

## A Future for Paris? Federalism, the Law of Nations, and U.S. Courts

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# A Future for Paris? Federalism, the Law of Nations, and U.S. Courts

JAMISON E. COLBURN†

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## I. INTRODUCTION

Since the United Nations Framework Convention on Climate Change in 1992 (UNFCCC),<sup>1</sup> states-parties have negotiated commitments to address global warming at annual conferences of the parties. The Paris Conference of the Parties (COP21) agreement in 2015 was carefully structured to help the U.S. President commit the nation to its multilateral pledges without having to seek U.S. Senate or Congressional assent to doing so.<sup>2</sup> The Obama Administration then made that commitment, not just to reduce domestic greenhouse gas emissions, but also to cooperate fully in the research and coordinative tasks set out in the agreement, at the very end of its 2012-16 term.<sup>3</sup> President Trump's announcement in June 2017 that he would withdraw the United States from COP21 to seek a better deal from major trading partners (China and the European Union especially),<sup>4</sup> sig-

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1. United Nations Framework Convention on Climate Change, *opened for signature* June 4, 1992, S. Treaty Doc. No. 102-38, 1771 U.N.T.S. 164 (1992) [hereinafter UNFCCC].

2. Rep. of the Conference of the Parties on Its Twenty-First Session, Held in Paris from 30 November to 13 December 2015, U.N. Doc. FCCC/CP/2015/10, at 21.

3. Jean Galbraith, *From Treaties to International Commitments: The Changing Landscape of Foreign Relations Law*, 84 U. CHI. L. REV. 1675, 1681–82 (2017) (describing President Obama's characterization of the Paris Agreement at its announcement as "historic" and an "ambitious" "enduring framework the world needs to solve the climate crisis," and the rapid progressions from Paris's entry into force to President Trump's announced intentions to withdraw).

4. Curtis A. Bradley & Jack L. Goldsmith, *Presidential Control Over International Law*, 131 HARV. L. REV. 1201 (2018).

naled no intention to withdraw contrary to Article 28 or to withdraw from the UNFCCC under its terms. Article 28 makes the earliest possible withdrawal date from COP21 November 4, 2020—the day *after* the next U.S. presidential election.<sup>5</sup>

The coalition of state governors, mayors, county executives, and other leaders that quickly formed and announced their intentions to keep the U.S. pledges in Paris notwithstanding Trump’s announced plans raised profound questions about our federalism and foreign relations.<sup>6</sup> Dubbed “We Are Still In,” this coalition may present U.S. domestic courts with an unprecedented situation in foreign affairs federalism. With most of what the preceding administration implemented domestically to address climate disruption being dismantled by the current Administration, and much of COP21 having been designed to serve a highly strategized mitigation agenda that would unfold decades into the future,<sup>7</sup> these courts may have to confront several exceedingly complex balances of state autonomy, presidential authority, and the place of international law within U.S. law. And they will do so with an issue set that has been exceedingly polarizing even by today’s standards.

The argument here is simple: simplistic invocations of “one voice” doctrines<sup>8</sup> or other forms of broadly preemptive deference to a (current) president’s announced policy intentions cannot substitute for what courts and courts alone must do in any exercise of judicial power: say what the *law* is. The context is anything but simple. Long traditions in both ethics and economics have aimed to knit bottom-up and top-down decision-making together.<sup>9</sup> What the Trump Administration’s announced intentions to withdraw from Paris seem to have accomplished is to shift the burden of action on the American

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5. See G.A. Res. 1/CP.21, art. 28, Paris Agreement (Dec. 12, 2015), [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf) [hereinafter Paris Agreement].

6. Cf. Jean Galbraith, *Two Faces of Foreign Affairs Federalism and What They Mean for Climate Change Mitigation*, 112 AM. J. INT’L L. UNBOUND 274, 274 (2018) (“President Trump has done the impossible: he has made the international community enthusiastic about U.S. federalism. Even as they express dismay at Trump’s plan to abandon the Paris Agreement, foreign leaders and internationalists have praised the efforts of U.S. states and cities to combat climate change mitigation in accordance with the Agreement’s goals.”).

7. See *infra* notes 13–127 and accompanying text.

8. See *infra* notes 190, 249 and accompanying text.

9. JOHN STUART MILL, A SYSTEM OF LOGIC, RATIOCINATIVE AND INDUCTIVE (8th ed. 1882) (defending empiricist utilitarian methods making use of both inductive and deductive inferences about people, markets and society); JOHN RAWLS, A THEORY OF JUSTICE 20–21, 48–51 (1971) (defending a method of normative ethics that seeks a “reflective equilibrium” between top-down theorizing and bottom-up considered judgments).

pledges in Paris to states, local governments, and leading market and nonprofit actors—in other words, to bottom-up decision-makers.<sup>10</sup> If the United States is to play any constructive part in addressing this unprecedented threat to global peace, security, and life on Earth, the burden of action will be shouldered for the foreseeable future by sub-national governments and private parties.

Part II introduces the Paris agreement in its unique diplomatic, legal, and environmental context. Part II then describes some enduring tensions of our foreign affairs federalism and the Supreme Court's most recent forays into them. Part III then anticipates three contexts in which American courts are most likely to confront the unprecedented as subnational governments strive to fulfill national commitments registered under the COP framework despite a current president's avowed intentions to raze that very framework. The conclusion considers the prospect of the 2020 election and how little that will probably matter to the major questions raised here.

## II. THE UNFCCC, MITIGATION STRATEGY IN TIME, AND THE PARIS AGREEMENT

Conventional wisdom categorizes treaties to protect the global commons as trading off *depth* for *breadth*.<sup>11</sup> The more stringent the commitments (depth), that is, the fewer participants (breadth) that should be expected.<sup>12</sup> This wisdom flows directly from the view that use of a global commons is the externalization of “costs” of some kind and, thus, treaties reversing that dynamic simply internalize those costs back onto the users of the commons. But this consensus can obscure the unique dimensions of global climate disruption, especially the technological innovation needed to avert its worst manifestations. The innovations embodied in the Paris Agreement reflect

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10. Chris Mooney, *Trump Withdrew from the Paris Climate Deal A Year Ago. Here's What Has Changed*, WASH. POST (June 1, 2018), <https://www.washingtonpost.com/news/energy-environment/wp/2018/06/01/trump-withdrew-from-the-paris-climate-plan-a-year-ago-here-what-has-changed/> (noting that Trump's announcement spurred considerable subnational action but left a “fog when it comes to what U.S. national policy is or should be—something not even the administration seems to know”).

11. See, e.g., DANIEL BODANSKY, *THE ART AND CRAFT OF INTERNATIONAL ENVIRONMENTAL LAW* 154–87 (HARVARD UNIV. PRESS, 2010); SCOTT BARRETT, *ENVIRONMENT AND STATECRAFT: THE STRATEGY OF ENVIRONMENTAL TREATY-MAKING* 49–84 (2003).

12. Thomas C. Schelling, *The Cost of Combating Global Warming*, FOREIGN AFF. (Nov.-Dec. 1997), <https://www.foreignaffairs.com/articles/1997-11-01/cost-combating-global-warming>; WILLIAM R. CLINE, *THE ECONOMICS OF GLOBAL WARMING* (1992); see also BODANSKY, *supra* note 11, at 165.

those dimensions, yielding a deal that defied conventional wisdom and may well survive Trump's vacuum. Before Paris is made to fail in execution, we must recognize the agreement's unique approach to this globally-scaled, complex collective action problem. For if we eventually mark 2015 as a turning point in collective action against climate disruption, it will be because this approach succeeded where orthodox diplomacy and conventional wisdom both failed.

This article argues that implementing Paris in the United States (U.S.), the European Union (EU) and other open economies will entail bold innovations, mirroring those fashioned in the agreement itself, which will be susceptible to several lines of attack in domestic courts. Only if courts adopt a discriminating approach to those challenges will they be able properly to apply the law without unnecessary costs to the climate and future generations. There are three important dimensions to distinguishing Paris from what preceded it. First, Paris was the culmination of two decades of experience with the UNFCCC and its novel approach to international obligations. Second, mitigating climate disruption is a special type of good, unlike many more familiar goods in environmental protection. Finally, Paris's strategic significance must be understood in light of the counting difficulties with actions and quantities of such scale and scope, as well as the economic leakage that threatens any ambitious mitigation plans.

*A. The Convention/Protocol Model in Retreat: The Rise of Pledge and Review*

The Paris Agreement was the result of twenty-one "conferences of the parties" to the UNFCCC. The UNFCCC was done twenty-seven years ago to much fanfare at the "Earth Summit" in Río de Janeiro.<sup>13</sup> The convention created the COPs as a step-wise path to the collective settling of mitigation obligations. But the actual steps along that path dissipated what little good faith had accrued in Río, eventually leading the parties to fashion a unique, unilateralist 'pledge-and-review' model in its place in 2015. This section traces that progression and describes the Paris Agreement's key features setting it apart both from the UNFCCC COPs and from the norms of international environmental law.

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13. BARRETT, *supra* note 11. Several multilateral conventions—both broad and deep—emerged from Río, including the Convention on Biological Diversity and the Río Declaration. See Catherine Redgwell, *International Environmental Law*, in INTERNATIONAL LAW 687, 691 (Malcolm D. Evans ed., 3d ed. 2010).

The UNFCCC's stated purpose, preventing "dangerous anthropogenic interference with the climate system,"<sup>14</sup> was phrased in careful but nebulous terms. Most importantly, whatever legal obligations flow from the UNFCCC are *collective* obligations and that severely complicates their fulfillment by the traditional means of international law. The UNFCCC dubbed these the "common but differentiated responsibilities and respective capabilities"—Rio's reference to obligations negotiators could name but could not specify.<sup>15</sup> As a principal party to those negotiations, the United States quickly signed and then ratified the "framework" convention.<sup>16</sup> Like many signatories, though, the United States rightly saw in the UNFCCC an "agreement to agree" on emissions abatement obligations.<sup>17</sup> Quite apart from abatement *per se*, though, parties to the UNFCCC obliged themselves to collect data and report on their domestic greenhouse gas (GHG) emissions,<sup>18</sup> to analyze and report any abatement efforts they were making,<sup>19</sup> and to base future negotiations on the "best available scien-

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14. UNFCCC, *supra* note 1, at art. 2.

15. Article 3 states that "[t]he parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with the common but differentiated responsibilities and respective capabilities." UNFCCC, *supra* note 1, at art. 3(1). Typically, treaties that adopt obligations of such uncertain stringency do so out of a lack of agreement among the negotiating parties. See BARRETT, *supra* note 13, at 141–47; BODANSKY, *supra* note 11, at 187; David A. Wirth, *The International and Domestic Law of Climate Change: A Binding International Agreement Without the Senate or Congress?*, 39 HARV. ENVTL. L. REV. 515, 521–32 (2015).

16. See Wirth, *supra* note 15, at 521. A "framework" convention is negotiated with the express intention of filling out substantive obligations through subsequent agreements or 'protocols.' *Id.* at 519. The Kyoto Protocol of 1997 was the first attempted protocol to the UNFCCC, aiming to reduce global emissions 5% below 1990 levels. See Kyoto Protocol to the United Nations Framework Convention on Climate Change art. 3(1), Dec. 10, 1997, 2303 U.N.T.S. 162 [hereinafter Kyoto Protocol]. The Senate Committee that recommended ratification of the UNFCCC made its views known at the time that it expected any future protocols establishing binding emissions cuts to be presented to the Senate for its advice and consent. See S. EXEC. REP. NO. 102-55, at 14 (1992).

17. Daniel Bodansky, *The United Nations Framework Convention on Climate Change: A Commentary*, 18 YALE J. INT'L L. 451, 458–60 (1993). Although this model had grown common, it failed quite precipitously with the Kyoto Protocol. Cf. BARRETT, *supra* note 13, at 360 (calling the convention/protocol approach the wrong model and "unlikely to sustain meaningful cooperation" on GHG abatement).

18. The UNFCCC's information collection obligations may yet become be its most critical contribution to GHG abatements. See Jane Ellis & Sara Moarif, *Identifying and Addressing Gaps in the UNFCCC Reporting Framework 27* (OECD, Paper No. 2015(7), 2015), <https://www.transparency-partnership.net/sites/default/files/u2402/identifying-and-addressing-gaps.pdf> (noting that many of the information streams needed to assess progress under the Paris Agreement were already expected of so-called "Annex I" states under the UNFCCC).

19. UNFCCC, *supra* note 1, art. 4(2)(a)-(c).

tific knowledge.”<sup>20</sup> As section C shows, this may be the most consequential legacy of the UNFCCC to date. Finally, the parties established the annual COPs.<sup>21</sup>

The annual COPs began in 1995 in Berlin where the Kyoto Protocol was first conceived.<sup>22</sup> In the quarter century since, the ‘common but differentiated responsibilities’ standard for the pursuit of Río’s collective goal became more impediment than pathway to the global abatement of GHG emissions.<sup>23</sup> As our science gradually clarified the nature of GHGs as an aggregating, cumulative pollutant,<sup>24</sup> as well as the probable consequences of global emissions growth,<sup>25</sup> the parties came to understand just how profound the needed changes to business-as-usual (BAU) were—as well as the complexity of the collective action problem that collective change from BAU would be.<sup>26</sup> In a nutshell, a majority of the pollutant stocks already in the atmosphere were put there by one set of parties while the majority of projected emissions would likely be put there by another set. Beset by

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20. UNFCCC article 12 obliged each signatory to create and maintain a “national inventory of anthropogenic emissions by sources and removals by sinks of [the principal GHGs] . . . to the extent its capacities permit.” UNFCCC, *supra* note 1, art. 12(1)(a). It also obliged them to report to other parties “[a] detailed description of the policies and measures . . . adopted” as well as a “specific estimate of the effects that [such policies and measures] will have on anthropogenic emissions. . . .” *Id.* art. 12(2)(a)-(b).

21. UNFCCC, *supra* note 1, art. 7(1).

22. BARRETT, *supra* note 11, at 369.

23. As Professor Stone observed, the Stockholm Declaration of 1972 endorsed “taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards,” opening a rift in the diplomatic world between “developing” and “developed” nations that has come to define most multilateral environmental treaty since. Christopher D. Stone, *Common But Differentiated Responsibilities in International Law*, 98 AM. J. INT’L. L. 276, 279 (2004). And, as nations have disagreed over which is a “developed” and which a “developing” nation—with only the former being saddled economically costly obligations—the measures implemented protecting the environment have too often faltered. *See id.* at 279–81.

24. DAVID ARCHER & STEFAN RAHMSTORF, *THE CLIMATE CRISIS: AN INTRODUCTORY GUIDE TO CLIMATE CHANGE* 17–32 (2010).

25. The so-called “transient climate response to cumulative emissions” (TCRE) has been plotted as a global average surface temperature change per unit of total cumulative anthropogenic CO<sub>2</sub> emissions. Joeri Rogelj et al., *Differences Between Carbon Budget Estimates Unraveled*, 6 NATURE CLIM. CHANGE 245, 245 (2016). That plot corresponds strongly to observed temperature changes to date and, assuming no nonlinearities, predict continued temperature change as well. *Id.* The problematic assumption is that the TCRE will continue uninterrupted, *i.e.*, without encountering some nonlinearity. *See infra* notes 53–58 and accompanying text.

26. *See infra* notes 48–52 and accompanying text.

the same forces that had gridlocked so many other major international institutions,<sup>27</sup> the imbalanced COPs' prospects grew increasingly dim.<sup>28</sup>

The Kyoto Protocol was built from a premise of fault/responsibility. It aimed to saddle roughly three dozen high-consumption economies with onerous abatement duties while leaving the majority of projected future emissions (by then-low consumption countries) ungoverned.<sup>29</sup> After the high-consumption economies mostly passed on signing, global emissions continued to increase at about their historic rate of 1.9 percent annually (doubling approximately every thirty-five years).<sup>30</sup> Thus, in practical effect Kyoto changed only a tiny fraction of global emissions.<sup>31</sup> With global temperature change approximately linearly related to *cumulative* CO<sub>2</sub> emissions,<sup>32</sup> it grew increasingly evident that responsibility and fault were no solution.<sup>33</sup>

At Kyoto's sunset in 2012, the UNFCCC convention/protocol model had come to epitomize the trade-off breadth of commitment makes in the depth of that commitment. In Kyoto's wake, the annual conferences of parties struggled to identify some other means of specifying the obligation(s) to abate GHG emissions.<sup>34</sup> Customary international law has long prohibited the use of one's territory to harm other states through pollution.<sup>35</sup> But the causation dimensions

27. See, e.g., THOMAS HALE ET AL., GRIDLOCK: WHY GLOBAL COOPERATION IS FAILING WHEN WE NEED IT MOST 251–69 (2013); ERIC A. POSNER & DAVID WEISBACH, CLIMATE CHANGE JUSTICE 10–40 (2010).

28. HALE ET AL., *supra* note 27, at 257–60; POSNER & WEISBACH, *supra* note 27, at 190.

29. DIETER HELM, THE CARBON CRUNCH 40–55 (2012).

30. R.J. Andres et al., *A Synthesis of Carbon Dioxide Emissions from Fossil Fuel Combustion*, 9 BIOGEOSCIENCES 1845, 1854 (2012).

