

**Ethics in International Environmental Law  
(forthcoming in OXFORD HANDBOOK OF  
INTERNATIONAL ENVIRONMENTAL LAW (2006))**

**Christopher D. Stone**

**USC Law and Economics and  
Legal Studies Research Paper No. 05-10**



**LAW & ECONOMICS and  
LEGAL STUDIES  
RESEARCH PAPER SERIES**

**Sponsored by the John M. Olin Foundation**

University of Southern California Law School  
Los Angeles, CA 90089-0071

*This paper can be downloaded without charge from the Social Science Research Network  
electronic library at <http://ssrn.com/abstract=705263>*

## Ethics in International Environmental Law

[Forthcoming: OXFORD HANDBOOK OF  
INTERNATIONAL ENVIRONMENTAL LAW 2006]

Christopher D. Stone

*The actual influence of didactic ethics on public policy is controversial, and perhaps particularly so in regard to multilateral fora. But efforts to mend the global environment invite ethical analysis in three ways. First, there are issues of human obligations to the non-human environment (“environmental ethics” proper). Second there are issues of ethics among nations in respect of the environment (“inter-national ethics”). Third, there are issues of ethics among generations in respect of the environment (“inter-generational ethics”).*

*The first—environmental ethics proper—can be illustrated by the question, has humankind an obligation not to kill whales? (Have whales rights?) The second is illustrated by the question, if the harvesting of a certain number of whales is moral, have indigenous peoples a higher priority on them than commercial fishermen from industrialized countries? (Are there principles of fair distribution among nations?) The third can be illustrated by the question, has have present generations an obligation to remote future generations to preserve whales? (Are there obligations of sustainable development?)*

*The author reviews and critically assesses these and related issues that have been recurring in international environmental governance bodies and literature.*

### 1. Ethics

---

“Ethics” comprehends the discourse of “right” and “wrong,” “just” and “unjust,” “duties” and “rights,” the morally preferable and the morally prohibited. In establishing international norms, such as those in international environmental law, one might turn to ethics for three reasons. First, as an individual (or government) engaged in the process of moral reasoning, one might be seeking guidance in identifying the morally ideal choice among the available policy alternatives: which option *ought* to be brought about?<sup>1</sup> Second, one might employ ethics to persuade others to endorse the same choice. Here, where ethics is employed a discursive strategy, the arguer may find herself arguing from the other’s principles, rather than the arguer’s

---

<sup>1</sup> Additionally the actor may seek guidance on which options it ought not to perform and which lie within the zone of moral indifference.

own. One who personally reaches vegetarianism from an animal rights perspective may seek to persuade others through utilitarian appeals, such as that rejecting meat is a means to feed more of the world's people. The third use of ethics would be to justify imposing a law or policy on others who remained unpersuaded. We object to eating marine mammals but you (having heard us out) don't. When—under what circumstances and via what institutional arrangements—may we legitimately force our wills upon yours?<sup>2</sup>

Efforts to mend the global environment implicate these ethical quandaries in three ways. First, there are issues of human obligations to the non-human environment (“environmental ethics” proper). Second there are issues of ethics among nations in respect of the environment (“inter-national ethics”). Third, there are issues of ethics among generations in respect of the environment (“inter-generational ethics”).

The first area can be illustrated with the question, ought we—humankind as a whole—not to kill/cause suffering of whales because of something *about whales*? The second deals with questions of distribution among peoples or nations: if some level of whale harvesting is justifiable, how do we allocate the allowable catch *among claimants*, for example, as between indigenous Arctic peoples and Japanese commercial whalers? The third deals with questions of distribution *across generations*: have we obligations to those yet to be born, and if so, do they extend to passing along whales to the unborn as part of their rightful legacy?

## 2. Environmental ethics

---

---

<sup>2</sup> Daniel Bodansky, The Legitimacy of International Governance: A Coming Challenge for International Environmental Law, 93 AM. JOURN OF INT'L LAW 596 (1999).

As we shall use the term here, environmental ethics comes into play when we wish to evaluate environment-affecting actions on account of their impact on the environment, rather than of its (indirect) impact on present or future humans. Thus, to contend that a forest ought not to be converted to farmland because the value of the added farmland is less than the foregone value of natural pharmaceutical inputs is not an argument of *environmental* ethics.

Environmental ethics appeals to some feature of the forest (or our relation to the forest) not straightforwardly referenced to human use or consumption.<sup>3</sup> In the same way, insofar as an argument not to kill whales is based solely on the commercial value of whales as food or as amusement, measured in restaurant and whale watching revenues, the argument is not environmental. Which elements of the “non-human environment” deserve such an independent accounting is controversial. Among philosophers who maintain that some non-human “things” deserve moral consideration there is considerable disagreement as to how far “out” from humans that concern ought to and might coherently run. Arguments can be found championing animals, plants, species, ecosystems and even inanimate natural objects. But philosophers who would support protecting one class of objects need not, and often do not, do so for another. Those who argue for the intrinsic value of species do not always speak up for individual members, and vice-versa.

To stake out a position for any of these things—to convince that we should conserve a forest ecosystem at the sacrifice of our own well-being (less farmland)—is of course intellectually challenging. The environmental ethicist faces all the obstacles that confront the proponent of a conventional inter-human ethics, starting with the epistemological basis of propositions about “rights” and “wrongs.” How can one prove to a skeptic that it is “wrong” to kill an innocent child? The proof gets no easier when the victim is a tree.

Environmental ethics is constrained from the start because many of the epistemological “resources” with which conventional, anthropocentric ethics have been composed are unavailable to the environmental ethicist. Some philosophers have grounded human morality in the various languages of games, co-operation, and expectations of reciprocity. But if saving lions is to be justified, it cannot be on the expectation (the Androcles fable comes to mind) that any lion we may rescue will return the favor. Nor are persons and lions—let alone trees—roughly equal in power with us, a crucial condition of justice according to Hume. At the other extreme, appeals to altruism—sacrifice which carries no prospect of cooperative gain—do not give good grounding either. The standard philosophical moves to justify and motivate benevolence appeal to empathetic thought experiments: How would you feel if you were in Jones’ shoes (and

---

<sup>3</sup> See 2.1, below.

someone did that to you)? Even if we can, with some stretch, put ourselves in the hooves of a horse, there seems to be no way we can put ourselves in the banks of a river, pondering how it would feel to be dammed. Nor does it appear helpful to ask (along lines popularized by John Rawls) what rules we would accept if, from behind a veil of ignorance, we did not know whether we would be born as a human or a bat. What would we want, if we were to be born bats? And then there is a whole barrage of standard criticisms. If some X cannot take an interest in its own well-being, why should we take any interest in it? Does smallpox have moral standing? If a gazelle has rights, are we obliged to muzzle lions?

