Scientists are now warning that our continued and increasing reliance on fossil fuels as a source of energy is causing a critical build-up of carbon dioxide in the atmosphere. This carbon dioxide build-up could bring about a significant warming of the earth's atmosphere, melting some of the polar ice caps and raising the sea level accordingly.

But the tidings aren't all bad: Washington may not be completely flooded. There is consensus among scientists that a sustained increase in atmospheric carbon dioxide will raise the atmospheric temperature at the earth's surface, but divergent opinion on where, how much, and how soon. However, leading scientists agree that the polar sea ice could quickly disappear with relatively small temperature changes. Landsberg's conclusion is a sobering one: "Should all the sea ice melt, the sea level would rise 5 to 8 meters with major ensuing flooding of low areas." These "low areas" include Washington, Los Angeles, and New York.

On the scientists' best guess, you and I won't be around to bail out our cities, and, probably, neither will our children. It doesn't look good, though, for our grandchildren, and for their grandchildren it looks bleaker still. We could increase our reliance on nuclear power, of course: toxic nuclear wastes, unlike our diminishing oil reserves, last a nice long while—at least several dozen centuries. Solar, wind, and hydroelectric power seem less hazardous, but perhaps more expensive, possibilities, with conservation a safer bet.
still. But the choice of these latter alternatives would mean that we, the present generation, would be making sacrifices on behalf of generations to come.

Why should we make such sacrifices? Many would answer that we have no obligation to make any sacrifices at all. In 1909, Senator Henry Taller, former Secretary of the Interior, wrote: "I do not believe there is either a moral or any other claim upon me to postpone the use of what nature has given me, so that the next generation or generations may have an opportunity to get what I myself ought to get." After all, one might argue, we didn't ask to be born now any more than they asked to be born later. While it's true enough that we arrived on the scene while air was breathable, water was drinkable, fuel was plentiful, and the nation's major cultural centers remained above sea level, that was just the luck of the draw. If they find themselves being born at a less auspicious moment, well, they took their chances in the generational lottery and lost fair and square: tough luck, guys. Our descendants may have reason to mourn their misfortune, but not to complain of any injustice.

But, of course, there isn't really any such lottery. In his CPPP working paper, "International Justice in Energy Policy," philosopher Brian Barry points out that "all there are really are successive generations, some of which are potentially disadvantaged by the actions of their predecessors." Lady Luck may know nothing of fairness or unfairness, but we do, and if we grab and despoil, we are accountable, in the name of justice, for what we have done. Justice to whom? To those who inherit the earth after we have depleted and despoiled it.

Here, however, an objection can be raised: Justice cannot govern our relation with our descendants, because justice, according to some popular theories, obtains only among equals: the principles of justice are the rules by which those roughly equal in power and opportunity agree to cooperate for their mutual advantage. Realizing that all will be better off if each restrains himself within the bounds of the agreement, rational, self-interested individuals contract with one another to regulate their conduct accordingly. But among generations no such bargain is possible. Later generations have no bargaining power; there is nothing they can threaten and nothing they can offer.

Barry characterizes this view (which he himself rejects) by this metaphor: each generation inhabits a single island, arranged along a current, with all the resources located on the island farthest upstream. The generation with the resources must decide what to use and what to float downstream to the later generations. What do the inhabitants of the upstream island gain by sharing resources with less fortunately situated islands? Nothing, it would seem. And so we can ask ourselves, in the words of Robert Heilbroner, "What has posterity ever done for me?"

If justice applies only in situations of reciprocal advantage, then justice cannot dictate our treatment of future generations. However, philosopher David A.J. Richards, in "Contractarian Theory, Intergenerational Justice, and Energy Policy," a CPPP working paper, argues that a different kind of reciprocity is at the heart of our concept of justice. This notion of reciprocity involves not mutual actual advantage, but what philosophers call universalizability or role reciprocity: treating persons in the way one would oneself reasonably like to be treated. We have obligations of justice even to the weak and powerless, and these obligations are precisely to treat them as we would want to be treated were we weak and powerless. Applying these principles across generations, Richards concludes: "Insofar as the actions of one generation directly affect the interests of later generations, there is a relation among persons governable by moral reciprocity." What matters is not what future generations have done for us, but what we would have liked them to have done for us had our temporal positions been reversed.

