

MORAL RESPONSIBILITY FOR ADDRESSING CLIMATE CHANGE

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The United Nations Framework Convention on Climate Change (UNFCCC 1992) grew out of the 1992 United Nations Conference on Environment and Development in Rio. The agreement (hereafter, the Convention) became the internationally recognized basis for creating legally binding treaty obligations that were to be developed in subsequent rounds of negotiations, thus far unsuccessful. However, the Convention is more than a legal document of interest only to international lawyers and diplomats. It is an explicitly moral framework designed as a guide for assignment of responsibility for addressing global warming under a comprehensive treaty agreement that would bind an overwhelming majority of the world's nations. Two of the Convention's key elements have provoked the most discussion and they are the focus of this chapter.

Two Persistent Issues

The first element is the ultimate objective of a comprehensive treaty and it is described in Article 2 of the Convention as the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would *prevent dangerous anthropogenic interference with the climate system.*" Left open in this statement of objective are the appropriate scientific benchmarks by which dangerous climate change should be judged. Subsequent negotiations among parties to the Convention led to the adoption of a target of 2°C above pre-industrialization levels. The Intergovernmental Panel on Climate Change (IPCC) estimates that the 2° target corresponds to an atmospheric concentration of greenhouse gases (GHGs) at roughly 450 parts per million (ppm) (Solomon et al. 2007; Parry et al. 2007). While other influential bodies, including the World Bank (WDR 2010) also endorse the 2° target, many leading scientists set the threshold much lower at 1.5°C, or roughly 350 ppm, because of the irreparable damage a 2° increase will cause to the most vulnerable regions of the world (Hansen 2008).

There is a broad scientific consensus, however, that what makes climate change "dangerous" is a constellation of effects on human health and wellbeing, other species, and the capacity of the planet to sustain life. The list of adverse impacts of even a 2° increase is lengthy, widely documented, and highly consequential (Solomon et al.

2007; Parry et al. 2007; WDR 2010; UNDP 2008; Samson et al. 2011). They include species extinction and decline of plant and animal populations; sea-level rise threatening island nations and low-lying coastal areas; increased frequency and intensity of extreme weather events; excess rain and cold weather during growing seasons, leading to crop loss, flooding, and freshwater runoff; decreases in annual rainfall, resulting in drought, desertification, and disruption of the hydrologic cycle processes; and expansion of the geographic zones at high risk for infectious diseases.

Moreover, the consequences of a failure to mitigate the production of GHGs are dramatically portrayed in estimates of the differential impact of climate change at the 350 ppm level and above on poorer, less developed nations, especially in the global South, the less developed regions of Asia, and island nations (Parry et al. 2007; WDR 2010; UNDP 2008). The effects are already being felt by, and will be greatest for, the nations that are the poorest, hottest, agriculturally most vulnerable to weather pattern disruption, economically most dependent on agriculture, most vulnerable to vector borne diseases that are expected to increase dramatically, and least able to adapt by virtue of both disadvantaging geography and fewer economic resources.

The second key element of the Convention consists of twin assumptions regarding the distribution of responsibility. Article 3.1 of the Convention endorses a principle of “*common but differentiated responsibilities.*” While the UNFCCC concept is highly abstract, its major premise is that the locus of moral responsibility rests with nation-states, rather than with individual persons or corporate entities. In addition, Article 3.2 states that the primary treaty objective should be promoted within the limits set by other goals, such as food production, the need for time for adjustment of national economies, and especially, the energy needs of developing nations for the alleviation of poverty.

Critics of the Convention argue that the focus on development of a treaty among nation-states misses the mark morally, for it fails to pin the primary moral responsibility for addressing climate change on the specific persons and firms who bear the greatest and most direct causal responsibility for creating the problem (Baer et al. 2010: 219; Gardiner 2011: 48). While disagreements over the appropriate target influence debates over assignment of moral responsibility, the full significance of the choice of target comes into view only after surveying the moral responsibility debates. The issue of whether the appropriate locus of moral responsibility is the nation-state is therefore examined first.

