

COMMENTARIES

CORRECTIVE JUSTICE AND LIABILITY FOR GLOBAL WARMING

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This brief Commentary focuses on Professor Farber's suggestion that corrective justice (CJ) might justify institutions imposing liability on greenhouse gas (GHG) emitters so as to compensate the victims of climate change.¹ He advances other arguments as well,² and indeed it is plausible that considerations of overall well-being, or distributive justice, might warrant some sort of liability scheme. I will not, however, address such considerations here.

If there is such a thing as CJ, what does it require? A standard suggestion is this: CJ imposes a duty on the agent who has acted wrongfully, and thereby caused loss to some individual, to repair the loss.³ There are various aspects to this paradigm. The victim's loss (arguably) must be more than reduction of well-being; rather, it must be a setback to some protected interest, an aspect of well-being or of personhood that is singled out for concern as a matter of CJ.⁴ The action must be causally connected to the loss.⁵ And the action must

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¹ See Daniel A. Farber, *Basic Compensation for Victims of Climate Change*, 155 U. PA. L. REV. 1605, 1641 (2007).

² See *id.* at 1641-47.

³ See, e.g., Benjamin C. Zipursky, *Civil Recourse, Not Corrective Justice*, 91 GEO. L.J. 695, 699-700 (2003) ("Corrective justice theory explains tort law as the embodiment of a deontological . . . set of values. One who causes a wrongful injury to another is obligated to compensate the other for the injury caused." (footnote omitted)).

⁴ I say "arguably" because it is an open question whether CJ protects all aspects of well-being, or just certain core interests. See Heidi M. Hurd, *The Deontology of Negligence*, 76 B.U. L. REV. 249, 260-61 (1996) (discussing different deontological conceptions of negligence—one that condemns conduct that is substantially risky to any interest, another that condemns conduct that is risky to a substantial interest). But the clearest cases of deontological wrongs involve some setback to the individual above and beyond a loss to her well-being. See SHELLY KAGAN, *NORMATIVE ETHICS* 85 (1998); Hurd, *supra*, at 261. And, as mentioned below, tort law does not protect well-being per se. Thus the clearest case for a duty of repair in CJ will involve a loss to some interest such as the integrity of property or the physical body.

⁵ See Stephen R. Perry, *The Moral Foundations of Tort Law*, 77 IOWA L. REV. 449, 450

have been “wrongful” or “faulty.”⁶

Each of these elements is illustrated by doctrines of tort law. This is not to say that tort law actually tracks CJ. CJ theorists may simply be incorrect in claiming that CJ is one component of morality. (Consequentialists deny that it is.) And, even if CJ theorists are correct, tort law may in fact be shaped by both CJ and non-CJ considerations. Still, tort law is the legal institution that CJ theorists believe has the closest connection with CJ. It is therefore instructive to note the following: (1) Tort law focuses on personal injury or property harms, rather than losses to well-being per se. There is no tort of diminution of happiness and no tort of negligent infliction of pure economic loss.⁷ (2) Tort liability, at least under the rubric of negligence, obtains only if the defendant was both the cause-in-fact and the proximate cause of the plaintiff’s loss.⁸ (3) Tort law typically requires fault in the form of either “intentional” wrongdoing or negligence.⁹ Even so-called “strict liability” requires that the action causing loss satisfy some further description, in part because the notion of imposing liability for the sheer causation of harm is chimerical.¹⁰ For a given loss event, there will be a multiplicity of causes of that event, including actions by the victim.¹¹

Farber proposes that GHG emitters be held liable for *environmental damage*, specifically sea level rise, harm to natural systems such as coral reefs or glaciers, and drought and loss of water supplies.¹² An obvious difficulty in justifying such liability as a matter of CJ is that these environmental damage events are not themselves losses to indi-

(1992) (explaining that the better and dominant conception of CJ imposes a duty of repair on some individual who has “causally contributed” to the injury).

⁶ Although some CJ theorists propose liability without fault, the case for “wrongfulness” or “fault” as an element of CJ is strong. *See, e.g., id.* at 496-500.

⁷ Loss of happiness may be an element of tort damages, but the infliction of a loss of happiness, even an intentional infliction, is not itself a tort. *See* DAN B. DOBBS, *THE LAW OF TORTS* 822 (2000) (noting that “[l]oss of enjoyment of life” is an element of damages for physical injury); *id.* at 832 (stating that the tort of intentional infliction of emotional distress requires severe distress). On negligent infliction of economic loss, *see id.* at 1282-83.

