
Justice and Climate Change

Toward a Libertarian Analysis

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DAN C. SHAHAR

As a group, libertarians have not dealt well with the prospect of anthropogenic global climate change. As most parts of the world scramble to find “solutions” to what they anticipate will be a serious problem for human civilization, libertarians have often brushed the issue aside by denying that climate change is real or, if it is real, that humans have caused it (Dolan 2006, 445–46). This position is problematic in several ways. Perhaps the most obvious is that the move to dismiss the problem relies heavily on minority views among the climate science community that may turn out to be incorrect (Dolan 2006, 450). It must be stressed that whatever case can be made in favor of questioning our ability to know the precise truth about climate change and to predict future states of the climate system, we must be careful in claiming that climate change *is not* happening, that humans *are not* causing it, or that it *will not* continue into the future to a significant degree (Gardiner 2004, 567). The mechanisms by which anthropogenic climate change *might be* occurring are firmly established; those by which it might not be occurring are surrounded by controversy and uncertainty.

A more serious problem with the libertarian habit of questioning the scientific basis for concern about climate change is that it does not indicate what position libertarians would endorse *if* climate change *were* known to be happening (Dolan 2006, 450). We have no compelling reason to believe that anthropogenic climate

Dan C. Shahar lives in Tucson, Arizona.

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change or a substantively similar phenomenon *cannot* happen. Accordingly, it seems extremely reasonable to ask what libertarians would say about such a phenomenon *if they knew* that it was occurring now.

In this article, I take the first steps to identifying the kind of answer for which we should be looking. For the sake of this discussion, I assume that the mainstream scientific perspective (embodied in the work of the Intergovernmental Panel on Climate Change, IPCC) is uncontestable. If that assumption proves to be mistaken, my analysis will be seen to have been based on flawed premises. Accordingly, the reader should keep in mind that any conclusions drawn here depend on the degree to which this fundamental assumption is correct.

Market Failures and Government Inefficacy

Mainstream discussions have typically portrayed global climate change as the product of the free market's systemic failure to bring about desirable environmental, economic, and social outcomes. The IPCC instantiates this view in its *Second Assessment Report*, noting that any individual contributor to climate change faces a different set of costs and benefits than are imposed on the whole of society as the result of his actions, and so individuals acting in their own interests may lack incentives to do what is best for society as a whole (Goldemberg et al. 1996, 21, 28).

To illustrate this idea, we might notice that for most individuals the personal benefits of, say, driving a car instead of taking the bus more than outweigh any costs that they will ever incur personally from their insignificant individual contributions to climate change. Accordingly, it will be in their personal interests to drive their car instead of taking the bus. But having a large number of extra cars on the road results in additional greenhouse gas emissions that contribute to climate change. As Garrett Hardin famously wrote, "we are locked into a system of 'fouling our own nest,' so long as we behave only as independent, rational, free enterprisers" (1968, 1245). The IPCC authors agree, characterizing contributions to global climate change as international externalities and the integrity of the global climate system as an international public good (Goldemberg et al. 1996, 21).

Mitigating global climate change requires the sacrifice of certain interests, and individuals' actions toward mitigation would be rendered insignificant if others did not take similar efforts. Accordingly, it seems reasonable to expect that many individuals will not take significant action to combat climate change in the absence of some kind of international agreement guaranteeing widespread participation. Unfortunately, it would be exceedingly difficult for independent market actors to coordinate such an agreement. Any attempt at doing so would face a number of hurdles, ranging from the large costs of negotiating the provisions of the accord to the pervasive incentive to "cheat."

The most obvious and widely discussed alternative, therefore, is the one that Garrett Hardin suggests: legislation (1968, 1247). If we know that we will "foul our

own nest” if left to our own devices, then it might seem reasonable to impose rules on ourselves and to punish violators in order to ensure that we forestall our own downfall. On this basis, the IPCC authors argue that phenomena such as climate change “require a legal framework within which the problems they pose can be addressed” (Goldemberg et al. 1996, 21). They build on the foundation laid by the United Nations Framework Convention on Climate Change, which they describe as “a framework for collective decision making by sovereign states,” and their analysis focuses on the “differences in national perceptions, capabilities, and objectives” that influence the decision-making process in the international political arena (Arrow et al. 1996, 59, 61).

Many libertarians bristle at the implication that centralized planning can easily solve the problems posed by climate change. It seems unreasonable, they argue, to suggest that we can simply fix the inadequacies of an imperfect market by turning the matter over to governments. After all, governments—which are themselves composed of fallible and imperfect individuals—have limitations of their own (Pennington 2005, 40). As Gene Callahan points out, “Government interventions and ‘five year plans,’ even when they are sincere attempts to protect the environment rather than disguised schemes to benefit some powerful lobby, lack the profit incentive and are protected from the competitive pressures that drive private actors to seek an optimal cost-benefit tradeoff” (2007, 9).