The Shape of the Moral Responsibility Problem

Two of the main types of climate-related moral responsibilities (Shue 2010a) should be distinguished at the outset. The first type of duty involves *mitigation* efforts designed to slow and eventually halt and reverse the accumulation of GHGs. Mitigation duties include the reduction of GHG emissions, providing economic and technological resources necessary for others (e.g., poor nations) to reduce emissions, and preserving “carbon sinks” (e.g., rainforests) that absorb GHGs that otherwise would accumulate in the atmosphere. The second type of responsibility involves duties of *adaptation*, for example, modifying human behavior or the environment in order to avoid the harmful consequences produced by climate change. The focus of this chapter is on duties of mitigation because the appropriate assignment of adaptation duties depends, in part, on what steps are taken, and by whom, to avoid climate-induced harms through mitigation efforts (Jamieson 2010b).

Questions regarding the proper assignment of mitigation duties are complicated by the fact that global climate change is a problem with a peculiar, though perhaps not unique moral shape. The Earth's atmosphere has a finite, rapidly approaching limit on its capacity to store GHGs without producing dangerous climate change. Global warming and its harmful effects are caused by the total stock of emissions produced and accumulated in the atmosphere from the dawn of the industrial revolution down through the present. The harm produced by climate change therefore is due to the fact that over hundreds of years millions of individuals, firms, and governments will have made small causal contributions by generating and using electricity, building cities, driving cars, cutting trees, and so on (Jamieson 2010a; Sinnott-Armstrong 2010). It is only when the total stock of atmospheric emissions from all sources, produced across many generations, reaches some critical threshold that the harms result. Hence, the critical nature of settling on the appropriate target for the maximum atmospheric emissions concentration.

The problem of climate change represents a challenge to traditional conceptions of moral responsibility found in ordinary moral thought, leading moral theories, and the moral foundations of environmental tort law. Two examples illustrate the source of the primary difficulties in assigning moral responsibility.

First, our inherited conception of individual moral responsibility "presupposes that harms and their causes are individual, that they can be readily identified, and that they are local in time and space" (Jamieson 2010a: 83). Responsibility for remedying or compensating for oil pipeline spills and industrial pollution of rivers and streams are familiar examples. Climate change does not conform to this standard pattern. With global warming, the causally responsible parties act separately and without coordination over extended periods of time, across great geographic distances, resulting in the joint production of a still unfolding set of harms. Climate change is thus a problem that is inherently different from and more complex than the familiar environmental problems in which the assignment of moral responsibility proceeds from individually identifiable and morally accountable agents.

Second, climate change poses a challenge to conceptions of moral responsibility presupposed in some prominent political theories. Consider the twin assumptions in Article 3 of the Convention. If the world collectively should act to reduce cumulative emissions from all sources, *and* the claims of developing nations for continuing emissions necessary to meet their pressing needs for poverty alleviation merit some priority, then absent a technological "magic bullet," the highest per capita emitters, concentrated in the developed nations, must decrease their emissions, even as emissions from less developed nations continue to rise (Shue 2011: 306). The fact that the entire world shares a common, but declining pool of available future emissions necessary to prevent the triggering of dangerous climate change means that the fates of nations are bound together in ways some leading theories of justice deny. Such theories assume that the fortunes of nations are largely a function of autonomous domestic policy choices, and that the primary determinants of wellbeing are tied to local factors under state control (Rawls 2001). Duties of distributive justice are then said to be largely domestic in scope because the primary causes of distributive inequalities are domestic, and global principles of distributive justice are not needed. Climate change shows that it is no longer plausible to think of the fates of nations, and of the global poor in particular, as substantially independent from external forces that exert profound and pervasive impact on a country's citizens in ways largely beyond domestic control.

I first discuss principles that link the moral responsibility of persons and firms to their individual causal contributions and I then examine some further issues arising from the

assignment of primary moral responsibility for climate change to nation-states rather than to such individuals.

Holding Individual Polluters Responsible

The main alternative to the Convention's assignment of moral responsibility to nation-states is the Polluter Pays Principle (PPP). The potential sources of PPP's attraction are various, but in each instance, there are powerful objections to the use of the principle in the context of global warming that limit its plausible scope of application.