⁸ *See id.* at 269.

⁹ *See id.* at 941.

¹⁰ *See id.* at 942 (surveying cases where tort law recognizes strict liability and characterizing them as cases where the “defendant creates or introduces a dangerous condition not commonly accepted or reciprocated in the social unit”).

¹¹ Stephen R. Perry, *The Impossibility of General Strict Liability*, 1 *CAN. J.L. & JURISPRUDENCE* 147, 154-59 (1988).

¹² *See* Farber, *supra* note 1, at 1609-13.

viduals' paradigmatically protected interests. They do not constitute (or directly cause) infringements of private property, physical injuries to individuals, or death. An exception would be the loss of acreage to coastal property owners, a quite direct result of sea level rise. By contrast, damage to natural systems and water supplies will not amount to an invasion of private property interests, since these resources are not (at least not typically) privately owned.

Can't this difficulty be circumvented by imposing liability on GHG emitters for a different set of harms—namely personal injury and private property damage, the core of tort law? Such a compensation scheme would more readily satisfy the protected-interest element of the CJ paradigm than Farber's scheme, but would have greater difficulties in satisfying the causal-connection element. Since global warming causes deaths, injuries, and property losses *via* environmental damage (or extreme weather events), the causal links between a particular set of GHG emissions and those protected interests will generally be more attenuated than the links between those emissions and environmental damage.

A different possibility, preserving Farber's focus on environmental damage, is to conceptualize an ecosystem or water supply as public property, belonging to the governmental entity with primary jurisdiction over this resource, or held in trust for the citizenry to which that entity is politically accountable. Indeed, the main U.S. scheme for rectifying environmental damage, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), provides for suits brought by the United States, the states, or Indian tribes, as trustees for the damaged resources, rather than by private individuals.¹³

Compensation to governmental entities for damage to public property is not unimpeachable as a matter of CJ. Is the loss supposed to be to the public entity itself (in which case one might wonder whether artificial persons, such as governments, can be victims to whom CJ creates duties of repair) or to the natural persons, i.e., individual citizens, whom the entity represents (in which case one might wonder whether an individual's interest in the publicly held resource is the sort of protected interest that CJ safeguards)? But providing compensation to public entities for environmental damage caused by GHG emissions seems at least a promising approach to a compensation scheme that will fit within the CJ paradigm.

Upon whom, though, would liability be imposed? Who, for ex-

¹³ *Id.* at 1623-25.

ample, has a duty as a matter of CJ to compensate Australia for the damage to its coral reefs caused by global warming? Are there GHG emitters whose contributions to global warming, and thus to the damage to the public property of Australia, were wrongful (in some sense)?

One route to wrongfulness is to show that the actor “intentionally” caused the loss: that he acted with the very purpose of causing it, knew that it would result from his action, or at least should have believed to a certainty or near-certainty that it would result.¹⁴ It is difficult to see how GHG emissions will be “intentional” in this sense. GHG emissions are a byproduct of activities (using automobiles, generating electricity, running factories, etc.) that do not have global warming as their very object. And, given the uncertainty about the causes and consequences of global warming, it will be very difficult to show that some group of GHG emitters knew, or had reason to believe to a near-certainty, that any environmental damage—let alone the particular damage claimed by some public entity (Australia, say)—would result from its emissions.

Another route to wrongfulness is to show that the action, albeit unintentional, was wrongful under some other description. But there is a problem. GHG emissions, at least at the level of individual actors, may have the structure of a moral collective action problem. A moral collective action problem arises when there is a kind of action that, if taken by every or most members of a group, has morally bad consequences, but that each member of the group is morally justified in taking.¹⁵ Assume, in particular, that the causal link between GHG emis-

¹⁴ “Intention” in the narrowest sense of specific intention, where the action is undertaken with the aim of producing the loss (either because the actor has that as his ultimate goal or because he sees it as a means to some ultimate goal), may well be relevant to deontological wrongdoing. See KAGAN, *supra* note 4, at 100-05. Intention for purposes of the “intentional” torts is the disjunction of specific intention and subjective near-certainty. See DOBBS, *supra* note 7, at 47-49. I have built in the further disjunct of objective near-certainty to suggest that GHG emitters do not meet even a very generous version of “intention.”

