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Intergenerational Justice

Richard B. Howarth

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Abstract and Keywords

This article reviews three distinct approaches (presentism, utilitarianism, and rights-based ethics) to address the important issues of intergenerational justice that arise in the evaluation of climate stabilization policies. Presentism is an ethical framework that emphasizes the interests of present generations while denying that future generations have full moral standing. Presentists note that people hold altruistic preferences concerning the welfare of their children and grandchildren and that those preferences provide the most appropriate basis for balancing short-run costs and long-run benefits in environmental policy analysis. Advocates of classical utilitarianism argue that equal weight should be attached to the welfare of each and every member of society including members of future generations. In the context of climate change policy, advocates of rights-based ethics argue that future generations are entitled to protection from harm or that the natural environment is the shared property of both present and future generations.

Keywords: intergenerational justice, presentism, utilitarianism, climate stabilization policies, rights-based ethics

1 Introduction

Anthropogenic climate change presents core issues of intergenerational justice. This chapter will delve into these issues with an emphasis on three distinct lines of moral reasoning: *presentism*, *utilitarianism*, and *rights-based ethics*. In brief, presentism is the view that the preferences of the present generation should play a dominant role in the formulation and evaluation of public policies. In this framework, the interests of future generations are pertinent only to the extent that the present generation holds an altruistic concern for its children, grandchildren, and subsequent descendants. Utilitarianism and right-based ethics, in contrast, assert that equal weight should be attached to the *welfare* or *rights* of both present and future human beings. Unsurprisingly, these theories have sharply different implications for climate stabilization policy.

In framing the distinction between these views, it is useful to begin by describing some factual premises concerning climate change and its moral implications. On the one hand, climate change is driven by activities that provide comfort, mobility, and a high material standard of living to members of the present generation. These benefits accrue in the short run and may be readily understood using the language and methods of economic analysis. A landmark study by Stern (2007), for example, found that implementing aggressive policies to stabilize climate would impose costs equivalent to a 1 percent reduction in economic output as the world made the transition towards low-emission technologies.

On the other hand, greenhouse gas emissions pose a threat to the long-term sustainability of ecological systems and the services they provide to human societies. Over the next century, standard estimates suggest that mean global temperature may increase by up to 6.4 °C in the absence of climate stabilization measures (IPCC 2007). Rising temperatures would give rise to pervasive impacts including sea-level rise, the spread of tropical diseases such as malaria, the intensification of tropical storms, exacerbated floods and droughts, the disruption of water supplies and agricultural production, and biodiversity loss. Hansen et al. (2006) note that a 2–3 °C increase relative to current temperatures would return the earth's climate to conditions last experienced some 3 million years ago, a time when sea level was many meters higher than it is today. In parallel, Thomas et al. (2004) conclude that a temperature increase of this magnitude would lead to the extinction of up to 37 percent of all terrestrial species. The upshot is that seemingly small changes in climate are likely to cause the wide-scale restructuring of environmental systems.

Focusing on impacts such as crop yields, sea-level rise, storm damages, and human health, economists have sought to assign a monetary value to the future damages imposed by climate change. Stern (2007), for example, gauged that a business-as-usual scenario in which greenhouse gas emissions remained unregulated would impose costs equivalent to a permanent 5–20 percent reduction in the level of economic activity. These costs would be concentrated in the twenty-second century and beyond, illustrating the need to consider intergenerational time horizons in understanding the impacts and implications of climate change.

More controversially, Weitzman (2009; see also Woodward and Bishop 1997; Gerst et al. 2010) argues that unregulated emissions might (with a low but positive probability) lead to a catastrophic collapse of the future economy, harkening back to early predictions associated with the Limits-to-Growth model (Meadows et al. 1972). To be clear, Weitzman's point is *not* that a climate catastrophe is in any sense likely to occur based on the hard logic of statistical analysis. But as Page (1978) noted some three decades ago, rational decision makers have

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good reason to mitigate environmental impacts that involve a low (near-zero) probability of imposing catastrophic (nearly infinite) costs. Unfortunately, the facts and uncertainties pertaining to climate science suggest that climate change constitutes what Page terms a 'zero-infinity dilemma.'

The question, then, is whether society should bear a significant and well-characterized short-term cost to avert long-term climate damages that—although uncertain—are potentially much greater in magnitude. As we shall see, presentists, utilitarians, and rights-based theorists approach this question from different perspectives that provide different insights and suggested solutions. Although this is an area where reasonable people can and do disagree, careful analysis is nonetheless useful in clarifying the plurality of values that can be applied in judging the justice and efficacy of policy alternatives.