One of the main attractions of the PPP is the fact that it figures centrally in environmental ethics and is prominent in the normative foundations of environmental tort law. It is appealing for a simple reason. It answers to the intuitive idea that all and only the causal contributors to some problem should have duties to prevent future harm, mitigate ongoing harm, or remedy or compensate for the harms created by their actions (Adler 2007; Perry 1992; Caney 2010a).

PPP is attractive for a second reason. Its application does not depend upon, or serve the ends of, any particular theory of distributive justice (Shue 2010a: 209–10; 2010b: 103; Miller 2008: 126). The PPP is a principle of corrective justice, which means that its sole purpose is to restore the injured party to his or her status prior to some injurious action, or if restoration is not possible, to compensate for irreparable injury. If climate change makes already badly off nations or peoples even more badly off, then there is a duty to restore them to their status quo position, but nothing more is required. PPP therefore does not alter the existing distribution of advantages, for example, in the way that the Convention contemplates in its proposal for giving priority in the allocation of future emissions to developing nations for poverty alleviation (Shue 2010a: 207).

A third source of PPP's enduring appeal in the climate change context is that it might seem like a useful way to pin the primary burdens of responsibility on citizens and businesses located in the nations that have gained so much in their standard of living from their historically higher use of GHG-producing fossil fuels.

However, there are numerous difficulties in applying PPP to climate change. One major problem is that the apportionment of causal responsibility among so many causal contributors, over an extended and continuing time frame, is so indefinite and speculative that it is neither feasible nor fair (Caney 2010c: 207; Posner and Sunstein 2008: 18). In particular, the worry is that the complete identification of wrongdoers is thwarted by the fact that some individuals are no longer living and some corporate entities are no longer doing business (Posner and Sunstein 2008: 18; Caney 2010a: 130; Miller 2008: 126–7). PPP then would seem both unfair and unworkable because it can hold accountable only a small fraction of the causal contributors to global warming, and even then, issues of fair apportionment of responsibility exceed the epistemic capacities of human judgment.

Moreover, if the aim of proponents of PPP is to penalize the rich or get the big emitters of the past to make amends for their large historical role thus far in causing global warming, there are numerous problems with that approach (Miller 2008: 126; Caney 2010c: 205, 212). While the biggest historical contributors to the accumulated stock of emissions thus far are based in the rich industrial nations, the composition of the biggest historical emitters will change as the threshold of dangerous climate change is approached. Because the bulk of accumulated emissions have been generated since the mid-twentieth century, it provides an important benchmark for comparison. One widely

respected projection estimates that by 2050 the percentage of total emissions since 1970 attributable to the thirty economically most developed nations will be surpassed by the cumulative emissions generated during that period from within the BRIC nations—Brazil, Russia, India, and China—and the share attributable to the rest of the world is projected to lag only slightly behind the combined total for the thirty most developed nations (OECD 2008). Whatever the precise proportions turn out to be in 2050, the clear trend is one in which the historical emissions attributable to developing or less developed nations is catching up to the historical emissions attributable to developed nations. Application of PPP will result in greatly declining responsibility being assigned to developed nations because the logic of PPP is such that moral responsibility follows strictly the path of proportionate causal responsibility. It is indifferent to how much any of the causally responsible parties benefited and whether anyone who benefited did so at the expense of others.

Perhaps the main objection against PPP is a lack of a plausible theory of morally culpable action by the emitters of the distant past for which they should be held accountable. Even if we can identify with sufficient precision the main contributors and find a feasible way to hold them or their successors accountable, it is unclear what makes their actions morally wrong. Arguably very few causal contributors at any stage of history are culpable due to malign intent or because their actions were inherently unjust in the way slavery can be said to be wrong in itself (Sinnott-Armstrong 2010; Miller 2008: 129). Even the weaker notion of negligence in tort law, from which we might construct a moral analogue, is problematic. As a condition for imposing liability it requires a showing of harm from some conduct that was in violation of existing norms of due care, for which the parties being held responsible either knew or should have known they were violating (Posner and Sunstein 2008: 18–19). The problem is that, until quite recently, there was no reliable scientific information upon which such norms could have been based, and hence, no reasonable basis for second-guessing conduct of the sort that many once assumed to be either morally benign or even socially valuable (Caney 2010a: 130–1; Caney 2010c: 207–10).

