

practices to make otherwise amorphous ideas more concrete and accessible. *Transnational Environmental Regulation and Governance* will advance our understanding of how environmental regulation works generally and how various models of TER operate. I highly recommend this book.

Melissa Powers
Lewis & Clark Law School, Portland, OR (United States)

Transnational Environmental Law, 8:3 (2019), pp. 581–588 © 2019 Cambridge University Press
doi:10.1017/S2047102519000323

Climate Justice and Historical Emissions, edited by Lukas H. Meyer & Pranay Sanklecha
Cambridge University Press, 2017, £88.99 hb, \$93 ebk
ISBN 9781107069534 hb, 9781108110334 ebk

The devastating effects of climate change are unfolding before us as heatwaves, severe drought, fires, floods, hurricanes, rising seas, and land loss occur with increased intensity and frequency. The 1.5°C report of the Intergovernmental Panel on Climate Change (IPCC),¹ released in 2018, showed that the effects of climate change have become more immediate and severe than the IPCC had expected, evidenced by the discovery that Alaskan glaciers are melting 100 times faster than previously thought² and the frightening spectacle of Greenland's ice sheets losing more than 12 billion tons of ice in a single day in the summer of 2019.³ As greenhouse gases (GHGs) continue to flood the atmosphere and feedback loops are set into motion, conditions will only worsen, exposing the most vulnerable and least culpable communities to the greatest damage. To prevent catastrophic outcomes, the world must achieve rapid and massive emissions reductions and invest in significant restoration and adaptation efforts. Yet, policymakers must also ensure that these response efforts are fair.

Climate Justice and Historical Emissions, edited by Lukas H. Meyer and Pranay Sanklecha, is a multivalent volume dedicated to the question of who can and who should be held responsible for historic emissions. Because of the long atmospheric lifespan of carbon dioxide (CO₂), climate change is the product of GHGs that have accumulated in the atmosphere for hundreds of years. Given that industrialized countries like the United States (US) have consumed a disproportionate share of the

¹ IPCC, 'Global Warming of 1.5°C' (2018), available at: <https://www.ipcc.ch/sr15>.

² J. Howard, 'Alaskan Glaciers Melting 100 Times Faster than Previously Thought', *National Geographic*, 29 July 2019, available at: <https://www.nationalgeographic.com/environment/2019/07/alaskan-glaciers-melting-faster-than-previously-thought>.

³ M. Solly, 'Greenland Lost 12.5 Billion Tons of Ice in a Single Day', *Smithsonian Magazine*, 5 Aug. 2019, available at: <https://www.smithsonianmag.com/smart-news/greenland-lost-record-breaking-125-billion-tons-ice-single-day-180972808>.

atmosphere's absorptive capacity, it might seem obvious that developed countries and their citizens should bear the primary responsibility for mitigating climate change and dealing with its consequences. However, this simplified view fails adequately to address several embedded questions, such as whether living people can be considered ethically responsible for the harm caused by ancestral emitters who did not, and could not, know the risks their conduct would create for future generations; whether those who will suffer the most dangerous consequences of climate change should be entitled to damages from historically large emitters; and how to fairly allocate the atmosphere's remaining absorptive capacity. *Climate Justice and Historical Emissions* explores these and other philosophical, theoretical, and legal questions related to climate justice.

In the book's introduction, Meyer and Sanklecha lay the groundwork by asking, 'How, if at all, and for what reasons, should the history of past people's highly unequal causal responsibilities for climate change matter for the distribution of the moral responsibilities to respond to the problem among currently living and future people?' (p. 4). The remainder of the book then grapples with some of the tensions underlying the issue of responsibility: ignorance and culpability; moral versus causal, and individual versus collective responsibility; fairness and feasibility; and justice and survival. As a whole, this collection offers a window into the complexities of assigning responsibility for climate change and sheds some light on the intractable nature of the decades-long debate. However, the book would have benefited from a more foundational discussion of the distinctions between causal, moral, and legal responsibilities and a more focused purpose. In addition, as described in more detail below, many of the chapters would have benefited from deeper discussions of how the ideas could be applied in practice.

Acknowledging that past polluters did not and could not understand the long-term consequences of their emissions, Chapters 1 to 4 focus on theories of responsibility that would assign present people a duty to recompense those harmed by historical emissions, despite past people's lack of moral culpability. Chapters 1 to 3 present different arguments in favour of assigning responsibility, and Chapter 4 investigates the extent to which liability can be based on past conduct before the risk of harm was known. These four chapters share the view that responsibility for at least some historical emissions should attach to present living people.