31. WILLIAM NORDHAUS, THE CLIMATE CASINO: RISK, UNCERTAINTY, AND ECONOMICS FOR A WARMING WORLD 247 (2013).

32. H. Damon Matthews et al., *The Proportionality of Global Warming to Cumulative Carbon Emissions*, 459 NATURE 829, 830 (2009).

33. The lack of “developed,” high-consumption economies ratifying the U.N. Convention on the Law of the Sea (UNCLOS) led to a prompt reevaluation and eventual amendment thereof, accommodating their concerns. See Robin R. Churchill, *The 1982 United Nations Convention on the Law of the Sea*, THE OXFORD HANDBOOK OF THE LAW OF THE SEA 24, 26–27 (Donald R. Rothwell et al. eds., 2015).

34. See Wirth, *supra* note 15, at 521–23; HALE ET AL., *supra* note 28, at 260–63; HELM, *supra* note 29, at 50–72; NORDHAUS, *supra* note 31, at 316–26. The conventional economic wisdom has long been that discussions of climate fairness and justice must yield to the social “pricing” of carbon emissions. See Robert N. Stavins, *A Meaningful U.S. Cap-and-Trade System to Address Climate Change*, 32 HARV. ENVTL. L. REV. 293 (2008); POSNER & WEISBACH, *supra* note 27. For many reasons, the COP has never adopted this conventional wisdom and, as Parts III and IV argue, neither did Paris.

35. See, e.g., Redgwell, *supra* note 13, at 695 (calling this the “no harm” principle of



alone have prevented that norm's application to GHGs, while the diffusion of responsibilities attending causation that is so ubiquitous yet indirect worsen matters still.<sup>36</sup> Relative national wealth, technological advantage, cumulative versus projected emissions, and many other criteria divided the subsequent COPs, blocking any agreement on specific abatement duties.<sup>37</sup> What constituted a "developed" nation supposedly able to pivot a growth-oriented economy off of fossil fuels through concerted national action as opposed to one in dire need of *any* productive activity became a distinction rooted more in motivation than in evidence or principle.<sup>38</sup> To some, the experience confirmed how coalition-building (breadth) invariably lessened the depth of commitments.<sup>39</sup> To others, it underscored the corrosive effects of self-interest and the incentives to free-ride on whatever efforts to protect a global commons others might make.<sup>40</sup> Though COP-21 negotiators studiously avoided talk of a carbon budget,<sup>41</sup> Section B explains how the Paris signatories created precisely that.

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customary international law).

36. BODANSKY, *supra* note 11, at 198–99.

37. Wirth, *supra* note 15, at 524–27; ARCHITECTURES FOR AGREEMENT: ADDRESSING GLOBAL CLIMATE CHANGE IN THE POST-KYOTO WORLD 13 (Joseph E. Aldy & Robert N. Stavins eds. 2007). It is far from clear that *national* wealth averaged over an entire populace reflects much concern for fairness. See Shoibal Chakravarty et al., *Sharing Global CO<sub>2</sub> Emissions Reductions Among One Billion High Emitters*, 106 PROC. NAT'L ACAD. SCI. 11884 (2009).

38. Where the UNFCCC had stated that "[t]he specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change . . . should be given full consideration," UNFCCC, *supra* note 1, art. 3(2), the Kyoto Protocol divided most of the states-parties into two annexes—only one of which (comprising 38 nations) faced mandatory mitigation. See Kyoto Protocol, *supra* note 16, arts. 2, 3 & annex I.

39. POSNER & WEISBACH, *supra* note 27, at 63–72; cf. Jonathan Baert Wiener, *Global Environmental Regulation: Instrument Choice in Legal Context*, 108 YALE L.J. 677, 736–83 (1999) (arguing that "voluntary assent" voting rules have unique advantages in negotiating international GHG constraints). See also GEOFFREY HEAL, *NATURE AND THE MARKETPLACE* 76–86 (2000) (providing an argument that Kyoto's heavy reliance on tradeable allowances in the land use sector created, in light of the profound uncertainties and variabilities thereof, cross-cutting influences on many of its signatories).

40. See, e.g., SCOTT BARRETT, *WHY COOPERATE? THE INCENTIVE TO SUPPLY GLOBAL PUBLIC GOODS* 74–102 (2007); William Nordhaus, *Climate Clubs: Overcoming Free-Riding in International Climate Policy*, 105 AM. ECON. REV. 1339, 1341–43 (2015).

41. Justin Gillis, *Pledges to Cut Emissions Lag as Climate Talks Get Underway*, N.Y. TIMES, Nov. 29, 2015, at A1.

*B. Mitigation: What Kind of Good?*

A *public* good is a good the provision of which is to all equally or not at all.<sup>42</sup> There are few truly public goods in this sense.<sup>43</sup> A *collective* good where individual consumption is independent of (collective) provision merely entails some risk that the good's providers will "defect" and seek to consume it without contributing to its supply.<sup>44</sup> If climate mitigation as such is a good, it is a *collective* good. With no global sovereign, moreover, it is one that neither price nor quantity tools alone can supply.<sup>45</sup> With GHG emissions so long identified with economic expansion ("growth"), emissions abatement efforts have long been thought to create their own perverse incentive: the more effective the collective effort, the bigger the incentive to free-ride on it.<sup>46</sup> And as different streams of quantitative work converged on the conclusion that success in mitigation meant eradicating practically all fossil fuel consumption,<sup>47</sup> mitigation began to seem like a good of unprecedented cost.<sup>48</sup>

42. Thus, "[g]lobal public goods offer benefits that are both non-excludable and non-rival. Once provided, no country can be prevented from enjoying a global public good; nor can any country's enjoyment of the good impinge on the consumption opportunities of other countries." BARRETT, WHY COOPERATE?, *supra* note 40, at 1.

43. See, e.g., William Barnett II & Walter Block, *Coase and Van Zandt on Lighthouses*, 35 PUB. FIN. REV. 710 (2007). Indeed, of the truly *public* goods existing in theory, identifying the actual demand therefore may be impossible, see Paul A. Samuelson, *The Pure Theory of Public Expenditure*, 36 REV. ECON. & STATS. 387 (1954), at least if voters/consumers are not free to do so 'with their feet.' See Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416 (1956).

44. A "public good," thus, entails these risks *by definition*. But economists have had a hard time deciding whether GHG emission abatements—or the environmental effects they might bring—are or are not *public goods* in this sense. The importance of excludability has long been known, see, for example, James M. Buchanan, *An Economic Theory of Clubs*, 32 ECONOMICA 1 (1965), as has that of rivalrous consumption. See, e.g., Charlotte Hess & Elinor Ostrom, *Introduction: An Overview of the Knowledge Commons*, in UNDERSTANDING KNOWLEDGE AS A COMMONS: THEORY TO PRACTICE 3 (Charlotte Hess & Elinor Ostrom eds., 2005). But the "consumption" of a good like mitigation continues to defy simple categorizations. See *infra* notes 57-67 and accompanying text.

45. See Wiener, *supra* note 39, at 701-34; Scott Barrett, *Credible Commitments, Focal Points, and Tipping*, in CLIMATE CHANGE AND COMMON SENSE: ESSAYS IN HONOUR OF TOM SCHELLING 29, 29-30 (Robert W. Hahn & Alistair Ulph eds., 2012).

46. See, e.g., Nordhaus, *Climate Clubs*, *supra* note 40, at 1339-40. As more nations restrict emissions, market operations that cannot abate their emissions will, to some unknown extent, seek out more favorable jurisdictions, thereby "exiting" (or "leaking") from the jurisdictions restricting their emissions. On this form of "regulatory competition," see DALE D. MURPHY, THE STRUCTURE OF REGULATORY COMPETITION: CORPORATIONS AND PUBLIC POLICIES IN A GLOBAL ECONOMY (2004).

47. See *infra* note 65 and accompanying text.

48. A public (or collective) good that is planetary in scale, while of ordinary theoretical difficulty for expected utility theorists, see, e.g., ARTHUR CECIL PIGOU, THE ECONOMICS OF WELFARE 29-30 (4th ed. 1932), has proven extraordinarily challenging as a matter of practi-

This picture of emissions as externalized cost and the abatement thereof as (global) collective good invites a still more troubling inference on emissions abatement and climate disruption. Any state can act to reduce the costs to its public from climate disruption by investing in capacities to *adapt*, *i.e.*, providing collective goods of *adaptation*. Nations differ in how well and/or quickly they may do so. Nations also differ in how, when, and to what degree they may be burdened by failing to adapt.<sup>49</sup> Yet they also differ in their capacities to contribute to mitigation, either because they do not currently and will not in the coming decades contribute very much to cumulative emissions,<sup>50</sup> or because reducing their own emissions would be extraordinarily costly to their electorates and, thus, not likely to be undertaken or sustained. Finally, the reverse holds true as well: a nation can be exceptionally *well*-positioned to contribute to mitigation.<sup>51</sup> If collective obligations imposed at an international level are viewed domestically as the opposite of self-government,<sup>52</sup> though, mitigate/adapt choices present particularly stark contrasts in how public resources are allocated.

A source of *structural* uncertainty in our estimations of Earth's future climate must be mentioned: potential nonlinearities severing future conditions from what, to date at least, has been a predictable climate response to cumulative emissions.<sup>53</sup> There is no baseline

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cal problem-solving. See GERNOT WAGNER & MARTIN L. WEITZMAN, *CLIMATE SHOCK: THE ECONOMIC CONSEQUENCES OF A HOTTER PLANET* (2015); BARRETT, *supra* note 13, at 369–91; Joseph E. Aldy et al., *Thirteen Plus One: A Comparison of Global Climate Policy Architectures*, 3 *CLIMATE POL'Y* 373, 374–78 (2003).

49. It is becoming increasingly clear that virtually all nations would face extreme costs of adaptation eventually. Camilo Mora et al., *Broad Threat to Humanity from Cumulative Climate Hazards Intensified by Greenhouse Gas Emissions*, 8 *NATURE CLIMATE CHANGE* 1062 (2018).

50. TCRE calculations treat every ton of emitted carbon, regardless of location or timing, as equal. See generally Myles R. Allen et al., *Warming Caused by Cumulative Carbon Emissions Towards the Trillionth Tonne*, 458 *NATURE* 1163 (2009). Thus, national decisions to emit/abate become a kind of “mirrored externality.” Lisa Grow Sun & Brigham Daniels, *Mirrored Externalities*, 90 *NOTRE DAME L. REV.* 135, 155 (2014).

51. A small number of states that could contribute disproportionately to mitigation would be reason to prefer some distributions of emissions abatement over others. Wiener, *supra* note 39, at 771–77.

52. See, e.g., Phillip R. Trimble, *A Revisionist View of Customary International Law*, 33 *UCLA L. REV.* 665, 669–70, 717–23 (1986).

53. ARCHER & RAHMSTORF, *supra* note 24, at 132. Thus, entirely apart from the distortions inherent in viewing global climate disruption as an aggregate temperature average, *id.* at 133, progress on “equilibrium” climate sensitivity has been minimal and will remain minimal at least until some major nonlinearity actually occurs. Gerard H. Roe & Marcia B. Baker, *Why Is Climate Sensitivity So Unpredictable?*, 318 *SCI.* 629 (2007) (arguing that the strength of any “feedback factor” in climate change predictions is likely to be unknowable and perhaps not that useful supposing it was known).

necessarily held in common among all nations party to the UNFCCC from which to differentiate duties to one's people either to adapt or to mitigate. This captures some of the turbulence in various nations' stances on mitigation stringency. When demography and time intersect, social welfare calculations can grow unstable,<sup>54</sup> generating considerable turnover in elected governments' views on adaptation and mitigation. We might call this the trap of 'common but differentiated responsibilities' in the production of this particular collective good.<sup>55</sup>

Of course, self-preservation is often the common denominator in international relations.<sup>56</sup> Kyoto made that seem synonymous with inaction on mitigation,<sup>57</sup> especially as the many uncertainties about optimal mitigation were further isolated.<sup>58</sup> Indeed, the trap was there for anyone aiming to analyze *the* social costs of adaptation, mitigation, or how the two should be balanced in some "average" or standard state or to derive international legal duties from orthodox theories of state responsibility, social welfare accounting, etc.<sup>59</sup> COP-20 and

54. Because the focal metric is cumulative emissions, delaying emissions by even a decade or more is not necessarily contributing materially to mitigation. And, unfortunately, projecting present reason balancing into the distant future – where unborn generations' health and welfare are the source of value—has remained an intractable ethical problem despite generations of patient study. TIM MULGAN, *FUTURE PEOPLE* 7–8 (2006).

55. Cf. Stone, *supra* note 23, at 298 (noting that of the 186 nations that ratified the UNFCCC, only 25 saddled with mitigation duties by the Kyoto Protocol ratified it and that, of the 16 top emitters, only 6 representing 16.4% of total emissions did so); *see also* Aldy et al., *supra* note 48, at 374–80.

56. Cf. KENNETH N. WALTZ, *THEORY OF INTERNATIONAL POLITICS* 103–28 (1979) (arguing that the ordering principle of international relations is anarchy and that self-preservation and expansion explain most states' motives). Paradoxically, probabilistic modeling of "structural" uncertainties like equilibrium climate sensitivity can result in essentially unconstrained willingness to pay to avoid expected harms. *See* Martin L. Weitzman, *On Modeling and Interpreting the Economics of Catastrophic Climate Change*, 91 *REV. ECON. & STATS.* 1 (2009). But in that case, of course, the analysis will undermine its own practical value to present-day decision-makers.

57. Barrett, *supra* note 45, at 37–39.

58. *See, e.g.*, NAT'L RESEARCH COUNCIL, *CLIMATE STABILIZATION TARGETS: EMISSIONS, CONCENTRATIONS, AND IMPACTS OVER DECADES TO MILLENNIA* 105–58 (2011) (collecting projections of expected changes in extreme precipitation and temperatures, loss of permafrost and snowpack, ocean acidification, sea level rise and their variations by global region). As Freeman and colleagues argue, the IPCC's lowering of its likely lower bound in the expected temperature gain range in 2013, paradoxically, was actually *bad* news for the UNFCCC parties because all it did was confirm an increase in the expected variance in future warming estimates. Mark C. Freeman, Gernot Wagner & Richard Zeckhauser, *Climate Sensitivity Uncertainty: When Is Good News Bad?* (Harvard Project on Climate Agreements, Discussion Paper No. 15-76, 2015), [http://belfercenter.hks.harvard.edu/files/dp76\\_freeman-wagner-zeckhauser-2.pdf](http://belfercenter.hks.harvard.edu/files/dp76_freeman-wagner-zeckhauser-2.pdf).

59. Responsibilities of this kind can, in other words, diverge in direction. *See* Chakravarty et al., *supra* note 37, at 11886 (arguing that pursuing mitigation "and meeting the basic energy needs of the global poor are nearly decoupled objectives"); POSNER & WEISBACH, *supra* note 27, at 179 ("The only way to ensure broad participation is to design

COP-21 finally found a path around this trap, although its ultimate arc will remain open to question for decades to come. They created a treaty<sup>60</sup> combining *pledges*,<sup>61</sup> *i.e.*, individually-determined contributions to mitigation,<sup>62</sup> with legal duties: (1) to help develop adaptation technologies;<sup>63</sup> (2) to track progress to those ends while disclosing that progress, or lack thereof, broadly;<sup>64</sup> and (3) to contribute to the collective goal of “[h]olding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature to increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.”<sup>65</sup> The UNFCCC’s nebulous goal of avoiding “dangerous” climate change was, in that much, sup-

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an agreement so that all nations are better off”). State-state relations rarely conform to simple principles. *Cf.* David Singh Grewal, *The Domestic Analogy Revisited: Hobbes on International Order*, 125 *YALE L.J.* 618, 622 (2016) (contrasting the “cosmopolitan legal theory” of Kant wherein state responsibility is measured by universal principles with the “Hobbesian realism” of rule by superior force).

60. The Vienna Convention on the Law of Treaties makes it clear that the Paris Agreement is a treaty governed by the public international law of treaties. *See* Vienna Convention on the Law of Treaties art. 2, May 23, 1980, 1155 U.N.T.S. 18232. The United States signed Vienna but the Senate never ratified it. *See* Evan J. Criddle, *The Vienna Convention on the Law of Treaties in U.S. Treaty Interpretation*, 44 *VA. J. INT’L L.* 431, 442–48 (2004). Nonetheless, Article 26 codified customary international law known since antiquity as *pacta sunt servanda*: the keeping of promises in good faith. *See id.* at 447, n.72 (“[E]very American court to address the Vienna Convention’s legal authority has concluded that its provisions express binding customary norms.”); Maglosia Fitzmaurice, *The Practical Working of the Law of Treaties*, in *INTERNATIONAL LAW* 172, 181–82 (Malcolm Evans ed., 3d ed. 2010).

61. We might characterize all international agreements as either legally binding “contracts” or non-binding accords similar in function to “pledges.” *See* Kal Raustiala, *Form and Substance in International Agreements*, 99 *AM. J. INT’L L.* 581, 586 (2005). Of course, any particular treaty or convention can combine both as the parties desire, but “[t]he choice between pledge and contract is a choice between employing and avoiding law.” *Id.* at 590.

