

# BOOK REVIEW

## Going Private: Climate Action by Businesses and Individuals

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Michael P. Vandenberg<sup>1</sup> and Jonathan M. Gilligan,<sup>2</sup> *BEYOND POLITICS: THE PRIVATE GOVERNANCE RESPONSE TO CLIMATE CHANGE*. Cambridge University Press 2017. Pp. xxi, 467. \$99.99 hardcover, \$39.99 paperback.

### INTRODUCTION

In *Beyond Politics*,<sup>3</sup> Vandenberg and Gilligan argue in favor of devoting far more attention to private initiatives that reduce carbon emissions and combat climate change.<sup>4</sup> As Vandenberg and Gilligan point out, it is a mistake to pin all of our hopes to a single strategy.<sup>5</sup> For this reason, they argue, we should look beyond government regulation to the private sector—both companies and individuals—for help.<sup>6</sup>

Vandenberg and Gilligan make a strong case for the potential for private action to reduce carbon emissions. They open with the story of Walmart’s dramatic reductions of carbon emissions by itself and its

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3. MICHAEL P. VANDENBERGH & JONATHAN M. GILLIGAN, *BEYOND POLITICS: THE PRIVATE GOVERNANCE RESPONSE TO CLIMATE CHANGE* (Aseem Prakash ed., 2017).

4. They summarize their major themes in *id.* at 446–48.

5. *Id.* at ix.

6. *Id.*

suppliers.<sup>7</sup> Of course, Vandenberg and Gilligan are aware of the possibility of greenwashing—false claims of environmental virtue<sup>8</sup>—but they believe that problem can be kept manageable. After all, any approach to reducing carbon will have less than perfect effectiveness.<sup>9</sup>

In both the book and the series of article that preceded it, the authors deserve considerable credit for highlighting this important, and often-overlooked, approach to addressing climate change. They assemble a mass of evidence that reveals the prevalence, importance, and potential of climate action by corporations and individuals.<sup>10</sup> This is a phenomenon that is beginning to receive public attention. For instance, the *New York Times* reported in a 2017 article that corporations were picking up the slack due to the Trump Administration's rollback of climate policy, and "[a]lmost two dozen companies, including Google, Walmart, and Bank of America have pledged to power their operations with 100 percent renewable energy, with varying deadlines, compared with just a handful in 2015."<sup>11</sup>

In highlighting this approach, Vandenberg and Gilligan hope to appeal to Americans who do not prioritize climate change as a political issue, as well as those who reject climate science because of an aversion to expanding the role of government.<sup>12</sup> Indeed, the authors say, they contemplated publishing two versions of the book, one for liberals, who might be put off by the idea of relying on the private sector,<sup>13</sup> and one for conservatives,<sup>14</sup> who may deny climate change out of aversion to greater government regulation.<sup>15</sup> Although the authors view a strong international agreement as the ideal policy response, they argue that

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7. *Id.* at 3. For more on corporate efforts to increase the use of renewables, see *id.* at 425–26.

8. For instance, although Walmart has made genuine reductions in carbon emissions, its record is not unblemished, marred by support for anti-climate action groups and a decrease in the percentage of renewables used at its stores. *Id.* at 178–79, 184.

9. *Id.* at xv.

10. The body of this review describes a great deal of this evidence, though by no means all of it.

11. Hiroko Tabuchi, *With Government in Retreat, Companies Step Up on Emissions*, N.Y. TIMES (Apr. 25, 2017), <https://www.nytimes.com/2017/04/25/climate/with-government-in-retreat-companies-step-up-on-emissions.html> [<https://perma.cc/J5QK-6H7V>]. A more guarded assessment is provided by D. McCarthy & P. Morling, *Using Regulation as a Last Resort: Assessing the Performance of Voluntary Approaches*, ROYAL SOC'Y FOR THE PROT. OF BIRDS (2015), [http://ww2.rspb.org.uk/Images/usingregulation\\_tcm9-408677.pdf](http://ww2.rspb.org.uk/Images/usingregulation_tcm9-408677.pdf) [<https://perma.cc/UA53-7G5T>] (demonstrating the need for clear incentives, targets, and accountability as key to success).

12. VANDENBERGH & GILLIGAN, *supra* note 3, at x. For thoughts on how to reach one important subset of conservatives, evangelical Christians, see Albert C. Lin, *Evangelizing Climate Change*, 17 N.Y.U. ENVTL. L.J. 1135 (2009).