¹⁵ For a discussion of moral collective action problems, specifically problems created by subthreshold actions—actions that are too small to cause harm individually—see Jonathan Glover, *It Makes No Difference Whether or Not I Do It*, 49 PROC. ARISTOTELIAN SOC'Y (SUPP.) 171 (1975); Jonathan Harrison, *Rule Utilitarianism and Cumulative-Effect Utilitarianism*, 5 CAN. J. PHIL. (SUPP. V) 21 (1979). For a skeptical view, see DONALD REGAN, UTILITARIANISM AND CO-OPERATION 54-65 (1980). In this brief Commentary, I do not mean to stake out a definitive position on the possibility of moral collective action problems and their precise structure, if they are possible. I simply mean to suggest that the issue is a serious one that anyone confronting the morality of global warming needs to engage. Thresholds are intuitively possible and the most straight-

sions and global warming has a threshold¹⁶ far above the increment of GHGs produced by any given individual through any of *her* activities, such as driving a gasoline-powered car, using electricity from coal-fired power plants, or purchasing goods that were produced using such electricity. Imagine, then, the position of an individual deciding whether to reduce her own GHG emissions at some moderate cost—for example, by switching to a more expensive hybrid automobile and lowering her thermostat in winter. Because the individual's own reduction in GHG emissions would not change global temperatures *at all* (given the threshold hypothesis), that reduction apparently cannot be morally required, at least *qua* global warming. Indeed, because the reduction in GHGs imposes costs on the individual and members of her household, in reduced material well-being and comfort, it is the decision *not* to reduce her own emissions that appears to be morally required, or at least morally supererogatory.

The problem here is not just a problem about causation. Tort scholars puzzle over cases where but-for causation fails—for example, where two careless backpackers, acting independently, flick cigarette ashes which produce small fires that combine to destroy a forest, so that neither act of ash-flicking was the but-for cause of the forest's destruction.¹⁷ In that example, each backpacker's action was negligent. Each act of ash-flicking, taken individually, had substantial expected costs, because in many possible states of the world (just not the actual world, as it turns out) there would be no other ash-flicker in the background and, thus, no fire without the act. By contrast, if an individ-

forward way to construct what appears to be a moral collective problem.

¹⁶ By this I mean some amount of emissions, *T*, such that emissions below *T* cause no change in global temperatures. Toxicologists have traditionally assumed that non-carcinogenic toxins have a threshold level below which exposures determinately do not cause harm, and this model has been influential in shaping regulation. See, e.g., Matthew D. Adler, *Against "Individual Risk": A Sympathetic Critique of Risk Assessment*, 153 U. PA. L. REV. 1121, 1161 nn.150-51 (2005) (citing sources). For discussions of possible thresholds with respect to different impacts of global warming, see Ove Hoegh-Guldberg, *Climate Change, Coral Bleaching, and the Future of the World's Coral Reefs*, 50 MARINE & FRESHWATER RES. 839 (1999) (coral bleaching); Martin Hoyle & Mike James, *Global Warming, Human Population Pressure, and Viability of the World's Smallest Butterfly*, 19 CONSERVATION BIOLOGY 1113 (2005) (species extinction); Michael Oppenheimer, *Global Warming and the Stability of the West Antarctic Ice Sheet*, 393 NATURE 325 (1998) (melting of the West Antarctic ice sheet); Thomas F. Stocker & Andreas Schmittner, *Influence of CO₂ Emission Rates on the Stability of the Thermohaline Circulation*, 388 NATURE 862 (1997) (disruption of thermohaline circulation).

¹⁷ See Richard W. Wright, *Causation in Tort Law*, 73 CAL. L. REV. 1735, 1775-76 (1985) (describing cases of duplicative and preemptive causation, where the but-for test fails).

ual's own GHG emissions produce no change in global temperatures regardless of the background level of GHG emissions produced by other actors, then there is no state of the world in which the emissions cause increased environmental damage and thus, apparently, no negligence in the individual act.¹⁸

The existence of a threshold in the casual link between GHG emissions and global warming is the easiest way to generate an (apparent) moral collective action problem. But such a problem could also seemingly arise given a threshold in the link between global warming and environmental damage or, more generally, given nonlinearities in the link between GHG emissions and global warming or between global warming and environmental damage.¹⁹