In Chapter 1, David Heyd argues that despite the original polluters' innocent over-use of the atmosphere, the unjust enrichment of their collective descendants places a duty on these beneficiaries. Heyd emphasizes that the injustice is located in the irreversibly diminished absorptive capacity of the atmosphere, which undermines the ability of later generations to benefit equally from the climate system. By analogy with the use of affirmative action to compensate for the enduring disadvantages of slavery and segregation, Heyd proposes a cap-and-trade system through which beneficiaries of historical emissions can fulfil their duty of restitution by taking on greater mitigation burdens and creating equal opportunities for the historically disadvantaged. He also argues that present people owe developing countries compensation for emissions after the point at which people knew or should have known about climate change. Finally, once historical emissions are accounted for, Heyd asserts that future people must share the burdens of mitigation and adaptation on the basis of distributive justice. Although Heyd does not

adequately explore the practical aspects of this approach, he establishes a useful theoretical model of distributional justice that accounts for historical emissions.

In Chapter 2, Janna Thompson, like Heyd, believes that historical emissions matter, but she assigns to current living people in industrialized nations a reparative duty to those harmed by historical emissions. Thompson proposes a version of the polluter-pays principle which establishes non-culpable responsibility for past people's emissions, arguing that historical emissions should be considered actionable. Central to her time-neutral theory is her idea of the state as a transgenerational entity, members of which share the obligation to fulfil the state's duty to justice. Thus, she asserts, current living people connected with historical emissions have a duty to compensate those harmed by climate change, given the straightforward causal responsibility between historical emissions and climate impacts.

In Chapter 3, Daniel Butt takes the issue of responsibility in a different direction by challenging the invocation of the 'exculpatory block' of ignorance – the idea that people should not bear responsibility for behaviour they did not know was wrong at the time. Butt argues that the ignorance of forebears should not excuse the remedial responsibility of present people when this ignorance had no material impact on the outcome. As examples of past behaviour that, by extension, supports a presumption of culpability, Butt points to the long history of harmful policies rationalized by national interests and to the fact that near certainty about the harmful effects of climate change has not served to check emissions. Therefore, when it is overwhelmingly likely that emitters with complete information would have acted no differently, ignorance should not excuse the remedial responsibility of present people. While Butt limits the application of his argument to claims where historical ignorance is the reason for exculpation, the retrospective presumption of culpability on the basis of contemporary behaviour is troubling, particularly because it ignores the realities of path dependency, wrongly assuming that people had the ability to adjust their conduct once they became aware of the consequences.

In Chapter 4, Daniel Farber addresses the issue of moral responsibility in the context of legal liability. Farber investigates how existing liability regimes in the US and the European Union (EU), as well as international environmental law, treat situations analogous to climate change. Farber concludes that liability for *all* historic emissions is unlikely because it would require showing that emitters knew or should have known of the dangers of climate change and should have taken reasonable steps to prevent the resulting harm – requirements that empirical evidence cannot support. However, Farber identifies two plausible claims for legal liability: negligence, which would attach when the general public became aware of the risks of climate change (some time between 1985 and 2005, according to Farber), and a more moderate version of strict liability containing a state-of-the-art defence, which would potentially expose actors to liability for damage at the point at which the risks of emissions became clear to scientists, which Farber puts in the range of 1960 to 1990.

Collectively, the authors in these initial chapters make a compelling case for non-culpable responsibility. Given the correlation between historic emissions and the enduring wealth of states, there is a common-sense appeal in the idea that those who make a

mess should clean it up. However, several issues deserve further attention. Firstly, what exactly is owed under each theory and why? Whether the duty is to mitigate emissions, finance adaptation assistance or something else deserves further discussion. While Heyd believes historical emitters have a responsibility to mitigate and create opportunity, Thompson and Butt both believe that adaptation assistance for poor countries will discharge the duty. However, if making reparations requires that ‘what was taken from the victims should be returned along with compensation for collateral losses’ (p. 58), then restoring the health of the atmosphere should be of primary concern. Secondly, Farber’s conclusions deserve more discussion regarding their effects on his colleagues’ respective theories and the broader climate justice implications. Farber suggests that legal liability for emissions is likely to be available only since the risks of climate change became known. Unless scientific knowledge can be established significantly earlier than Farber suggests, nations that were early to industrialize, namely the US and EU states, will not be held responsible for the majority of their cumulative emissions, while those who came later to industrialization probably would be held responsible.