Accordingly, a number of libertarians have apparently taken the stance that because we cannot hope for an “optimal” level of climate stability, our best option is simply to face the realities of our suboptimal state of affairs. And because, they continue, the free market is the most efficient system for allocating resources to satisfy the needs of society, the best way to deal with climate change is to allow individuals the freedom to adapt in their own way. As George Reisman writes, “Even if global warming is a fact, the free citizens of an industrial civilization will have no great difficulty in coping with it—that is, of course, if their ability to use energy and to produce is not crippled by the environmental movement and by government controls otherwise inspired” (2007).

Climate Change: A Matter of Justice

Both the mainstream view and the libertarian response to it do not consider adequately an important consideration that is central to the libertarian paradigm: according to most accounts, climate change will produce victims. This fact brings us out of the realm of mere economic efficiency and forces us to confront the ethical issue (Baer 2006, 134). To illustrate this matter, imagine for a moment that we are trying to determine the proper social response to a particular theft. It might be true that of all social systems, an unfettered free market provides the best setting in which the victim of the theft can cope with the loss. He would not need to consult a central planning board in order to replace the stolen property, and his greater purchasing

power—brought about by participation in a thriving market economy—would enable him to afford replacement with comparative ease.

Libertarians surely would not be satisfied with this “solution,” however. In our story, the thief who violated the victim’s *rights* should be held accountable for making proper restitution. Holding the thief responsible does not represent a departure from the normal course of the free market: the free market’s operation is predicated on the recognition of rights (Rothbard [1974] 2000, 89–90). Therefore, when libertarians argue that the proper response to climate change is to allow individuals the freedom to adapt to it, they implicitly assume that climate change does not represent an injustice. If it did, the proper response would not simply be to allow people to adapt: libertarians would support protection of the victims’ rights. But is climate change unjust? To understand how libertarians should think about climate change, we need to understand how they think about justice.

Rights and Entitlements

Libertarian conceptions of justice resolve around the idea that we may not do certain things to people because they, as intrinsically valuable individuals, are not to be used against their will whenever it would benefit others to do so (Nozick 1974, 30–31): to treat them as mere resources for others’ consumption would be to disrespect them on a fundamental level. This view is often represented through some notion of individual “rights.” Although the concept of a “right” may seem intuitively simple, difficulties arise as we try to understand exactly how rights are supposed to function (Thomson 1986, 33–48). Because the first step to finding a proper libertarian response to climate change would seem to involve a determination of whether causing such change violates any rights, we must stipulate precisely what it means to have a right to something.

In the simplest conception, to have a right to something is to be entitled to it, so that its absence constitutes a rights violation, but this conception immediately leads to difficulties. For example, as surely as I have a right to anything, we would generally acknowledge that I have the right not to have my leg chopped off. Yet if I chopped off my own leg, it would seem odd to say that my right had been violated.

Perhaps, then, we can amend our conception to say that to have a right to something is to be entitled to not being deprived of it by external forces. So my right would remain intact if I cut off my own leg, but it would be violated if my leg were chopped off in some other way. This form, too, is problematic. It seems fair to say that just as clearly as I have the right not to have my leg chopped off, I have the right not to be killed. But if I fell ill with a deadly disease, it would seem absurd to say that the pathogens violated my right. It makes no sense to say that pathogens *may not* infect us because to do so would disrespect our individuality and intrinsic value. A pathogen is not the sort of being that can respect anything, and so it cannot *disrespect* us by affecting us in any way.

Accordingly, we might respond that to have a right does not protect us against all external deprivations, but only against those caused by *other moral agents*. Thus, a pathogen, not being the sort of thing that can respond to moral reasons, cannot violate my rights, whereas a person, in contrast, can do so. Again, however, we encounter problems. Returning to the right not to be killed, we find that in some instances a person might kill us without disrespecting our rights. The most obvious example is self-defense. If I attack you with a knife, and the only way you can stop my attack is by killing me, it would almost certainly be permissible for you to do so.