The possibility that GHG emissions constitute a moral collective action problem is an important difference between liability for global warming and the proposal that reparations be paid for slavery, a proposal that Farber points to as a rough analogy.²⁰ Individual slave owners did confront a sort of threshold with respect to creating a culture of racial subordination—that is, no individual slave owner's actions may have made a difference to the existence and intensity of general views about black inferiority—but, in addition, each individual slave owner did very substantial wrong to the slaves he owned. So there is no question about the wrongfulness of each slave owner's actions, taken alone, while there is a serious question about the wrongfulness

¹⁸ As Jonathan Harrison explains:

Th[e] risk-avoidance explanation of why I have a duty not to do something which, harmless though it is by itself, would do harm if enough other people were to do the same, is . . . totally unsatisfactory. That it is unsatisfactory follows from the remarks I have already made about a threshold below which one action by itself has not the power to produce any ill effects. Given that it falls below this threshold, no individual action by itself ever does any harm, whether it is the only one of its kind which is performed, or whether everybody or almost everybody performs actions of a similar kind. The effects of my action (and, of course, theirs) on the harm done [are] always nil, whether others do what I do or whether they do not.

Harrison, *supra* note 15, at 33-34.

¹⁹ To see in a simple way how nonlinearities could produce an (apparent) moral collective action problem, imagine that there are a group of n potential individual emitters, each potentially emitting K units of GHGs, and that $W(\cdot)$ is the change in global temperature produced by emissions. Each individual benefits by B from the emission of K units, and the costs of a given change are linear in the change, i.e., equal to $cW(\cdot)$. Then it's easy to see that if $W(nK) > nW(K)$, the net benefits of an individual's emissions might be positive, while the net benefits of emissions in the aggregate might be negative. That is, $B > cW(K)$, but $nB < cW(nK)$.

²⁰ Farber, *supra* note 1, at 1632-35.

of each GHG emitter's actions, taken alone.

Whether GHG emissions truly do amount to a moral collective action problem depends on the science of global warming. For example, if the connection between GHG emissions and environmental damage is linear, or if there are thresholds but they are below the level of individual emissions, the problem disappears. The problem may also, perhaps, be dissolved at the level of moral theory. Perhaps the moral justifiability of an act depends, in part, on the justifiability or consequences of some group of acts to which the individual act belongs.²¹ Finally, it is possible (I suppose) that an action might be "faulty" or "wrongful" as a matter of CJ even though it is morally justified. There are many difficult scientific and moral questions here, at which I can only gesture. I simply wish to suggest that the possibility of a moral collective action problem is one that anyone hoping to justify the imposition of liability on GHG emitters as a matter of CJ must grapple with.

One way to address moral collective action issues in the design of a liability scheme is to impose liability on "large" actors—those who produced or induced a large quantity of emissions. It is possible that neither China's emissions, nor the emissions of all the cars produced by Ford Motor Co., nor the emissions of an individual natural person, make any difference, taken alone, to global temperatures. On the other hand, it is possible that China's emissions make a difference, while Ford Motor Co.'s and the individual's do not. But it seems virtually inconceivable that China's emissions make no difference, while Ford's or the individual's do. There are, to be sure, scenarios where one individual makes a difference, while a whole group of different individuals do not. Imagine that there are a billion and one buttons; only one is connected to a huge nuclear bomb. I press that button while a billion Chinese citizens simultaneously press the others. Thus, China's actions, en masse, do not cause nuclear destruction, while

²¹ For example, Harrison defends "cumulative effect utilitarianism" as a solution to the problem of subthreshold actions:

[C]umulative-effect utilitarianism [contends] that I ought to omit an action if, because of its cumulative effects, harm would be done if everybody were to do it, or to perform an action if good were to be done if everybody were to do it, regardless of the fact that, in the first case, it may by itself do no harm, or even do good, and regardless of the fact that, in the second case, it may do no good, and even do harm.

Harrison, *supra* note 15, at 28-29. Glover argues for a "principle of divisibility": "It says that . . . where a hundred acts like mine are necessary to cause a detectable difference I have caused 1/100 of that detectable harm." Glover, *supra* note 15, at 174.

mine does. I am not aware of suggestions, however, that the connection between GHG emissions and global warming has this sort of structure!