Some defenders of PPP argue “that the objection of ignorance runs together punishment for an action and being held responsible for an action” (Shue 2010b: 104). Shue agrees that it would be unfair to punish someone for actions they could not have known were harmful to others, but not unfair to make them pay the costs of problems they caused. Some arguments of this sort rest on a moral analogue to legal doctrines of strict liability (Neumayer 2000: 188; Baer 2010: 250–1; Shue 2010c). Under theories of strict liability, those individuals causally responsible for harms of some types should be made to bear the associated costs without regard for their intentions or what they knew or should have known at the time.

Even if a moral analogue of legal doctrines of strict liability offers a plausible account of moral culpability for actions in the distant past, the weight of other objections to the application of PPP to climate change is significant. Problems of identity, apportioning causal responsibility, and the fact that the creation of harm is ongoing undermine its plausibility. Moreover, PPP is a conservative moral principle, at least from the perspective of those who have reservations about the current global distribution of advantages and disadvantages, and by itself it offers no prospective guide to deciding how to allocate emissions. Most of the large emitters from the past are off the hook because they are no longer available, and their proportional share of causal contribution to dangerous climate change is in steep decline. Under PPP, a greater share of the moral responsibility

will fall on individual polluters from within developing nations that neither accrued massive developmental benefits nor have the resources to pay their share for mitigation without eroding recent gains in poverty reduction.

However intuitively attractive it might seem to hold all and only those individuals morally responsible for their individual causal contributions, assignment of moral responsibility for climate change to individuals through the application of PPP is unfair and unfeasible.

Holding Nation-States Responsible

A variety of justifications have been proposed for assigning primary moral responsibility for climate change to nation-states, rather than to individuals. However, critics argue that nation-states are not the right kind of entities for assignment of moral responsibility. This section surveys several lines of argument for holding nation-states responsible for addressing climate change and the main objections. The conclusion is that nation-states are plausible entities for assignment of moral responsibility, but only with some caveats, and not for the reasons most often cited.

One line of argument appears to be designed to rescue at least a part of the underlying rationale of PPP by treating the industrialized nation-states that have been home to the largest carbon emitters as proxies for the diverse and unidentifiable polluters that have been causally responsible for the harm of climate change and by treating current generations as their appropriate successors. The argument rests on the claim that the citizens of developed countries are the contemporary beneficiaries of past carbon-intensive activities that have been harmful. This principle has been called the Beneficiary Pays Principle (BPP) (Caney 2010a: 128). The essence of the argument is that the high standard of living of the developed nations has been made possible only through their ancestors' contribution to GHG accumulation to date and that these nations should be held responsible because of the benefits derived from the harmful side effects of earlier emissions (Shue 2010b: 105; Neumayer 2000: 189). In effect, this construal of BPP attempts to circumvent the main difficulties of PPP while retaining many of its intuitively attractive aspects as a principle of compensatory justice.

The first objection is that, even if current citizens of developed nations are the continuing beneficiaries of prior generations of GHG emitters, the lack of clearly articulated grounds for assigning moral culpability to those earlier emitters under PPP reappears as a problem for BPP. If the rationale for BPP is that their predecessors caused the harm from which current generations benefited, then compensation to those who have been harmed is due from those who benefited only if the actions of their predecessors can be shown to be morally culpable (Miller 2008: 129). Under BPP, if intended as a principle of compensatory justice, the current beneficiaries may be held responsible only for what amounts to ill-gotten gains. Absent a theory of moral culpability of past emitters heavily clustered in developed nations, current citizens are merely the beneficiaries of an undeserved windfall, not ill-gotten gains for which their moral claim is nullified.