13. VANDENBERGH & GILLIGAN, *supra* note 3, at xiii.

14. *Id.* at x.

15. *Id.* at 137.

we should not be distracted from more practical, immediate action by the possibly chimeric possibility of an ideal policy.<sup>16</sup> This book, pulling together a body of research going back over a decade, is undoubtedly an important contribution to the literature.

The norm in policy or legal analysis is to address those who exercise government power, usually government agencies or courts, but sometimes legislators. Those actors are largely absent from this book, which raises two questions: First, why do Vandenberg and Gilligan speak in terms of private governance rather than simply private action? And second, to what set of actors are their recommendations addressed? As to the use of the term governance, Vandenberg and Gilligan cite a tradition going back to Benjamin Franklin of private action substituting for government provision of public goods.<sup>17</sup> It is for this reason that they refer to their approach as a form of private governance.<sup>18</sup> As to the second question, they say that private governance is in the hands of readers of the book.<sup>19</sup>

This review largely accepts their conclusions but seeks to place them in a somewhat different light. After some preliminaries, the book is largely framed around the identity of the actor (corporate or individual) and the factors that make private action more or less successful. Instead, this review will focus on the factors that make private action closer or further from the kind of regulatory governance we see from public government: whether the action involves coordinating the activities of a group and whether it involves incentives or pressure to change the behavior of others.

Part II of the review offers taxonomy of private climate action on the basis of these factors, mostly though not entirely using examples from the book itself. The two dimensions are collective versus individual action, and self-directed versus providing incentives to others. This generates the following matrix, with examples in parentheses:

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16. *Id.* at xiv.

17. *Id.* at xi.

18. *Id.*

19. *Id.* at 10.

	<b>Uncoordinated</b>	<b>Coordinated</b>
<b>Spontaneous</b>	Solo action (conserving energy)	Coordinated (signing a group pledge to conserve energy)
<b>Incentive Generating</b>	Leverage (utility giving incentives to consumers to save energy)	Classic governance (utilities agree to provide consumer incentives)

Part III considers how private governance might be strengthened in various respects such as interacting with public governmental actions or taking on more of the trappings of regulation such as emissions trading. Giving some additional attention to this, the bottom right square in the matrix, could add force to the contribution of private action. This does not mean, by any means, that the other squares lack the ability to make significant contributions of their own.

The somewhat different framing in this review is not meant to detract from the achievement of the book. The ideas advocated in the book, and by Vandenberg in particular in past scholarship, deserve a ready audience. Whatever the superior merits of federal action, it is clear that the current Administration and Congress have no interest in pursuing emissions reductions. One of the great barriers is the extreme partisan polarization surrounding the climate issue these days. Both of these facts are so notorious as to need no citation. If *Beyond Politics* can help us cope with one or both of these problems, it deserves a broad audience.

### I. A TAXONOMY OF PRIVATE CLIMATE ACTION

In classifying private actions, we need to consider both the identity of the actor and the nature of the action. That gives the following matrix:

	Solo Action	Group Action
Individual	Reduced Vehicle Idling	Carbon Rationing Groups
Corporate	Buying renewables	Renewable Energy Buyers Alliance

In the remainder of Part II, we address the four squares in this matrix, using them as a way to understand the structure of private climate action.

### A. Solo Initiatives

We begin with the second column of the matrix, focusing on individual decisions by consumers and businesses about energy use. The book's focus seems to be on interventions that could help shape decisions by consumers as much as it is on spontaneous individual actions. In terms of corporations, however, the focus is primarily on management decisions regarding business strategies.

#### 1. The Household Sector

Small changes in behavior, if widespread, may add to the effort to address climate change. As Vandenberg and Gilligan point out, even a small emissions reduction is worthwhile—a one percent emissions reduction is that much less carbon that will linger in the atmosphere for centuries.<sup>20</sup> And some individual actions, such as recycling aluminum, have potentially large payoffs.<sup>21</sup>

As ways of increasing individual participation in emissions cuts,<sup>22</sup> the authors point to the potential for individual carbon inventories, provided by cellphone apps, to increase awareness. They also propose the creation of a legacy register, so individuals can communicate their efforts to reduce emissions to future generations.<sup>23</sup>

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20. *Id.* at 19.

21. *Id.* at 20.

22. For other useful ideas about how to motivate individual action, see Hope M. Babcock, *Assuming Personal Responsibility for Improving the Environment: Moving Toward a New Environmental Norm*, 33 HARV. ENVTL. L. REV. 117 (2009).