2 Presentism

Presentism is a moral framework that is implicitly adopted by climate economists such as Manne (1995), Nordhaus (1992, 2008), and Anthoff et al. (2009b). In this perspective, policy decisions should be based strictly on the *preferences* of the current generation with no explicit moral standing afforded to members of future generations. Taken to its logical extreme, presentism might imply an implausibly strong version of egoism in which present decision makers would never take actions that imposed short-run costs to provide benefits that accrued over intergenerational timescales. In fact, however, both introspection and a substantial body of evidence support a broader and more sensitive interpretation of this approach. Because people hold *altruistic preferences* regarding the welfare of their children and grandchildren, it is appropriate for policy makers to balance the interests of present and future generations (Passmore 1974). The rub is that presentism implies that the weight attached to the welfare of future generations should be based strictly on the degree of altruism that people exhibit through their private decisions (Arrow et al. 1996).

Advocates of presentism attach special importance to the market rate of return on capital investment, which they argue reveals people's willingness to give up present economic benefits for the sake of their children and grandchildren (Goulder and Stavins 2002). Suppose, for example, that households demanded a 6 percent annual return on investment, a figure that is consistent with long-run data from global stock markets. Then given rational decision making, a typical household would be willing to bear a short-run cost of one dollar if and only if it provided benefits of at least 1.06^t dollars to family members living t years from the present. This represents the compound return that could be achieved by investing on the market. Interestingly, this framework implies that the weight attached to the interests of future generations falls geometrically over time. Given a time horizon of 100 years, for example, a future benefit of at least 339 dollars is needed to justify bearing one dollar of costs today. This figure rises to 115,000 and 39 million dollars as the time frame shifts from 200 to 300 years.

The implications of this approach for the analysis of climate stabilization are well established in the literature. Nordhaus (1992, 2008), for example, has long advocated a presentist approach in which major reductions in greenhouse gas emissions should be deferred into the long-run future. In Nordhaus's analysis, the future benefits provided by climate stabilization are too small to justify imposing significant short-run costs given the degree of intergenerational altruism people reveal through their private decisions. In this perspective, people are simply too impatient to care especially about benefits and costs that accrue to their distant descendants.

The presentist approach to environmental policy analysis has been criticized on a variety of grounds. One line of critique argues that the market return on capital investment reveals the preferences that people hold regarding their own present and future well-being, not the conceptually distinct values they hold regarding the appropriate resolution of intergenerational conflicts (Burton 1993). In the economic models employed by presentists, these two behavioral motives are typically reduced to a single parameter for the sake of tractability and simplicity. Authors such as Howarth and Norgaard (1992), however, argue that this modeling approach is theoretically unsound and that fresh insights arise through the use of models that distinguish between personal time preference and intergenerational ethics. Gerlagh and van der Zwaan (2000) show how such models can be effectively applied in the economics of climate change.

As we shall see, critics also charge that presentism involves the unjust treatment of posterity because it denies the principle that all human beings—including members of future generations—should have full and equal moral standing (Broome 2008). Along these lines, Singer (2002: 26) argues that the moral salience of impacts such as 'suffering and death, or the extinction of species' does not diminish with the passage of time. In a similar vein, Ramsey (1928) argues that favoring the interests of present over future generations is 'a practice which is ethically indefensible and arises merely from the weakness of the imagination.' In this perspective, a lack of empathy cannot be used to justify actions that would inflict harms on future generations.

Advocates of presentism, however, counter that the strength of intergenerational altruism has been sufficient to ensure that the quality of life has steadily improved in the centuries following the industrial revolution. If one assumes that economic growth will continue for some time into the future, it follows that our descendants in future generations are likely to be substantially more wealthy than we are today. According to Schelling (2000), the relatively poor people who are alive today are under no compulsion to sacrifice their own interests to provide incremental benefits to the presumably richer people who will populate future society. One response to this is that the presentist stance abstracts away from the catastrophic risks that climate change poses to future generations—climatic impacts may be severe enough to threaten the sustainability and productivity of economic activity (Hoel and Sterner 2007). This point of view is supported by the findings of Woodward and Bishop (1997), Weitzman (2009), and Gerst et al. (2010).