Alternatively, BPP might be construed as a general principle of distributive justice, for example, on the theory that it is just, all things considered, to place the burden of responsibility on parties who benefited from some windfall and thereby are better able to bear the burdens. Similarly, it has been argued that nations that are prepared to accept the benefits of past actions should be prepared to accept the burdens as well (Neumayer 2000: 189). Indeed, human rights arguments discussed later in the chapter reach that

very same conclusion. But proponents of BPP muddy the waters insofar as they tend to tout its merits as a principle that satisfies a demand for compensation for past harms, rather than a principle grounded in a general theory of distributive justice, or theory regarding the fair distribution of benefits and burdens.

Even if the moral culpability objection can be met, such that BPP *should be applied* even if the beneficiaries gain from activities of predecessors who could not have known the harmful effects of their actions, the BPP is vulnerable to a further objection. The further complaint is against the speculative character of the counterfactual arguments that are necessary to back up the crucial empirical assumption that developed nations actually benefit in the way that the principle requires and that their actions resulted in a net harm to others.

Some observers might conclude that the continuing benefit from prior emissions is patently obvious, as is the net harm, but counterfactual claims regarding benefit or harm that accrues *but for* some activity are more complex than often supposed. The simplest examples of counterfactual arguments are found in environmental tort cases. In order to establish that agricultural waste runoff from factory farms is responsible for degradation of a water well, the plaintiff's burden is to show that "but for" the negligent actions of some specific polluter there would not be dangerous toxic substances present in the drinking water. Such cases are often factually difficult to sort out, especially where the polluters are numerous, the actions are spread across a long time horizon, and other causally contributing factors may be at work. However, the difficulties in establishing "but for" arguments in ordinary water pollution cases are not nearly as great as counterfactual arguments involving sweeping historical claims (Posner and Sunstein 2008: 18–20).

An example of a grand historical counterfactual is the argument that but for the 500-year legacy of colonialism and slavery, developed nations would not enjoy the same high standard of living and lesser developed nations would not experience their current level of poverty (Pogge 2005). Critics argue that counterfactuals of such sweep pose insuperable problems (Risse 2005). In order to argue that, as a consequence of previous wrongs to earlier generations, the current residents of some nations have been made worse off than they otherwise would have been, or that current residents of some nation would not enjoy their high standard of living, it must be possible to rule out all of the intervening variables that might have altered the broad sweep of human history.

Objections to the reliance on counterfactual arguments of this sort do not dispute that slavery and the practices of colonialism were unjust in themselves. Nor do they dispute that members of past generations were harmed by those practices. However, the objection is that conclusions regarding the continuing harms, as well as the continuing benefits, that flow from those practices are speculative. While there is no dispute about the unfairness of an initial distribution of advantages and disadvantages, there is uncertainty about the enduring effects of that initial, unjustly created distribution. The same sort of objection applies to counterfactuals regarding the enduring effects of GHG consumption. Rich nations might have become rich even without as much GHG production, and poor nations might still be poor even with more GHG production.

Third, for the sake of argument, assume that defenders of BPP are justified in claiming that but for a history of carbon-intensive activities, current citizens of some nations would not enjoy their high standard of living. A further objection is that holding nation-states morally responsible is potentially unfair to particular citizens in both rich and poor nations. Because carbon-intensive lifestyles are imperfectly correlated with the wealth of states, holding nation-states responsible fails to take account of the fact that there are rich, carbon-intensive consumers in poor states and less carbon-intensive,

poor consumers in rich states (Baer 2010: 247–8, 253; Socolow and English 2011: 183; Baer et al. 2010: 216–17). For any assignment of moral responsibility to nation-states, based on contribution to the problem from which citizens derived (or continue to derive) benefit, fairness requires some mechanism or formula that ensures that all high emitters are treated alike across nations and that citizens who live in affluent nations, but who have not benefited (or do not now benefit from ongoing activities), are not penalized (Socolow and English 2011: 185; Caney 2010c). The objection is not decisive against a principle of holding nation-states morally responsible for what happens within their borders. It simply alters the conditions under which holding nation-states responsible is justified and it makes large epistemic demands on the state's ability to distinguish properly among its citizens.