This line of thought suggests that a scheme of liability for global warming should target the largest discrete actors—namely, governmental entities. If the quantity of emissions produced by firms or individuals within the territory of the United States over some stretch of time was sufficiently large to cause, and to have been expected to cause, a change in global temperatures, then it is plausible that the government of the United States acted wrongfully in encouraging or failing to reduce those emissions.²² Combining this suggestion with my suggestion earlier that compensation might be paid *to* a governmental entity for damage to the environment within its jurisdiction, what emerges is this: A government-versus-government structure for global warming liability seems particularly promising as a matter of CJ. For example, Australia might seek redress from the United States for damage to Australia's coral reefs that emissions from the United States, as a whole, caused and that the U.S. government allowed. This government-versus-government structure seems to involve compensation for a loss that is a protected interest (the environmental resource understood as public property); the causal issues, however thorny, are less so than in the case of compensation for private property losses or individual injuries or deaths; and a government's inaction in the face of GHG emissions may well be wrongful, by actually making a difference to global temperatures, even if individual or firm emissions are not.

But there is a further wrinkle, having to do with one sort of remedy that Farber proposes: namely, *ex ante* compensation to monitor and prevent future harms.²³ While a claim by Australia against the United States for past damage to its coral reefs seems plausible as a matter of CJ, a claim by Australia against the United States for money to fund steps that will ward off possible future damage to Australia's reefs is less plausible.

The key difficulty is that risk imposition is not itself a welfare setback.²⁴ By analogy (if not by strict deduction), the risk of infringing a

²² To be sure, pure inaction may not be wrongful as a matter of CJ, but I assume that a plausible case can be made that the United States is on the "action" side of any action/inaction divide with respect to the emissions of GHGs, by establishing an elaborate system of air pollution regulation without controlling GHGs.

²³ Farber, *supra* note 1, at 1635-36.

²⁴ On the connection between risk and harm, see Adler, *supra* note 16, at 1188-93.

protected interest does not itself infringe a protected interest.²⁵ If I am likely to trespass on your property or body, but have not yet done so (and the likelihood of my doing so does not scare you), I have not yet wronged you and, thus, have not yet done anything that would trigger an obligation to repair under CJ.²⁶ Indeed, tort law generally does not compensate for pure risk imposition.²⁷ So-called “loss of chance” cases involve a special relationship between the plaintiff and defendant, such as that between doctor and patient.²⁸ The medical monitoring cases, which seem to provide a helpful analogy for Farber,²⁹ are controversial and, in any event, typically involve something additional to the pure risk of possible future injury and the pure economic loss of monitoring costs—in particular, a current physical impact, such as exposure to a toxin.³⁰

Australia’s claim to recover from the United States now, to fund a program to monitor and mitigate future damage to its coral reefs, looks like compensation for pure risk imposition or pure economic loss, and is therefore problematic as a matter of CJ.

In conclusion, I suggest that CJ may warrant a compensation mechanism for global warming, but that the structure of that mechanism may be quite distinctive: namely, compensation by governments to other governments for past (not expected) environmental damage. Given a causal link between GHGs and global warming, it seems very plausible that GHG emissions by sufficiently large actors are substantial moral wrongs. But one should not leap from that premise to the conclusion that a compensation scheme will be supported by considerations of CJ simply because it channels resources from GHG emitters to those suffering or likely to suffer the effects of global warming.

²⁵ This is not strict deduction insofar as protected interests might be aspects of autonomy or “personhood,” rather than of well-being.

²⁶ Although it is arguable that the imposition of risk in a Bayesian sense *does* amount to a dignitary harm, see Adler, *supra* note 16, at 1192-93, it is hard to see how this line of thought supports *ex ante* remedies for global warming. Past GHG emissions by U.S. emitters that threaten future harm to coral reefs are hardly a dignitary harm to Australia.

²⁷ See Matthew D. Adler, *Risk, Death and Harm: The Normative Foundations of Risk Regulation*, 87 MINN. L. REV. 1293, 1437-39 (2003).

²⁸ *Id.* at 1438.

²⁹ Farber, *supra* note 1, at 1636.

³⁰ See Kara L. McCall, Comment, *Medical Monitoring Plaintiffs and Subsequent Claims for Disease*, 66 U. CHI. L. REV. 969, 975-76 (1999).