Further sharpening our conception of rights, we might therefore say that to have a right to something means to be entitled against deprivation of it by other moral agents, except when the right-holder has somehow “aggresed” against someone else. So if we were being attacked by someone else, we would be justified in treating the attacker in ways that would be unacceptable in all other cases. It would normally be unacceptable to kill a person, but if I were attacking you with a knife, you would be justified in killing me. Once again, however, counterexamples present themselves. Joel Feinberg writes:

Suppose that you are on a backpacking trip in the high mountain country when an unanticipated blizzard strikes the area with such ferocity that your life is imperiled. Fortunately, you stumble upon an unoccupied cabin, locked and boarded up for the winter, clearly somebody else’s private property. You smash in a window, enter, and huddle in a corner for three days until the storm abates. During this period you help yourself to your unknown benefactor’s food supply and burn his wooden furniture in the fireplace to keep warm. Surely you are justified in doing all these things, and yet you have infringed the clear rights of another person. (1978, 102)

Feinberg maintains correctly that you would be justified in your actions, even though the victim in this case would not be responsible for your situation in any way and certainly could not be identified as an aggressor.¹ But if we are justified in breaking into the cabin, admittedly infringing on someone else’s rights, then to what *do* our rights entitle us?

Although in certain situations it can be permissible for people to do things to others that would not be acceptable in normal circumstances, it seems unlikely that we can spell out exactly which situations qualify in this way and which ones do not. Perhaps we might settle on the idea that to have a right to something comes closest

1. Whether the hiker, in his actions, acquires a duty to compensate the owner of the cabin is an issue that, despite its importance, I do not deal with here. Likewise, I do not deal with whether we would be justified in *forcing* the hiker to pay compensation. Some will react with the intuition that the hiker obviously must pay compensation, whereas others will react with the intuition that obviously the hiker did nothing wrong and that the limits of his gratitude should define the extent to which he should compensate the cabin’s owner. Resolution of these issues lies beyond the scope of the present, already lengthy article.

to being entitled not to be deprived of it by others in the absence of *morally significant reasons* for their doing so. In taking this position, we leave open the issue of exactly what reasons might qualify as “morally significant.” Nevertheless, it does not seem that in so doing, we render our theory of rights meaningless or paralyzed by indeterminacy.

On the contrary, this account seems to match our basic intuitions about how rights are supposed to work (Gaus 2003, 3). In ordinary circumstances, the hiker would be unjustified in breaking into the cabin because it does not belong to him. But the fact that the hiker’s life is at stake in Feinberg’s example seems to provide the kind of reason that justifies his breaking in. This conclusion does not imply that the cabin owner has no right to have the cabin remain free of break-ins. Rather, it is *because* of this right that the hiker must provide morally significant reasons to justify his actions.

This conclusion seems fitting when we recall that rights reflect the respect due to others in light of their individuality and inherent worth (Sauer 1982, 238). Most of us can probably agree that properly respecting others does not mean that we must avoid infringing on their rights *at all costs*. Rather, it means that we must take their rights into consideration very seriously and infringe on them only when we can justify our actions with reasons that have sufficient weight of their own (Gaus 2003, 7–10).

The idea that we can sometimes be justified in infringing others’ rights can be captured in a bit of terminology that I borrow from Judith Thomson. She writes: “Suppose a man has a right that something or other shall be the case; let us say that he has a right that *p*, where *p* is some statement or other, and now suppose we make *p* false. So, for example, if his right is that he is not punched in the nose, we make that false, that is, we bring about that he *is* punched in the nose. Then, as I shall say, we *infringe* his right. But I shall say that we *violate* his right if and only if we do not merely infringe his right, but more, are acting wrongly, unjustly in doing so” (1986, 40).

Throughout this article, I make extensive use of the notion of infringing on individuals’ rights. It is critical to keep in mind that without further discussion of the justificatory reasons that actors or groups of actors might have for these infringements, we cannot condemn their actions as impermissible. We *can* say, however, that the rights-infringing nature of their actions necessitates justification by the relevant actors. To infringe on rights is still, in my view, *prima facie* wrong. Accordingly, I seek here to establish that if we knew that climate change were actually occurring, then we would have to recognize its potential to infringe on rights. Because libertarians are committed to supporting rights where ample justificatory reasons cannot be provided in defense of the actions that infringe them, the appropriate libertarian response to climate change should be to seek out those reasons and, if none are found, to condemn those who contribute to climate change as rights violators.

How Might Climate Change Infringe on Rights? Climatic Shifts and the Right to Environmental Conditions

The most obvious kind of rights infringement that climate change might cause involves direct damage to individuals and property by environmental phenomena. Easiest to think about are the shifts in “normal” environmental conditions projected to occur as a result of human influences on the climate system. One example is the expected rise in sea levels that may occur as higher global temperatures melt a portion of the ice that naturally covers part of Earth’s land area and simultaneously cause thermal expansion in the oceans (Meehl et al. 2007, 812–22). As sea levels rise, some coastline property will be submerged or otherwise damaged. In other low-lying areas, salty ocean water will enter the water table beneath individuals’ property, potentially killing vegetation and destroying the conditions for certain agricultural practices. Levels of salinity in rivers and estuaries will increase in many areas, potentially affecting the kinds of organisms that can survive in them and their capacity to serve as resources for the individuals who depend on them (Nicholls et al. 2007, 330–36). So far as these sorts of effects will be the direct consequences of anthropogenic climate change, it seems that we would intuitively want to say that those who contributed to climate change will have infringed on the rights of those who are harmed.