In the face of such obstacles, it is tempting to dismiss the whole exercise as futile and academic. But that would be wrong. The fact is, issues of environmental ethics are already rising, inescapably, across the whole area of international environmental law. I do not mean merely that non-anthropocentric propositions have worked their way into “soft law,” for example, the 1982 World Charter for Nature’s Declaration that “every form of life is unique, warranting respect regardless of its worth to man.” Consider the following contemporary controversies:

- Under the International Whaling Convention: should the current moratorium on commercial whaling be extended, even for species (such as the minke) that are in no wise threatened?
- Under the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS): should a Member be permitted to refuse recognition of patents on forms of life?
- Under the Convention on Biological Diversity and other conservation treaties: which species (and “mix” of life) are to be prioritized in the face of conflict?
- Under the various area and habitat set-aside conventions: which terrestrial and oceanic areas should be “specially protected”? If we go beyond privileging life of potential “use” value to humans, should we single out areas with “most” life? – most “higher” life? -- “rarer” life forms?
- Under the General Agreement on Tariffs and Trades (GATT): should a Member be permitted to block import of furs from animals caught in painful leg traps?
- Under the United Nations Law of the Sea (UNCLOS): how stringently (and at what cost) should fishing gear be restricted to protect non-commercial by-catch, such as turtles and albatrosses?

These are among the real-world questions that one might look to environmental ethicists to illuminate. What guidance can they in fact provide?

In general, efforts to introduce a moral accounting for the environment have appealed to one of three foundations.

The first is a variant on *homocentric* ethics. As I have remarked, in their most common expressions, appeals to human welfare (“if you don’t kill whales, there will be more whales to eat in the long run”) are not environmental ethics arguments, strictly speaking. But there is one strategy that, while working within a welfarist framework, seeks to expand our accounting for the environment. While, in the final analysis it accepts our preferences (and is therefore homocentric), it does so only after modifying our preferences through environment-focused reasoning.

Second are *ecocentric* ethics (environmental ethics proper) which seek to temper our impact on non-human life and the environment on the basis of some “good” or value that these things intrinsically (in some accounts, “inherently”) are supposed to possess, human welfare aside.

Third are *human ideal*-regarding ethics, under which enjoying the environment or treating it with sensitivity is viewed as transforming us into better (as distinct from *happier*) persons.

To continue with the whales as illustration, suppose that the issue is whether to retain the moratorium on commercial whaling. An environmentalist adopting the first strategy would claim that we must weigh, as against the aggregated commercial value of whales as food and entertainment, even as supplemented by the contingent value people *do* place on the existence of whales, the value that people *would* place if they thought about the matter *rightly*. The second strategy is to argue that we ought not to kill (or cause suffering of) whales because whales have a moral right to life and to be free of unjustified pain. To adopt the third approach is to embellish the idea that, given what we know about whales, the killing of whales (not in self defense) debases us as persons—violates, perhaps, a duty to our better selves. Let us look at those three frameworks, and the issues they pose, more closely.

## **2.1 Human welfare regarding environmental ethics**

---

The first foundational strategy adopts the biases of an anthropocentric framework, but assumes that what we are willing to give up for protecting non-human, Nature potentially inflates (or deflates) with moral deliberations exogenous to, and prior to, the utility calculations. People asked to contingently value a whale (or its species) – “What would you be willing to

sacrifice to assure the continuing life of a/the whale?—are apt to revise their preferences upon reflection on morally salient features: the intelligence and social relations of whales, the unique evolutionary twist they represent as terrestrial mammals that returned to the sea, and so on. In fact, much of the environmental ethics literature is dedicated to promote just such an inflation. There are several rubrics into which an expansive welfarist might feed these considerations. These include, at the start, pointing out “market failures, that leave the most uncontroversial benefits, such as positive externalities of trees as carbon dioxide sequesterers, unaccounted for. And the ethicist may seek to force the public to revise the value it has been placing on natural resources, emphasizing “existence value” (what we are prepared to pay, collectively, just for the satisfaction of knowing that X exists), “option value” (what we are prepared to pay for the option to have X on hand in our futures), and “legacy value,” (what we are prepared to pay to include X as part of our legacy for future generations). The environmental ethicist may maintain that these evaluations need not be accepted as “given,” as determined by immediate polling, but are variables within the reach of moral argument. In this manner, human preferences are conclusive, but the burden of environmental ethics is to “educate” them through enlightening discourse. I am not sure that it is possible to confine the range from which “educative” appeals can be launched. An analysis of the Journal Environmental Ethics reveals a broad orbit, from Christian spirituality to eco-feminism and elaborations of particular mainstream philosophers.<sup>4</sup>

## **2.2 Direct environment-regarding ethics.**

Many environmentalists believe that human-centered ethics, even an expansive welfarist vision, do not go far enough in protecting Nature, and are based on morally flawed—even arrogant--premises. These writers maintain that at least some non-humans (and perhaps the biosphere as a whole) deserve moral consideration in their own right—in the words of the 1982 World Charter for Nature, “regardless of [their] worth to man.” If X is deemed worthy of moral consideration in its own right, then the question is not what humans *would* pay, even well educated, for X’s continued existence, but what (if it is right to employ a currency metric at all) they *ought to* pay.

Efforts to frame obligations on direct respect for nature quickly encounter at least two major conceptual challenges. The first involves foundation: On what basis do we have a *prima facie* moral obligation towards non-human *things*? The second involves prioritization.

---

<sup>4</sup> See Christopher D. Stone, “Do Morals Matter: The Influence of Ethics on Courts and Congress in Shaping U.S. Environmental Policies, 37 U.C. DAVIS LAW REVIEW 13, 42 (Table) 2003.

Assuming that we have prima facie obligations to both X and Y, what are we to do in the case of conflict?

### **2.21 *The foundational challenge.***

Many would consider animals to present the easiest case for moral considerableness in the non-human world. If the crux of morality is to minimize infliction of pain, then, as Bentham put it, “the question [of including animals in the moral realm] is not, Can they reason? nor Can they speak, but *Can they suffer?*”<sup>5</sup> strictly speaking, Bentham’s reasoning would not endow an animal with “rights” (for the status even of human rights is uncertain under utilitarianism ) but would enter its pleasures and pains along with the pleasures and pains of every other sentient creature in making the relevant utility calculations. Balancing the pain of an animal against the pleasures of people is knotty business. After all, how do we weigh the suffering of a leg-trapped animals against the pleasure of the fur wearer? But in weighing, we are at least rightly rejecting the judgment (with Descartes) that animals are, “like the clock,” beyond conscious awareness, much less morally considerable.

However, the application of utilitarianism to non-humans remains problematical when we advance beyond the simple Benthamite pleasure-pain version to contemporary preference-satisfying modes. Granted that there are actions that cause an animal pain, but what basket of goods does it prefer over another? Imagine, for example, that the issue is not killing whales but, by the construction of an oil loading facility, dislodging them from their traditional migratory path into a more roundabout route.<sup>6</sup> Suppose we regard the migratory history as having endowed the whales with a prescriptive easement. Inter-personal morality, and the legal system in its ordinary operations, can draw on a wide range of devices, under-written by preference-oriented utilitarianism, to identify suitable adjustments when a property right is targeted for public “taking.” If an easement is worth \$100,000 to the owner and \$200,000 to the public (which needs it to operate the oil facility) the parties, if they wish to avoid a judicial determination, will presumably strike a deal at a price between those figures. But even if there is a guardian to speak for the whales, how do we know what the whale stock would regard as compensation—what amount of squid “chummed” along the alternate route--would give the whales satisfaction equivalent to their lost easement?