More radically, authors such as Parfit (1983a) question the notion that present decision makers have any obligations to future generations aside from ensuring that future persons have lives that are minimally worth living. The reason is that present decisions will determine not only the welfare but also the identities of future human beings. To understand this point, suppose that wholly different sets of potential

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persons would live in: (a) a low-income future characterized by a degraded natural environment; and (b) a high-income future characterized by a flourishing environment. Parfit's argument is that the individuals living in the degraded state would be thankful for the fact that present decisions fostered the conditions necessary for *them* to come into being. Steps to stabilize climate would in no way benefit them and would lead to a different world in which they would never be born.

Parfit's argument has attracted considerable attention in the philosophical literature, casting an interesting light on the analysis of intergenerational social choice. De-Shalit (1995: 14–15), for example, argues that communitarianism provides an approach to questions of intergenerational justice that escapes the web of Parfit's reasoning:

> Our obligations to future generations derive from a sense of a community that stretches and extends over generations and into the future…If one accepts the idea of a community in one generation, including the principle that this entails certain obligations to other members, then one should accept the idea of a transgenerational community extending into the future, hence recognizing obligations to future generations.

De-Shalit's approach is related to the recent work of Norton (2005: 335), who emphasizes the importance of deliberation and social learning in the articulation of environmental values. For Norton, our duties towards posterity must be constructed based on ‘processes by which communities can democratically, through the voices of their members, explore their common values and their differences and choose which stuff should be saved’—i.e. what set of social, economic, technological, and environmental assets should be conserved over time.

Alternatively, Gosseries (2008) notes that Parfit's argument abstracts away from a key fact of human demographics: At each point in time, the current generation of adults overlaps with its children and grandchildren whose existence and identities are fully determined. If one accepts the plausible premise that each generation of adults holds binding duties to its flesh-and-blood progeny, a ‘chain of obligation’ is then established between present decision makers and the unborn members of more distant generations (Howarth 1992). In particular, the principle of equal opportunity between contemporaries imposes a duty to ensure that human life opportunities are maintained from each generation to the next (Page 1983; see also Vanderheiden 2006). This moral claim is seemingly denied by presentism, which reduces the analysis of intergenerational trade-offs to the presence or absence of intergenerational altruism.

The implications of this ‘opportunities’ approach to intergenerational fairness are in line with the prescriptions of rights-based ethics as described later in this chapter. For the moment, however, it is pertinent to note that maintaining the structure, functioning, and integrity of natural systems is a secure means of leaving options open to future generations. Authors such as Norton (2005) and Sneddon et al. (2006) therefore stress the importance of environmental conservation based on perceived duties to posterity. Sneddon et al. relate this approach to Sen's (1999) writings on functionings and capabilities, which strongly emphasizes the importance of enhancing people's opportunities and effective freedoms in a broadly Aristotelian conception of justice.

3 Utilitarianism

Conferring moral status on members of future generations undercuts the foundations of presentism. While present decision makers might *prefer* to attach more weight to their own interests than to the welfare of future generations, this seems to conflict with a defining characteristic of moral reasoning—that moral subjects must be treated equally and impartially in the definition and pursuit of justice. One prominent alternative to presentism is *classical utilitarianism*, an ethical framework that dates to the seminal work of Jeremy Bentham (1823). According to utilitarians, social institutions and public policies should be designed to maximize total utility or well-being in society with equal weight attached to the welfare of each and every person. Mill (1863) termed this criterion the ‘greatest happiness principle.’

Singer (2002: 42) discusses the implications of utilitarianism for climate stabilization policy. On the one hand, utilitarians favor an approach that balances the costs and benefits of greenhouse gas emissions. On the other hand, they also attach special importance to the interests of people suffering material deprivation:

> [W]hen you already have a lot, giving you more does not increase your utility as much as when you have only a little. One of the 1.2 billion people in the world living on $1 per day will get much more utility out of an additional $100 than will someone living on $60,000 per year. Similarly, if we have to take $100 from someone, we will cause much less suffering if we take it from the person earning $60,000 per year than if we take it from the person earning $365 a year. This is known as ‘diminishing marginal utility.’

According to Singer, this reasoning implies that the costs of climate change mitigation should be borne disproportionately by the wealthiest members of the international community since a dollar of net benefits provides less utility to a rich person than to a poor person. For this same reason, utilitarians are especially concerned about the potential threat that climate change poses to incomes and livelihoods in low-income, developing countries that are resource dependent and therefore especially vulnerable to changes in environmental conditions (Anthoff et al. 2009a).