In the next pair of chapters, the focus turns from the issue of the moral culpability of historical emitters to the beneficiary-pays principle, specifically challenging the underlying principles for assigning duties to present people on the basis of having benefited from past people’s actions as incompatible with the notion of individual moral responsibility. In Chapter 5, Anja Karnein argues that present living people cannot be divested of benefits that flow from their predecessors’ actions simply because they have indeed benefited. Rather, Karnein insists that duty attaches only if someone is directly implicated in producing a wrongful harm. Although present living agents of wealthy nations may in fact be in the best position to pay, unless they are independently culpable by knowingly compounding an injustice or directly perpetuating it, ‘the only reason to ask beneficiaries to [help those most vulnerable to adapt to climate change] is that they also happen to be the most able to pay’ (p. 121). Karnein’s view of the necessary connection between individual duty and moral culpability is well defended, and her conclusion that the ability to pay creates a duty to pay is also pragmatic, given that our collective survival depends on restoring a viable climate system. However, to assert that the ability to pay is the ‘only reason’ to ask beneficiaries to help overlooks many other moral and ethical reasons for imposing a duty on them to help.

In Chapter 6, Brian Berkey similarly argues that current people should bear no significant obligations to contribute to mitigation and adaptation efforts on account of their relationship with the emissions-generating activities of past people. He agrees that historical emissions do matter, but only to the extent that they are a symptom of systemic injustice. According to this rationale, a duty arises from ‘a special obligation to promoting justice, with the view that benefitting from an unjust state or unjust state of affairs can ground such obligations’ (p. 138). Berkey thus posits that the beneficiary-pays principle can be adjusted to avoid assigning responsibility based solely on the benefits that present people have received and to favour assigning responsibility when those benefits turn out to be unjust. Such a formulation, he argues, would require redistribution of ‘justice-related goods’ (p. 138) from those who possess more than they would in a just system to those who have fewer such goods than they otherwise would.

In the remaining chapters, the authors shift their focus towards strategies for meeting the challenges of climate change under the climate regime, considering the tension between poorer nations' development needs, the fair expectations of citizens in industrialized countries, and the imperative for immediate massive cuts in global emissions. Chapters 7 and 8 contemplate specific design features of a cap-and-trade system, both based on a gradual 'contraction and convergence' approach to reduce overall emissions, with every country lowering its emissions to a level that is equal for all countries on a per capita basis (p. 162). The final two chapters explore how the international climate negotiations should assign responsibility for past emissions. In Chapter 9, Sarah Kenehan advocates a compromise that dictates only partial responsibility, and in Chapter 10, Mizan Khan proposes applying the polluter-pays principle to realize the rights of particularly vulnerable countries (PVCs).

Rudolf Schuessler, in Chapter 7, examines the moral basis of grandfathering, ultimately arguing for a temporary period of percentage-based emissions cuts in proportion to emissions levels in 1990. The ultimate goal is an egalitarian distribution of sustainable emissions entitlements, but Schuessler focuses on the transitional phase during which temporary grandfathering would give economies and individuals in industrialized nations time to adapt to a low-emissions lifestyle. He claims that a design based on percentage-based cuts to emissions during the transition phase is the most straightforward and flexible. Although this 'buffering' principle perpetuates overuse by those who have already consumed a disproportionate amount of the atmosphere's absorptive capacity, Schuessler defends this approach with a 'luck-based' moral argument that, just like those living in developing nations deserve support in adapting to the effects of climate change, those in industrialized nations facing climate pressures through no fault of their own deserve protection from life-disruptive shocks while moving towards a fair regime of emissions rights. Schuessler's argument will no doubt rub many the wrong way, but his atypical expression of empathy towards those in industrialized nations serves as a useful reminder that responding to climate change will cause the poor to suffer most painfully, even within the wealthiest nations.