---

<sup>5</sup> INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION, ch.XVII (italics in original). 1789. Bentham in this passage refers to the animal’s “rights.”

<sup>6</sup> The analysis is complicated by the risk that the forced detour might extinguish the stock, but let us assume that the stock survives.



Notice that the problem here illustrated is not that we cannot coherently assign rights to non-humans. The problem is that, if we do assign them rights, it is hard to preserve the utility-sensitive flexibility that survives the allocation of rights among humans, who can continuously “correct” course, mutually improving their well-being through trade. Or if the entitlement is taken non-consensually (deliberately or accidentally), judicial awards can restore the loser to something like the status quo ante level of well-being. But mimicking these maneuvers with non-humans is problematical.

To say rights-based protections of non-humans is problematical is not to say it cannot be tried. We protect rights of the unborn, infants, and senile persons, even when constructing their preferences is somewhat conjectural.<sup>7</sup> And those who strongly support the rights of nonhuman entities are not likely to be put off by the inconveniences. Moreover, to subscribe to rights for, say, animals, is not a commitment to rights that are co-extensive with human rights, a position that would include some civil rights that are simply inapposite, such as the rights to worship, vote, and speak. Indeed, even those who deny animals a right to live frequently endorse a right to be free from undue pain, as evidenced by the IWC position already alluded to: killing whales is acceptable, but pain is to be minimized.

When we move away from animals in the direction of plants, neither version of utilitarianism, neither the pleasure-pain nor the preference variant, is available for guidance. Indeed, when we turn to plants, other non-utility, rights-based factors commonly called upon are also unavailable, such as the requirement that a rights-bearer “take an interest in its life” or have “a conscious life plan.” Nonetheless, plants share with all living things a good in the sense of having a life. Can having a life (without pain or conscious preferences) be the basis of a coherent moral claim? While a weed, lacking consciousness, does not “take an interest” in someone not spreading Roundup on its leaves, it is certainly not incoherent to say that our doing so is against the weed’s well-being. (That, after all, is why the product sells.) This has led some to argue that, just as there is a certain sort of “speciesism” in licensing human over non-human animals, so, too it is illegitimately “speciesist” to deny plants *prima facie* moral standing along with all other teleological centers of life.<sup>8</sup> Perhaps. But even if we were to agree that life, *per se*, gives *prima facie* moral standing in principle, it is quite another matter to give the life of a weed substantial weight in the face of conflicting claims on it, such as those of the human-favored encroaching cornstalk. This may explain why, at present, with the exception of certain show-

---

<sup>7</sup> See, for example, *Superintendent of Belchertown State School v. Saikewicz*, 370 NE2d 417 (Mass 1977) (upholding lower court's decision to withhold chemotherapy from a severely retarded patient on the conjecture that view that he would have suffered from uncomprehending fear if subjected to chemotherapy).

<sup>8</sup> PAUL TAYLOR, *THE ETHICS OF RESPECT FOR NATURE* (1986).

case animals, neither the lives nor the “natural” unfoldings of individual life forms (such as an individual toad or tree) have marshaled much protection under international law.

While the movement to endow moral status on individual plants, even animals, remains peripheral on the international level, the protection of groups--species, ecosystems, portfolios of biodiversity--is well advanced, as evidenced by many treaties including the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species of Floral and Fauna and (CITES), the Convention for the Conservation of Antarctic Living Marine Resources (CCALMR). This relative solicitude for the group over the individual raises the question, on what basis do we favor species? Species are even more transparently than individuals lacking in the characteristics ordinarily deemed pertinent for moral considerateness, such as the capacity to feel pain, to suffer, to have a life plan, and so on. Indeed, the very concept of a species might be considered too gossamer a foundation for intrinsic ethical concern. Classification of life into species reflects human judgment--species are not, in the philosophical lingo, “natural kinds”--and there is often controversy marking the line where one species leaves off and another begins, particularly in the face of continuing evolution.

Those who would extend moral status to species rejoin, however, by portraying the species as the logically prior entity: the individual member “represents (re-presents) a species in each new generation.” The individual is thus portrayed as a mere token of a type, the type being considered more important than the token.

While the moral considerateness of species, in their own right, is thus arguable, it is far from clear that most species-protecting conventions require it. Indeed, the earliest migrant bird treaty (1868) tips off its frankly utilitarian provenance in its title: “Birds useful to agriculture.”<sup>9</sup> Other treaties conserve species that less transparently service human needs, but whose survival could probably be cost-justified to the “educated” utilitarian.

Providing an ethical basis for biodiversity conservation provides a particularly ambiguous challenge. While the Preamble to the CBD pays ecocentric homage to “the intrinsic value of biodiversity,” much of the text refers to “biological resources” defined to include “genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity.” Indeed, the Convention’s definition of biodiversity, the variability among living organisms, is hard to pin down (what is variability, and isn’t it always changing?), much less to characterize as something to which “intrinsic value” can be assigned.

---

<sup>9</sup> SIMON Lyster, *INTERNATIONAL WILDLIFE LAW* 63 (1985).

## **2.22 The question of priorities**

In the course of examining foundational questions, the ethical literature should, hopefully, sort out the ontological conundrums already alluded to, whether the unit of moral concern is to be the species of ant, ant DNA, the ant's habitat, the anthill, the individual ant, the encompassing ecosystem--or all of them perhaps in different ways. But it is not enough to carve up the world into those things deemed to be morally considerable. What are we to do in the case of conflict? Do we favor the rare species of lower animal over the less rare but "higher" one? The species that contributes most to the biomass or energy flow of the ecosystem? Surveying existing international agreements, one can infer a priority for charismatic megafauna and intelligence--creatures "like us." But to defend these psychological leanings on moral grounds is another matter. For example, even if we were to accept the most extravagant claims about whales having "higher than human intelligence,"<sup>10</sup> it would not follow that we would thereby have more stringent duties to whales than to wallabies. Indeed, within inter-personal morality, the more demanding duties are reserved for those with the least intelligence--infants, the incompetent and the senile. Whales, someone might argue, can fend for themselves

Notwithstanding the apparent inevitability of ranking some life ahead of others--to acknowledge a "Great Chain of Being"--much of the literature goes off in the other, less helpful, direction, aiming to delegitimize prioritization. A dominant strategy among scholars is to champion a unique crucial feature--sentience, life, consciousness, or whatever--and to maintain that all things that possess that feature merit equal consideration. Thus Peter Singer famously argues that sentience is a sufficient condition--and any effort to treat any homo sapiens differently than any other species in regards to pain infliction is "speciest."<sup>11</sup> If there is to be no suffering for Man, then no (human-caused) suffering for mice. To the biocentrist, for whom even privileging sentience smacks of human self-pleading, all life demands respect equally. These positions, certainly the biocentrist's, seem impossible to maintain literally: if no living thing is fair game for us, not even soy beans, we will expire. Indeed, the principle of non-interference with life's unfolding (not merely with its existence) can lead philosophers to condemn espaliering fruit trees as immoral.