23. VANDENBERGH & GILLIGAN, *supra* note 3, at 26. They provide more details later in the book. *Id.* at 337–51.

They hope to rely on individuals' motivations, well documented by psychologists, to leave a legacy for future generations.<sup>24</sup>

Vandenbergh and Gilligan argue that it is important to appeal both to the currently small number of people who place a high priority on addressing climate change and to the much larger number who recognize that climate change is a problem but do not view it as urgent.<sup>25</sup> One barrier to reducing household emissions is ignorance. Few people are aware, for instance, of the high energy demands of clothes dryers.<sup>26</sup> More generally, consumer misinformation hinders their ability to take sustainability into account when buying goods.<sup>27</sup> Providing inventories of household emissions could be particularly useful.<sup>28</sup>

Vandenbergh and Gilligan point to some myths that lead consumers to waste energy and increase emissions. Many people believe that turning a vehicle engine on and off is wasteful and that vehicles need warm-up time before they can be driven.<sup>29</sup> This results in wasteful engine idling, since modern vehicles do not require warm-up. In addition, idling in traffic wastes a tremendous amount of fuel.<sup>30</sup> Another myth is that washing one's hands in hot water is needed to kill germs, a false belief that leads to wasted energy from water heaters.<sup>31</sup>

As evidence for the potential significance of what they call the behavioral wedge,<sup>32</sup> the authors point to Opower, an effort to provide information to utility customers about their energy consumption and how theirs compares to other consumers.<sup>33</sup> They report that this program produces an average reduction of two percent in energy usage, equal to a million tons of carbon dioxide.<sup>34</sup> Such social norm messaging can be highly effective.<sup>35</sup> In addition, empirical research shows that up to a twenty percent reduction in emissions through behavioral intervention is possible, such as encouragement to use LED lights and heat pumps.<sup>36</sup>

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24. *Id.* at 136.

25. *Id.* at 135.

26. *Id.* at 132.

27. *Id.* at 207.

28. *Id.* at 269.

29. *Id.* at 279–80.

30. *Id.* at 280–87.

31. *Id.* at 287–92.

32. *Id.* at 247.

33. *Id.* at 245.

34. *Id.*

35. *Id.* at 248.

36. *Id.* at 254.

Vandenbergh and Gilligan provide a careful analysis of possible behavioral interventions, including tables showing the likely participation in various behavioral programs and how much participants' behavior would actually be affected.<sup>37</sup> Mixing financial incentives and nudges such as making energy-efficient settings the default setting on cars can be particularly effective.<sup>38</sup> They estimate that household emission reductions could collectively amount to 450 million tons of carbon per year.<sup>39</sup>

## 2. The Business Sector

With the federal government “missing in action” in the war against climate change, we need to look for other options. Some major corporations are taking climate change seriously and beginning to address the issues. In 2016, the Climate Disclosure Project (CDP) reported that 638 companies were “proactively planning” for climate risk and “are outpacing their governments in thinking ahead” and 150 global companies included a “shadow price” of carbon in their business strategies.<sup>40</sup> For instance, ConocoPhillips says:

For operations in countries without existing or imminent GHG regulation, all capital projects with a total installed cost of \$150 million or greater or that result in a change to annual emissions in excess of 25,000 metric tons of CO<sub>2</sub> equivalent are required to perform a sensitivity analysis that includes carbon cost as part of the project's economic analysis. The company uses an estimated market cost of greenhouse gas emissions in the range of \$6 to \$51 per tonne (in 2014 uninflated terms) depending on the timing and country or region to evaluate future project opportunities.<sup>41</sup>

Similar strategies are used by many companies, including others in the oil industry. Industries take varying approaches. Wells Fargo applies a carbon price to the operations of borrowers in considering credit risks. Microsoft actually charges its business groups a small

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37. *Id.* at 256, 260.

38. *Id.* at 263.

39. *Id.* at 258.

40. Ilario D'Amato, *Hundreds of Top Companies Are Outpacing Their Governments on Carbon Pricing*, THE CLIMATE GROUP. (Sept. 15, 2014), <https://www.theclimategroup.org/news/hundreds-top-companies-are-outpacing-their-governments-carbon-pricing> [http://perma.cc/ZA7V-CT6C]; *Putting a Price on Risk: Carbon Pricing in the Corporate World*, CDP (formerly the CARBON DISCLOSURE PROJECT) (2015), <https://www.oceanfdn.org/sites/default/files/CDP%20Carbon%20Pricing%20in%20the%20corporate%20world.compressed.pdf> [https://perma.cc/7we8-WAFE].