In Chapter 8, Christian Baatz and Konrad Ott focus on a system for fairly achieving massive emissions reductions, arguing for emissions egalitarianism, through which entitlements would initially be distributed equally among nations, on a per capita basis. Baatz and Ott begin their chapter methodically, considering various ethical challenges to emissions egalitarianism, and then move on to compare in detail two specific plans. The first is their own two-part plan, which distributes emissions entitlements on a straightforward per capita basis and separately implements adaptation financing on the basis of beneficiary-pays/ability-to-pay. The competing plan proposes the distribution of entitlements based on a complex set of factors such as adaptation costs, natural resources, and the development needs of individual countries. Ultimately, Baatz and Ott conclude that while their scheme is marginally less just because it ignores historic emission and climate change impacts, it is also simpler and, as a result, more politically and institutionally feasible. Sketched as a cap-and-trade system to be implemented with tradable emissions entitlements, Baatz and Ott see their plan as a 'first step toward a more just world and a global redistribution of entitlements' (p. 194).

In Chapter 9, Sarah Kenehan takes a pragmatic approach to assigning responsibility for historic emissions in the context of climate negotiations. She proposes that, despite the industrialized nations' causal responsibility for the bulk of GHGs accumulated in the atmosphere, moral responsibility should attach only for excessive emissions after 1990, when nations and individuals knew or should have known of the harmful effects of their excessive GHG emissions. Kenehan makes the case that partial responsibility is a politically feasible compromise that may not live up to a moral ideal but has the greatest likelihood of moving towards climate stability in the short window the planet has in which to avert climate disaster.

Finally, in Chapter 10, Mizan Khan focuses on the PVCs and proposes changes to the Paris Agreement⁴ to better protect them. He states that PVCs will not only suffer disproportionately from the consequences of climate change; they also face inadequate access to technology and a desperate lack of adaptation finance, which exacerbate their lagging development and climate vulnerability. To remedy this disproportionate harm, Kahn proposes implementation of the polluter-pays principle within the Paris Agreement, which would require nations to pay compensation for loss and damage. Khan asserts that implementing this principle would give teeth to existing provisions and effectuate a fair and binding commitment to mitigation, emission rights, and assistance with adaptation. Although offering no specifics, Khan states that a base year will have to be established, from which point historical responsibility for past GHG emissions can be assessed. Despite acknowledging the explicit provision in Article 8 of the Paris Agreement, which excludes liability and compensation, Khan insists that compensation for loss and damage may be available under different sections of the Agreement, arguing that the parties' obligation for common but differentiated responsibilities under the United Nations Framework Convention on Climate Change (UNFCCC)⁵ triggers liability.

Taken together, the final group of chapters provides a window into the complex challenges of addressing climate change in a moral or equitable manner. The different approaches to cap-and-trade set out in Chapters 7 and 8 highlight fundamentally different underlying principles of justice. While Schuessler's plan can be criticized for perpetuating historical injustice and being slow to achieve an equitable distribution of remaining emissions entitlements, it is a worthy exploration of transitional justice and an interesting moral defence of grandfathering. As a politically appealing plan from the perspective of industrialized nations, it can also boast feasibility. However, it also contains some blind spots. While the emissions egalitarianism plan proposed by Baatz and Ott strives to balance just, equitable and historical sensitivity with easy implementation, it is not likely to be politically viable, at least for as long as it requires significant sacrifice on the part of industrialized nations. The moral bases for transition proposals in Chapters 7 and 8 are well developed, but both would benefit from

⁴ Paris (France), 12 Dec. 2015, in force 4 Nov. 2016, available at: http://unfccc.int/paris_agreement/items/9485.php.

⁵ New York, NY (US), 9 May 1992, in force 21 Mar. 1994, available at: <https://unfccc.int/resource/docs/convkp/conveng.pdf>.

incorporating a scientific analysis to determine whether their plans are viable in terms of stabilizing the climate system.

Kenehan's partial-responsibility strategy endorsed in Chapter 9 has a pragmatic appeal given the political necessity for compromise under the UNFCCC. However, her proposal fails adequately to explore the implications that flow from establishing 1990 as the date from which responsibility for emissions can attach. The same can be said for Schuessler's analysis of grandfathering in Chapter 7. Considering the long history of emissions from industrialized nations versus the short but significant history of emissions from nations that began to develop only in the latter half of the 20th century, issues of equity and justice deserve further discussion. Finally, in contrast to Chapter 9's pragmatic strength, Khan's suggestion that the polluter-pays principle be implemented under the Paris Agreement as a mechanism for PVCs to seek compensation for loss and damage is somewhere between ambitious and impossible. The value of his proposal may be to stake out an outer position and hope to move negotiations to a place of greater concern for the challenges that PVCs face and their dependency on wealthier nations to help them survive climate change. However, if Khan is genuinely interested in seeking compensation, which seems unrealistic under the consensus structure of the UNFCCC, the PVCs may wish to consider litigation against private actors, a strategy that has proven hopeful at least in some cases.⁶