---

<sup>10</sup> Anthony D'Amato and Sudhir K. Chopra, Whales: Their Emerging Right to Life, 85 AM. J. INT'L L. 21 (1991).

<sup>11</sup> PETER SINGER, ALL ANIMALS ARE EQUAL (1989)

The impracticality of such biocentrism seems blatant; even the “logic” seems strained. To grant that life and sentience are morally significant (and all humans have them) does not entail that either is a sufficient condition for undifferentiated moral concern. Indeed, the assumption is odd, considering that conventional morality is full of differentiations among persons—duties to strangers versus duties to kin, for example. If, in the course of looking after our own security and subsistence, we find we have to eradicate either a bee or a bear, one or the other, it is hard to believe that the only legitimate method of choice is the flip of a coin.<sup>12</sup> Some writers have tried to back-track from indefensible advances by speaking of *prima facie*, not absolute, obligations and burdens of proof. Thus Paul Taylor, who maintains that humans have no greater inherent worth than any other living thing, is prepared to introduce a slew of human favoring “principles” that would, for example, underwrite construction of a library at the cost of a termite colony. In other words, the escape valve principles appear loose enough to make the whole premise unhelpful. Some have taken the opposite tack, maintaining that speciesism may be “closer to the moral truth than is species egalitarianism.”<sup>13</sup> But if so, we need to go further in identifying the principles on which a morally acceptable speciesism it to be built. Its challenge is not only to differentiate among species, but to arbitrate the many tensions between species and individual members. To preserve a species may require actions detrimental to the individual, such as culling and imprisoning breeding stock in zoos. Why sacrifice one rather than the other?

### **2.3 Human character/ideal-regarding environmental ethics**

A third foundational approach is to examine and exploit, rather than reject, the specialness of humans. After all, as David Schmitz observes, the whole premise of our having an obligation to gazelles that lions do not have is that we are unlike lions, not that we are like gazelles.<sup>14</sup> In this view, our duties to other creatures and to Nature are grounded on aspirations that are distinctly human. Rather than to address and revise the calculations, as per the first strategy, here the ethicist seeks to address and revise the calculator.

An illustration is Immanuel Kant’s declaration that “He who is cruel to animals becomes hard also in his dealings with men.”<sup>15</sup> One may feel uncomfortable with the idea that we ought

---

<sup>12</sup> 13The point is well elaborated in David Schmitz, “Are All Species Equal” in David Schmitz and Elizabeth Willott, eds., *ENVIRONMENTAL ETHICS: WHAT REALLY MATTERS, WHAT REALLY WORKS* (Oxford 2002).

<sup>13</sup> Schmitz, note 13 *supra* at 99..

<sup>14</sup> *Ibid.* at 100.

<sup>15</sup> I. Kant, *LECTURES ON ETHICS*, transl. Louis Infield (1930) 240.

not to kick a dog for our own sakes, rather than the dog's. However, particularly in cases where pain is not available as a moral guide-post, the human ideal foundation explains intuitions otherwise hard to ground. Consider why one might rue as evil the "wanton, capricious squashing of a beetle [. . . or] wild flower in the wild."<sup>16</sup> Kant's take may explain moral intuitions that Bentham cannot. The moral repugnance at traditional "rattlesnake round-ups" in some parts of the United States, in which the torment and slaughter of snakes is accompanied by feasts and celebration, has less to do with the pain of snakes than about the brutishness, arrogance and ecological stupidity of the perpetrators. For an illustration from international environmental law in the same vein, consider the Antarctic Conventions's rules against sullyng the landscape with evidence of human presence.<sup>17</sup> We *could* attribute the motivation to straightforward utility: the cost of trash collections may be less than what those who do not want to encounter trash would be willing to pay to have it removed. But I suspect something of human ideal is involved—a repugnance more against the sullyng of humankind's character, than against the sullyng of the environment.

Even if we accept this reasoning, however, the challenge of prioritization cannot be dodged. An action that ill-treats some thing only "sullies" our character if it is an action we ought not to do, and for that a prior determination of the moral status of the thing would appear to be critical. Why is it "sullyng" to drown sea turtles in shrimp nets but not so to eat shrimp? Certainly, in the realm of international diplomacy, an argument based on (what will inevitably be) one nation's notion of "good character" is going to be more controversial, and less effective, than arguments based on, for example, homocentric welfare claims.

### **3 Ethics among people(s) in respect of the environment**

---

Probably less of international environmental diplomacy is concerned with the rights *of* Nature than with the rights of people *inter se in regard to* Nature. Inter-national ethics may even conflict with obligations to Nature, above. For example, poor nations complain about trade "sticks," such as import bans on turtle unsafe shrimp, deployed to strong-arm poorer nations into raising their standards.<sup>18</sup>

---

<sup>16</sup> Joel Feinberg, "Legal Moralism and Free-Floating Evils," *PACIFIC PHILOSOPHICAL QUARTERLY* 61, 133

<sup>17</sup> For example, Annex III to the Protocol to the Antarctic Treaty (Madrid) provides that " "The amount of wastes produced or disposed of in the Antarctic Treaty area shall be reduced as far as practicable so as to minimise impact on the Antarctic environment and to minimise interference with the natural values of Antarctica, with scientific research and with other uses of Antarctica which are consistent with the Antarctic Treaty."

<sup>18</sup> Steve Charnovitz, "Environmental Trade Sanctions and the GATT: An Analysis of the Pelly Amendment," 9 *AMERICAN UNIVERSITY JOURNAL OF LAW AND POLICY* 751 (1994).

Ethical disputes among nations may take either corrective justice or distributive justice forms. [Cross-reference to Chapter 28 on “Equity”] In the context of climate change it has taken both. First, there is the corrective argument that certain nations, the historical emitters of greenhouse gasses (the early industrializers), are obliged to bear the weight of clean-up costs because they are, primarily, to blame. Distributive justice emerges in arguments such as that all individuals have equal right to the atmosphere, and that, history aside, the richer states should shoulder the burden because they can better afford it (a position that may be buttressed by citing the rich states’ lower marginal utility of the wealth expended in clean-up measures).

However, all such arguments, justice based and otherwise, encounter objections at the very threshold: does morality even apply in the international arena? That is, can we even meaningfully discuss what distribution of whales is “just” or “fair”? The proponent must meet several objections.

First there is the *strong realist* view, that the actions of nations are beyond moral evaluation, or (what amounts to the same thing), that any "rights" are mere dictates of "might" and self-interest. A related view, *fiduciary realism*,<sup>19</sup> does not reject all ethics in the international sphere, but maintains that what is ethical is for the national leader to consider exclusively his own people, to whom his responsibilities run, not other people or the global community at large. *Methodological individualism* criticizes attribution of moral predicates to states not on moral as much as on metaphysical grounds: the action of states lies beyond right and wrong because there are in reality no "state actions." Only individuals act and are acted upon, have interests to advance or frustrate, can be praised and blamed for polluting the atmosphere or depleting ozone. Finally, *doctrinal cosmopolitanists* hold commitment to individualist accounts by virtue of their substantive moral positions. For example, for a utilitarian, who is committed to evaluate actions by reference to their consequences on individual welfares, nation states and their boundaries are morally arbitrary: action should be guided by what conduces to the greatest happiness of persons, whichever side of a border they chanced to be born on.