Fourth, some objections to holding nation-states accountable for the actions of their citizens do not depend on any of the historical claims discussed so far. Critics argue that even in the case of very recent or ongoing GHG emissions produced by their citizens, only individual persons or firms and not nation-states are the right sort of entities to be held morally responsible (Posner and Sunstein 2008: 20). The claim is that all ascriptions of moral responsibility should attach to individuals and corporate entities that are the direct causal agents of environmental problems, and not to collective governmental entities that have only indirect relationship to the harms.

The counterargument is that citizens of all countries, by virtue of membership in the state, readily accept, and claim as justified, the benefits and advantages derived from whatever harms their predecessors have produced, as well as the harms produced by co-nations who are their contemporaries, at least insofar as the nature of the harms were well understood at the time of the emissions (Neumayer 2000: 189; Miller 2008: 128).

Arguments for a blanket exclusion of nation-states from any assignment of a share of moral responsibility ignore the fact that modern states play important causal roles in climate change. Numerous forms of state involvement can be cited, including state owned or operated carbon-intensive industries. In addition, nations exert substantial influence on the carbon-intensive conduct of both industrial polluters and consumers within their borders. Such influences include direct subsidies of industries, government-backed bonds and other complex financing mechanisms for the construction of power plants and other energy facilities, fossil fuel mining and drilling operations conducted on public lands, and individual and corporate tax deductions that incentivize the purchase of large homes, automobiles, and other energy-intensive products. Nation-states have contributed, and continue to contribute to GHG accumulation by direct GHG production, fostering consumer demand, shaping both the preferences and the options of everyone within its boundaries, and implementing policies that sustain carbon-intensive modes of production and consumption. Failure to ascribe moral responsibility to nation-states ignores the fact that the carbon footprints of individuals and corporations within its territories are what they are only because of governmental fingerprints.

The real question, then, is not whether nation-states are eligible for being held responsible for mitigation. The question is whether the case for holding them responsible should be made to depend on assumptions about the benefits accrued from past activities or the wrongness of the means from which those benefits were derived. The answer, it seems, is that it is not necessary to look to the distant past to find sufficient reasons to question the fairness of current emissions, especially when those emissions support an affluent lifestyle for a minority of the world's population. Some human rights approaches explore arguments of this sort as alternatives to historical principles such as BPP.

Two Human Rights Approaches

Simon Caney (2009, 2010a) argues that the basis for climate change duties is found in Henry Shue's cosmopolitan conception of human rights. The cosmopolitan conception proceeds under the assumption that everyone has duties to everyone else to ensure circumstances necessary for the fulfillment of rights to life, health, and subsistence (Shue 2011: 305). These are rights "that persons have in virtue of their humanity, and not because of the nation or state into which they were born or any actions that they have performed" (Caney 2010a: 164). Caney surveys the list of adverse consequences expected from climate change and identifies them as harms to the very interests that these specific rights are meant to protect (Caney 2010a: 166). The harms are then shown to be very substantial and in violation of human rights insofar as human rights "represent moral thresholds," below which people should not fall. They designate the most basic moral standards to which persons are entitled" (Caney 2010a: 136, 164–5). The adverse consequences of climate change are said to be an injustice when those who have the ability to mitigate the dangerous accumulation of GHGs fail to do so and the consequence is that some people fall below the moral thresholds established by these human rights. For example, many people in the hottest regions of the world already face significant challenges in meeting their own food needs, but the impact of global warming in these regions is a much further reduction of available ground water, accelerated desertification, and the increase of pests and diseases (Samson et al. 2011). The loss of the economically most viable and most heavily populated coastal lands, and even the loss of entire island nations, are examples of the further threats to the minimum requirements of a decent life posed by global warming, resulting in the potential for massive global migration of climate refugees unable to meet their needs in their countries of origin (WDR 2010).