As a moral philosophy, utilitarianism provides no basis for attaching different weights to the welfare of present and future generations. On the contrary, utility is viewed as equally valuable regardless of who experiences it in either space or time (Broome 2008).[1] This point of view has a long and rich history in the development of economic thought. Ramsey (1928), for example, considered a theoretical model in which maximizing total utility over time required short-run sacrifices so that the economy would converge to a long-run state of ‘bliss,’ characterized as the highest degree of happiness that is psychologically achievable. In empirical applications, this approach implies higher rates of saving and economic growth than is typically observed in real-world economies.

Authors such as Cline (1992) and Stern (2007) have explored the consequences of classical utilitarianism in fully specified mathematical

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models of climate-economy interactions (see also Howarth 1998). These authors begin by gauging the monetary costs and benefits of greenhouse gas mitigation measures. Monetary costs and benefits are then converted to units of utility or well-being based on empirically plausible assumptions concerning the relationship between income and human flourishing. In contrast with Singer (2002), these authors limit their analyses to a concern for human welfare but attach equal weight to both present and future well-being. This analytical approach has strong policy implications: It implies that greenhouse gas emissions should be substantially if prudently reduced since the future welfare costs of unmitigated climate change would far exceed the short-run costs of making the transition towards more sustainable agricultural and energy technologies.

While utilitarianism supports aggressive steps to stabilize the earth's climate, this approach to policy analysis is controversial for both theoretical and practical reasons. The theoretical objections to utilitarianism are nicely summarized in Sen and Williams's edited volume Utilitarianism and Beyond (1982). In short, much of moral philosophy is concerned with understanding and managing the conflicts that exist between the pursuit of self-interest and the performance of one's moral duties. Utilitarianism approaches this problem by asserting that people's decisions should aim to maximize total utility in society without attaching special weight to personal needs and concerns.

Critics charge that this criterion seems psychologically implausible and inconsistent with our moral intuitions. It seems to suggest that it is morally wrong to spend resources to promote one's own happiness in a world of inequality in which transferring one's wealth to the poor would provide greater social utility. One response is that utilitarianism might be viewed as a criterion for *collective* decisions that is consistent with a framework in which individuals legitimately pursue their private preferences. Harsanyi (1955), for example, explores the circumstances under which utilitarian social choice rules can be derived from a situation in which free and equal persons negotiate constitutional arrangements behind a veil of ignorance.

A related concern arises especially in the economics of climate change, where as we have seen authors such as Schelling (2000) argue that phasing out greenhouse gas emissions would redistribute wealth from the poor of today to comparatively rich members of future generations. This runs afoul of what Parfit (1983b) terms the 'argument from excessive sacrifice.' The problem is that incurring one dollar of costs in the present would provide many more dollars of benefits accruing to future generations. Given realistic empirical assumptions, undertaking deep cuts in greenhouse gas emissions is therefore necessary to maximize total utility. But is it reasonable to demand self-sacrifice by the poor to provide increased benefits to people who are or will be considerably more affluent?

This issue signals an important and quite general objection to utilitarian ethics. In certain circumstances, utilitarianism appears to justify inflicting major hardships on the few as long as doing so would provide minor yet widely shared benefits for a sufficiently large number of people. This conflicts with the notion that individuals are entitled to protection against serious, uncompensated harms resulting from actions that provide benefits to third parties. As Shue (1999: 39) frames this point:

> One can try to imagine, say, a 'state of nature' in which assault, beating, rape, torture, and mayhem violate no rights and break no rules, because there are no such rights or underlying rules.

That said, a reasonable person:

> has no doubt whatsoever that it is unacceptable for a person's body to be damaged. It is simply not possible for a sane person to act in practice as if he or she believes that his or her body is not entitled to the kind of special protection against the depredations of others that a right constitutes.

In this sense, utilitarianism is in tension with the moral principles that support liberal-democratic political, economic, and legal institutions, which attach paramount importance to the extension and preservation of individual rights and freedoms.

4 Rights-Based Ethics

Shue's analysis invites the question of what rights and entitlements should be afforded to members of future generations. Shue's own answer is that, at a minimum, future persons are entitled to protection against bodily harm. More broadly, Shue (2005: 276) imagines a future dystopia in which the present generation's unwillingness to reduce greenhouse gas emissions has inflicted suffering and immiseration on posterity. He reasons that 'If I were a desperate member of that later generation, I think I would be furious at our generation' for failing to take action. 'This is not how I was hoping to be remembered: as a good-for-nothing great-great-grandfather who wallowed in comfort and convenience.'