Similarly, as regional climates shift toward new equilibrium states as the result of anthropogenic forcings, it is likely that some of the natural processes on which many people depend will be substantially altered. For example, most organisms can survive only within a certain range of environmental conditions: inadequate or excessive rainfall, increased average temperature, and other climatic factors might prove detrimental to certain organisms’ capacity to flourish in areas that have supported them and thus preclude the continued normal functioning of certain ecosystems (Fischlin et al. 2007, 219–45). Many individuals, notably farmers and fishermen, might be adversely affected by the effects of regional climate shifts on the organisms on which they rely (Easterling et al. 2007, 282–94). So far as these individuals have a right not to be hampered in the continuing pursuit of their livelihoods and well-being with the aid of resources naturally available to them, pushing their local climate systems out of their previous states and thus bringing about environmental conditions injurious to their interests and needs would seem to constitute an infringement of their rights.

It may be objected that the preceding discussion assumes that individuals have a right to certain environmental conditions, whereas no such right actually exists. One might point out that the climate system is inherently subject to substantial variation. We would not want to claim that individuals are entitled to the cessation of this instability. Accordingly, it might be argued that individuals do not have a right to certain environmental conditions. I believe, however, that such an argument fails to take into account my earlier discussion of rights.

As noted previously, to have the right to something means only that we are entitled to certain things from *other moral agents*. For example, no rights violation would occur if a naturally occurring shift in your regional climate were to produce temperatures too high for you to continue to grow wheat on your land. But if your neighbor installed an enormous heater on the edge of his property and blew warm air onto your property, thus killing your wheat crop, we might find good reason to object. I contend that we object because you possess something that you have an entitlement against being deprived of by other people in the absence of morally significant reasons. So far as climate change inspires this objection, it constitutes a similar infringement on rights.

Altered Climate Systems and Diverted Damage

Not all of the effects of climate change will occur as shifts in normal conditions. For example, a world affected by climate change will likely see an increase in the frequency, duration, and severity of extreme climate events, such as floods, droughts, and heat waves (Meehl et al. 2007, 783). As we have a right against having our property damaged by others' direct actions, we have a right against damage that results from the amplification of natural destructive forces. In this view, contributors to climate change would be infringing others' rights by making the climate system more dangerous so that more damage results than would have occurred in the absence of interference.

However, this intuition is muddled by the fact that in an altered climate system, we will almost certainly see an entirely different set of climate events than we would have if no interference had taken place. That is, it is not the case that we will see all of the floods, droughts, and heat waves that would have occurred naturally, except that many of them will last longer or cause more damage, and new ones will occur. Rather, the floods, droughts, and heat waves that would normally have occurred will never occur, and they will be replaced by an entirely new set of floods, droughts, and heat waves that, if considered in an aggregate sense, will display greater frequency, duration, and severity than would have characterized the set of naturally occurring events.

Even the extreme phenomena that are not made more dangerous (in a statistical sense) by climate change will likely occur in different patterns in an altered climate system. For example, some scientists believe that a warmer climate will produce a greater number of more intense hurricanes, but many others believe that no such change will occur (Mooney 2007). *Even if* the skeptics are correct, and hurricanes do not generally become more dangerous as a result of climate change, *different* hurricanes almost certainly will occur in an altered climate system.

Because different events will occur, affecting different areas at different times, the new set of extreme climate phenomena will affect different groups of people in different ways. This difference raises an important challenge in discussing these impacts from the perspective of justice and rights. Intuitively, it seems that we should

take into account the fact that the climate system is naturally destructive, and individuals should be held responsible only for the *additional* damage that they cause. In an important sense, however, *every* extreme weather event and so every instance of damage may be the result of interference with the climate system. We can only talk about the “additional” damage caused by interference by first aggregating the total damage done in the altered climate system and then comparing it to the total damage that would have been done in the absence of interference.

Given, however, that the damage in question will be distributed differently, affecting some people more than it would have and others less, it is debatable whether such an aggregation can be justified. As many have pointed out in objecting to utilitarianism and cost-benefit analysis, benefits to some individuals do not clearly “cancel out” costs to other individuals. After all, the parties made worse off must still bear the entire burden of their new circumstances; they do not experience any counterbalancing good from the beneficial consequences that others obtain (Nozick 1974, 32–33; Brink 1993, 255). It seems intuitively reasonable to think that we have a right not to have damage inflicted on us, regardless of whether others are made better off as a result.² Accordingly, we might be inclined to say that those who interfere with the climate system infringe others’ rights to the extent that they bring about consequences that are more damaging *to those other individuals*.