62. *See* Paris Agreement, *supra* note 5, arts. 3, 4(3). The agreement states that “all Parties are to undertake and communicate ambitious efforts . . . with the view to achieving the purpose of th[e] Agreement as set out in Article 2,” which includes the temperature constraint. *Id.* art. 3.

63. Paris Agreement, *supra* note 5, arts. 9, 10.

64. *Id.* art. 13. A mixture of “pledges” and “contracts” in Raustiala’s terminology has led some to characterize Paris as the joinder of “hard” and “soft” (as well as several “non-”) obligations. *See, e.g.,* Lavanya Rajamani, *The 2015 Paris Agreement: Interplay Between Hard, Soft, and Non-Obligations*, 28 *J. ENVTL. L.* 337 (2016).

65. Paris Agreement, *supra* note 5, arts. 2(1)(a). “Parties” also declared the “aim to reach global peaking of [GHG] emissions as soon as possible,” *id.* art. 4(1), although nothing more specific to individual parties followed that expressed “aim.”

planted with a quantified and verifiable global target.<sup>66</sup> However, the agreement also ordered all of the foregoing into regularized collective reviews—periodic global “stock-takes”—beginning in 2023.<sup>67</sup>

Although this pledge/review model left the setting of national mitigation targets to each signatory’s choosing and avoided talk of state responsibility for missed targets,<sup>68</sup> it ensured that the broad scrutiny thereof, along with the development of adaptation capacities and continued collective pursuit of the hard temperature limit, were hard commitments.<sup>69</sup> “[T]he vast majority of Parties were keen that the 2015 agreement, many years in the making, take the form of a legally binding instrument.”<sup>70</sup> Thus, even though Article 4(4)’s economy-wide emissions-cutting pledges are prefaced by a “should” (not a “shall”),<sup>71</sup> much of the rest of the agreement is, by parity of reasoning, mandatory.<sup>72</sup> As the 2016 election showed, even that much of a binding commitment to mitigate was too much to sustain politically in Washington.<sup>73</sup> The tide of legal commentary<sup>74</sup> and opposition

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66. See *infra* notes 76–80 and accompanying text. The 2°C goal has a long, disputed history in climate change talks. See Mark New et al., *Four Degrees and Beyond: The Potential for a Global Temperature Increase of Four Degrees and Its Implications*, 369 PHIL. TRANSACTIONS ROYAL SOC’Y MATHEMATICAL PHYSICAL & ENG’G SCIS. 6, 7–8 (2011) (noting that 2°C goal came together in the late 1990s as a reflection of two sets of beliefs: that harmful impacts were thought to start accumulating quickly moving from 2°C to 3°C and that limiting average warming to 2°C could be accomplished without dire or extraordinary costs). Some have argued that it dates to the 1970s, well before the Rio summit. See Samuel Randalls, *History of the 2°C Climate Target*, 1 WIREs CLIMATE CHANGE 598, 599–601 (2010).

67. Paris Agreement, *supra* note 5, art. 14.

68. Susan Biniaz, *Comma But Differentiated Responsibilities: Punctuation and 30 other Ways Negotiators Have Resolved Issues in the International Climate Change Regime*, 6 MICH. J. ENVTL. & ADMIN. L. 37, 51–57 (2016).

69. With the exception of the 2°C goal, each of these obligations is couched with a mandatory “shall.” See Rajamani, *supra* note 64, at 344–51 tbl. 1. Both internationally, see Vienna Convention on the Law of Treaties, *supra* note 60, art. 31, and domestically, an instrument’s legally binding character is to be gauged by the expressed intent of the parties. See 22 C.F.R. § 181.2(a)(3) (2017); RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW § 301 (1987).

70. Rajamani, *supra* note 64, at 340.

71. Paris Agreement, *supra* note 5, art. 4(4). The normative operators “should” and “shall” featured prominently in the Paris talks according to those familiar with the negotiations. Biniaz, *supra* note 68, at 52.

72. Rajamani, *supra* note 64, tbl. 1, at 344–51.

73. One economist estimated that achieving the Paris pledge could cost the US between \$3.3 and \$6 trillion in new energy generating capacity, storage, and transmission investments between now and 2050. Geoffrey Heal, *What Would it Take to Reduce US Greenhouse Gas Emissions 80% by 2050?* (Columbia Bus. Sch., NBER Working Paper No. 22525, 2016), <https://www.nber.org/papers/w22525>. That was remarkably similar to the price several economists once put on the Kyoto Protocol. John P. Weyant & Jennifer Hill, *Introduction and Overview: The Costs of the Kyoto Protocol: A Multi-Model Evaluation*, 20 ENERGY J.

venom unleashed on the agreement—even though the text was unequivocal<sup>75</sup>—instantly polarized COP21 and America’s pledge in the public sphere.

Of course, some of the United States’ most consequential treaties have taken the form of a pledge.<sup>76</sup> The global average temperature goals in the Paris agreement were almost certainly both aspirational and carefully qualified in their precise meanings.<sup>77</sup> Though some maintain that this shows Paris “rests more on economic, social, and political obligation than it does on legal authority,”<sup>78</sup> Paris’ real wedge for changing present trajectories was always its successful attraction of so many credible commitments to *mitigate* collectively notwithstanding the clear, increasingly urgent incentives to *adapt* one’s national economy and populace.<sup>79</sup> Credibility of commitments to mitigate can only be measured in soft variables like contracts, firms, inertia, culture, leadership, *etc.*<sup>80</sup> However, the credibility of

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vii, at vii, xii (1999).

74. See, e.g., Daniel Bodansky, *The Legal Character of the Paris Agreement*, 25(2) REV. EUR., COMP. & INT’L ENVTL. L. 16, 16–22 (2016); David A. Wirth, *Cracking the American Climate Negotiators’ Hidden Code: United States Law and the Paris Agreement*, 6 CLIMATE L. 152, 166–70 (2016); Daniel Bodansky & Peter Spiro, *Executive Agreements+*, 49 VAND. J. TRANSNAT’L L. 885 (2016). A mitigation pledge that is non-binding need not be submitted to the U.S. Senate for its ratification pursuant to Article II, § 2. Wirth, *supra* note 15, at 543–45.

75. Paris calls on parties to “pursue domestic mitigation measures” with the “aim of achieving the objectives of such contributions,” Paris Agreement, *supra* note 5, art. 4(2), and the COP-21 “decision” invites contributions “towards achieving the objective of the [UNFCCC] as set out in its Article 2. Article 2 states that the UNFCCC’s “ultimate objective” is the “stabilization of [GHG] concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.” UNFCCC, *supra* note 1, art. 2.

76. DANIEL C. THOMAS, *THE HELSINKI EFFECT: INTERNATIONAL NORMS, HUMAN RIGHTS, AND THE DEMISE OF COMMUNISM* (2001). “The Helsinki Accords, which included human rights provisions, altered the behavior of groups in civil society in eastern Europe, much to the dismay and surprise of their Communist overlords, who had signed because they believed that the provisions of the accord dealing with borders and economic exchange would strengthen their position.” STEPHEN D. KRASNER, *SOVEREIGNTY: ORGANIZED HYPOCRISY* 32 (1999).

77. Andrew P. Schurer et al., *Importance of the Pre-Industrial Baseline for Likelihood of Exceeding Paris Goals*, 7 NATURE CLIM. CH. 563, 563–64 (2017).

78. Jennifer Jacquet & Dale Jamieson, *Soft But Significant Power in the Paris Agreement*, 6 NATURE CLIMATE CHANGE 643, 645 (2016).

79. Cf. ALINA AVERCHENKOVA & SAMUELA BASSI, *BEYOND THE TARGETS: ASSESSING THE POLITICAL CREDIBILITY OF PLEDGES FOR THE PARIS AGREEMENT* (2016) (finding that, among G-20 nations, INDCs were generally credible measured by the domestic institutions and factors bearing on the pledges being implemented).

80. Cf. AVERCHENKOVA & BASSI, *supra* note 79, at 9–10 (tracking the “multiple dimensions” of a nation’s INDC “credibility” into four main elements: rules and procedures, players and organizations, norms and public opinion, and past performance).

the pledges to apply best efforts is nonetheless their most important property, as Section C explains, and one to which domestic mitigation efforts must pay close attention.

*C. Game of Assurances: Achieving Collective Mitigation*

In game-theoretic terms, policy-induced mitigation that does not simply push emissions to non-mitigating places or times presents a kind of *assurances problem*.<sup>81</sup> Globalized supply chains, capital flows, and trading norms all, at least in theory, make “leakage” around or beyond a policy easier than ever.<sup>82</sup> In reality, there is no telling what frictions any given firm in a specific time and place faces in shifting the site(s) of its operations,<sup>83</sup> nor how readily free capital will flow across legal borders.<sup>84</sup> There are precious few ways to model or otherwise compute average or standardized answers to these questions that would be useful to decision-makers. Decarbonization in that environment must find ways to bridge the deep uncertainties

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81. The assurance problem goes beyond the ubiquitous single-shot Prisoners’ Dilemma to the regularity of “substantial voluntary contributions to public goods without outside enforcement” wherein the decision problem is the matter of degrees—turning on an ability to predict others’ behaviors “subject to varying limits of confidence.” Carlisle Ford Runge, *Institutions and the Free Rider: The Assurance Problem in Collective Action*, 46 J. POL. 154, 157, 162 (1984). That analysis begins from three assumptions. First, that “[w]herever benefits and costs are a function of the total actions of the group, it [is] implausible that decisions to contribute are unaffected by expectations of the decisions of others.” *Id.* at 160. Second, when payoffs are a function of joint choice (as with most public goods problems), wherever expectations are not coordinated, each player’s choice of strategy is secondary to the correct prediction of every other player’s choices. *Id.* at 161. This is so because enhancing mutual predictability allows the players to optimize their own contributions. *Id.* Third, whether others will or will not contribute is a probabilistic judgment, dependent upon the information held by each player. *Id.* at 166.

82. See, e.g., Adam B. Jaffe et al., *Environmental Regulation and the Competitiveness of U.S. Manufacturing: What Does the Evidence Tell Us?*, 33 J. ECON. LITERATURE 132 (1995).

83. See *id.* (finding that there is no conclusive evidence of “regulatory competition” pulling firms out of the US because of its stringent environmental controls). Cf. MURPHY, *supra* note 46, at 242–54 (finding from over a dozen detailed case studies that factor balancing by individual firms and interests is shaped by a multitude of influences, many of them impossible to quantify, and that site-shifting (or “reflagging”) is growing harder to predict as regulatory cooperation increases).

84. Jaffe et al., *supra* note 82, at 137; see also Derek K. Kellenberger, *An Empirical Investigation of the Pollution Haven Effect with Strategic Environment and Trade Policy*, 78 J. INT’L ECON. 242 (2009); Yuqing Xing & Charles D. Kolstad, *Do Lax Environmental Regulations Attract Foreign Investment?*, 21 ENVTL. & RESOURCE ECON. 1 (2002); Werner Antweiler et al., *Is Free Trade Good for the Environment?*, 91 AM. ECON. REV. 877 (2001).



of trade exposure, long- and short-term dealing, fluid supply chains, and how all of it functions in fast-changing markets.<sup>85</sup> Stringency confronts an endless maze of localized specifics, in short.

This dilemma hardens as the number of relevant parties expands. The larger a coalition providing a good like climate mitigation, the less perceptibly effective the median contribution is, diminishing eventually to *imperceptibility*.<sup>86</sup> This helps to explain Paris' detailed reporting obligations, its unique "enhanced transparency framework,"<sup>87</sup> and its step-wise approach to stringency.<sup>88</sup> If imperceptibility in contributing is easily mistaken for *negligibility*,<sup>89</sup> Paris' architects understood that threat. A pledge need never be rescinded—leaving states' electorates otherwise prone to turn out their elected governments just as they were without the pledge.<sup>90</sup> But Paris' use of a temperature constraint to define the global collective good informed such individuated and soft obligations and, thus, the contributions.

Finally, the agreement took full account of the *temporal* dimension in the pledge/review model. If there has been one certainty in estimating China's total GHG emissions it is that the estimates are soft and subject to revision—sometimes considerable revision.<sup>91</sup> But China is not alone.<sup>92</sup> Estimating quantities at such scales and scope has proven extraordinarily challenging everywhere.<sup>93</sup> After years of data crunching, the United States is thought by many to have reduced

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85. Cf. Tim Jeppesen, John A. List & Henk Folmer, *Environmental Regulations and New Plant Location Decisions: Evidence from a Meta-Analysis*, 42 J. REGIONAL SCI. 19 (2002). Jeppesen and colleagues found that factors besides regulation account more directly for site-shifting decisions in many sectors. *Id.*

86. MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION* 44 (1965).

87. Paris Agreement, *supra* note 5, art. 13.

88. Pivotal to Paris's graduated approach to mitigation stringency are its periodic "stock-takings," which are to "assess the collective progress towards achieving the purpose" of the Agreement. *Id.* art. 14(1).

89. RICHARD TUCK, *FREE-RIDING* 12–14 (2008).

90. As Geoffrey Brennan has shown, the notion of contribution imperceptibility is vague, especially where selective incentives are available and motivational changes can result regardless of a contribution's causal efficacy. Geoffrey Brennan, *Olson and Imperceptible Differences: The Tuck Critique*, 164 PUB. CHOICE 235, 242–44 (2015).

91. Jan Ivar Korsbakken et al., *Uncertainties Around Reductions in China's Coal Use and CO<sub>2</sub> Emissions*, 6 NATURE CLIMATE CHANGE 687, 687 (2016) (noting a 3% aggregate reduction by weight in national coal consumption, followed by a later estimation of an insignificant increase in total coal-derived energy use for the same period, from the Chinese National Bureau of Statistics and concluding that interpreting Chinese coal statistics has been complicated severely by retrospective revisions, altered methods, inconsistent reporting).

92. Corinne Le Quéré et al., *Global Carbon Budget 2015*, 7 EARTH SYS. SCI. DATA 349, 358–59 (2015).

93. *Id.* Even putting aside the land use sectors, fossil fuel combustion and the GHG intensities thereof have proven remarkably variable. *Id.* at 358–59.

the “carbon intensity” of its energy production and consumption over the last decade.<sup>94</sup> Without precise and accurate estimates of a long list of quantities, though, it is exceedingly difficult to track market responses to policy inducements, *i.e.*, to *know* whether “leakage” around or beyond policy tools is occurring and where.<sup>95</sup> Because slackening U.S. demand for internationally traded goods might just enable their consumption elsewhere, usable intelligence is still too often unavailable when it is needed.

The full experience with the Kyoto Protocol proved more than wide participation’s importance to stringent mitigation and mitigation counting, though.<sup>96</sup> It proved that knowing how to target consumption in one quarter without that consumption leaking to other quarters or to a later quarter is a severe challenge in an increasingly globalized economy.<sup>97</sup> Tracking land use changes over time, for example, it revealed many more accounting obstacles than had been understood at first.<sup>98</sup> During that same time, after some early models estimating the costs of GHG abatements were converging to a common conclusion showing *delay* as the key to minimizing abatement costs,<sup>99</sup> it emerged that those models did not allow for induced technical change from

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94. See, e.g., John Larsen et al., *Taking Stock: Progress Toward Meeting Climate Goals*, RHODIUM GRP. (Jan. 28, 2016), <http://rhg.com/reports/progress-toward-meeting-us-climate-goals> (“We estimate that US carbon dioxide emissions from energy consumption in 2015 were 11% below 2005 levels.”). This is not to say that it has reduced its GHG emissions by absolute quantity.

95. See, e.g., Jaffe et al., *supra* note 82, at 157–58. Even starting with the so-called “second generation” of empirical studies tracking loss of economic starts and/or capital from environmental controls, the results seem to be impossible to derive without extensive longitudinal data sets. See Daniel L. Millimet, *Environmental Federalism: A Survey of the Empirical Literature*, 64 CASE WESTERN RES. L. REV. 1669, 1683–94 (2014).

96. Cf. BODANSKY, *supra* note 11, at 255–60 (noting that, to properly evaluate Kyoto Protocol for its effectiveness, we should compare what actually happened under the protocol to what would have occurred without it but that Kyoto did “little to slow [the] trend” of annual 1.9% growth rates in GHG emissions over the decades climate disruption has been a global problem).

97. Steven Ferrey, *When 1 + 1 No Longer Equals 2: The New Math of Legal “Additionality” Controlling World and U.S. Global Warming Regulation*, 10 MINN. J.L. SCI. & TECH. 591 (2009) (describing the common challenges fossil fuel markets in different jurisdictions confront when regulators have attempted to quantify actual emissions averted by their rules); Michael P. Vandenberg & Mark A. Cohen, *Climate Change Governance: Boundaries and Leakage*, 18 N.Y.U. ENVTL. L. J. 221 (2010); H. Scott Matthews et al., *The Importance of Carbon Footprint Estimation Boundaries*, 42 ENVTL. SCI. & TECH. 5839 (2008).