Assessing these positions is far beyond the scope of this chapter. But the underlying issues cannot be ignored. For example, if the methodological cosmopolitans are right, what are we to make of claims that contemporary Americans have a special burden to reduce carbon dioxide because “the United States” emitted  $x$  tons of carbon dioxide in the 19<sup>th</sup> century? In the

---

<sup>19</sup> This paragraph benefits from Allen Buchanan and David Golove, “Philosophy of International Law” Chapter 21 in Jules Coleman and S. Shapiro, eds. OXFORD HANDBOOK OF PHILOSOPHY AND JURISPRUDENCE (2002).

period of early industrialization my forbears were living in rural Bessarabia, making the most modest demands on the atmosphere. Why should I be debited?<sup>20</sup>

One might question, moreover, the growing practice of MEAs to differentiate treaty obligations by holding rich and poor nations to different standards.<sup>21</sup> This practice is understandable if one adopts the legal starting point of territorially defined states, some of which have more resources to put to the chore of clean-up than others. But the reductionists are right to remind us that poverty and other markers of low welfare are the plight of persons, not countries. Lightening the load on the poorest *countries* is a rough approach to lifting the poorest *persons*. (Countries with low median incomes harbor very rich persons, and vice-versa.)

Even if we put the reductionist objections aside and accept, if only for convenience, the framework of nations and of just dealings among them, there remains the issue, how thick is the morality among nations? How detailed and forceful are the edicts it can offer? *Moral minimalism* holds that the obligations are relatively anemic; in the views of some, what is right is keeping treaty obligations--*pacta sunt servanda*--and little else. Some free-standing moral imperatives may hover outside treaties, but these are limited to prescriptions with the broadest and hoariest backing in international practice, such as that diplomats are not to be abused. When we turn to the controversies that actually abound in international environmental law, such as whether poor nations should be allowed to destroy forests or adopt a carbon-heavy path for economic development, there is nowhere near consensus on what is “right” and “fair” that one finds in genocide debates. China and India undoubtedly consider it unfair that the United States, historically the heaviest emitter of greenhouse gases, refuses to join the Kyoto Protocol; but the United States Senate considers it unfair for those countries, prospectively major polluters themselves, to refuse to put on paper *any* emission commitment to start *some time* in the future. Nations with large volumes of biomass (a sink for carbon dioxide) consider it fair they get credit, as against the gas they produce, for the gas they withdraw. Nations whose emissions of greenhouse gas consist largely of methane, and therefore related to the “necessities” of agriculture, object to lumping their emissions in with the emissions that they associate with “luxury” uses of the developed world, such as transportation. It isn’t morally obtuse to wonder, as it would be with ethnic cleansing, which side is right. Many developing countries, even if they are willing to acknowledge global human rights, nonetheless reject criticism of

---

<sup>20</sup> The question is not rhetorical: One might say I “owe” by benefiting from life in an economy whose wealth was made possible by carbon-intensive activities that preceded my grand-parents’ immigration.

<sup>21</sup> See, Christopher D. Stone, *Common but Differentiated Responsibilities in International Law*. 98 AM. JOURN OF INT’L LAW 276 (2004).

environmental abuses as nothing more than “cultural imperialism” that threatens “sovereign control over natural resources.”

There is also an empirical aspect to the fairness controversy. It is practically an article of faith in the literature that fairness, or at least the perception of fairness, substantially influences countries to join environmental accords. But the evidence is at best ambiguous.<sup>22</sup> Clearly, there are many instances of wealthy countries accepting a heavier burden than the poor. But these cases are consistent with the rich simply expressing their greater willingness to pay for environmental improvements. Realist self-interest, not other-regarding morality, may explain treaty provisions for “common but differentiated responsibility.”

#### **4. Ethics among generations in respect of the environment**

---

A third foundation for environmental protection is based on the presumed claims of future generations. In the words of the Stockholm Declaration (United Nations Conference on the Human Environment (1972)), humankind is said to bear “a solemn responsibility to protect and improve the environment for present and future generations.” The sentiment, echoed in many other documents, is undoubtedly regarded as a warrant for much of international environmental law, particularly because the concerns of IEL tend to be long-term and the conviction that future generations are un- or under-represented in politics and in market transactions, and therefore need special legal protection. [Cross-reference to Chapter 28 on “Equity”]

The argument that, absent special law, the unborn are “voiceless” is not self-evidently true. The interests of the unborn work their way into the calculations of contemporaries in several ways. For one, if markets are well working, the future value of natural resources (their projected scarcity) manifests itself in present prices: it is false to suppose that present generations will deplete their stock with no accounting for their value to the unborn.<sup>23</sup> Markets aside, even in voting behavior, the welfare of future persons is not outside any current generation's thinking. Each of us, during our own lifetimes, is presumably concerned for how our children's future will unfold after our deaths, and concern for our children's well-being incorporates their concern for the welfare of their children, and so on. To look at it from another angle, each generation knows

---

<sup>22</sup> For a skeptical view of the influence of ethics in international diplomacy, see David G. Victor, *The Regulation of Greenhouse Gases: Does Fairness Matter?* in *FAIR WEATHER?* 193 (Ferenc L. Tóth ed., 1999).

<sup>23</sup> Harold Hotelling demonstrated in 1931 that if markets for a nonrenewable resource, such as coal, are efficient, then the owner will hold the coal in situ if and only if the anticipated growth in price equals or exceeds the social rate of interest, *i*. This should incline the owner to preserve or consume the asset at a pace that is responsive to future supply and demand, assuring some connection to the well-being of the unborn.



that to savage the environment is to erode the value of its own estates. These factors have been said to introduce an "infinite horizon" in our thinking.

Even if the "infinite horizon" argument for inter-generational harmony is a bit Panglossian, the tension between present and future is easily exaggerated. Most environmental amenities we deem future persons to value are (not surprisingly) benefits to us. The whaling moratorium is not motivated, solely, by generosity for the unborn. That is, even if we stripped away the legacy value, the costs and benefits of whaling to us, the living, might well support the IWC's position. In point of fact, given life spans and generational overlap, one has to labor to construct hypotheticals in which the interests of the unborn would be, by consensus, foursquare in conflict with (and not merely perhaps incongruent with) predominant contemporary self-interests. For example, one can imagine a massive public works project, such as to deflect an incoming asteroid; if the undertaking took 100 years to get up and running, *we* would bear all the costs and *they* would reap all the benefits. But in the typical cases of IEL concern, such as protection from climate damage and preservation of species, there is a generational overlapping of both costs and benefits.

Nonetheless, it is hard to deny the prospect of trans-generational externalities, so that costs and benefits are skewed; we can imagine an unborn to argue that we should be self-imposing some level of costs on ourselves beyond the level which our own benefits (even including the satisfaction of contingent "legacy value") would merit. Viewed from an ethics perspective, what obligations do we have to the unborn to redress such spill-overs?

The analysis of obligations to future generations may be sorted into three sorts of claims.