Rights and Risk

One might object, however, that many ways of interfering with the climate system ostensibly cause some redistribution of climatic events, producing winners and losers, yet we do not generally think of these ways as involving rights infringements. Given the chaotic nature of the climate system, very small interferences can have important consequences elsewhere: as the saying goes, the flapping of a butterfly’s wings in Brazil might cause a tornado in Texas. Yet surely we do not need a morally significant reason to fly a kite, go base jumping, or operate a windmill because of the tiny disturbances that will be imposed on the climate system. What, then, should we make of the idea that we have the right not to have damaging climatic events diverted onto us? As I have said, to have a right to something means that others may not deprive the right-holder of it in the absence of morally significant reasons. If no reasons are necessary to justify interfering with the climate system in a way that might alter the distribution of extreme climate events, then it seems that we have no right against climatic damage being diverted onto us.

So are no rights infringed as a result of the diversion and amplification of the destructive force of the climate system? Although we have good reason for thinking

2. An open question remains as to whether, in some cases, counterbalancing social benefits might be used as justificatory reasons for infringing on rights. In sufficiently extreme situations, it seems reasonable to think that they might be used in this way, particularly when the infringement would be minor. A rigorous examination of this important issue lies beyond the scope of this article.

that the diversion of climatic damage does not infringe rights, we might still identify a problem in the fact that by causing climate change, we cause greater *overall* damage. By contrast, the eventual consequences for the climate system of flying a kite might as easily be positive as negative—a tornado might be caused, to be sure, but a tornado might also be prevented. Taken together, all of the tiny interferences on the climate system that result from our everyday activities likely do not cause a greater or lesser overall amount of damage, especially on a longtime scale. But what kind of right might an individual possess that would be contingent on the overall amount of damage done by the climate?

Perhaps the answer lies in the concept of risk. By increasing the total amount of damage that will be inflicted by the climate system, contributors to climate change increase individuals' risk of damage from extreme climate events. If we add the increases in the expected value of the climatic damage done by all individuals over a given period, we will ideally see that the total equals the amount by which the climate system was made "more dangerous" by the interference in question. If we recognize a right not to be put at greater risk of climatic damage by the actions of others, then we arrive at a conclusion that matches our initial intuitions perfectly: rights are infringed to the extent that the climate system is made "more damaging" by the contributors to climate change.

The debate over whether we can have rights based on risk is complex, and I do not attempt to resolve it here. For my purposes, it suffices to point out that by dealing with the problem of altered climate systems in terms of risk, we arrive at the kind of answer we expected to find from the beginning. Of course, because our off-the-cuff intuitions are often wrong, we certainly have not *proved* here that we have a right against exposure to risk (or even that such a right makes conceptual sense), but because such a right matches our intuitions, it deserves further attention.

The Right to an Opportunity for Cultural Integration

Focusing only on property damage caused by climate change leaves out a large part of why people are concerned about it. Some people also worry that climate change will deprive members of certain social groups of the opportunity to integrate themselves into the societies in which they were reared as a result of changes in the physical setting in which those societies historically were able to flourish. In many situations, entire cultures will be forced to relocate in order to survive, and some might vanish altogether. Such a prospect is surely troubling, but does it represent an infringement of rights?

In examining this question, we must take care to isolate the deprivation of an opportunity for cultural integration from the sorts of rights infringements discussed so far. For example, if you were so deprived because your farm was flooded by ocean water and you were forced to move, then the problem seems to be one of property

rights, and we already know what to say about it. To avoid confusion, I discuss cases where the deprived party's property is not damaged, and the only harm being done takes the form of cultural deprivation.

Accordingly, imagine a hypothetical scenario in which a young Pacific Islander, Akiko, is deciding what she wants for her future. She owns no property and has not settled into any profession or living situation. She is simply evaluating her options in order to choose how she will begin her adult life.

The IPCC suggests that small island communities will be especially vulnerable to climate change. Besides submerging land on the island, an increased sea level would likely make storm surges more dangerous and exacerbate erosion and other coastal hazards. On land, water resources would likely be seriously compromised, and the introduction of salty ocean water into the environment would likely make agriculture more difficult. In the ocean itself, changing environmental conditions might fundamentally alter ecosystems, possibly affecting populations of fish and other organisms on which the islanders rely. Further, a number of studies have concluded that the effects of climate change on the tourism industry would produce generally negative outcomes for many island economies (Mimura et al. 2007, 689). All things considered, then, it might not be feasible for Akiko to try to start a traditional life for herself on the island. Changing environmental conditions might make it impossible for her to live the kind of life her people lived in the past, and she would have to adjust her plans accordingly.