In developing this theme, Vanderheiden (2006: 343) notes that 'neither spatial nor temporal distance between agents and their victims can excuse acts of intentional or predictable harm.' Since compelling evidence suggests that climate change would inflict harms on future generations, this line of reasoning implies a duty to stabilize climate by cutting greenhouse gas emissions (see Vanderheiden 2008).

A related interpretation is provided by Caney (2008: 538), who argues that climate stabilization is necessary to secure and defend at least three kinds of fundamental human rights. In particular, Caney argues that climate change:

1. Violates people's right to *subsistence* by imposing risks of 'widespread malnutrition' that are well documented by the scientific literature.
2. Threatens people's capacity to 'attain a *decent standard of living*' (emphasis added), a point that resonates with the economic arguments advanced by Weitzman (2009).
3. Poses unacceptable risks to *human health* due to a range of mechanisms that include heat stress and the increased incidence of

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tropical diseases.

Further insights arise by locating Shue's (1999: 43) ‘no-harm principle’ in the history of Anglo-American political thought. In a letter to James Madison written in 1789, the American statesmen Thomas Jefferson reasoned that ‘the earth belongs in usufruct to the living’ (see Ball 2000). Jefferson's letter focused on the argument that the United States Constitution should include a provision preventing the federal government from accumulating unpaid financial debts that would be passed on from one generation to the next. His argument, however, built on the premise that the *earth*—i.e. the land and, by extension, the full suite of environmental resources—is the shared patrimony of present and future society. In this perspective, the present generation holds usufruct rights—i.e. an entitlement to reap the sustained flow of benefits provided by biophysical systems.[2] These rights, however, come with a correlative duty to conserve and protect resources for the benefit of future generations. To deplete natural resources would inflict uncompensated harm on posterity, thereby invading the rights and entitlements of future persons.

Jefferson's approach to questions of intergenerational justice builds on the rights-based ethical theories advanced by authors such as Locke (1690) and Kant (1963). Locke, for example, wrote that ‘the earth, and all that is therein, is given to men for the support and comfort of their being’ and that ‘all the fruits it naturally produces…belong to mankind in common.’ Although Locke famously argued that people could legitimately establish private property rights by mixing their labor with the land, he also held that the enjoyment of private property was thus limited by the proviso that there be ‘enough and as good left in common for others’ (see Singer 2002: 27–8). In this perspective, the legitimacy of private property seems to depend on the existence of institutions that ensure that different members of society have equal access to livelihoods and opportunities. Over intergenerational timescales, this may require policies that specifically protect environmental resources for the benefit of future generations.

Jefferson's concept of usufruct rights strongly anticipates more recent developments in conservationist thought and its applications to environmental governance. The founding Chief of the US Forest Service, for example, advanced the following principle that became institutionalized in the structures of US forest, land, and fisheries management (Pinchot 1910: 80)—publicly owned resources should be managed based on an approach that:

> recognizes fully the right of the present generation to use what it needs and all it needs of the natural resources now available, but [also] recognizes equally our obligation so to use what we need that our descendants shall not be deprived of what they need.

In close parallel, the Brundtland Commission's definition of *sustainable development* emphasizes the importance of ‘[meeting] present needs without compromising the ability of future generations to meet their own needs’ (WCED 1987: 43). Quite explicitly, the Commission argued that this language entailed a responsibility to conserve natural resources and environmental quality.

The application of this approach to climate stabilization policy is described in detail by Brown's (1998, 2007) writings on ‘stewardship.’ If future generations hold a moral right to enjoy the benefits of a stable and non-degraded natural environment, then the present generation holds a corresponding trusteeship duty to limit greenhouse gas emissions to sustainable levels. This normative standard provides an important basis for the United Nations Framework Convention on Climate Change, which calls for:

> [the] stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

The language of this text echoes the ‘safe minimum standards’ criterion proposed by Ciriacy-Wantrup (1952), under which ecological resources should be managed in a manner that minimizes potential adverse impacts under conditions of uncertainty. Bishop (1993) interprets this approach as implying that the present generation should refrain from actions that threaten the stability and functioning of natural systems unless the costs are ‘intolerable.’