#### **4.1 *The temporally remote tort***

First, one may argue that we have an obligation to avoid imposing a certain class of risks on the unborn: a duty to avoid temporally remote torts, such as widespread injury to remote progeny from a poorly contained nuclear waste facility. According to common standards of negligence law, an actor causing harm is liable if the expected value of the harm (the magnitude of loss, if it occurs, times the probability) exceeds the costs to the actor of avoiding the losses. To illustrate, suppose that by spending on containment \$1000 in excess of what is cost-beneficial to *us*, the living, would avert a loss of \$1,000,000 to our remote descendants. If we adopt the logic of the tort standard as our moral guide, it would seem that we are *prima facie* obliged to expend the \$1000.

I say *prima facie* because there are several avenues open for assessing and perhaps denying any obligation. The first is conceptual, that it is simply incoherent to have duties to an unidentifiable someone who does not (yet) exist. But to label duties to the unborn incoherent seems strained: estate planners create enforceable duties to the unborn as a matter of course. To deny it seems, moreover, morally dubious. Suppose that someone on the bank of a river were to launch a raft packed with unstable explosives. It hardly seems a defense that, because the current is slow and the nearest population lives far down-river, those put at risk are yet to be born, and therefore the action is morally acceptable.

Suppose that someone on the bank of a river were to launch a raft packed with unstable explosives. It hardly seems a defense that, because the current is slow and the nearest population lives far down-river, those put at risk are yet to be born, and therefore the action is morally acceptable.

Some commentators, however, appeal to time discounting to justify some such future-casting risks, on the view that a positive rate of discount trivializes remote damages. Suppose the dynamite-laden raft is not expected to explode for 300 years. We can avert the risk by a controlled explosion that will cost \$1000. However, if we discount the expected \$1,000,000 damage at 3%, the present value of the loss is only \$140. This line of reasoning alleges that the savings (\$140) are not worth the investment (\$1000). We can pass on the risk in good conscience.

There is an expansive and knotty literature on whether any such discounting is applicable, and, if so, what is the appropriate rate. Those who doubt the applicability of discounting point out that it was never designed for generation-skipping scenarios such as climate change presents. Discounting applies when we wish to compare consuming \$1 today versus investing it and consuming \$2 tomorrow; the idea was never to compare our consuming \$1 today versus someone else consuming \$1000 in their remote lifetimes.

Some add that to discount (to apply anything other than a zero discount for future costs and benefits) is arbitrarily to deny a future person's welfare the weight we would give our own. One problem is, if we accept that move, and weigh each present and future being equally, it is difficult to justify permitting ourselves anything beyond the most abstemious consumption, given the specter of the unborn trillions to follow, whose aggregate welfare needs would arguably swamp our own. Some discount seems practically unavoidable.

Moreover, the charge that a positive discount rate trivializes remote damages—holds the welfare of future persons at naught—is confused. Returning to the raft hypothetical, suppose there are two ways to prevent the catastrophe. We can, as stated, eliminate the dynamite with a controlled explosion at a cost to us of \$1000. Alternatively, we can leave it to *them* to build an

interception system at a cost of, let us say, \$500,000. It only sounds as though not to invest the \$1000 would be callous. Discounting reminds us that if we forgo expending the \$1000, and invest at 2.5%, we will be turning over \$1,766,330 to them, enough for them to build their defensive system and have over \$1 million left over.

Perhaps a moderately high rate, lifting some of the weight of their otherwise oppressive welfare demands, might be justified as an adjustment for economic growth. Assume (1) a declining marginal utility of consumption and (2) that each future will continue to be, as it has been, wealthier than its predecessor, even on a per capita basis. If so, then we might be warranted, after all, to apply a higher rate of discount to actions that will affect the remote future than we apply to, say, public works projects.<sup>24</sup>

Yet, even if they will be richer and readier to handle losses, it is not clear--if domestic law is a moral guide--that the wrongdoer, the party who places the insecure dynamite on the raft, would be permitted to defend the tort on grounds of comparative utility, viz., that the victims were richer than he and they needed the wealth less urgently.

Even if we reject shrinking our concern based on projections of economic growth (on the grounds either that the future or the morality is too uncertain), we might still apply some sort of "discount" for empathic distance. Our distant descendants are destined to be remote from us not only in time, but in culture, habits, kinship and tastes. We might find them detestable, like grandchildren we relish cutting out of our wills. Perhaps at some point the population will be scarcely "human," dominated by cyborgs. As an empirical matter, valuation studies leave no doubt that people in fact attach less weight to the fate of the remote unborn than to nearer descendants. But defending such an empathic discounting as a moral principle is another matter. Is there any principle that justifies a plea by the launchers of the dynamite-laden raft that the downstream victims are far away, speak another tongue, and hold distasteful beliefs, and therefore the rate of discount should be especially high?

Of course, the challenges of being just to strangers remote in time is not precisely parallel with those remote in space. If we undertake an activity that jeopardizes strangers in space--our contemporaries--we can proceed with the assurances that, should damage materialize, it is possible to make good ex post. The classic illustration in international environmental law is the *Trail Smelter* litigation, with Canada being assessed damages on account of noxious fumes that wafted across the border into the United States. Providing for such ex post recovery serves both to internalize otherwise negative externalities and to achieve corrective justice. Pursuant to the

---

<sup>24</sup> But see Martin Weitzman, "Just Keep Discounting, but . . ." in Paul R. Portney and John P. Weyant, eds. *DISCOUNTING AND INTERGENERATIONAL EQUITY* (1999) (favoring a positive but low and declining rate based on the skepticism that the deep future productivity of capital is highly uncertain).

same moral and economic considerations we ought to be held no less accountable to strangers in time. But temporally remote torts present institutional complications. We will never know whether a nuclear site with a risk of leakage will in fact actually corrupt in a hundred years, or two hundred, and if so, with what damage. The ordinary tort solution, which condones waiting and seeing and settling up is unavailable. We could, as an alternative, “award” the future the mathematically expected loss. But the magnitude of that loss is highly conjectural. If—good fortune—no damage did eventuate, our descendants would simply reap a windfall. Even if we were willing to buy into such a system, and escrow for our descendants the probable value of some harms, there is simply no way for us to assure delivery of the award. Suppose, for example, we decided to set aside a \$1 billion investment earmarked for “23rd century victims of 21<sup>st</sup> century avoidable fossil fuel use.” How could we prevent the fund from being ransacked in fifty years? Indeed, even if a literal lock-box were really sealed until the 23d century, there would be no way to assure that it would finally go to relieve the actual victims of our carbon profligacy, rather than to gratify their chiefs.

The moral tuning of damage-based relief being unavailable, a concern for the unborn has to be executed through the rougher justice of self-imposed “injunction”: unable to compensate with damages, *ex post*, we are left to identifying certain acts that must be avoided, *ex ante*. There is, to begin with, the same problem with our uncontrollable immediate successors: they might just violate the injunction. And that aside, in deciding whether to issue an injunction in ordinary legal circumstances, the utility of the defendant’s (our) conduct can be balanced against the plaintiff’s (their) harm. But when conduct and harm are so disjointed in time, the weighing is almost unmanageably conjectural. Things can change dramatically. We cannot rule out that they (some time slice of them), with their technology and needs, will prefer us to have left our nuclear waste accessible rather than disposed of unretrievably. Or they may look back to conclude that the melting we are causing of the Arctic was a boon, with its opening of the Northwest Passage and uncovering of new oil fields viewed as dominating the loss of Inuit and wildlife habitat. (A judgment all the more likely if there are no Inuit remaining among them.)