98. Sandro Federici et al., *New Estimated of CO<sub>2</sub> Forest Emissions and Removals: 1990-2015*, 352 FOREST ECOLOGY & MNGMT. 89, 92 (2015) (finding from reanalysis that forest lands over the period in question were a net source of CO<sub>2</sub> emissions globally, averaging 1.52Gt CO<sub>2</sub> per year).

99. See, e.g., John P. Weyant, *Costs of Reducing Global Carbon Emissions*, 7 J. ECON. PERSP. 27, 34–42 (1993); NORDHAUS, *supra* note 31, at 227–32.

carbon-intensive to carbon-free energy sources.<sup>100</sup> Because *cumulative* global emissions are the focal metric,<sup>101</sup> sham estimates for ‘planning purposes’ are not just a waste of time: they diminish the confidence of partners whose own mitigation contributions will be vital to success.<sup>102</sup>

The inversion of gross domestic product (GDP) growth from the high consumption to the low consumption economies that many have forecasted for this century<sup>103</sup> punctuates this need to prevent mere site-shifting of carbon-intensive production/consumption as mitigation efforts ramp upwards.<sup>104</sup> In this context, virtually any public initiative authority that can be used to induce technological innovation away from carbon-intensivity can be vital.<sup>105</sup> Thus, Paris’ iterative pledge/review model treats GHGs’ accumulation in the atmosphere as a cumulative carbon constraint—several parameters of which had already been calculated in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report of 2015 (AR5) and which now fall into a widely known probability distribution.<sup>106</sup> Most peer-reviewed estimates in literature find that this cumulative constraint will require global emissions to peak soon and fall to negative CO<sub>2</sub> emissions by the second half of the century.<sup>107</sup> Because the first generation NDCs were so clearly insufficient to that end, assuming the

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100. Michael Grubb et al., *Induced Technical Change in Energy and Environment Modeling: Analytical Approaches and Policy Implications*, 27 ANN. REV. ENERGY ENV'T 271, 293 (2002) (“Some models (e.g., Nordhaus) have just one aggregate energy-carbon sector with no opportunity for substitution toward non-carbon sources. Perhaps not surprisingly, these generate a modest response to induced technical change.”). With the possibility of induced substitution of low- for high-carbon energy, the model results changed dramatically. See, e.g., Lawrence H. Goulder & Stephen H. Schneider, *Induced Technological Change and the Attractiveness of CO<sub>2</sub> Abatement Policies*, 21 RESOURCE & ENERGY ECON. 211 (1999).

101. See *supra* text accompanying note 24.

102. Cf. BARRETT, *supra* note 11, at 150 (noting the “problematic” nature of Kyoto’s self-reporting and verification scheme).

103. Structural trends seem likely to deliver the GDP inversion throughout this century. See ROBERT J. GORDON, *THE RISE AND FALL OF AMERICAN GROWTH* 321-22 (2016).

104. Aldy et al., *supra* note 48, at 375.

105. David A. Adelman & Kirsten H. Engel, *Reorienting State Climate Change Policies to Induce Technological Change*, 50 ARIZ. L. REV. 835, 844 (2008).

106. The Fifth Assessment report concluded that to have a 66% chance of holding to no more than 2°C global average warming, no more than 2900 gigatons cumulative CO<sub>2</sub> equivalent could be emitted. See INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *CLIMATE CHANGE 2014: SYNTHESIS REPORT 10* (2015) [https://digital.library.unt.edu/ark:/67531/metadc950248/m2/1/high\\_res\\_d/SYR\\_AR5\\_FINAL\\_full\\_wcover.pdf](https://digital.library.unt.edu/ark:/67531/metadc950248/m2/1/high_res_d/SYR_AR5_FINAL_full_wcover.pdf). That left 800-1000 gigatons remaining as of 2015. *Id.*

107. Carl-Friedrich Schleussner et al., *Science and Policy Characteristics of the Paris Agreement Temperature Goal*, 6 NATURE CLIMATE CHANGE 827, 831 (2016); Hal Harvey et al., *A Trillion Tons*, 142(1) DÆDALUS 8, 9–11 (2013).

signatories can hold the deal together and agree on common carbon “budgeting” frameworks,<sup>108</sup> Paris’ subsequent commitment periods have become the Rubicon, spotlighting the importance of mitigation stringency over time.

If a joint and cumulative carbon constraint is to harden over time, Paris’ signatories must meet the major challenges of economic leakage and the maintenance of collective assurances on stringency. If contributors’ decisions turn even indirectly on their expectations of others’ mitigation,<sup>109</sup> though, they must be able to tell the difference between contributing and free-riding.<sup>110</sup> And that is no easy task. For example, the United States is assumed to have bent the curve on its GHG emission intensities through its push for installed wind and solar capacity over the last decade.<sup>111</sup> However, the low GDP growth and tax credits subsidizing existing technologies that created that wedge are deeply contingent: the tax credits will phase out and current renewables cannot compete without subsidy.<sup>112</sup> Fossil fuel production has proven singularly protean, market adaptive,<sup>113</sup> and adroit at attracting political allies both big and small.<sup>114</sup> What should a trading partner like China or the European Union expect of the United States over the next decade or two? There is no doubting US leaders’

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108. Even assuming the IPCC AR5’s projections, there are importantly different ways to “budget” the GHG emissions that remain consistent with Paris’s temperature goals. Joeri Rogelj et al., *Differences Between Carbon Budget Estimates Unravelling*, 6 NATURE CLIMATE CHANGE 245, 246–478 (2016). The principal divides are between “threshold exceedance” versus “threshold avoidance” budget types, *id.* at 246–47, and between single gas (CO<sub>2</sub>) and multi-gas (all principal GHGs) models (which can be used in either budget type). *Id.* at 248–50.

109. Orthodox game theory situates these dynamics in a “cooperative,” as opposed to a conflictual framework, although the presence or absence of thresholds or “tipping points” can easily dominate such an analysis. *See, e.g.*, THOMAS C. SCHELLING, MICROMOTIVES AND MACROBEHAVIOR 87–98 (2d ed. 2006); *see also* Joseph E. Aldy, *The Crucial Role of Policy Surveillance in International Climate Policy*, 126 CLIMATIC CHANGE 279 (2014) (regarding pledges to mitigate and the coordinating role played by the Paris Agreement’s “enhanced transparency framework”).

110. Runge, *supra* note 81, at 175–76.

111. *See, e.g.*, John Larsen et al., *supra* note 94, at 2–4.

112. HELM, *supra* note 29, at 75–99; John Larsen et al., *supra* note 94, at 3–8. Conventional wisdom has long been (and remains) that, barring a major technological breakthrough in storage technology, wind and solar will not be “grid competitive” wherever fossil fuel prices can be set by supply and demand. *See, e.g.*, SCOTT L. MONTGOMERY, THE POWERS THAT BE: GLOBAL ENERGY FOR THE TWENTY-FIRST CENTURY AND BEYOND 153–57 (2010).

113. Thomas Covert et al., *Will We Ever Stop Using Fossil Fuels?*, 30 J. ECON. PERSP. 117, 126–34 (2016); John M. DeCicco, *The Liquid Carbon Challenge: Evolving Views on Transportation Fuels and Climate*, 4 WIREs ENERGY ENV’T 98, 98–99 (2015).

114. *See, e.g.*, Eliza Griswold, *Undermined: A Local Activist Fights for the Future of Coal Country*, NEW YORKER MAG., July 3, 2017, at 48.

political incentives to maximize consumption.<sup>115</sup> Chinese and EU leaders surely share those same incentives.<sup>116</sup> Given the US economy's immense capacity for mitigation, giving other nations a reason to trust in policy stringency is a critical part of reducing mitigation's overall cost in Paris' subsequent commitment periods.<sup>117</sup> If initial indications are any guide, mitigation in both the United States and European Union are lagging far behind expectations.<sup>118</sup>

Unlike certain collective goods, climate change mitigation's "consumption" is not "rivalrous."<sup>119</sup> Indeed, it is unlike the "consumption" of goods or services at all.<sup>120</sup> Most of the beneficiaries of this collective forbearance have yet to be born and, indeed, might not be born if nations of the world were to constrain their own demographic growth.<sup>121</sup> In all events, 2°C will affect Paris' signatories

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115. TIM JACKSON, PROSPERITY WITHOUT GROWTH: ECONOMICS FOR A FINITE PLANET 3 (1st ed. 2011) (arguing that in most mature economies like the US's, rising per capita GDP is thought of as equivalent to increasing prosperity and, for that reason, GDP growth "has been the single most important policy goal across the world for most of the last century").

116. The EU pledged in Copenhagen in 2009 (COP-15) to cut its emissions by 30% below 1990 levels by 2020 "provided that other developed countries commit themselves to comparable emissions reductions." BARRETT, *supra* note 40, at 206. In its inaugural NDC for Paris the EU committed to cutting by 40% below 1990 levels by 2030. European Commission, *2030 climate and energy framework*, EUROPA (last visited May 2, 2019) [https://ec.europa.eu/clima/policies/strategies/2030\\_en](https://ec.europa.eu/clima/policies/strategies/2030_en). However, the EU pledges were predicated in no small part on an expectation of slowing member economies—a trend its leaders would like desperately to reverse. See David G. Victor et al., *Prove Paris Was More than Paper Promises*, 548 NATURE 25, 25–27 (2017).

117. Most economists have concluded that that remains severe under-investment in mitigation globally. Robert W. Hahn & Alistair Ulph, *Thinking Through the Climate Change Challenge*, in CLIMATE CHANGE AND COMMON SENSE: ESSAYS IN HONOUR OF TOM SCHELLING 3, 12 (Robert W. Hahn & Alistair Ulph eds., 2012) (listing as the first item in a "Schelling consensus on climate change policy" that governments have "significantly under-invested in mitigation relative to the level of effort that would be economically efficient from a global perspective").

118. Jeffrey B. Greenblatt & Max Wei, *Assessment of the Climate Commitments and Additional Mitigation Policies of the United States*, 6 NATURE CLIMATE CHANGE 1090, 1092 (2016) (finding from modeling 17 different policies additional reductions will be needed to reach US NDC's 2025 goals); Victor et al., *supra* note 116, at 26.

119. Cf. Todd Sandler, *Collective Action: Fifty Years Later*, 164 PUB. CHOICE 195, 200 (2015) (observing that Mancur Olson's propositions on the provision of collective goods assumed that the good's consumption was "rivalrous" in that shares decreased in proportion to the group size's increase).

120. If mitigation choices arise before localized consequences of future climate sensitivities can be backed out of the "general circulation models" (GCMs) on which the IPCC and UNFCCC COPs rely, they may be severely compromised by how costly, complex, and uncertain the derivation of local consequences will remain. Michael C. Runge et al., *Detecting Failure of Climate Predictions*, 6 NATURE CLIMATE CHANGE 861, 861–62 (2016).

121. See, e.g., JOHN BROOME, CLIMATE MATTERS: ETHICS IN A WARMING WORLD 156 (2012).

quite differently.<sup>122</sup> Replacing the avoidance of “dangerous” climate change with the hard limit of 2°C total average warming at least has the potential to sharpen the obligatory tone of Paris’s commitments.<sup>123</sup>

Still, tradeoffs between public expenditures for adaptation and those for mitigation are seemingly inevitable<sup>124</sup> given adaptation’s capacity to lower any jurisdiction’s costs of collective failures to mitigate.<sup>125</sup> Indeed, the types and pace of adaptation investments are projected to vary tremendously depending on the degree to which mitigation succeeds or fails.<sup>126</sup> Thus, adaptation is hardly “defection” in the game-theoretic sense, even as this interactivity of a signatory’s response options after Paris severely complicates the assessment of pledge credibility and, derivatively, the feasibility of mitigation’s joint supply. With relatively high confidence that, even limiting warming to 2°C globally, catastrophic regional and local consequences will continue to mount throughout this century,<sup>127</sup> the interactivity of pledges, their credibility, and the successful pursuit of the 2°C goal becomes extremely difficult for nations to anticipate. In fact, especially given a “high ambition” coalition’s (unsuccessful) efforts to push the 1.5°C temperature goal at Paris, there is every reason to expect that the more nations already suffering global warming’s damages doubt the prospects for mitigation’s joint supply, the

122. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY 7 (2014) [hereinafter AR5 WGII].

123. See, e.g., H. Damon Matthews et al., *Cumulative Carbon as a Policy Framework for Achieving Climate Stabilization*, 370 PHIL. TRANSACTIONS ROYAL SOC’Y A 4365, 4367–75 (2012) (mapping the emissions cuts needed to keep warming to 2°C globally).

124. HALE ET AL., *supra* note 27, at 267 (discussing poorer countries’ ostensible “right . . . to exploit the atmosphere as they develop” as a principal cause of “gridlock” on climate and the tradeoffs entailed for many of them deciding whether to develop with fossil fuels or to prioritize clean energy-based development); cf. NICHOLAS STERN, *THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW* 217 (2006) (noting that low consumption economies would have to expand for decades before growing into a preference for environmental protections like those mitigation demands); see [http://mudancasclimaticas.cptec.inpe.br/~rmclima/pdfs/destaques/sternreview\\_report\\_complete.pdf](http://mudancasclimaticas.cptec.inpe.br/~rmclima/pdfs/destaques/sternreview_report_complete.pdf).

125. See, e.g., Jason Scott Johnston, *The Social Cost of Carbon*, REG. (Spring 2016), at 36, 41.

126. See, e.g., François Gemmene, *Climate-Induced Population Displacements in a 4°C+ World*, 369 PHIL. TRANSACTIONS ROYAL SOC’Y A 182, 187–93 (2011) (hypothesizing that population displacements would shift dramatically as between 2°C and 4°C of cumulative global average warming); cf. AR5 WGII, *supra* note 122, at 21–25 (tracking several “key risks” across major geophysical regions in 2°C and 4°C scenarios).

127. AR5 WGII, *supra* note 122, at 64–66; cf. Paris Agreement, *supra* note 5, art. 8(1) (recognizing the importance of “averting, minimizing, and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage”).

stronger their incentives will be domestically to prefer investing in adaptation. Part III situates Paris within our federalism and the legal doctrines governing this unique agreement.

### III. OUR FOREIGN AFFAIRS FEDERALISM: SUPREMACY AND DORMANCY IN A CHANGED WORLD

The Supremacy Clause's inclusion of "all treaties made, or which shall be made, under the authority of the United States" within the ranks of the "supreme Law of the Land" that "the judges in every state shall be bound" by, "anything in the Constitution or laws of any State to the contrary notwithstanding"<sup>128</sup> left to both state and federal courts the delicate task of interpreting the nation's international agreements into domestic (federal) law.<sup>129</sup> Doctrines of self- versus non-self-executing treaties emerged<sup>130</sup> but have remained notoriously opaque, despite the fact that treaty practice and U.S. treaties in force have both expanded tremendously since the end of World War II.<sup>131</sup> However, the UNFCCC's status within U.S. law<sup>132</sup> must not be confused with the Paris agreement's status. The latter is an "executive agreement" nowhere mentioned in the Supremacy Clause, the Treaty Clause,<sup>133</sup> or Article III.<sup>134</sup> As already noted, the Paris agreement

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128. U.S. CONST. art. VI, § 2.

129. See MICHAEL J. GLENNON & ROBERT D. SLOANE, *FOREIGN AFFAIRS FEDERALISM: THE MYTH OF NATIONAL EXCLUSIVITY 185–245* (2016) (discussing *Missouri v. Holland*, 252 U.S. 416 (1920), and *Bond v. United States*, 134 S. Ct. 2077 (2014), and finding the two cases incompatible in their theories of the treaty power and, at the extremes, irreconcilable).

130. *Foster v. Neilson*, 27 U.S. 253, 314 (1829).

131. Cf. John C. Yoo, *Globalization and the Constitution: Treaties, Non-Self-Execution and the Original Understanding*, 99 COLUM. L. REV. 1955 (1999) (making historical argument that treaties ordinarily require implementing legislation to fit directly into American law), with David M. Golove, *Treaty-Making and the Nation: The Historical Foundations of the Nationalist Conception of the Treaty Power*, 98 MICH. L. REV. 1075 (2000) (arguing that text, structure and history all support a presumption of self-execution of treaties made).

132. The UNFCCC's "framework" nature is something of a term of art in international law, see Wirth, *supra* note 15, at 519, but is otherwise unrelated to its force or status within US law. Cf. Criddle, *supra* note 60, at 449–64 (identifying and contrasting "nationalist" and "internationalist" theories of treaties' force in domestic courts and concluding that nothing about a treaty's international significance must necessarily factor into a court's application of treaties domestically). In its only case ever to have addressed an executive agreement made pursuant to an Article II treaty, the Court held that its legal force turned at least in part on whether the Senate that had approved the treaty had "authorized" the making of subsequent executive agreements. *Wilson v. Girard*, 354 U.S. 524, 528 (1957).

133. U.S. CONST. art. II, § 2 ("[The President] shall have power, by and with the Advice and Consent of the Senate, to make Treaties, provided two thirds of the Senators present concur").