This is a sad story, to be sure, yet people might in many ways be deprived of the opportunity to live in the manner for which their culture is adapted, ways that would not involve any violations of their rights. For example, a community of small-scale farmers might have fallen on hard times because of the emergence of a large agribusiness corporation, whose greater efficiency and high output caused market prices for the farmers' products to fall below the level required to support their traditional lifestyles. Jebediah, a child growing up in such a community, would seemingly be faced with a situation similar to Akiko's. The changes in market conditions would make it impossible for Jebediah to take his place in the culture of his upbringing, much as Akiko is driven away from her heritage by the changing environmental conditions on her island.

We would presumably not think that the agribusiness corporation, in bringing its products to market in higher quantities and at lower prices, was doing anything wrong, even if it had no significant moral reason to support its actions. In fact, as long as its business practices were not objectionable in other ways, we might applaud it for facilitating an increase in the well-being of its customers, who could use the money they saved on purchasing food products to improve their material conditions in ways that would have been unavailable to them otherwise. Accordingly, the corporation's actions would not seem to represent infringements of any rights held by the young members of the farming community, such as Jebediah, who would be denied an opportunity to carry on in their parents' traditions by the workings

of the free market.³ And so we might think that in the same way Akiko's rights are not infringed when by climate change she is denied the opportunity to become integrated into the culture of her upbringing.

One might object, however, that the two cases differ in that Akiko's situation is the result of rights-infringing damage to the environment in which her culture existed, whereas Jebediah's situation is the result of customers' exercising their right to withdraw their patronage from producers who offer noncompetitive products. Jebediah lost his opportunity because it was built on an assumption of continued voluntary financial support that proved to be false, and neither he nor any of his predecessors had any right to this support. Akiko's elders, however, *did* have a right to the things that Akiko would need in order to exercise her opportunity, and Akiko was denied access to them only because a third party behaved in a way that infringed on the elders' rights.

In the present discussion, however, infringements on the rights of those whose property is damaged by climate change have already been accounted for, and we have stipulated that none of the damaged property belonged to Akiko. So this avenue of establishing her rights is closed: it seems fairly clear that she has no claim to other people's property, and her rights are not infringed when we damage that property.

Rights as a Member of a Community

Akiko's claim, however, does not center on the property damage itself, but rather on its implications for the island community as a whole. Viewed holistically, Akiko's community is a system of interdependences that can be "fostered" or "hindered" in a way that cannot be understood simply as the sum of the effects on individual members. From this perspective, we harm the community not only when we harm a given member, but also when we interfere with an individual's fulfillment of his function in the community. For example, if a community depends on the agricultural products supplied by a particular farmer, and we damage the farmer's land so that his productivity is constrained, then we harm not only the farmer, in that his property is damaged, but also the community as a whole because the farmer filled an important "niche" as the provider of food for the rest of the community.

From Akiko's perspective, climate change would be damaging not only a great deal of others' property, but also the integrity of the community in which she was reared and of which she expected and hoped to become a part. According to our assumptions, it does seem that the opportunities of which Akiko has been deprived depended on the community's health. So, in objecting to the loss of her opportunity to be integrated into her culture, Akiko may be objecting to the loss of her community's integrity owing to the impairment of members' functions as the result of climate change.

3. I am indebted to Harry Brighouse for this point.

What is so special about the holistic “community” in this example that it stands apart from other cases in which an individual’s social functions are impaired in a way that has negative implications for others? We might imagine that a young man named Russell has been training himself to work as a laborer at a pogo stick factory in his town, but when he arrives at the factory to apply for a job, he discovers that terrorists have destroyed it. Unfortunately, the economic conditions in Russell’s town are so bad that his only hope of supporting himself there is to work at the pogo stick factory, and its destruction will force him to leave his community.

In this case, it does not seem that the terrorists infringed on *Russell’s* rights (though they almost certainly infringed on the factory owners’ rights). Nevertheless, Russell depended on the factory’s ability to fulfill its function as a provider of jobs, and by impairing that function, the terrorists deprived Russell of the opportunity to integrate himself into his community. It seems as though the only difference between Russell’s situation and Akiko’s is that Russell’s was brought about by the impairment of the functioning of a single member of the community, whereas Akiko’s was brought about by the impairment of the functioning of multiple members. I see no reason why this difference is morally significant.⁴ Therefore, it seems fair to conclude that although Akiko’s story is a sad one (as are Jebediah’s and Russell’s), her rights have not been infringed as the result of her being deprived of the opportunity to integrate herself into the culture of her upbringing.

