds., 1999); Amartya K. Sen, *Equality of What?*, in *1 THE TANNER LECTURES ON HUMAN VALUES* 195 (1980), reprinted in *AMARTYA K. SEN, CHOICE, WELFARE AND MEASUREMENT* 353–69 (1982).

173. See generally MYRES S. MCDUGAL, HAROLD D. LASSWELL & LUNG-CHU CHEN, *HUMAN RIGHTS AND WORLD PUBLIC ORDER: THE BASIC POLICIES OF AN INTERNATIONAL LAW OF HUMAN DIGNITY* (1980) (providing a model for this formulation).

174. Universal Declaration of Human Rights, G.A. Res. 217A, at 72–77, U.N. GAOR, 3d Sess., 1st plen. mtg., U.N. Doc. A/810 (Dec. 12, 1948), reprinted in *3 INTERNATIONAL LAW AND WORLD ORDER*, supra note 44, III.A.1.

175. International Covenant on Economic, Social and Cultural Rights, opened for signature Dec. 16, 1966, 993 U.N.T.S. 3 (entered into force Jan. 3, 1976), reprinted in *3 INTERNATIONAL LAW AND WORLD ORDER*, supra note 44, III.A.2; International Covenant on Civil and Political Rights, adopted Dec. 19, 1966, S. Exec. Doc. E, 95–2 (1978), 999 U.N.T.S. 171, reprinted in *3 INTERNATIONAL LAW AND WORLD ORDER*, supra note 44, III.A.3.

176. See supra note 166.

177. For the inspiration that led to these following formulations, I am indebted to Axel Gosseries. Axel Gosseries, *Constitutionalizing Future Rights?*, *INTERGENERATIONAL JUSTICE* REV. 10, 11 (2004).

(2) “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 incomplete propositions, and to this end I again invoke the three principles of intergenerational justice developed by Edith Brown Weiss¹⁷⁸:

(1) 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

(2) 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 previously, I endorse these propositions of respect-based intergenerational justice. But why, it may be asked, should anyone else accept these three principled propositions? Professor Brown Weiss lists four reasons. The three principles, she writes:¹⁷⁹

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

178. BROWN WEISS, *supra* note 9, at 38 (emphasis added); *see also supra* text accompanying notes 82–84.

179. 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.”¹⁸⁰

It is these four virtues, among others, that make Brown Weiss’s 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 Rawls and, in particular, his proposed thought experiment,¹⁸¹ akin to Kant’s “categorical imperative,”¹⁸² 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

180. Brown Weiss, *Intergenerational Fairness*, *supra* note 21, at 5.

181. See RAWLS, *supra* note 65, at 17–40, 136–42.

182. IMMANUEL KANT, *GROUNDING FOR THE METAPHYSICS OF MORALS 2* (James W. Ellington trans., Hackett Publishing Co. 3rd ed. 1993).

Rawls,¹⁸³ shows us how:

[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.¹⁸⁴

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.¹⁸⁵

Especially noteworthy, however, is Brown Weiss’s 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.”¹⁸⁶ 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, [requiring] each generation to conserve the improvements of its predecessors.”¹⁸⁷ 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.”¹⁸⁸ She thus argues forcefully for “a minimum level of equality among generations,” a generational entitlement to a

183. See RAWLS, *supra* note 65, at 291–92.

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

185. JOHN RAWLS, *POLITICAL LIBERALISM* 274 (1993).

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

187. *Id.*

188. *Id.*

“planet and cultural resource base at least as good as” the one enjoyed by the generation preceding.¹⁸⁹

Embedded in these statements is a contractarian viewpoint akin to Whitehead’s process philosophy of human solidarity across space and time as a basis of justice for the global common good. Brown Weiss’s underlying point, with which I agree, is that we humans are “integrally linked with other parts of the natural system”¹⁹⁰ 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.”¹⁹¹ 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.¹⁹²

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.”¹⁹³

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, elaborating on the human rights provisions of the U.N. 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.”¹⁹⁴ And multiple subsequent human rights instruments—from the International Covenant on Economic, Social and Cultural Rights¹⁹⁵ and the International Covenant on

189. *Id.* at 24–25.