134. *But see* *Dames & Moore v. Regan*, 453 U.S. 654, 679 (1981) (affording preemptive effect to executive agreement); *Am. Ins. Ass'n v. Garamendi*, 539 U.S. 396, 415–16 (2003) (stating same in dicta).

was actively and overtly structured to avoid putting President Obama in the position of having to seek the Senate or Congress's support.<sup>135</sup> Yet the diplomatic relations created and put in motion by the Paris agreement are another matter—potentially as consequential within several important U.S. legal doctrines as a treaty's text.<sup>136</sup> That leaves to our courts the especially delicate task of sorting a current presidential administration's powers over diplomatic relations from the force and scope of the Supremacy Clause—something scholars have lately argued about vehemently and at length.<sup>137</sup>

### *A. Supremacy in a Changed World*

By the time of the founding, several states had, by neglecting (or refusing) to honor commitments made by the Union, entangled it in disputes with foreign powers.<sup>138</sup> Our federal courts were structured in no small degree to be able to check those abuses.<sup>139</sup> Most importantly, treaties made by the United States are both supreme law of the land and their own head of federal jurisdiction in Article III.<sup>140</sup> This constitutional inter-positioning of the federal courts between states and foreign powers has since taken on a very different significance in a world of constantly expanding international ties—commercial, social, legal, and other.<sup>141</sup> Indeed, as the 'We Are Still In' coalition shows, it is often subparts of the United States seeking to redeem the republic's good name abroad today and that is unlikely

135. A great deal of ink has been shed suggesting that such moves by US Presidents are inherently unconstitutional. See Jack Goldsmith & John F. Manning, *The President's Completion Power*, 115 YALE L.J. 2280, 2287-97 (2006) (collecting sources). Given the UNFCCC and the President's Article II powers (and even ignoring theories of inherent executive power), I leave this line of argument about Paris to the side. *But see id.* (arguing that Article II leaves to the president, by necessary inference, the power to "complete" treaties and statutes expressing the will of the people).

136. See *infra* notes 223–55 and accompanying text.

137. See Henry Paul Monaghan, *Supremacy Clause Textualism*, 110 COLUM. L. REV. 731, 734–40 (2010).

138. LOUIS HENKIN, *FOREIGN AFFAIRS AND THE UNITED STATES CONSTITUTION* 175 (2d ed. 1997); Gary Lawson & Guy Seidman, *The Jeffersonian Treaty Clause*, 2006 U. ILL. L. REV. 1 (2006).

139. ANTHONY J. BELLIA, JR. & BRADFORD R. CLARK, *THE LAW OF NATIONS AND THE UNITED STATES CONSTITUTION* 3–18 (2017); GLENNON & SLOANE, *supra* note 129, at 189–93; HENKIN, *supra* note 138, at 298–303.

140. Among the first reported opinions from our Supreme Court was a case enforcing the Treaty of Paris notwithstanding a Virginia statute to the contrary. See *Ware v. Hylton*, 3 U.S. 199 (1796). Recall Article III, Section 2 included cases "arising under . . . Treaties made, or which shall be made under the Authority of the United States," as well as "all Cases affecting Ambassadors," in its jurisdictional subject matters. U.S. CONST. art. III, § 2.

141. See GLENNON & SLOANE, *supra* note 129, at 27–29; Douglas A. Kysar & Bernadette A. Meyler, *Like a Nation State*, 55 UCLA L. REV. 1621, 1637-1650 (2008); Julian Ku, *Gubernatorial Foreign Policy*, 115 YALE L.J. 2380, 2398-409 (2006).



to change in the near term. Although some have argued this is legally irrelevant and that courts should interpret silences in the law to prohibit such subnational foreign relations (a kind of “dormant treaty power”),<sup>142</sup> the Supremacy Clause notably excludes a lot by only including its three discrete forms of “supreme Law of the Land.” There is every reason to believe that the separation of powers checks on the making of those laws was expected (and intended) to be a safeguard to the states.<sup>143</sup>

What can we in the present make of the fact that the common law, administrative regulations, interstate compacts, and customary international law are all practically invisible for purposes of federal supremacy under the Constitution?<sup>144</sup> *Erie Railroad Co. v. Tompkins*,<sup>145</sup> of course, rejected the inference that the jurisdiction to adjudicate established by Article III entailed the authority to fashion rules of decision.<sup>146</sup> Although *Erie* arguably trimmed the subject matters where federal common law-making is appropriate to a discrete list of fields stemming directly from the Constitution’s structure,<sup>147</sup> that is hardly an afterthought.<sup>148</sup> If this federal common law is the true origin of doctrines like “act of state,”<sup>149</sup> “equal footing,”<sup>150</sup> the downstream right to a flowing river,<sup>151</sup> and/or others,<sup>152</sup> that still creates a

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142. See, e.g., Edward T. Swaine, *Negotiating Federalism: State Bargaining and the Dormant Treaty Power*, 49 DUKE L.J. 1127, 1162-64 (2000).

143. See generally Bradford R. Clark, *Separation of Powers as a Safeguard of Federalism*, 79 TEX. L. REV. 1321 (2001).

144. Cf. Monaghan, *supra* note 137, at 768-69 (characterizing this omission as reflecting the “Lost World of the Founders”). But see Gil Seinfeld, *The Jurisprudence of Union*, 89 NOTRE DAME L. REV. 1085, 1109-14 (2014) (arguing that the values protected by national supremacy are important enough to motivate a broadly preemptive “dormant foreign affairs” doctrine).

145. 304 U.S. 64 (1938).

146. *Erie*, 304 U.S. at 79-80 (overruling *Swift v. Tyson*, 41 U.S. 1 (1842)); see also *Klaxon Co. v. Stentor Electric Mfg. Co.*, 313 U.S. 487, 496-98 (1941) (holding that federal courts sitting in diversity must apply the conflicts rules of the state in which they sit, citing *Erie*).

147. Bradford R. Clark, *Federal Common Law: A Structural Reinterpretation*, 144 U. PA. L. REV. 1245 (1996); Martha A. Field, *Sources of Law: The Scope of Federal Common Law*, 99 HARV. L. REV. 881, 885-87 (1986). But see *id.* at 950-82 (arguing that federal common law can apply wherever federal interests demand a uniform federal standard).

148. Alfred Hill, *The Law-Making Power of the Federal Courts: Constitutional Preemption*, 67 COLUM. L. REV. 1024 (1967); Henry J. Friendly, *In Praise of Erie—and of the New Federal Common Law*, 39 N.Y.U. L. REV. 383 (1964).

149. See *Verlinden B.V. v. Cent. Bank of Nigeria*, 461 U.S. 480, 486 (1983); *Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398, 425 (1964).

150. See, e.g., *Pollard v. Hagan*, 44 U.S. 212 (1845).

151. See, e.g., *Connecticut v. Massachusetts*, 282 U.S. 660 (1931).

152. See, e.g., *Clearfield Trust Co. v. United States*, 318 U.S. 363 (1943) (upholding the creation of a federal rule of decision in cases of the commercial dealings of the United

great deal of federal “law” that somehow preempts inconsistent state law without mention in the Supremacy Clause.<sup>153</sup> Still more central to the modern economy are the regulations of federal administrative agencies which occupy a unique rank in the Supreme Court’s esteem—below that of a federal statute but high enough to preempt inconsistent state law, serve as the basis of a prison sentence,<sup>154</sup> and provide other rules of decision in court.<sup>155</sup> Interstate compacts approved by Congress have been (unequivocally) shoe-horned into federal supremacy despite their absence from Article IV.<sup>156</sup> Court rules are a final example: we no longer think that the Federal Rules can have no independent legal force for their omission from the Supremacy Clause.<sup>157</sup>

But, then there is the anomalous and beguiling case of international law and its place in our federalism.<sup>158</sup> Under *Erie*, if international law is not incorporated into federal law—and plenty of scholars have mounted substantial arguments that much of it is not<sup>159</sup>—it may still find a place in *state* law.<sup>160</sup> The modern Supreme Court has long maintained that *certain* elements of international law must be preemptive for the good of the Nation,<sup>161</sup> although it has struggled to

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States).

153. Monaghan, *supra* note 137, at 756–61, 765–68. Statutory interpretive methodology is another field where some have argued federal common law must necessarily exist. See Abbe Gluck, *The Federal Common Law of Statutory Interpretation: Erie For the Age of Statutes*, 54 WM. & MARY L. REV. 753 (2013).

154. *United States v. Grimaud*, 220 U.S. 506, 522–23 (1911).

155. *Long Island Care at Home, Ltd. v. Coke*, 551 U.S. 158, 172 (2007); *Chrysler Corp. v. Brown*, 441 U.S. 281, 301 (1979); Kristin E. Hickman, *Unpacking the Force of Law*, 66 VAND. L. REV. 465 (2013).

156. See *Arizona v. California*, 373 U.S. 546 (1963); *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92, 110 (1938); see also Duncan B. Hollis, *Unpacking the Compact Clause*, 88 TEX. L. REV. 741 (2010).

157. *Sibbach v. Wilson & Co.*, 312 U.S. 1 (1940).

158. A shrewd and succinct overview of the debate is Daniel J. Meltzer, *Customary International Law, Foreign Affairs, and Federal Common Law*, 42 VA. J. INT’L L. 513 (2002).

159. See, e.g., Anthony J. Bellia, Jr. & Bradford R. Clark, *The Federal Common Law of Nations*, 109 COLUM. L. REV. 1, 20–28, 80–90 (2009); Ernest A. Young, *Sorting Out the Debate Over Customary International Law*, 42 VA. J. INT’L L. 365 (2002); Curtis A. Bradley & Jack L. Goldsmith, *Customary International Law as Federal Common Law: A Critique of the Modern Position*, 110 HARV. L. REV. 815 (1997); A.M. Weisburd, *State Courts, Federal Courts, and International Cases*, 20 YALE J. INT’L L. 1 (1995); Trimble, *supra* note 52, at 716–21.

160. Meltzer, *supra* note 158, at 536–51; see also Bradley & Goldsmith, *supra* note 159, at 870; cf. MICHAEL D. RAMSEY, *THE CONSTITUTION’S TEXT IN FOREIGN AFFAIRS* 342–61 (2007) (allowing that international law may supply the rule of decision in state and federal courts if not displaced by valid state or federal law).

161. Lea Brilmayer, *Federalism, State Authority, and the Preemptive Power of International Law*, 1994 SUP. CT. REV. 295; Jack L. Goldsmith, *Federal Courts, Foreign Affairs*,

provide general contours to that end.<sup>162</sup> Given the Constitution's clauses explicitly disabling the states in foreign relations,<sup>163</sup> it is almost surely correct that "the Constitution was designed to interact in distinct and specific ways with each branch of the law of nations in existence at the founding."<sup>164</sup> And much of living with the Constitution and international law's place in our federalism was originally handled with great care by the Supreme Court.<sup>165</sup>

Yet the exact positioning of executive authority in relation to a governing treaty remains wide open to debate.<sup>166</sup> In the immortal words of Justice Jackson's *Steel Seizure* concurrence, these questions lay in a "zone of twilight" where the executive may exercise "independent presidential responsibility" but emphatically *not* to the effect of ignoring federal law.<sup>167</sup> Thus, while some "executive agreements" not ratified by the Senate may displace contrary state law, the scope of this power has been tied tightly to the President's power to enforce law.<sup>168</sup> There is no general presumption, after all, that treaties operate in American courts of their own force.<sup>169</sup> The Obama Admin-

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*and Federalism*, 83 VA. L. REV. 1617, 1625-41 (1997).

162. Goldsmith, *supra* note 161, at 1664-98.

163. Cf. Hollis, *supra* note 156, at 769-96 (examining the text and history of the Compacts Clause and arguing that compacts or other agreements with foreign states should draw special constitutional scrutiny given the several dimensions of the Founders' approach to states as sovereign).

164. BELLIA & CLARK, *supra* note 139, at 144.

165. MARK WESTON JANIS, *THE AMERICAN TRADITION OF INTERNATIONAL LAW: GREAT EXPECTATIONS 1789-1914*, at 62 (2004) (noting that the Marshall Court's references to international law's being a part of U.S. law "involved ticklish questions about respecting foreign sovereigns").

166. See GLENNON & SLOANE, *supra* note 129, at 234-44; HENKIN, *supra* note 138, at 194-228; BELLIA & CLARK, *supra* note 139, at 229-31; Wirth, *supra* note 15, at 518-21; Bodansky & Spiro, *supra* note 74, at 887-88.

167. *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579, 636-37 & n.2 (1952) (Jackson, J., concurring); see also *Japan Whaling Ass'n v. American Cetacean Soc'y*, 478 U.S. 221, 240-41 (1986); *Dames & Moore v. Regan*, 453 U.S. 654, 680-83 (1981). Article II makes it the President's duty to "take Care that the Laws be faithfully executed." U.S. CONST. art. II, § 3. All agree that Paris's status as an executive agreement depends on its consistency with federal law. See Bodansky & Spiro, *supra* note 74, at 887-88, 929; Bradley & Goldsmith, *Presidential Control*, *supra* note 4, at 1257 ("A foundational tenet of American separation of powers is that all presidential action must be authorized by the Constitution or an act of Congress.").

168. See Jean Galbraith & David Zaring, *Soft Law as Foreign Relations Law*, 99 CORNELL L. REV. 735 (2014); Bradford R. Clark, *Domesticating Sole Executive Agreements*, 93 VA. L. REV. 1573 (2007); Michael P. Van Alstine, *Executive Aggrandizement in Foreign Affairs Lawmaking*, 54 UCLA L. REV. 309 (2006).

169. See *Medellin v. Texas*, 552 U.S. 491, 504-05 (2008) ("This Court has long recognized the distinction between treaties that automatically have effect as domestic law, and those that—while they constitute international law commitments—do not by themselves function as binding federal law.").

istration's legal justification for the Paris Agreement cited, among a litany of other potential sources of authority, the UNFCCC.<sup>170</sup> Surely were an Article II treaty to guarantee some primary conduct right, privilege, immunity, or other entitlement to a foreign government or foreign national which was thereafter denied in a U.S. court—misfeasance under the treaty, violating international law<sup>171</sup>—the incident would at the very least embarrass our presidency and the federal arrangements atop which it sits.<sup>172</sup> Of course, extremal cases of the kind are extreme (and rare).<sup>173</sup> Much more common are treaty rights and duties imperfectly specified and indeterminately implemented.<sup>174</sup> But, if anything, the modern Court has shown itself immensely deferential to state law and interests, ever-ready to curb the preemptive scope of treaties to shelter those interests.<sup>175</sup> Thus, whatever merit there may be in arguments that subnational efforts to mitigate should be preempted by a president's claims that their high emitting econo-

170. See Bradley & Goldsmith, *Presidential Control*, *supra* note 4, at 1250 & n.222 (describing a copy of the “confidential submission to Congress” concerning the agreement, done pursuant to the Case Act, offering a “‘kitchen sink’ statement of legal authorities” for Paris).

171. Fitzmaurice, *supra* note 60, at 175, 181–82 (observing that the Vienna Convention on the Law of Treaties both codified principles of *pacta sunt servanda* and obliged signatories by its own force); see also IAN BROWNLIE, *PRINCIPLES OF PUBLIC INTERNATIONAL LAW* 603–05, 616 (4th ed. 1990).

172. Compare BROWNLIE, *supra* note 171, at 35 (“A state cannot plead provisions of its own law or deficiencies in that law in answer to a claim against it for an alleged breach of its obligations under international law.”), with *The Paquete Habana*, 175 U.S. 677, 700 (1900) (observing that “[i]nternational law is part of our law” and that, barring any “controlling executive or legislative act or judicial decision” to the contrary, it should decide “questions of right” in U.S. courts wherever applicable).

173. The Court has on occasion held that treaties should be construed with reference to their meaning under the law of nations. See, e.g., *Santovincenzo v. Egan*, 284 U.S. 30, 40 (1931) (citing *De Geofroy v. Riggs*, 133 U.S. 258, 271 (1890)). But even the liberal internationalists have long conceded the prerogative lies with the signatory. Cf. Louis Henkin, *International Law as Law in the United States*, 82 MICH. L. REV. 1555, 1568 (1984) (“In principle, every state has the power—I do not say the right—to violate international law and obligation and to suffer the consequences.”).

174. See, e.g., *Sanchez-Llamas v. Oregon*, 548 U.S. 331, 347–60 (2006) (denying an exclusionary remedy for violation of defendant's right to counsel from Mexican Consulate under the Vienna Convention on Consular Relations on grounds that convention did not specify an exclusionary remedy and that Supreme Court generally lacks the power to force equitable remedies on state courts); *Bond v. United States*, 572 U.S. 844, 860–66 (2014) (holding that chemical weapons convention banning the use of all “toxic chemicals” would not support criminal liability for attempted poisoning with toxic chemicals as the convention was “non-self-executing”).

175. See, e.g., *Medellín v. Texas*, 552 U.S. 491, 506 (2008) (rejecting multiple treaty grounds for recognizing judgment of International Court of Justice to free Texas inmate on grounds none of the specific provisions nor any implementing legislation rendered such judgments binding on state courts); *Sanchez-Llamas*, 548 U.S. at 360.

mies could become an important “bargaining chip,”<sup>176</sup> they run headlong at least into the Court’s demonstrated solicitude for those same states.