Central to the cosmopolitan conception of human rights is the fact that it grounds universal duties with respect to health, life, and subsistence in the vital needs of others. The basis upon which the specific moral responsibility for addressing climate change is assigned is not tied to history, or to any active harming of the interests of others, but to the ability to pay. "In principle, the Ability to Pay approach is indifferent to who caused a harm: its emphasis is on who can rectify that harm" (Caney 2010c: 213). In fact, Caney claims that the existence of duties of the affluent nations to address climate change "does not necessarily rest on the assumption that climate change is human-induced. Its insistence is that persons' preeminent interests be protected, and it is not, in itself, concerned with the causes of climate change" (Caney 2010a: 136).

Climate change duties, then, on the cosmopolitan account, do not differ in their rationale from duties that would arise if an asteroid were hurtling toward a vulnerable country. The existence of profound human need and the ability of others to meet it are jointly sufficient to trigger duties that correspond to human rights claims.

Critical readers will raise questions about what supports the cosmopolitan's conclusion. In response, Caney invokes what he takes to be the widely shared conviction that even when someone plays no part in causing the suffering of others, there are sufficient reasons to render assistance, especially when the costs of doing so are not substantial. Caney takes the central intuition as well established (Caney 2010c: 216). Shue argues in similar fashion that what is of paramount moral importance is that everyone have enough of the various goods that are necessary for a "decently human, if modest, life" (Shue 2010b: 108), and that "[i]f the aggregate of resources is enough for some parties

to have more than enough, and they do in fact have more than enough, and other parties have less than enough, then it is unfair not to guarantee everyone at least an adequate minimum" (Shue 2010b: 108).

Not everyone will find such arguments persuasive. Libertarian critics, for example, argue that for such an argument to be successful it must establish a link between someone's need, however great, and the reasons for holding specific persons or entities under a moral duty to meet that need (Nozick 1974: 168; Lomasky 1987: 85–94). The critic rejects, as unsupported by clear philosophical argument, the cosmopolitan's core claim that there is universal duty of everyone—including specific nation-states—to guarantee to everyone else, regardless of nationality, and regardless of how need arose, the means to the satisfaction of their most basic human needs.

Even many of the defenders of universal duties of humanitarian assistance, or duties to relieve extreme human suffering such as famine, augment their arguments with the strategic proviso that such duties apply only when they could be performed without significant sacrifice (Singer 1972). However, it is worth noting that duties of climate change mitigation might prove difficult to square with the proviso. The IPCC (Solomon et al. 2007) estimates that a cut in the annual global per capita emissions from 2000 levels of 4 tons by 50–80 percent by 2050 would be necessary in order to keep the temperature rise in the range of 2°. Given the fact that the world's population is expected to grow by 2 billion people by then, the estimated per capita global average in 2050 has to be reduced to a level between 1.33 tons and 1.5 tons (Moellendorf 2011: 118–19; Baer 2010: 219–21). The significance of these numbers becomes clear when we observe that the per capita emissions in the U.S. in 2008 was roughly 18 tons compared with just over 5 tons for China (World Bank 2012). Without a rapid technological transition toward a radically decarbonized world, life in a country at or near the global average would be one in which "few could be described as well-off" (Socolow and English 2010: 181).

Both Caney and Shue concede that the stringent demands of their cosmopolitan conception of human rights will be resisted in various quarters. Accordingly, they offer an alternative conception of human rights designed to enlist wider support. They argue that at the very least their critics should accept a negative rights construal of their trio of human rights (Caney 2010a: 166). The core claim of the negative rights account is that we "should not do things that interfere with others' ability to maintain a decent human life for themselves" (Shue 2010b: 109). Similarly, Caney argues that what is often ignored is "a morally relevant aspect of current climate change, namely that some persons are imposing grave risks on others" (Caney 2010a: 170).

A negative rights construal fundamentally shifts the grounds of the argument. The upshot is that whatever we might think about the duties of the developed nations in the asteroid case, global warming should not be seen as morally equivalent. By focusing on the causal role played by large emitting nations, Caney and Shue strategically retreat from their much stronger compound claim that it makes no moral difference how the harms were created and that ability to pay is the only morally relevant factor in the assignment of duties to guarantee a minimum human rights standard for all. The negative rights alternative attempts to show that the real moral difference does in fact rest with how the harms are created (Caney 2010a: 169).