In the last analysis, therefore, even if future persons “count,” as of course they should, our obligation to shield them from tort-like behavior appears to generate a less stringent and finely tuned review than that which we impose in our conduct towards contemporaries. Any sharp-edged Learned Hand test has to yield to something like the “Kew Gardens principle”: if for a relatively modest cost we can avoid foreseeable high risk of serious, widespread bodily harm to others, then we have to bear the costs of reducing the risks to an acceptable level, no matter how remote the victims in time, kinship or manner. What is “relatively modest” and “acceptable” are inevitably plastic. Perhaps we can project no greater risks on them than what we, behind a veil

of ignorance as to which generation we would inhabit, would have permitted our predecessors to project onto us.

## **4.2 Sustainable development**

Much of the future generations literature is less concerned about quelling recklessly tortious behavior, which typically connects specific culpable misconduct to specific victims, than about assuring the unborn that they receive “their fair share.” This is the position that emerges in the international environmental law literature under the rubric of “sustainable development.” [Cross-reference to Chapter 27 on “Sustainable Development”] While artfully vague (an original intent was to gloss over the North-South tensions that erupt at international conferences, North being more for conservation, South for development) sustainable development, in its application to the unborn, can usefully be divided into two distinct claims. The first is the right of future generations to no less than a certain general level of welfare; the second, the right to inherit certain specific assets—global heirlooms—as part of their legacy. The first position (sometimes labeled “weak sustainability”) is welfarist; the second, preservationist.<sup>25</sup>

### **4.21 Sustainable development as a welfare-transfer constraint.**

Welfarist arguments define our obligations to the future in terms of some proxy for general welfare. Phelps’s “Golden Rule of capital accumulation” would have each generation leave to its successor as much capital (per effective labor unit) as it would have liked to have received from its predecessor.<sup>26</sup> John Rawls invokes a “just savings principle,” which, while derived and calculated in a more complex manner,<sup>27</sup> produces much the same constraint termed as “a fair equivalent in real capital.” Others speak of each generation’s obligation to retain and pass along equivalent “productive capacity,”<sup>28</sup> to live off the earth’s “earnings” without invading its “capital,” to maintain “a standard of living at least as good as our own,”<sup>29</sup> or to equalize opportunities.

---

<sup>25</sup> The many variants are authoritatively collected and critiqued in ERIC NEUMAYER, *WEAK AND STRONG SUSTAINABILITY* 2d ed. (2004).

<sup>26</sup> See William H. Branson, *Macroeconomic Theory and Policy* 611-26 (3d. ed. 1989).

<sup>27</sup> Those in the original position would seek a fair “balancing [of] how much at each stage they would be willing to save for their immediate descendants against what they would feel entitled to claim of their immediate predecessors. JOHN RAWLS, *A THEORY OF JUSTICE* (1971) 289. Rawls’s larger motivation, however, is different: to allocate a “fair share of the burden of realizing and preserving a just society,” *ibid.*, rather than to provide equal wealth opportunities of economic welfare.

<sup>28</sup> ROBERT SOLOW, *AN ALMOST PRACTICAL STEP TOWARD SUSTAINABILITY* 19-20 (1992).

<sup>29</sup> *Ibid.* 15.

Whatever the benchmark, the point is that no constraints are imposed as to the *bases* on which welfare is to be secured, only as to some minimum level to be passed along. Each generation is free to pillage natural resource capital such as coal and trees, as long as it substitutes enough capital in other forms (technology, infrastructure, social institutions, education, and so on) so that the succeeding generation can maintain the requisite floor level of well-being,  $W^*$ .<sup>30</sup>

We ought to observe that such a limitation appears too unconfining to merit much controversy. Between 1000 and 1820 real income per head increased 50%. Between 1820 and 1998, a period in which world population increased six-fold, global GDP increased forty-nine fold.<sup>31</sup> Against the background of this historical velocity, “sustainable development” appears to be a very weak constraint indeed.<sup>32</sup>

More stringent welfare-oriented tests would include inter-generational Pareto-optimality (seek a position from which it is impossible to advance the well being of any person at any point in time without sacrificing the well-being of someone else in the current or some future generation);<sup>33</sup> inter-generational Kaldor-Hicks efficiency (no action permitted unless the benefits to the gainers were robust enough to fund compensatory payment to the losers); and an inter-temporal wealth maximization requirement (maximize the present value of everyone through time’s utility).<sup>34</sup> In the international environmental literature, however, these alternatives appear less frequently than the relatively innocuous “floor” constraints. This emphasis may be wise: the information these more stringent tests require would be by some magnitude more difficult to conjure than what is required to estimate whether we are meeting a sustainable development “floor” test.

#### **4.22 Sustainable development as preservationism**

Preservationism, by contrast with all the welfarist variants, holds that among our many assets there is a set that we have a special responsibility to conserve and transmit to our descendants, and are therefore non-substitutable. Some have argued on this basis for maintaining assets that are critical to life support, such as a minimal ozone shield and some

---

<sup>30</sup> Otherwise put, net genuine investment must not be negative.

<sup>31</sup> 30 MARTIN WOLF, WHY GLOBALIZATION WORKS 444-454 (2004). Note that these figures are gross, not net of losses from environmental costs that would not (but should) show up in the accounting. Even with proper adjustments, it is hard to believe that the per capita gains would disappear.

<sup>32</sup> A more confining, but also less easily defended constraint, sometimes labeled “strong sustainability,” would prohibit substitution of natural (often specifically non-renewable) resources for other forms of capital, such as man-made. Accordingly, we could not permit soil to erode faster than new soil was created by weathering, notwithstanding the increased productivity of soil attributable to advancing knowledge and technology.

<sup>33</sup> See TODD SANDLER, ECONOMIC CONCEPTS FOR THE SOCIAL SCIENCES 423 (2001).

<sup>34</sup> Kenneth J. Arrow, et. al. “Are We Consuming Too Much?” 18 JOURN. ECONOMIC PERSPECTIVES 147 (2004).

robustness of biodiversity. Indeed, fear that we will exhaust natural inputs to production (such as minerals) has ebbed in recent years and there is probably more concern today with the impairment of ecosystem services, specifically, of the environment's capacity to continue to absorb wastes without some form of collapse. Part of the "waste absorption" and other critical assets threat is that, while we can impose property rights over most input factors, the ecosystem services constitute global and inter-generational public goods, and are therefore more challenging to protect institutionally. So, the removal of natural, life-sustaining capital demands attention. But it is not clear why the removal of life-critical assets would not already be barred under weak sustainability (above), without recourse to any special non-welfare constraint: if ransacking 50% of biodiversity would do in our successors, what other capital could we possibly replace it with that would meet the compensatory-substitution test?