More recently, authors such as Turner (1993) and Dobson (1998) have called for the conservation of ‘critical natural capital’—those features of biophysical systems that provide potentially indispensable and irreplaceable ecosystem services—as a way of securing the interests of future generations under conditions of scientific uncertainty. Both safe minimum standards and the critical natural capital approach can be seen as ways of interpreting and applying the ‘precautionary principle,’ which endorses ‘the commitment of resources now to safeguard against the potentially adverse future outcomes of some decision’ (Perrings 1991; see also O'Riordan and Cameron 1994; Howarth 2001).

Paavola (2008: 657) presents an interesting discussion that links this precautionary, rights-based reasoning with a pluralistic, participatory approach to global environmental governance. According to Paavola:

> [F]rom a social justice viewpoint, it is necessary to adopt atmospheric targets for GHGs, to adopt instruments such as a carbon tax to raise funds for assisting adaptation, and to establish procedural solutions that address inequities in participation in planning and decisionmaking on adaptation to climate change.

Paavola's point is that a concern for intergenerational justice mandates reducing greenhouse gas emissions to limit the future harms caused by climate change. In parallel, however, the design of just policies requires institutions that insure that burdens and benefits are fairly shared between members of society. For Paavola, the question of equitable burden sharing is best addressed through the mechanisms of deliberative democracy (see Dryzek 2000).

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Critics of rights-based approaches to framing intertemporal decisions emphasize several lines of argument that are worthy of careful consideration. First is Parfit's (1983a) claim that future generations lack moral standing. As we have discussed, this view abstracts away from the well-recognized duties that each generation holds towards its children and grandchildren (Page 1983; Howarth 1992; Gosseries 2008).

Second is the concern that taking aggressive steps to stabilize climate would slow the rate of economic growth in ways that would reduce the welfare of both present and future generations. As we noted in the introduction, a substantial body of empirical research casts doubt on this argument (Stern 2007). On the one hand, the short-run costs of climate stabilization are thought to be relatively small—perhaps 1 percent of economic output, or less than one year's worth of economic growth over the course of several decades. On the other hand, the projected costs of unmitigated climate change are believed to be much larger in magnitude—a full 5–20 percent of future economic output. In short, climatic stability is a valuable resource that would support and sustain future prosperity and human flourishing. Stabilizing climate is therefore instrumental in securing the life opportunities of future generations.

Critics also advance the argument from excessive sacrifice (see above) as a reason to defer or delay reductions in greenhouse gas emissions. Here too, however, the evidence is equivocal. Given well-designed policies, cutting greenhouse gas emissions to stabilize climate would impose costs that would be unnoticeable by most members of society. Climate stabilization, however, would reduce the risk of imposing uncompensated and potentially catastrophic harms on members of future generations. With a low but nonetheless positive probability, unmitigated climate change might lead to a long-run collapse of the ecosystem services needed to support human welfare and economic activity (Weitzman 2009). In statistical terms, this risk can be reduced to effectively zero by stabilizing temperatures at a level no more than 2 °C above the pre-industrial norm (Gerst et al. 2010).

As Bromley (1989) argues, rights-based approaches to environmental management may be especially appropriate when: (a) the costs of environmental protection are comparatively low; and (b) the projected impacts of environmental degradation are uncertain, irreversible, and potentially catastrophic. This line of reasoning builds on Page's (1978) discussion of ‘zero-infinity dilemmas’ as outlined in the introduction of this chapter. Problems of this nature involve key asymmetries that provide a potential rationale to refrain from imposing prospective harms.

5 Conclusions

This chapter has reviewed three distinct approaches to addressing the important issues of intergenerational justice that arise in the evaluation of climate stabilization policies. The discussion supports the following findings and conclusions.

First, *presentism* is an ethical framework that emphasizes the interests of present generations while denying that future generations have full moral standing. Presentists note that people hold altruistic preferences concerning the welfare of their children and grandchildren and that those preferences provide the most appropriate basis for balancing short-run costs and long-run benefits in environmental policy analysis. On empirical grounds, authors such as Nordhaus (1992, 2008) argue that the degree of intergenerational altruism is too weak to justify aggressive steps to reduce greenhouse gas emissions. In this sense, presentism seems to suggest that it is better to endure the future costs of climate change than the short-run costs of climate stabilization.