Climate Justice and Historical Emissions offers an engaging, multi-perspective investigation into issues of responsibilities and duties derived from historic emissions. The strengths of this volume are its focused treatment of responsibility as applied to historical emissions and the thorough examination of core principles and theories of obligation. Several of the chapters grapple with highly complex issues related to moral culpability, causal responsibility, and the responsibilities of present people to correct past harm in interesting and thought-provoking ways. They also illustrate the need for society to engage more deeply with how we can achieve some semblance of climate justice, as questions about moral responsibility will not be resolved easily or quickly under our existing legal and political systems.

However, the book has two noteworthy shortcomings. Firstly, it does not define 'historical emissions', nor does it address how to deal with the increasing emissions from industrializing developing countries since the 1970s. Although some of the chapters make reference to post-1990 emissions and imply that major emitting countries, such as China, could bear responsibility for their post-1990 emissions, the book as a whole seems to focus on outdated notions of 'industrialized' and 'developing' countries that make no room for emerging economies and the responsibilities they may bear for contributing to climate change. Discussions of responsibility that dichotomize developed and developing countries are therefore overly simplistic. They also ignore the

⁶ *Saúl Luciano Lliuya v. RWE* (2018) Az 5 U 15/17 OLG Hamm; see also L. Benjamin, 'The Responsibilities of Carbon Major Companies: Are They (and Is the Law) Doing Enough?' (2016) 5(2) *Transnational Environmental Law*, pp. 353–78; G. Ganguly, J. Setzer & V. Heyvaert, 'If at First You Don't Succeed: Suing Corporations for Climate Change' (2018) 38(4) *Oxford Journal of Legal Studies* pp. 841–68.

quarter century of political debates regarding responsibility which have, at times, upended the international climate negotiations and resulting treaties.

Indeed, the book's light treatment of how the ideas raised in the chapters would work in practice is its other primary shortcoming. For the most part, the book does not explain how the proposals for assigning responsibility might be implemented through policymaking, litigation, or negotiation strategies; nor do most of the chapters explain how their proposals will actually abate or address climate change. Since assignments of responsibility were an underlying reason for the US repudiation of the Kyoto Protocol,⁷ and since many commentators considered the Paris Agreement a success largely because it – at least in the context of the bottom-up nationally determined contributions – skirted such questions of responsibility,⁸ these omissions make the book less relevant than it could be. In addition, given the urgency of the impending climate crisis, this volume could be strengthened by the inclusion of more legal analysis which translates theories of responsibility into action. 'Deciding the right way to face the challenge of global warming' is, as Heyd writes, 'not a mere philosophical issue of competing theoretical justifications' (p. 59). Figuring out how to allocate responsibility for historic emissions and how to share the burdens of mitigation and adaptation is a matter of survival.

Despite these limitations, *Climate Justice and Historical Emissions* offers a number of interesting and stimulating reflections regarding moral and causal responsibility for past contributions to climate change. The challenges associated with addressing climate change in a way that fairly treats past, present, and future people are clearly articulated in the book. One can only hope that a deeper understanding of these challenges will spur humanity to act more quickly to prevent the climate crisis from worsening and to lessen the moral debt owed by historical emitters.

Destiny Shelton

Lewis & Clark Law School, Portland, OR (US)

⁷ Kyoto (Japan), 11 Dec. 1997, in force 16 Feb. 2005, available at: <http://unfccc.int/resource/docs/convkp/kpeng.pdf>.

⁸ D. Bodansky, 'The Paris Climate Change Agreement: A New Hope' (2016) 110(2) *American Journal of International Law*, pp. 288–319; J.E. Viñuales, 'The Paris Agreement on Climate Change' (2016) 59 *German Yearbook of International Law*, pp. 11–45; C. Voigt & F. Ferreira, "'Dynamic Differentiation": The Principles of CBDR-RC, Progression and Highest Possible Ambition in the Paris Agreement' (2016) 5(2) *Transnational Environmental Law*, pp. 285–303.