Preservationism, as a distinct platform, may be more coherent as applied to assets such as the Grand Canyon, or whales, or tropical forests, insofar as they are valued for their existence rather than production value, and as such have no substitutes. Some such set of things may have to be preserved for their own sake, or because their continued existence and appreciation fosters an ideal of human flourishing, or they are simply heirlooms connecting each generation to, and constructing of us all, a true family of Man (or Earth.) These are, indeed, the sorts of assets the World Heritage Convention is designed to perpetuate.

#### ***4.23 The welfarist and preservationist models critiqued***

By analogy to familiar legal models, the first approach places the living in the position, roughly, of trustees managing a portfolio of assets for unborn beneficiaries. Each generation is charged with husbanding the value of the corpus, but can, and is expected to, sell and reinvest proceeds from various holdings as conditions change and prudence dictates. The second approach views the living as enjoying, roughly, a life estate in certain property, lacking *ius abutendi* (right to destroy); we were "left" the Grand Canyon for life, then to our heirs, in perpetuity. Our obligations are to pass along--not to "waste," alter or even convert the favored asset to a more beneficial use.

It is not uncommon to find in the sustainable development literature a single commentator promoting both foundations. Robert Solow, for example, while emphasizing a substitution-permitting welfare constraint (equivalent "productive capacity") would nonetheless

insist on the preservation of “certain unique and irreplaceable assets,” offering as illustrations Yosemite and the Lincoln Memorial.<sup>35</sup>

The straddling between welfarist and preservationist rationales is not surprising, given the intuitive appeal in both positions. Yet, they share common problems, and, while logically supplementary, are potentially in conflict.

The common problem is that no generation can be assured that if it honors its obligation to pass along the required real investment or asset, a succeeding, more profligate and dishonorable successor generation will not run through the legacy before it reaches the third. Does this risk of wipe out remove the first generation’s obligation to do the good act? In general terms, the question might be put as, whether a person is under a duty when her action is a necessary but not a sufficient condition of bringing about the morally desired result.<sup>36</sup> Consider the case where to save a drowning child requires the coordinative effort of two persons, A and B. Surely A and B are not each disobliged because the action of each, alone, cannot assure the right outcome. I am not clear why the answer should be otherwise where the required actions of A and B happen to be successive, not contemporaneous. I grant the intuition that as the chain required to bring about the good gets longer, the duty of each link may weaken. But as against this we must consider that after only a few duty-honoring links, *some* good has been done: perhaps the tenth generation will be cheated, but even if so, two through nine will have been (rightly) served.

The tension is this. Let us assume that we have subscribed to sustainability of the first sort, an obligation to assure our successors the prescribed minimum level of general well-being,  $W^*$ . Suppose also that, in acknowledgment of sustainability of the second sort, we have judged the pristine Antarctic to be one of the “heirloom” assets we are obliged to conserve. (Mineral exploitation of the continent is in fact presently under a moratorium.) If the remote economic future looks secure, we can achieve both goals. But suppose there is appreciable uncertainty whether  $W^*$  can be met in the  $n$ th generation. To reduce the risk of missing the welfare mark, one solution will be to mine the Antarctic of its rich troves of mineral deposits, which, although presently unreachable, will gradually become attractive as the technical and economic barriers to dealing with the harsh environment are overcome. A not too distant future may find the value of

---

<sup>35</sup> Solow, note 27 *supra* at 14. Solow indicates that these are examples of assets that would be “preserved for their own sake,” but his choice of the Lincoln Memorial to illustrate invites questions about how he understands “own sake.”

<sup>36</sup> It might be put in other ways, too. First, we think of some duties as outcome-independent: a doctor’s duty to render aid to a victim is not conditioned on her being able to minister successfully. Second, we are talking here about a duty to pass along a legacy, which I imagine to be more pliable than the duty to rescue which I employ as an illustration.



the deposits in situ to be increasing at a lower rate than the prevailing social rate of investment. In those circumstances, there is a considerable wealth benefit not only for that generation, but also for its remote descendants in tearing out the mineral wealth, and investing the unconsumed proceeds. If we assume a 2% return, each dollar invested into the economy from the converted assets would amplify over 50-fold in 200 years.

Future generations may value an unsullied Antarctic at millions of dollars, but will it be worth billions? The question is not rhetorical. Given the increased “price” societies are prepared to pay for environmental amenities as their wealth increases, it may be that the remote future will shrug off the missing billions and be glad for the Antarctic. We simply cannot judge. At some level of indeterminacy, does the calculation simply have to be dropped from consideration? The Preservationists, recall, consider the whole idea of welfare calculations wrong from the start, not because the data is inaccessible, but because it is inapt. The issue is simplified by casting it in terms of the future’s alleged entitlement to the particular asset. The unborn “have a right to  $x$ ” where “right” (or “duty”) is intended to truncate conversation about outcomes. But this leaves open not merely the obvious questions of which  $x$ s are sacrosanct, but also of what such an entitlement might mean. Presumably the no-substitution constraint says they, as beneficiaries, have a right to  $x$  in their portfolio, which forecloses us, as their trustees, from waiving their right on condition we replace  $x$  with some sum or other asset,  $y$ . But are we also forbidden any measure that exposes  $x$  to small risks? And if, despite our best estimates and efforts,  $x$  is destroyed, what is the remedy for our having failed to deliver? How can we compensate for the loss of something “beyond value”?

Preservationism may be the right route for some assets, notwithstanding these problems--that is, there may be some  $x$ s whose preservation should be withdrawn entirely from cost-benefit calculations. We would thereby be committed to leave, say, *some* tropical forests part of the legacy, period. I myself am not comfortable that the decision to “convert” the pristine beauty of the Antarctic to “alternative assets” by jumbo, messy mineral extraction should turn on the relative wealth endowments of the two paths. On the other hand, it is a trifle absurd, too, to suppose that we can form an accurate and detailed idea of what our descendants’ tastes will be--of how their contingent valuation of the forests, an unsullied Antarctic, whales and so on, will weigh against a fuller pot of fungible wealth. Will they opt to while away their time playing video games with their robots, and consider us fusty for preferring a walk through an actual woods to encounters with computer-enhanced forests in their “virtual” and improved drama and splendor? To maximize the wealth we leave them, crude as it sounds, enables them to devise and select their own rewarding experiences--liberates our progeny from what the law calls “dead hand control.” And the bigger the savings account the better their capacity to respond to

unforeseen calamitous bumps in civilizations' road. It might be better to regard heirloom assets as we do family heirlooms--not as unsaleable, but as the last things to be sold off, and only in emergency.

Indeed, the analysis of common heritage heirlooms is even knottier, because our progeny's very tastes, the foundation of their interests, are destined to be affected by the legacy we leave them, whether, for example, they have had the chance to experience clear skies and equatorial forests. Whatever their tastes will be, we know they will be to some degree endogenous. Therefore we cannot avoid our responsibility in constructing them, through our choices, into the sort of people they ought to be, at least in some, if not in every fine detail. Insofar as it is within our influence, ought they to be the sort of persons who prefer real trees and grass or plastic or virtual substitutes-- or are we willing that they be indifferent, free to choose?

Ultimately, international environmental ethics may be less about human welfare, or even the environment, than about the unavoidable molding of ideal human character.

---