The most deeply contested terrain in treaties and the treaty power has long been the extent to which the ‘government of limited and enumerated powers’ on the domestic front<sup>177</sup> can use pretenses of “external objects” like “war, peace, negotiation [sic], and foreign commerce”<sup>178</sup> to create initiative power where the Constitution denies it.<sup>179</sup> That in itself complicates expansive interpretations of the president’s unilateral preemptive authority in dealings with foreign powers—like that stated in dicta in *American Insurance Ass’n v. Garamendi*.<sup>180</sup> From all that I have been able find in my research, however, what has never come to the Court is the Article II treaty, with its independent force in both domestic and international law, and that treaty’s place in domestic litigation (in light of Articles III and IV) arrayed against executive actions undoing the implementation work of a preceding administration, themselves arrayed against subnational implementation of the same treaty. It is hardly surprising that such a unique tangle of questions would never have arisen in the Supreme Court. Paris’s inimitable emergence and relationship to the UNFCCC, to say nothing of the breadth of its signatories and global support, however, may soon be coming to a court near you. Section B describes the “dormant” preemptive doctrines that could also factor into such cases.

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176. *Foreign Affairs Preemption and State Regulation of Greenhouse Gas Emissions*, 119 HARV. L. REV. 1877, 1881–94 (2006).

177. Cf. THE FEDERALIST NO. 45, at 313 (James Madison) (Jacob E. Cooke ed., 1961) (“The powers delegated by the proposed Constitution to the Federal Government, are few and defined. Those which are to remain in the State Governments are numerous and indefinite.”); Lawson & Seidman, *supra* note 138, at 11.

178. THE FEDERALIST NO. 45, *supra* note 177, at 313.

179. See GLENNON & SLOANE, *supra* note 129, at 185–244; Oona A. Hathaway, *Treaties’ End: The Past, Present, and Future of International Lawmaking in the United States*, 117 YALE L.J. 1236, 1339–40 (2008); HENKIN, *supra* note 138, at 185–98.

180. 539 U.S. 396, 416–17 (2003); see Brannon P. Denning & Michael Ramsey, *American Insurance Association v. Garamendi and Executive Preemption in Foreign Affairs*, 46 WM. & MARY L. REV. 825 (2004). Oddly, after citing three cases involving recognition and claims espousal, *Dames & Moore v. Regan*, 453 U.S. 654 (1981), *United States v. Pink*, 315 U.S. 203 (1942), and *United States v. Belmont*, 301 U.S. 324 (1942), the Court in *Garamendi* pronounced that “[g]enerally, then, valid executive agreements are fit to preempt state law, just as treaties are,” 539 U.S. at 416, immediately before concluding that the executive agreement at issue in the case did *not* do so. *Id.* at 417.

*B. Dormancy in a Changed World*

“Dormant” constitutional limitations on states date at least to 1824<sup>181</sup> and by the middle of the nineteenth century had grown familiar to the Supreme Court.<sup>182</sup> Yet, motivated mostly by political theories of union rather than any economic theory of trade,<sup>183</sup> this implied preemption of state laws “designed to benefit in-state economic interests by burdening out of state competitors”<sup>184</sup> has long occupied unstable ground amidst the Court’s federalism landmarks.<sup>185</sup> By the middle of the twentieth century, dormant limitations on states’ “intrusion” into foreign relations through the regulation of foreign commercial activity had also been rooted in that ground.<sup>186</sup> All told, the Court has confronted claims against states’ taxation of foreign commerce as such an intrusion,<sup>187</sup> as well as claims against various other posturing toward foreign powers, entities, and capital.<sup>188</sup>

For the era in which the dormancy doctrines hardened, “foreign” commerce and relations were the exceptions – rather like declarations of war and peace.<sup>189</sup> The Court could mount a colorable claim that preemption grounded in structural inference and theories of union was needed to keep states from “prevent[ing] this Nation from ‘speaking with one voice’ in regulating foreign commerce.”<sup>190</sup> Today, foreign trade and the posturing that manages it is as expected of governors and metropolitan mayors as foreign business’ search for

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181. *Gibbons v. Ogden*, 22 U.S. 1, 209 (1824).

182. *Cooley v. Bd. of Wardens of Port of Philadelphia*, 53 U.S. 299, 315–18 (1851) (summarizing the Court’s twin theories of foreign and interstate commerce, Congress’s control thereof, and states’ remaining prerogatives in foreign and interstate commercial dealings).

183. LAURENCE H. TRIBE, *AMERICAN CONSTITUTIONAL LAW* § 6-5, at 1057 (3d ed. 2000); see also Julian N. Eule, *Laying the Dormant Commerce Clause to Rest*, 91 *YALE L.J.* 425, 429–35 (1982).

184. *Wyoming v. Oklahoma*, 502 U.S. 437, 454 (1992).

185. Donald H. Regan, *The Supreme Court and State Protectionism: Making Sense of the Dormant Commerce Clause*, 84 *MICH. L. REV.* 1091, 1094–96 (1986).

186. *Clark v. Allen*, 331 U.S. 503 (1947); *Zschernig v. Miller*, 389 U.S. 429 (1968).

187. See *Michelin Tire Corp. v. Wages*, 423 U.S. 276 (1976); *Japan Line, LTD v. County of Los Angeles*, 441 U.S. 434 (1979); *Container Corp. of Am. v. Franchise Tax Bd.*, 463 U.S. 159 (1983); *Barclays Bank PLC v. Franchise Tax Bd.*, 512 U.S. 298 (1994).

188. See *National Foreign Trade Council v. Natsios*, 181 F.3d 38 (1st Cir. 1999), *aff’d sub. nom.*, *Crosby v. National Foreign Trade Council*, 530 U.S. 363 (2000); *Am. Ins. Ass’n v. Garamendi*, 539 U.S. 396 (2003). The Court’s “dormant” preemption theory in *Garamendi* was criticized for its breadth by a dissent that included Justices Ginsburg, Stevens, Scalia, and Thomas. See *Am. Ins. Ass’n*, 539 U.S. at 438–41 (Ginsburg, J., dissenting).

189. See *supra* notes 138–41 and accompanying text.

190. *Japan Line, LTD v. County of Los Angeles*, 441 U.S. 434, 451 (1979) (quoting *Michelin Tire Corp v. Wages*, 423 U.S. 276, 285 (1976)).

favors from host jurisdictions.<sup>191</sup> Perhaps even more importantly, as the latest dormant commerce clause precedents have reflected,<sup>192</sup> federal law (here, by treaty) is now *so* prevalent<sup>193</sup> that the original inferential warrant from powers granted but unexercised to judicial freelancing has all but vanished.<sup>194</sup> Indeed, it would be the submergence of judicial power into politics and economic competition that so many of the Court's doctrines aim precisely to avoid.<sup>195</sup>

Still, this dormant preemption has attracted a great deal of attention as subnational climate change initiatives have spread and strengthened.<sup>196</sup> Much of modern field preemption doctrine stems

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191. See GLENNON & SLOANE, *supra* note 129, at 35–45, 60–76; David H. Moore, *Beyond One Voice*, 98 MINN. L. REV. 953 (2014); Kysar & Meyler, *supra* note 141; Ku, *supra* note 141; Richard B. Bilder, *The Role of States and Cities in Foreign Relations*, 83 AM. J. INT'L L. 821 (1989).

192. The Court has noticeably tempered dormant commerce clause doctrine over the past generation. See, e.g., *McBurney v. Young*, 133 S. Ct. 1709, 1720 (2013); *United Haulers' Ass'n v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 550 U.S. 330, 336–37 (2007); *West Lynn Creamery v. Healy*, 512 U.S. 186, 205 (1994); *CTS Corp. v. Dynamics Corp. of Am.*, 481 U.S. 69, 87 (1987); *Reeves, Inc. v. Stake*, 447 U.S. 429, 435– (1980); see also *Rocky Mtn. Farmers' Union v. Corey*, 730 F.3d 1070, 1087–97 (9th Cir. 2013); see generally Daniel Francis, *The Decline of the Dormant Commerce Clause*, 94 U. DENV. L. REV. 255 (2017). In fact, for many areas it will be preemption by a field-occupying federal statute that constitutes the more direct threat to states. See, e.g., *United States v. Locke*, 529 U.S. 89 (2000) (holding that Congress had “left no room for state regulation” of oil tanker design).

193. See, e.g., Hathaway, *supra* note 179, at 1248–71; HENKIN, *supra* note 138, at 175–230; LOCH K. JOHNSON, *THE MAKING OF INTERNATIONAL AGREEMENTS: CONGRESS CONFRONTS THE EXECUTIVE* (1984).

194. See Ingrid Wuerth, *The Future of the Federal Common Law of Foreign Relations*, 106 GEO. L.J. 1825, 1831 (2018) (noting the Supreme Court has not used dormant foreign affairs preemption to strike down a state law since 1968); Jack Goldsmith, *Statutory Foreign Affairs Preemption*, 2000 SUP. CT. REV. 175, 211 [hereinafter Goldsmith, *Preemption*].

195. Cf. Goldsmith, *Preemption*, *supra* note 194, at 210 (“The waning of the distinction between domestic and foreign affairs means that just about any state law, when applied in a case involving a foreign element, is potentially subject to judicial preemption. The expanding array of preemptable state laws means that dormant foreign affairs preemption represents a potentially massive transfer of federal foreign relations lawmaking power to the federal courts at the expense of the states.”).

196. See, e.g., Jessie Cammack, *California, Climate, and Dormant Foreign Affairs Preemption (Again)*, 65 UCLA L. REV. 1642 (2018); Augusta Wilson, *Linking Across Borders: Opportunities and Obstacles for a Joint Regional Greenhouse Gas Initiative-Western Climate Initiative Market*, 43 COLUM. J. ENVTL. L. 227, 246–65 (2018); David Sloss, *California's Climate Diplomacy and Dormant Preemption*, 56 WASHBURN L.J. 507 (2017); David W. Wright, *Cross-Border Constraints on Climate Change Agreements: Legal Risks in the California-Quebec Cap-and-Trade Linkage*, 46 ENVTL. L. REP. NEWS & ANALYSIS 10478 (2016); Jeremy Lawrence, *The Western Climate Initiative: Cross-Border Collaboration and Constitutional Structure in the United States and Canada*, 82 S. CAL. L. REV. 1225 (2009); Jeremy Lawrence, *Where Federalism and Globalization Intersect: The Western Climate Initiative as a Model for Cross-Border Collaboration Among States and Provinces*, 38 ENVTL. L. REP. NEWS & ANALYSIS 10796 (2008); *Foreign Affairs Preemption and State Greenhouse Gas Regulations*, *supra* note 176.

from what might be called a “foreign affairs” context.<sup>197</sup> Yet skeptics would surely be correct to note the ubiquity of fossil fuels and their infrastructure, subsidy, and health risks—and the range of actions implicated by their disentanglement and replacement with renewable energy and carbon-conscious supply chains. If all of that is to be preempted by structural inferences from the Constitution it would implicate the federal courts in a vast enterprise, searching for ‘bargaining chips’ to aid a (current) president’s opaque strategy to undo an executive agreement possessed of treaty-standing under the Vienna Convention and public international law.<sup>198</sup> And this, above all, should give those courts pause in challenges to subnational mitigation efforts. For the most potent influence in the interpretation of treaties as the “supreme Law of the Land” at the Supreme Court has lately been the interpretation’s significance to the “judicial Power.”<sup>199</sup> Part IV considers these points in three contexts where ‘We Are Still In’ efforts are likely to present an unprecedented new normal in US courts.

#### IV. PARIS’S FUTURE IN AMERICAN COURTS: THREE CORE CONTEXTS IN THE NEW NORMAL

This part considers three contexts where the Paris agreement’s unique position in international and domestic law may influence a court’s decision involving subnational mitigation efforts, whether as a function of dormancy or supremacy. Key to any federal court’s intervention on behalf of an aggrieved party will be the exact manner in which regulatory power is projected—and whether to characterize that projection as legitimate, as “extraterritorial” and illegitimate, or as something else. Equally important will be difficult questions surrounding international law’s place in domestic courts and, particularly, courts of general jurisdiction – like many state courts. Finally, the remedial discretion that every court exercises in granting or withhold-

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197. Goldsmith, *Preemption*, *supra* note 194, 187–89 (*discussing* *Hines v. Davidowitz*, 312 U.S. 52 (1941)).

198. *See supra* notes 140, 170 and accompanying text.

199. *Cf. Medellin v. Texas*, 552 U.S. 491, 526–28 (2008) (refusing to find in non-self-executing treaty authority for the president to unilaterally change the law and displace state court judicial discretion); *Sosa v. Alvarez-Machain*, 542 U.S. 692, 720–38 (2004) (interpreting Alien Tort Statute to confer jurisdiction to hear but not a distinct cause of action or jurisdiction to prescribe rules of decision for cases of alleged torts committed on foreign soil); *United States v. Alvarez-Machain*, 504 U.S. 655, 668 n.15 (1992); *Argentine Republic v. Amerada Hess Shipping Co.*, 488 U.S. 428 (1989) (holding that Geneva Convention on the High Seas did not create exception to Foreign Sovereign Immunities Act because jurisdiction over foreign state signatory to the convention would put U.S. federal courts to adjudicating foreign state liabilities for torts committed on the high seas).



ing equitable relief inevitably turns on that relief's prejudice to the public at large, *i.e.*, consistency with the public good. In each of these three contexts, sensitive discriminations between Paris and what preceded it will be critical.

*A. Extraterritoriality and Decarbonization: The Scale and Scope of Mitigation Actions*

Globalized finances, supply chains,<sup>200</sup> and regulatory interest therein<sup>201</sup> mean that subnational 'municipal' authority is more likely to reach conduct and trade spanning international boundaries.<sup>202</sup> Our own dormant commerce doctrines have labeled this the extraterritorial assertion of jurisdiction,<sup>203</sup> but virtually any serious effort to push decarbonization by advantaging low carbon competitors (or disadvantaging so-called carbon "majors") will at least *appear* extraterritorial and prejudicial in effect.<sup>204</sup> It is in the nature of inducing technological change in free markets that regulatory effects spill over into cognate jurisdictions, though.<sup>205</sup> And although the Court has made clear that it is entirely appropriate to regulate across borders where conduct that was meant to produce and did in fact produce some sub-

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200. HALE ET AL., *supra* note 27, at 113–88.

201. In historical context, it is only quite recently that regulatory attention has turned to the supply chains producing the goods and services consumed in a jurisdiction—as opposed to its confinement to the consumption and production therein. See Douglas A. Kysar, *Preferences for Processes: The Process/Product Distinction and the Regulation of Consumer Choice*, 118 HARV. L. REV. 526, 527–79 (2004).

202. Ku, *supra* note 141, at 2412–14. This comes at a time when it has never been more difficult to secure Senate and/or Congressional approval of executive branch initiatives abroad. See Galbraith, *supra* note 3, at 1723–30.

203. See, e.g., Healy v. Beer Inst., 491 U.S. 324, 336 (1989); Brown-Forman Distillers Corp. v. N.Y. State Liquor Auth., 476 U.S. 573, 582 (1986); Edgar v. MITE Corp., 457 U.S. 624, 642–43 (1982) (“The Commerce Clause ... precludes the application of a state statute to commerce that takes place wholly outside of the State’s borders, whether or not the commerce has effects within the State.”); Hughes v. Alexandria Scrap Corp., 426 U.S. 794, 810 (1976); see also National Foreign Trade Council v. Natsios, 181 F.3d 38, 59–60, 62–66 (1st Cir. 1999), *aff’d on other grounds*; Am. Ins. Ass’n v. Garamendi, 539 U.S. 396, 400 (2003).

204. See, e.g., Central Valley Chrysler-Jeep, Inc. v. Witherspoon, 456 F. Supp.2d 1160, 1183 (E.D. Cal. 2006), *rev’d sub nom.*, Central Valley Chrysler-Jeep, Inc. v. Goldstene, 529 F. Supp.2d 1151, 1187–88 (E.D. Cal. 2007).

205. Cf. Rocky Mtn. Farmers Union v. Corey, 740 F.3d 507, 509–13 (9th Cir. 2014) (Gould, J., concurring in denial of rehearing *en banc*) (observing that California’s low carbon fuel standard, which took account of fuel’s transport in calculating the carbon intensity of its production, only utilized state boundaries and long-distance travel for non-discriminatory reasons and that any indirect regulatory effects in other states were incidental to California’s legitimate purposes); Clyde Spillenger, *Risk Regulation, Extraterritoriality, and Domicile: The Constitutionalization of American Choice of Law, 1850-1940*, 62 UCLA L. REV. 1240 (2015) (tracing the gradual pull of interstate markets on state legislatures and the gradual federalization of choice of law doctrines by means of the Full Faith and Credit Clause of Article VI).

stantial effect in the jurisdiction,<sup>206</sup> claims that such efforts will “Balkanize” our economy or “impinge on the sovereign interests” of other states will no doubt continue.<sup>207</sup> Renewable portfolio standards, now in force in some fashion in over three dozen states, will continue to present such challenges if nothing else.<sup>208</sup>

The Supreme Court passed on judging California’s so-called low-carbon fuel standard in 2014.<sup>209</sup> But the Ninth Circuit, in a contentious proceeding, divided sharply over the state’s right to advantage lower carbon transport fuels as it did.<sup>210</sup> Carbon intensity in any product increases with the distance it travels to market and/or the use of fossil fuels in its production. California’s law, thus, disadvantaged fuels derived from coal combustion in far-off states.<sup>211</sup> Of course, states should face relaxed dormant commerce scrutiny to whatever degree they are a mere “market participant,” *i.e.*, purchaser or seller.<sup>212</sup> And they will also likely find an easier path to the extent any discriminatory treatment is in favor of some public facilities needing subsidy.<sup>213</sup> The real test of Paris, the UNFCCC, and the strategic value of subnational implementation efforts, is where local law creates some kind of reward/sanction effect advantaging mitigation.<sup>214</sup> In that context, efforts to advantage lower carbon production

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206. *Hartford Fire Ins. Co. v. California*, 509 U.S. 764, 796–99 (1993).