190. Brown Weiss, *Our Rights and Obligations*, *supra* note 22, at 199.

191. *Id.*

192. 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)).

193. *Id.*

194. Universal Declaration of Human Rights, *supra* note 174, at 71 (emphasis added).

195. International Covenant on Economic, Social and Cultural Rights, *supra* note 175.

Civil and Political Rights¹⁹⁶ to the Convention on the Rights of the Child¹⁹⁷ and beyond—are at one in articulating, Brown 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.”¹⁹⁸

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.¹⁹⁹ 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.²⁰⁰ 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 resorting 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.²⁰¹

How then are human rights—a dialectic about interpersonal and intergroup respect across space and time—to be justified as a foundation

196. International Covenant on Civil and Political Rights, *supra* note 175.

197. Convention on the Rights of the Child, *supra* note 25.

198. BROWN WEISS, *supra* note 9, at 26.

199. For extended treatment of the universalism versus cultural relativism debate, see Burns H. Weston, *The Universality of Human Rights in a Multicultural 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*, 60 *ME. L. REV.* (forthcoming June 2008).

200. As Philip Allot has reminded us, “[I]n 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).

201. As Upendra Baxi observes, “Any 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, *Voices of Suffering and the Future of Human Rights*, 8 *TRANSNAT’L L. & CONTEMP. PROBS.* 125, 149–50 (1998).

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 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.²⁰²

CONCLUSION

The subtitle to this Article, “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

202. 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. *E.g.*, ALEXANDRE KISS & DINAH SHELTON, GUIDE TO INTERNATIONAL ENVIRONMENTAL LAW 237–41 (2007). “Third wave” human rights is a term better used in the present context. *See supra* discussion at note 168. These rights 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. Weston, *supra* note 149, at 658–59. The third wave right to a clean, healthy, ecologically balanced, and sustainable global environment to which future generations are legally entitled will be the subject of another essay forthcoming within the next year. Weston, *supra* note 199.

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.²⁰³ It therefore behooves the legal profession, myself included, to approach this battle with humility and to pledge respectful collaboration across disciplinary lines.²⁰⁴ As is well known, a variety of transformational ideas born of transdisciplinary synthesis have animated the environmental movement of approximately the last 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 U.N.’s Intergovernmental Panel on Climate Change has made abundantly clear, there is literally no time to waste.²⁰⁵

This Article 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 Commons—these projects and more must be on the agenda, and at all levels of social organization from the most local to

203. The work of Edith Brown Weiss is much relied upon in this Article.

204. See RICHARD O. BROOKS ET AL., *LAW AND ECOLOGY: THE RISE OF THE ECOSYSTEM REGIME*, at xi–xv (2002) (emphasizing the importance of incorporating ecosystem studies to the legal process—through a more comprehensive interdisciplinary or multi-disciplinary approach—due to its central role in shaping and understanding environmental law and policy).

205. *IPCC Second Assessment*, *supra* note 1; *IPCC Fourth Assessment*, *supra* note 1.

the most 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—including the clarification of societal goals that reflect the preciousness of 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. A key example: 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.²⁰⁶

Happily, the legal profession has begun to mobilize along these lines and is doing so, as it should, with accelerating speed.²⁰⁷ 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—“[n]ot occasional heroism, a remarkable instance of it here and there, but constant heroism, systematic heroism, heroism as governing

206. *E.g.*, Lothar Gündling, *Our Responsibility to Future Generations*, 84 AM. J. INT'L L. 207 (1990).

207. 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 et al. eds., 1998), especially Philippe Sands, *Protecting Future Generations: Precedents and Practice*, at 89 therein; 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 Law 1982); H.E. Judge C.G. Weeramantry, *Achieving Sustainable Justice Through International Law*, in SUSTAINABLE JUSTICE, *supra* note 84, 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) and 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>.

principle.”²⁰⁸ No matter how persuasive its theoretical underpinnings, intergenerational ecological justice is not self-executing and will not happen without it.

208. RUSSELL BANKS, CONTINENTAL DRIFT 40 (1985).