Rights for Future People in Light of the Nonidentity Problem

To this point, I have identified rights infringements as potentially occurring where climate change causes the climate system to become more dangerous. It might seem, then, that wherever the effects of a more dangerous climate system are felt, rights will be infringed into perpetuity. After all, the mere passage of time between a cause and its effects does not seem to be the kind of feature that would lead us to deny that a rights infringement has taken place (Ekeli 2004, 429). I surely infringe your rights when I plant a time bomb beside your house, no matter how long a fuse I put on it (assuming, of course, that you will be around when the bomb explodes).

We might take a different view, however, if we thought that those adversely affected by climate change will not *necessarily* be made worse off than they might otherwise have been. Consider the implications of climate change *not* being caused. Those who otherwise would have contributed to climate change would spend their money on different things, travel to different places, and get different jobs. More important, they would meet different people and fall in love in different circumstances (Broome 1992, 34).

4. I am indebted to Dan Hausman for this point.

As Derek Parfit points out in his book *Reasons and Persons*, “Each of us grew from a particular pair of cells: an ovum and the spermatozoon by which, out of millions, it was fertilized” (1986, 351). If our parents had conceived their children in substantially different circumstances than the ones through which we were brought into existence (perhaps even with different partners), the consequence would be that we would not exist; other people would exist instead (351). Parfit observes: “If a choice between two social policies will affect the standard of living or the quality of life for about a century, it will affect the details of all the lives that, in our community, are later lived. As a result, some of those who later live will owe their existence to our choice of one of these two policies. After one or two centuries, this will be true of everyone in our community” (377).

The changes in our lifestyles necessary to prevent anthropogenic climate change seem to be the sorts that will affect future people’s identities within a relatively small number of generations. Even communities completely isolated from the rest of civilization will probably be affected through differences in their climates. Therefore, we can say with reasonable certainty that if humanity does not cause climate change, the people who will eventually inherit the earth will be a completely different group of people than would have existed if climate change had been allowed to occur.

Acknowledging this phenomenon, referred to as the “nonidentity problem” (Parfit 1986, 351), we reach a startling conclusion. If we cause climate change, the people who will experience its effects will be people who could not possibly have existed if climate change had not occurred. Accordingly, they will be no worse off as a result of our choice to allow climate change to occur than they would have been in any other scenario. Their climates would be a necessary condition of their existence. Do we infringe these individuals’ rights by contributing to climate change?

Perhaps the most intuitive response is that we do not. In a sense, we generally think of rights infringements as *harmful* to their victims, and it is difficult to identify any person among the future generations dealing with the effects of climate change who will be *harmed* by the actions of those who will have caused it. As noted, none of them will be any worse off than he or she would have been in any other scenario. Essentially, the only thing that will have been done to them is that they will have been brought into existence (Vanderheiden 2006, 339). Although it is conceivable that in some cases where a life is deemed to be not worth living, it might be seen as harmful to be brought into existence (Parfit 1986, 373), this possibility does not nullify the overall notion that bringing a different set of people into existence is not a harmful act. If harm is a core component of a rights infringement, then, it seems that no rights are infringed when future people, who exist only because of climate change, have to deal with its effects.

Some might point out that even if the effects of climate change, strictly speaking, do not make anyone worse off than he could have been, they will impose definite *costs* on future people. Individuals have interests in certain conditions being

the case, and when those interests are hampered, they must bear a burden even if their overall well-being is not made any worse than it otherwise might have been (Woodward 1986, 809). An individual whose house is destroyed by a flood, for example, must still have to deal with the consequences of that destruction even if the flood's occurrence is a necessary condition of that individual's existence.

Therefore, one might coherently argue that individuals have a right not to have certain interests hampered by others, even if the entailed costs do not result in the victims' being made worse off as a result. For example, James Woodward writes:

In his moving memoir *Man's Search for Meaning*, Viktor Frankl seems to suggest that, as a result of his imprisonment in a Nazi concentration camp, he developed certain resources of character, insights into the human condition, and capacities for appreciation that he would not otherwise have had. Let us suppose, not implausibly, that Frankl's mistreatment by the Nazis was a necessary condition for the richness of his later life, and that, had the Nazis behaved differently toward him, his life would have been, on balance, less full and good. It seems wildly counterintuitive to suggest that it follows from this fact alone that the Nazis did not really wrong Frankl or violate his rights. (1986, 809)

Woodward's suggestion is correct. The Nazis did infringe Frankl's rights, even though he was not actually made worse off on the whole, because they imposed costs on him. As noted previously, the contributors to climate change will bring about the occurrence of phenomena that will impose burdens on future people. If we accept that the hampering of certain kinds of interests provides sufficient grounds for identifying a rights infringement, we might conclude that climate change does infringe the rights of future individuals.