207. *See Rocky Mtn. Farmers Union*, 740 F.3d at 512 (9th Cir. 2014) (Smith, J., dissenting from denial of rehearing *en banc*).

208. Brannon P. Denning, *Environmental Federalism and State Renewable Portfolio Standards*, 64 CASE W. RES. L. REV. 1519 (2014).

209. *See Rocky Mtn. Farmers Union v. Corey*, 134 S. Ct. 2875 (2014); *Amer. Fuel & Petrochem. Mfrs. Ass’n v. Corey*, 134 S. Ct. 2875 (2014); *Corey v. Rocky Mtn. Farmers Union*, 134 S. Ct. 2884 (2014).

210. *See Rocky Mtn. Farmers Union v. Corey*, 730 F.3d 1070 (9th Cir. 2013); *Rocky Mtn. Farmers Union*, 740 F.3d at 512 (9th Cir. 2014) (Smith, J., dissenting from denial of rehearing *en banc*), *cert. denied*, 134 S. Ct. 2875 (2014).

211. *Rocky Mtn. Farmers Union*, 730 F.3d at 1082–87. An Oregon scheme mirroring California’s survived dormant commerce clause attacks, as well. *See Am. Fuel & Petrochem. Mfrs. v. O’Keefe*, 903 F.3d 903 (9th Cir. 2018).

212. *Camps Newfound/Owatonna, Inc. v. Town of Harrison*, 520 U.S. 564, 592–93 (1997); *see also Reeves, Inc. v. Stake*, 447 U.S. 429, 430–33 (1980). Exactly what differentiates trading from regulating, however, has remained a murky subfield in dormant commerce clause doctrine. *See Francis*, *supra* note 192, at 303–06.

213. *United Haulers Ass’n v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 550 U.S. 330 (2007) (upholding county flow control ordinances that incidentally burdened commerce while increasing net recycling).

214. *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970) (holding that where a challenger can show that the “burden imposed on commerce is clearly excessive in relation to the putative local benefits,” the law should be invalid under dormant commerce scrutiny); *see also National Foreign Trade Council v. Natsios*, 181 F.3d 38, 62 (1st Cir. 1999) (assuming for purposes of reviewing the validity of the injunction that a “market participant” exception exists under the Foreign Commerce Clause because it might permit a simple immunity to

in parts unknown by burdening access to a local market are inappropriately “discriminatory” or “extraterritorial” only if one ignores the character of its opposite: maintenance of the fossil fuel subsidies and consumption aids regardless of their harms to others.<sup>215</sup> It is nothing like the protectionism that unionists have singled out for dormancy’s strictest scrutiny.<sup>216</sup>

When it is remembered that a cumulative carbon constraint is aiming to supply a *collective* good,<sup>217</sup> only a sham application of the Court’s dormant commerce or dormant foreign relations precedents would preempt subnational efforts to create a reliable and significant pull on new, decarbonizing technology.<sup>218</sup> The risks of unchecked warming are real and increasingly manifest,<sup>219</sup> and bottom-up efforts to force technological change can only ever be contributory.<sup>220</sup> Indeed, their place in the assurances game Paris re-engineered is wholly unlike the domestic actions that have provoked ‘foreign affairs’ preemption in the past.<sup>221</sup> Unless and until the Congress and President change the *law* to bar Americans from contributing to these ends, federal courts have no business doing so on anything more substantial than political theories of union.<sup>222</sup>

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Massachusetts’ sanctioning firms doing business with Burma).

215. See *supra* notes 45–48 and accompanying text. Cf. *Rocky Mtn. Farmers Union*, 730 F.3d at 1089–90 (observing that regulations are not unduly burdensome to commerce or facially discriminatory simply for affecting in-state and out-of-state interests unequally); *O’Keefe*, 903 F.3d at 913 (adopting *Rocky Mtn.* holding and noting that “[o]ur federal system recognizes ‘each State’s freedom to ‘serve as a laboratory; and try novel social and economic experiments.’”) (quoting *San Antonio Indep. Sch. Dist. v. Rodriguez*, 411 U.S. 1, 50 (1973)).

216. See, e.g., Seinfeld, *supra* note 144, at 1088 & n.12; Regan, *supra* note 185.

217. See *supra* notes 48 and 81 and accompanying text.

218. Adelman & Engel, *supra* note 105, at 841–61 (describing the twin market failures of GHG emissions and technological innovation in climate mitigation and the necessity of a collective solution to each); see also Jonas Meckling et al., *Winning Coalitions for Climate Policy*, SCI. MAG., Sept. 11, 2015, at 1170, 1170–71 (arguing that winning coalitions of green industries thrive on feedback from policies and then become strategic partners in continual strengthening efforts).

219. *Rocky Mtn. Farmers Union*, 730 F.3d at 1080–86 (describing the “life-cycle” analysis used in California low-carbon fuel standard and its targeting GHGs in the atmosphere which pose “the same local risk to California citizens” as a means of promoting the development of alternative fuels).

220. See *supra* notes 49–52 and accompanying text.

221. Cf. Goldsmith, *Preemption*, *supra* note 194, at 209 (“It is no accident that the doctrines were applied by the Supreme Court in two cases in the height of the Cold War involving parties—Cuba and East Germany—who were our Cold War enemies.”).

222. Cf. *Barclay’s Bank PLC v. Franchise Tax Bd.*, 512 U.S. 298, 328 (1994) (rejecting dormant foreign affairs preemption claim against California’s worldwide tax on multinational firms and observing that federal courts are “not vested with power to decide how to balance a particular risk of retaliation against the sovereign right of the United States as a whole to let the States tax as they please”).

*B. International Law as State Law: Common but Differentiated Responsibilities Declared*

Many state courts are unquestionably possessed of the authority to declare and apply norms of international applicability in the matters to which they apply.<sup>223</sup> François Génys's neoclassical definition of customary international law as repeat state action plus *opinio juris sive necessitatis*<sup>224</sup> has for generations evinced criticisms of its circularity, theoretical incoherence and, increasingly, obsolescence.<sup>225</sup> Yet customs still arise, especially if they are recast as so many international norms.<sup>226</sup> State courts are surely bound to apply valid, governing federal law<sup>227</sup> and, where customary international law has been incorporated into federal law, it is final.<sup>228</sup> But, as already noted, *Erie* insists that this state/federal question not be assumed away simply because a case possesses elements of (inter-)national significance.<sup>229</sup>

Whether federalized or not, the norms that have arisen from thick, multilateral environmental regimes are real.<sup>230</sup> Moreover, as discussed above, mitigation/adaptation balancing is inherently politi-

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223. See, e.g., Paul Schiff Berman, *Towards a Cosmopolitan Vision of Conflict of Laws: Redefining Governmental Interests in a Global Era*, 153 U. PA. L. REV. 1819, 1823 (2005).

224. Emily Kadens, *Custom's Past*, in CUSTOM'S FUTURE: INTERNATIONAL LAW IN A CHANGING WORLD 11, 12-13 (Curtis A. Bradley ed., 2016) (conventional definition of customary international law includes a two-part test: consistent action/forbearance and state beliefs that the actions or forbearance were required by law).

225. Hiram E. Chodosh, *Neither Treaty nor Custom: The Emergence of Declarative International Law*, 26 TEX. INT'L L.J. 87, 97-105 (1991); see also Curtis A. Bradley, *Customary International Law Adjudication as Common Law Adjudication*, in CUSTOM'S FUTURE: INTERNATIONAL LAW IN A CHANGING WORLD 34, 40-45 (Curtis A. Bradley ed., 2016); Joel P. Tractman, *The Growing Obsolescence of Customary International Law*, CUSTOM'S FUTURE: INTERNATIONAL LAW IN A CHANGING WORLD 172 (Curtis A. Bradley ed., 2016).

226. BODANSKY, *supra* note 11, at 94-106.

227. *Testa v. Katt*, 330 U.S. 386, 391 (1947) (citing U.S. CONST. art. VI, § 2).

228. BELLIA & CLARK, *supra* note 139, at 193-268; see also Harold Hongju Koh, *Is International Law Really State Law?*, 111 HARV. L. REV. 1824, 1839-41 (1998); HENKIN, *supra* note 138, at 157-58.

229. See, e.g., *W.S. Kirkpatrick & Co. v. Env'tl. Tectonics Corp., Int'l*, 493 U.S. 400, 409-10 (1990) (holding that federal act of state doctrine does not bar courts from hearing cases that might impute illegal motivations to foreign state officials); *Bergman v. De Sieyes*, 170 F.2d 360 (2d Cir. 1948) (holding that a federal court sitting in diversity must apply state law in determining whether an ambassador in transit is immune from suit).

230. See BODANSKY, *supra* note 11, at 262-66; Irini Papanicolopulu, *The Mediterranean Sea*, in THE OXFORD HANDBOOK OF THE LAW OF THE SEA 604, 616-22 (Donald R. Rothwell et al. eds., 2015); Malcolm D. Evans, *The Law of the Sea*, in INTERNATIONAL LAW 651, 683 (Malcolm D. Evans ed., 3d ed. 2010); Ved P. Nanda, *Environment*, in THE UNITED NATIONS AND INTERNATIONAL LAW 287, 299-300 (Christopher C. Joyner ed., 1997); see generally WILLIAM T. BURKE, THE NEW INTERNATIONAL LAW OF FISHERIES: UNCLOS 1982 AND BEYOND (1994) (describing the evolution of fisheries law).

cal and increasingly local.<sup>231</sup> For example, the areas of the world most likely to benefit from heat-sink-moderated temperatures by their proximity to an ocean are also most likely to suffer catastrophically from sea level rise.<sup>232</sup> This puts state courts to a choice, ultimately, if confronted with subnational mitigation effort: what is the scope of ‘common but differentiated responsibilities’? There is no single, uniquely authoritative way to resolve this obligation under UNFCCC; Paris surely did not do so.<sup>233</sup> But the continuation of the pledge/review iterations will create COP decisions about emissions accounting, technology sharing, and other aids to bottom-up collective action that signatories will then translate into domestic reality.<sup>234</sup> This will surely present questions about the status of such norms in municipal courts and domestic law.<sup>235</sup> Given the susceptibility of small contributions to *imperceptibility*,<sup>236</sup> indeed, a court’s simple mention of Paris or the UNFCCC could be instrumental to others’ confidence and contributions in the future.<sup>237</sup> American courts could become an important adjudicator of customary international norms arising under Paris’s unique pledge/review system, not least because of their thicker connections to their electorates (neoliberal objections to customary international law’s tension with democratic consent is blunted considerably in the majority of state courts),<sup>238</sup> their more

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231. See *supra* notes 81–85 and accompanying text.

232. ARCHER & RAHMSTORF, *supra* note 24, at 133.

233. See *supra* notes 67–75 and accompanying text.

234. The proposition that state courts rarely consider customary international law and that, when they do, they typically defer to the federal government’s view(s), see, for example, Lea Brilmayer, *Federalism, State Authority, and the Preemptive Power of International Law*, 1994 SUP. CT. REV. 295, 314, although perhaps still the conventional wisdom, ignores the *authority* of state courts within our federalism. See *Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398, 421–27 (1964) (weighing the possibility that the “act of state” doctrine is state law).

235. Cf. *Natural Resources Defense Council, Inc. v. EPA*, 464 F.3d 1, 9 (D.C. Cir. 2006) (observing under another convention/protocol regime that a holding that “the Parties’ post-ratification side agreements were ‘law’ would raise serious constitutional questions in light of the nondelegation doctrine, numerous constitutional procedural requirements for making law, and the separation of powers.”).

236. See *supra* note 86 and accompanying text.

237. Even in fields dominated by bilateral treaties and domestic trade regulation it has proven essentially impossible to rule out the rise of customary international law as more and more adjudications converge to common standards. See Bernard Kishoyian, *The Utility of Bilateral Investment Treaties in the Formulation of Customary International Law*, 14 NW. J. INT’L L. & BUS. 327, 329 (1993) (examining how bilateral investment treaties elucidate and portend the crystallization of customary international foreign investment law).

238. See, e.g., Helen Hershkoff, *State Courts and the “Passive Virtues”*: Rethinking the Judicial Function, 114 HARV. L. REV. 1833, 1842–76 (2001) (analyzing the difference between state and Article III court’s justiciability doctrine). Curiously, many state judiciaries, at the same time they have grown closer to an electorate by constitutional changes in the selection of judges, increasingly have looked abroad in interpreting domestic law. See ROBERT

controllable risks of error,<sup>239</sup> and their physical and social proximity to the local trade-offs adaptation-mitigation optimizing entails.<sup>240</sup> Regardless of customary international law's ultimate juristic footing in our federalism, declarations of this kind could prove vital to the future specification of the 'common but differentiated responsibilities' obligation under international law.<sup>241</sup>

The partisan, often bitter politics of international human rights law which so long shaded these structural debates among American analysts<sup>242</sup> have overshadowed the fields in which customary international norms have been vital to American courts.<sup>243</sup> To just this extent, state court adjudication of custom and customary international norms can supply the evidence of practice and *opinio juris* that traditional international lawyers so often seek.<sup>244</sup> As Professor Stephan has observed, the "argument for federalizing the law of nations is su-

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F. WILLIAMS, THE LAW OF AMERICAN STATE CONSTITUTIONS 283–301 (2009).

239. Yair Listokin, *Learning Through Policy Variation*, 118 YALE L.J. 480 (2008) (exploring the advantages of combining policy variation and reversibility).

240. Not facing the Article III limitations faced by federal courts, see HENKIN, *supra* note 138, at 142, state courts are often freer to engage merits questions than are their federal counterparts. See Lisotkin, *supra* note 239, at 480; WILLIAMS, *supra* note 238, at 298–301.

241. See BURKE, *supra* note 230, at 263–302 (tracing the use of domestic sanctions and other municipal law in the rise of an international moratorium on commercial whaling from among the parties to the International Convention on the Regulation of Whaling); Stone, *supra* note 23, at 298–300 (noting that public expenditures on adaptation are more likely to be internalized benefits than those on mitigation and that relatively rich nations stand much to gain from having 'common but differentiated responsibilities' progressively clarified); cf. Chodosh, *supra* note 225, at 110 (observing that the circularities of the *opinio juris* element and its "institutional weakness" have consigned customary international law to a dysfunctional status in contemporary practice but that a stricter approach grounded in a forum's powers and traditions of declaring its own rules of decision could enhance international custom in both domestic and international venues).

242. Compare Bradley & Goldsmith, *supra* note 159, at 836 (arguing that Henkin and others manipulated the third *Restatement* of foreign relations law's assertion that customary international law is federal law through "pure bootstrapping" by citing an article Henkin himself authored and nothing else), with Koh, *supra* note 228, at 1828 ("Bradley and Goldsmith mount virtually no arguments explaining why fifty state courts and legislatures should be free to reject, modify, reinterpret, selectively incorporate or completely oust customary international law rules from domestic law.").

243. See, e.g., William Patry, *Choice of Law and International Copyright*, 48 AM. J. COMPARATIVE L. 383 (2000); Karl M. Meessen, *Antitrust Jurisdiction Under Customary International Law*, 78 AM. J. INT'L L. 783 (1984).