Atmospheric carbon dioxide is projected to continue to accumulate at a rapidly increasing rate. (After Kellogg, 1977; reproduced courtesy the World Meteorological Organization.)

Here another complication emerges. Douglas MacLean, Research Associate at the Center for Philosophy and Public Policy, points out that, whatever other rights potential future persons might have, they have no "right to be born." We have no obligation to bring as many future persons as possible into existence—if we did, the planet could rapidly get mighty crowded. But if potential persons have no right to be born, this seriously undercuts the claim of future generations to just treatment from us. For then the pres-
ent generation can simply "solve" the problem of meeting its obligations to future generations by causing it to be the case that there aren't any future generations in the first place. "You don't like boating down the Mall in between the sunken monuments? Well, try not being born at all, and see how you like that!"

To this challenge, two responses are possible. The first is simply to assume it away. The human race is not going to be deliberately exterminated; there are going to continue to be future generations—and so the fact that ending life on earth might be one solution to problems of intergenerational justice has no practical relevance for us in assessing our obligations to future persons.

The second response involves a radically different way altogether of viewing intergenerational justice. MacLean, in *Energy and the Future*, forthcoming from Rowman and Littlefield, proposes that, rather than looking at the rights and interests of future generations, we might do better to look at our own most deeply rooted interests and values. "A better proposal," he suggests, "is to argue that a concern for posterity is in our own interests—the interests of ourselves and our contemporaries. . . . Many of the interests we value most are directed not toward our own satisfaction, but toward the world." We value scientific research, political activism, and cultural monuments for their contributions to making a better world, a world that will endure long after we are gone. "The value of these things requires protecting them and passing them on, and this in turn requires creating an environment where culture and history can continue in ways we like to imagine they will. Alternatively, if we do not value posterity in this way, we undermine the value of these interests in our own lives."

Landsberg's statistics about carbon dioxide build-up alarm us not merely because we recognize an obligation to those who come after us, but because so much of what we ourselves value is directed toward the continued existence and flourishing of the human race. We do not want our monuments to be submerged because they are our *monuments*, our legacy to our descendants, the distinctive mark we have made on the universe. It is up to us, the members of the present generation, to see that this legacy is preserved and transmitted.

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**An Attack on the Social Discount Rate**

Economists and policymakers are commonly faced with determining when it makes economic sense to invest in large-scale public projects whose investment costs are immediate, but whose benefits return only over a long period of time. In making these decisions, most economists make use of a positive discount rate that diminishes the value of costs and benefits as these occur further in the future—a project is worth undertaking if the discounted value of its benefits is greater than the discounted value of its costs. Reliance on such a discount rate provides one reason for believing that the present generation need not sacrifice on behalf of future generations. In the following abridgement of a portion of his Center working paper, "Energy Policy and the Further Future," Oxford University philosopher Derek Parfit argues that the social discount rate is unjustified.

It is now widely believed that, when we are choosing between social policies, we are justified in being less concerned about their more remote effects. All future costs and benefits may be "discounted" at some rate of \( n \) percent per year. Unless \( n \) is very small, the further future will be heavily discounted. Thus, at a discount rate of 10%, effects on people's welfare next year count for more than ten times as much as effects in 20 years. At the lower rate of 5%, effects next year count for more than a thousand times as much as effects in 200 years.

Such a "Social Discount Rate" seems to me indefensible. The moral importance of future events does not decline at \( n \) percent per year. A mere difference in timing is in itself morally neutral. Remoteness in time roughly corresponds with certain other facts, which are morally significant. But since the correlation is so rough, the Discount Rate should be abandoned.

Why was it adopted? I am aware of six arguments.