Moreover, the negative rights construal need not rely upon claims regarding the harms generated by activities in the distant past or upon counterfactual speculations about how the current benefits enjoyed by developed nations were caused. All that is necessary to make the case that global warming constitutes a violation of human rights,

negatively construed, is to point to the current failure of affluent nations to take the available steps necessary to alter the technological and economic basis that supports their way of life, when that failure eventuates in a human-made disaster for much, if not, all of the rest of the planet.

We might, then, re-state the point of the negative rights construal in the language of moral thresholds. Instead of conceptualizing human rights as moral thresholds below which no one *should be allowed to fall*, the negative rights construal argues for a moral threshold below which no one should be *driven* by the actions of others. The negative rights construal thus challenges its critics to provide sufficient reasons for failing to curb current high levels of emissions that support a very high standard of living for some when their level of emissions contributes to the deprivation of a decent human life for others.

Systematic Disadvantage

The further consequences of a failure to mitigate the production of GHGs are dramatically portrayed in estimates of the differential impact of climate change on poorer, less developed nations, especially in the global South, the less developed regions of Asia, and island nations (Parry et al. 2007; WDR 2010; UNDP 2008). The effects are already being felt by, and will be greatest for, the nations that are the poorest, hottest, agriculturally most vulnerable to weather pattern disruption, economically most dependent on agriculture, most vulnerable to vector borne diseases that are expected to increase dramatically, and least able to adapt by virtue of both disadvantaging geography and fewer economic resources. All the while, some nations of the global North will experience far less negative impact at GHG concentration levels of around 450 ppm. In some cases, nations in the northern latitudes may even experience some economic benefits (Samson et al. 2011), and certainly they have the economic resources that will make adaptation to any negative effects much easier. The stark truth about climate change is that it is not an ordinary collective action problem in which all stand to lose in roughly comparable ways, at the same threshold of harm, unless all act to prevent it. It is a problem in which the poorest, most vulnerable will be hurt first and worst.

Moreover, the harms associated with global warming for the global poor are not confined to losses in health, subsistence, and life. As important as these are, at stake additionally is the loss of even a minimal degree of self-determination over the most fundamental matters affecting them. The populations most vulnerable to climate change experience complete powerlessness in the face of a set of global social arrangements in which developed and developing nations can decide unilaterally whether to mitigate the unfolding of a human-made disaster that imposes the greatest burdens on the global poor. Indifference of this magnitude, if that is the outcome over the years ahead, is incompatible with any plausible understanding of what is required by a commitment to the equality of moral standing among human beings. For such indifference means that the most vital human interests of wholly dependent peoples are given no moral weight in the decisions of those who hold asymmetric political and economic power over their fates.

What can be expected from business-as-usual energy policies of the more affluent nations is the perpetuation and exacerbation of a densely woven web of systematic disadvantage, characterized by deprivations of wellbeing across multiple dimensions, from which those most adversely affected groups are largely powerless to escape, and could not, on their own, have taken steps to avoid (Powers and Faden 2006).

The fact that ongoing economic and political interactions among nation-states can create or perpetuate global patterns of systematic disadvantage underscores the point that there are sources of injustice beyond those associated with policies that have the effect of driving citizens of other nations below a moral threshold for a decent human life. Many in the global South are already below that threshold due to a variety of causes other than climate change. The global poor are profoundly and pervasively affected by extra-national energy policies that make them even worse off, lock in lower long-term life prospects by making it far less likely that they can rise above the threshold for a decent human life, and ensure that they will not lead sufficiently self-determining lives or exercise significant domestic political control over their vital interests in health, life, and subsistence. These impacts of global climate change demand a global response to the issue of moral responsibility. Responsibility must be assigned somewhere to ensure that urgent action is taken to prevent great and irreparable harm being done to the poorest and most vulnerable.

Related Topics

- Chapter 2, "Social Determinants of Health and Health Inequalities," Sridhar Venkatapuram and Michael Marmor
 Chapter 31, "Population Growth and Decline: Issues of Justice," Margaret P. Battin

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