Proponents argue that presentism is supported by the futurity or contingent status of future generations (Parfit 1983a) and by the ‘argument from excessive sacrifice,’ which reasons that present decision makers have no obligation to make sacrifices for the benefit of future generations that (in a world of economic growth) are likely to enjoy far higher levels of prosperity and well-being (Parfit 1983b; Schelling 2000). In the main body of this chapter we made the case that these arguments are morally and empirically unsound. The concern is that presentism unreasonably abstracts away from both: (a) the duties that the current generation holds towards its children and grandchildren; and (b) from the serious risks that climate change poses to future welfare.

Second, advocates of *classical utilitarianism* argue that equal weight should be attached to the welfare of each and every member of society including members of future generations (Broome 2008). Authors such as Cline (1992) and Stern (2007) show that utilitarianism supports aggressive policies to stabilize climate under plausible empirical assumptions (see also Howarth 1998). The key point is that stabilizing climate would reduce short-run economic output by roughly 1 percent while conferring gains of 5–20 percent on members of future generations (Stern 2007). Translated into units of experienced well-being, these figures imply that the benefits of climate stabilization considerably exceed the costs given the equal weighing criterion adopted by utilitarians.

As noted above, utilitarianism is vulnerable to the argument from excessive sacrifice. This critique, however, is less compelling than a superficial analysis might suggest. A consistent utilitarian, for example, would argue that the burden of climate stabilization should be borne disproportionately by the wealthiest members of the present generation. Indeed, climate change impacts are likely to fall hardest on poor communities that lack the resources and capabilities needed to adapt to changing environmental conditions. Preventing such impacts would arguably yield particularly large welfare gains.

A more serious objection is that utilitarian ethics leaves little room for the premise that people have fundamental rights and that the protection of rights—not simply the pursuit of aggregate social welfare—should play a key role in the design of public policies. In the context of climate change policy, advocates of *rights-based ethics* argue that (a) future generations are entitled to protection from harm (Shue 1999) or that (b) the natural environment is the shared property of both present and future generations (see Ball 2000). Rights-based theories accept the premise that the present generation has a right to derive benefit from the sustainable use of environmental resources. But they also imply a correlative duty to conserve the environment based on the rights and interests of future persons (Brown 1998).

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Caney (2008), for example, reasons that members of future generations have a right to be protected from the uncompensated and potentially catastrophic harms that climate change might impose on their livelihoods and life opportunities.

Advocates of the rights-based view would argue that it is only by protecting the rights and entitlements of future generations that we can be confident that future generations will enjoy a quality of life that is undiminished relative to the present (Norton 2005). This is one way of responding to the argument from excessive sacrifice. Moreover, they would argue that the present generation holds a duty to ensure that life opportunities are maintained from each generation to the next (Page 1983; Howarth 1992; Gosseries 2008). This argument extends the notion of equality of opportunity between each generation of adults and its children and grandchildren.

As noted in the introduction, this field of research and praxis is an area where reasonable people can and do hold strongly contrasting points of view. The author of this chapter, for example, is a critic of presentism, has written sympathetically though skeptically concerning the application of utilitarianism to climate change policy (Howarth 1998), and has endorsed the argument that rights-based ethics provides the most convincing approach to issues of sustainability and intergenerational justice (see Howarth 2001). Other contributors reach their own conclusions based on different value judgments and factual assumptions.

That said, both classical utilitarianism and rights-based ethics support the stated objective of the Framework Convention on Climate Change, which calls for the prevention of ‘dangerous anthropogenic interference’ with the earth's climate to protect the interests of future generations. We can say, then, that the simple move of conferring full moral standing on future generations seems to favor aggressive climate change policies in a way that brings together concepts of intra- and intergenerational justice. One could imagine a plausible if pragmatic policy approach that emphasized both the protection of basic rights and the pursuit of higher social welfare. In this sense, resolving the principled disagreement between utilitarians and right-based theorists may be unnecessary to reach agreement on just and effective climate change policies.

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Notes:

(1.) In fact, Bentham (1823) suggested that the flourishing of all sentient beings might be pertinent to applications of the moral calculus. Developing this point, Singer's (1975) theory of animal liberation confers moral standing on nonhuman animals.

(2.) The Oxford English Dictionary (2nd edition, 1989) defines usufruct as 'the right of temporary possession, use, or enjoyment of the advantages of property belonging to another, so far as may be had without causing damage or prejudice to this.'

Richard B. Howarth

Richard B. Howarth is Pat and John Rosenwald Professor, Dartmouth College.

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