However, a critical difference between what it means for the Nazis to hamper Frankl's interests and what it means for the contributors to climate change to hamper future people's interests should be noted. We can reasonably say that if the Nazis had not imprisoned Frankl (and no one else did, either), then Frankl would have lived his life unimprisoned—he would have been free. But we can make no similar claim about the future individuals whose interests are affected by climate change. If the contributors to climate change had not acted as they did, it is not the case that the future individuals in question would have been unaffected by climate change. Rather, they would never have come into existence.

One way to think about this difference is to notice that discussions of rights generally presume a baseline set of conditions to which an actual set of conditions is compared. For Frankl, the relevant baseline was a state of liberty in which his interest in being free of unjust imprisonment was fulfilled. By imprisoning Frankl, the Nazis "moved" Frankl away from the baseline in a way that impeded his interest in freedom. In contrast, the future people who will be affected by climate change will be

born into a world in which they inherently will never be “on” the baseline of freedom from the costs that will be imposed on them. Where Frankl was *moved off* his baseline, the future people affected by climate change will not be. For them, the baseline in question was always *unattainable*.

In order to have a right that something be the case, it must be possible that that thing be the case. If the thing in question is the integrity of my interest, then it must be possible that my interest be fulfilled. But the future people’s interests that will be “hindered” by climate change cannot possibly be fulfilled. Therefore, it seems reasonable to say that future people have no rights based on these interests.

Rights reflect the respect to which individuals are due as intrinsically valuable individuals. If it is impossible that a person exists unless certain things be the case, then it seems odd to say that we disrespected that person by bringing about those conditions (again, excluding the possibility that the person’s life is not worth living). We may conclude, therefore, that we do not infringe on future people’s rights by causing phenomena that will impose costs on them so far as the occurrence of those phenomena is a necessary condition of those individuals’ existence.

Where Do We Stand?

In the preceding pages, I have considered a number of different ways in which climate change might affect people and several ways of thinking about the moral relevance of those effects in regard to individuals’ rights. Although I have identified certain ways in which climate change likely would infringe on rights, much of the concern surrounding climate change cannot be reconciled with a rights-oriented paradigm. I have further identified the possibility of a “right against being put at risk” as an area in which the implications of climate change for rights is unclear and in need of further development. How does this discussion fit into the search for a proper libertarian response to climate change?

To have a right to something means that one is entitled against being deprived of it by other moral agents unless morally significant justificatory reasons can be offered in defense of this action. By identifying at least some ways in which climate change might infringe on rights, we shift the focus to those who cause climate change, demanding that they justify their actions. Libertarians must now examine the potential for legitimizing anthropogenic climate change; if no such legitimization can be advanced, the proper libertarian response to anthropogenic climate change is to condemn the actions that contribute to it as unjust and to demand that they be discontinued or curtailed to justifiable levels.

Nothing I have written here *proves* that those who are supposedly causing climate change are in fact acting unjustly. Much more must be said about the kinds of reasons that can be offered in defense of rights-infringing actions. I have suggested that it would be implausible to think that rights can never be legitimately

infringed—we do not owe each other an infinite degree of consideration. Nevertheless, respect for individuals and their rights is an important part of any plausible ethical theory. Finding a comfortable balance between these ideas will be critical in the search for a more thorough libertarian analysis.

In considering climate change, we must take into account individuals' rights not to be interfered with as they pursue their goals and desires. Because many proposals for dealing with climate change involve constraining individuals, their proponents must successfully defend themselves against charges of rights infringements. Libertarians will need to consider the procedural justice and the legitimacy of public-policy measures before formulating any concrete recommendations. Nothing in this article should be construed as an endorsement of any policy option.

In moving toward a more complete libertarian response, we must also take explicit account of this discussion's assumption that the current mainstream scientific understanding of climate change is beyond dispute. In the real world, this presumption may be questionable or entirely absent. Even if no justificatory reasons can be found on behalf of the actions alleged to contribute to climate change, our ability legitimately to consider those actions to be unjust depends on the degree to which we are certain about their negative consequences.

A further controversy pertains to the attribution of moral responsibility for climate change to the billions of independent individuals whose actions collectively cause it to occur. Some libertarian thinkers have questioned whether individuals can legitimately be held responsible for a phenomenon that their individual actions can neither have caused nor prevented and that was not made noticeably more damaging by their marginal contributions (Hunt 2001; Reisman 2002, 13; Long 2007). This debate must be resolved before a definitive libertarian stance on climate change can be achieved.

In this article, I have taken an initial step in formulating a coherent libertarian response to climate change. Much more must be done before such a response can be outlined clearly and completely. Continuing simply to brush the problem aside will not do.

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