244. Cf. Bradley, *supra* note 225, at 46 ("Instead of hypothesizing that custom is a reflection of some underlying spirit, will, or consciousness, the standard view today attempts to ground [customary international law] in the actual practices and beliefs of states."); Chodosh, *supra* note 225, at 119–20 (noting that, in light of customary international law's many failings and challenges, declarations of custom by municipal courts can provide a middle path bridging the gaps left by positive, treaty-based law and more nebulous theoretical accounts of *opinio juris*).

perfidiously compelling,”<sup>245</sup> but the evidence is overwhelming that the Framers expected a “general law” of commerce and commercial practice (“*lex mercatoria*”) to take root in both state and federal courts without the strictest (positivistic) attention to that law’s sources.<sup>246</sup>

To what degree, then, are state courts of general jurisdiction in any position to focus and to declare a customary international law of mitigation? Recall that the UNFCCC’s ‘common but differentiated responsibilities and respective capacities’ to prevent ‘dangerous anthropogenic interference with the climate system’<sup>247</sup> were finally succeeded after 20+ COPs with Paris’ complex scheme of political and legal obligations.<sup>248</sup> The conventional position casts “parochial state acts [as] threaten[ing] the foreign relations interests, and perhaps the national security, of the entire nation—a situation the Constitution is plainly designed to avoid.”<sup>249</sup> Ironically, though, it has been neoliberal revisionists who have pushed back the hardest for state jurisdiction and the authority to declare the law of anything not positively federal.<sup>250</sup> And there is no good reason to assume away state prerogative to interpret these norms in development. Indeed, when empirical work on customary international law has been done, the evidence gathered suggests that adjudicators are more likely “engaged in a forward-looking or aspirational exercise” than they are mechanically running some traditional two-part test for a custom’s existence.<sup>251</sup>

Every state’s judiciary is presumably as perfectly empowered to these ends as the judiciary of other states. Of course, the states are not all the same. Those with especially large markets can pull in investments and induce compliance with their law notwithstanding the higher costs imposed on carbon-intensive production.<sup>252</sup> But states

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245. Paul B. Stephan, *Inferences of Judicial Lawmaking Power and the Law of Nations*, 106 GEO. L.J. 1793, 1805 (2018).

246. See Stephan, *supra* note 245, at 1796–97; DANIEL J. HULSEBOSCH, *CONSTITUTING EMPIRE: NEW YORK AND THE TRANSFORMATION OF CONSTITUTIONALISM IN THE ATLANTIC WORLD, 1664-1830*, at 207–58 (2005); Koh, *supra* note 228, at 1830–31.

247. See *supra* notes 14–15 and accompanying text.

248. See *supra* notes 60–67 and accompanying text.

249. Jack L. Goldsmith, *Federal Courts, Foreign Affairs, and Federalism*, 83 VA. L. REV. 1617, 1621 (1997) (“In foreign affairs, the nation must speak with one voice, not fifty”).

250. See Bradley & Goldsmith, *supra* note 159, at 870–76; Goldsmith, *Preemption, supra* note 194; BELLIA & CLARK, *supra* note 139; Trimble, *supra* note 52, at 718–23.

251. Stephen J. Choi & Mitu Gulati, *Customary International Law: How Do Courts Do It?*, in *CUSTOM’S FUTURE: INTERNATIONAL LAW IN A CHANGING WORLD* 117, 147 (Curtis A. Bradley ed., 2016).

252. DAVID VOGEL, *TRADING UP: CONSUMER AND ENVIRONMENTAL REGULATION IN A*

checking one another are surely as accountable or more so than the presidency left essentially unchecked,<sup>253</sup> and state court testing of public reasons for subnational initiatives on adaptation/mitigation balancing, because it can be carried on in parallel, can provide an invaluable platform for the sorting of mitigation, and adaptation priorities.<sup>254</sup> State court litigation of local laws advantaging or mandating mitigation efforts should reflect this constitutional prerogative reserved to our states (or to the people).<sup>255</sup>

### *C. Mitigation Injuries: Remedial Discretion and Subnational Action*

The Roberts Court has gone to considerable lengths to clarify the standards for the awarding of injunctive relief in federal court.<sup>256</sup> As it observed in *Monsanto v. Geertson Seed Farms*,<sup>257</sup> “[i]t is not enough for a court considering a request for injunctive relief to ask whether there is a good reason why an injunction should *not* issue; rather, a court must determine that an injunction *should* issue.”<sup>258</sup> The Court’s factored tests—one for preliminary and another for permanent relief<sup>259</sup>—are to inform the sound discretion of the trial court.<sup>260</sup> And the Roberts Court has made it emphatically clear that

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GLOBAL ECONOMY 5–8 (1995) (calling this the “California effect”).

253. Cf. Bradley & Goldsmith, *supra* note 4, at 1275 (“[T]he main forms of accountability for presidential control over international law are congressional and public scrutiny of international agreements made by the executive branch, a task made harder by the fact that the executive branch has not entirely complied with its publication and reporting duties . . .”).

254. Notwithstanding Professor Livermore’s recent assertion that “[c]limate change is not a context in which state experimentation is likely to produce valuable deliberative information” about the “policy question[s]” in adaptation/mitigation balances, Michael A. Livermore, *The Perils of Experimentation*, 126 *YALE L.J.* 636, 692 (2017), it should be quite clear that the practical keys to any electorate’s support for mitigation are twofold: (1) how to reduce the costs of decarbonization both in the immediate and medium-term futures; and (2) whether mitigation contributions can and are likely to be matched by enough other jurisdictions to be worth the (jurisdiction’s) sacrifice(s). See *supra* notes 81–85 and accompanying text. If this isn’t “valuable deliberative information” of the sort Livermore maintains justifies decentralized experimentation, nothing is.

255. U.S. CONST. amend. X.

256. See *Petrella v. Metro-Goldwyn-Mayer*, 572 U.S. 663 (2014); *Nken v. Holder*, 556 U.S. 418 (2009); *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139 (2010); *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7 (2008); *Munaf v. Green*, 553 U.S. 674 (2008); *eBay, Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006); *Sereboff v. Mid. Atlantic Med. Servs., Inc.*, 547 U.S. 356 (2006).

257. *Monsanto Co.*, 561 U.S. 139 (2010).

258. *Id.* at 158 (emphasis in original).

259. Samuel L. Bray, *The Supreme Court and the New Equity*, 68 *VAND. L. REV.* 997, 1023–44 (2015).

260. For a preliminary injunction, the factors are (1) likelihood of success on the merits, (2) likelihood the plaintiff will suffer irreparable harm without preliminary relief, (3) the bal-



there is no *general* presumption either favoring or disfavoring any award of equitable relief.<sup>261</sup> An earlier era where presumptions on the presence or lack of “irreparable” injury made equity doctrines tick<sup>262</sup> has given way to a factored but largely free-form weighing of hardships, functioning mostly as a four-pronged proof burden on the party seeking the relief.<sup>263</sup>

In the context of injunctive relief against government, the Court has also said that “there is little practical difference between injunctive and declaratory relief.”<sup>264</sup> But this is not always so. A declaratory judgment is only fully remedial if in its institutional context the parties (or their successors in office) behave as an injunction would *entitle* the claimants to demand.<sup>265</sup> As regulatory and statutory claimants have faced the ‘no presumption in favor’ hurdle, it has become manifest that many policy-driven contours in government can continue uninterrupted in the absence of an injunction.<sup>266</sup> For preemption and Commerce Clause challenges, particularly, injunctive (and especially preliminary injunctive) relief can be decisive—and it is not to be skipped around the Court’s factored tests.<sup>267</sup> Even fol-

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ance of equities between the parties, and (4) the public interest. *Winter*, 555 U.S. at 20. [Short Form – Rule 10.9] For a permanent injunction, the plaintiff must have demonstrated (1) that it has suffered an irreparable injury, (2) that the remedies available at law are inadequate to compensate for that injury, (3) that the balance of equities is in favor of the remedy, and (4) that the public interest would not be disserved by the remedy. *eBay*, 547 U.S. at 391.

261. See *eBay*, 547 U.S. at 391 (“The decision to grant or deny permanent injunctive relief is an act of equitable discretion by the district court, reviewable on appeal for abuse of discretion.”); *Winter*, 555 U.S. at 22 (“Our frequently reiterated standard requires plaintiffs seeking preliminary relief to demonstrate that irreparable injury is *likely* in the absence of an injunction.... Issuing a preliminary injunction only on a possibility of irreparable harm is inconsistent with our characterization of injunctive relief as an extraordinary remedy that may only be awarded upon a clear showing that the plaintiff is entitled to such relief.”) (citations omitted) (emphasis in original).

262. Mark P. Gergen, John M. Golden & Henry E. Smith, *The Supreme Court’s Accidental Revolution? The Test for Permanent Injunctions*, 112 COLUM. L. REV. 203, 219–31 (2012).

263. Gergen, Golden & Smith, *supra* note 262, at 210–11; see also Bray, *supra* note 259, at 1036–44.

264. *California v. Grace Brethren Church*, 457 U.S. 393, 408 (1982); see also *Great Lakes Dredge & Dock Co. v. Huffman*, 319 U.S. 293, 299 (1943).

265. Michael T. Morley, *Public Law at the Cathedral: Enjoining the Government*, 35 CARDOZO L. REV. 2453, 2459–87 (2014) Generations of “institutional reform” litigation put this point in stark relief. See MALCOLM M. FEELEY & EDWARD L. RUBIN, JUDICIAL POLICY MAKING AND THE MODERN STATE: HOW THE COURTS REFORMED AMERICA’S PRISONS (1999).

266. Jared A. Goldstein, *Equitable Balancing in the Age of Statutes*, 96 VA. L. REV. 485 (2010).

267. *Pharm. Research & Mfrs. of Am. v. Walsh*, 538 U.S. 644, 668–70 (2003) (rejecting the award of a preliminary injunction in dormant commerce clause challenge to state law regulating prescription drug prices because “petitioner had not carried its burden of showing a probability of success on the merits of its claims”).

lowing the Ninth Circuit's remand to the district court for further proceedings, California's continued implementation of its low carbon fuel standard (LCFS) almost a decade after the plaintiffs had first filed their complaint seeking declaratory and injunctive relief was unremitting.<sup>268</sup> A preliminary injunction during that time could have been lethal for the LCFS program and clearly implicated the "public interest."<sup>269</sup>

Of course, the supply of public (or *collective*) goods is full of uncertainties surrounding the beneficiaries, reasonable alternatives, optimizing supply, *etc.*<sup>270</sup> The Supreme Court was obviously aware of this when, in applying its factored test in *Winter v. Natural Resources Defense Council*,<sup>271</sup> it first quoted George Washington and worked to explain the benefits of military preparedness.<sup>272</sup> And although the Court has remained studiously aloof to the unique problems presented by the diffusion of environmental risks and, thus, their abatement,<sup>273</sup> careful consideration of the contributory nature of decarbonization policies and technology forcing, especially in light of Paris's cumulative carbon and assurances framework,<sup>274</sup> would turn to whether the public interest factor can *ever* defeat an application for injunction—preliminary or permanent. Of the "notably porous"<sup>275</sup> terms in the Court's factors, the 'public interest' anchor in each test, shorn of presumptions, can easily present what courts are least able to measure within the confines of a lawsuit.<sup>276</sup> The *eBay* Court may have sought to blunt this critique by phrasing its factor in the nega-

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268. *Rocky Mtn. Farmers Union v. Corey*, 258 F. Supp.3d 1134, 1138–40 (E.D. Cal. 2017).

269. As Judge Denlow observed five years before *Winter*, the 'public interest' factor in the granting of preliminary injunctive relief allowed the court to consider the interests of non-parties—and to override a showing of irreparable harm by the plaintiff. Morton Denlow, *The Motion for a Preliminary Injunction: Time for a Uniform Federal Standard*, 22 REV. LITIG. 495, 511–12 (2003).

270. See *supra* notes 44–46 and accompanying text.

271. 555 U.S. 7 (2008).

272. *Winter*, 555 U.S. at 12. The Court made a similar case, if only implicitly, in *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 318–19 (1982) (reversing grant of preliminary injunction against US Navy for probable violations of the Clean Water Act).

273. Goldstein, *supra* note 266, at 528–39; Cf. Daniel A. Farber, *Equitable Discretion, Legal Duties, and Environmental Injunctions*, 45 U. PITT. L. REV. 513, 537–38 (1984) (noting that injunctions to enforce environmental statutes often must grapple with "qualified" legal rights and duties combining multiple goods).

274. See *supra* notes 60–110 and accompanying text.

275. Gergen, Golden & Smith, *supra* note 262, at 213.

276. Cf. Bray, *supra* note 259, at 1028–29 (calling the public interest factor a "long-standing concern of equity" but noting that making it something a claimant must prove lacked support in the equity traditions).

tive,<sup>277</sup> but there is no escaping the challenge with phraseology. Either plaintiffs bear a burden and the court must choose on the public interest factor or not.

Unlike the old protectionism cases, mitigation efforts today are rarely a projection of “unaccountable power”<sup>278</sup> aiming to rig the terms by which firms compete. In the vast majority of instances where subnational decarbonization efforts are afoot, a public has elected to burden itself to some considerable extent by contributing – be it in the form of taxes, higher prices, constrained product choices, conservation, *etc.*<sup>279</sup> That has often been a significant factor in dormant commerce liability determinations.<sup>280</sup> For purposes of weighing the *public* interest in the withholding of injunctive relief despite some (probable) doctrinal violation (and even laying aside the concentrated economic and political power of fossil fuel interests and other carbon majors<sup>281</sup>), a local or state public’s autonomy and right to contribute should weigh no less in the court’s balance than should any injunction’s binding of non-parties<sup>282</sup> or the *polycentricity* of climate mitigation decision-making.<sup>283</sup> With GHG emissions’ accumulation<sup>284</sup> and future peoples’ practicable invisibility in electoral politics, any court (preliminarily) enjoining a subnational mitigation policy for private losses in profitability must surely demand clear and convincing evidence of mistake.<sup>285</sup> To be sure, declaratory relief may

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277. *eBay*, 547 U.S. at 391 (“A plaintiff must demonstrate . . . that the public interest would not be disserved by a permanent injunction.”).

278. *TRIBE*, *supra* note 183, at 411.

279. *See, e.g.*, Lawrence, *The Western Climate Initiative*, *supra* note 196, at 1227–30. Moreover, as Washington’s initiative 1631 demonstrated, they just as easily elect *not* to do so. *See* Timothy Cama, *Washington State Voters Reject Carbon Tax*, *THE HILL* (Nov. 7, 2018, 12:11 AM), <https://thehill.com/policy/energy-environment/415418-washington-state-voters-reject-carbon-tax>.

280. *See, e.g.*, *United Haulers Ass’n v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 550 U.S. 330, 345 (2007) (plurality opinion); *Maine v. Taylor*, 477 U.S. 131, 146–52 (1986); *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941, 956–57 (1982); *Minnesota v. Clover Leaf Creamery Co.*, 449 U.S. 456, 472–73 (1981).

281. Cinnamon P. Carlarne, *On Localism and the Persistent Power of the State*, 112 *AM. J. INT’L L. UNBOUND* 285, 289 (2018).

282. *Cf.* DOUGLAS LAYCOCK, *MODERN AMERICAN REMEDIES* 275 (4th ed. 2010) (observing that injunctions against government enforcement of regulations should ordinarily pertain only to the parties bringing suit); *see* *Doran v. Salem Inn*, 422 U.S. 922, 931 (1975) (same).

283. Lon L. Fuller, *The Forms and Limits of Adjudication*, 92 *HARV. L. REV.* 353, 394–405 (1978) (noting that motivations of self-interest make the adversarial presentation of argument in most bilateral adjudications more reliable than they would be for polycentric tasks and adjudications).

284. *See supra* note 107 and accompanying text.

285. *Winter*, 555 U.S. at 24 (calling the preliminary injunction an “extraordinary remedy”); *see also* *Davis v. Pension Benefit Guar. Corp.*, 571 F.3d 1288, 1296 (D.C. Cir. 2009) (Kavanaugh, J., concurring) (“[T]he old sliding-scale approach to preliminary injunctions . . .

or may not achieve what a personal command backed by the contempt power can—which is exactly why the Court’s ‘new equity’ has so forcefully underscored judicial choice.<sup>286</sup> But in the context of subnational GHG emissions abatement and a federal court’s duty to consider the public interest before enjoining efforts to contribute toward Paris’ ends, this must be a choice alert to the values of subnational autonomy, the ever-present right simply to do business elsewhere, and the unfortunate fact that we are all running out of time.

## V. CONCLUSION

The in again/out again nature of even subnational climate initiatives<sup>287</sup> is indicative of the adaptation/mitigation trade-offs more and more governments are facing. Even if a new president in 2021 re-commits the U.S. government to the Paris agreement and America’s 2016 pledge, a formidable opposition to any nationally imposed caps on carbon will almost surely re-emerge and complicate (if not defeat) any legislative alternatives. With cheap, pervasive fossil fuel energy as tightly tied to economic prosperity as it was in the twentieth century, decarbonizing transport, electrical grids, and other energy-intensive industrial sectors without the complete or at least near-complete cooperation of all economically significant jurisdictions puts mitigation into a difficult situation politically, as well. In short, Trump’s vacuum, if only in legacy form, will probably persist for the foreseeable future. Subnational actions will therefore need legal protection even as they struggle forward politically. American courts would do well to study very carefully the features of our foreign affairs federalism and, in assessing subnational climate mitigation efforts, take their cues from the best, most adaptive parts of that tradition.

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is no longer controlling or even viable. It appears that a party moving for a preliminary injunction must meet four independent requirements.”).

286. Cf. Bray, *supra* note 259, at 1036 (“The Court’s exposition of equitable principles has been dominated by two themes. One is the *exceptionalism* of equitable remedies, and the other is the pervasive *discretion* that courts have when granting them.”).

287. Wilson, *supra* note 196, at 237–39, 265–66; see generally Jonas Monast, *From Top-Down to Bottom-Up Climate Policy: New Challenges in Carbon Market Design*, 8 SAN DIEGO J. CLIMATE & ENERGY L. 175 (2017).