41. CDP (formerly the CARBON DISCLOSURE PROJECT), *supra* note 40, at 34.

carbon fee and uses the funds to support internal efficiency initiatives, green power, and carbon offset projects.<sup>42</sup> It contends that its operations are now carbon-neutral.<sup>43</sup>

As Vandenberg and Gilligan note, many corporations made carbon commitments prior to the Paris Agreement,<sup>44</sup> and over 600 have joined the Ceres climate declaration.<sup>45</sup> One revealing statement was from the director of global sustainable agriculture at Monsanto, who said, “This is directly related to our business. . . .We need to provide solutions while farmers are facing climate change.”<sup>46</sup>As a 2017 article observes,

Monsanto is on track to be carbon neutral by 2021 and has long accepted as fact something the Trump administration has not: that absent swift action, human-induced climate change could be catastrophic for business. It was among the more than 745 companies and big investors that signed a post-election letter expressing full support for the Accord.<sup>47</sup>

Among those supporting the Paris Accord is Exxon, whose former CEO was Secretary of State until recently. Exxon had this to say when the accord was signed: “Today marks the entering into force of the Paris climate agreement. The agreement is an important step forward by world governments in addressing the serious risks of climate change.”<sup>48</sup> The statement continued, “ExxonMobil supports the work of the Paris signatories, acknowledges the ambitious goals of this agreement and believes the company has a constructive role to play in developing solutions.”<sup>49</sup> After Trump announced his intention to withdraw from the Paris Agreement, major corporations endorsed the “We’re Still In” effort.<sup>50</sup>

Vandenberg and Gilligan assemble compelling stories of corporations such as Apple and Dell taking initiative on climate change.<sup>51</sup> Readers are entitled to ask about the motivations for such

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42. *Id.* at 140.

43. *Globally Carbon Neutral*, MICROSOFT CORP., <https://www.microsoft.com/en-us/environment/carbon/> (last visited Mar. 29, 2018) [<https://perma.cc/ZBZ4-Y9FJ>].

44. *Id.* at 177.

45. *Id.* at 181.

46. Evan Halper, *Trump’s Vow to Scrap the Paris Climate Change Accord Faces Skepticism from Corporations and GOP Moderates*, L.A. TIMES (Feb. 15, 2017, 3:00 AM), <http://www.latimes.com/politics/la-na-pol-trump-paris-accord-20170215-story.html> [<https://perma.cc/DXA7-SMG3>].

47. *Id.*

48. *Statement on Paris Climate Agreement Entering into Force*, EXXONMOBIL (Nov. 4, 2016), <http://corporate.exxonmobil.com/en/current-issues/climate-policy/climate-perspectives/statement-on-paris-climate-agreement-entering-into-force> [<https://perma.cc/M9YY-AT3P>].

49. *Id.*

50. VANDENBERGH & GILLIGAN, *supra* note 3, at 10

51. *Id.* at 4.

actions, although we should not dismiss entirely the idea that corporate management may have altruistic impulses. Vandenberg and Gilligan point to a number of more tangible motivations that obviate the need to rely too heavily on altruism.<sup>52</sup> Investor pressure is one reason.<sup>53</sup> Another is supply chain pressure from businesses like Walmart.<sup>54</sup> Some consumers are willing to pay a premium for sustainable products,<sup>55</sup> and some investors press for climate action.<sup>56</sup> In addition, actions to cut carbon emissions can have other benefits for corporations by revealing areas of waste and opportunities for increased efficiency.<sup>57</sup> And an overarching concern for companies is protecting the reputation of their brand.<sup>58</sup>

### *B. From Solo to Group Effort*

Individuals and firms act alone, but acting collectively brings both greater scale and coordination, two characteristics of formal governance. Vandenberg and Gilligan suggest the possibility of creating an organization with a broad mandate to promote private climate action.<sup>59</sup>

#### 1. Groups of Individuals

The topic of group action by individuals does not receive sustained discussion from Vandenberg and Gilligan. But we do have a

52. *Id.* at 126.

53. *Id.* at 11.

54. *Id.* at 15.

55. *Id.* at 142.

56. *Id.* at 145–47. Similarly, lenders may press corporations to take action to address climate change. *Id.* at 148.

57. *Id.* at 4, 139. Corporations began to discover these efficiency possibilities in the 1990s. *Id.* at 185.

58. *Id.* at 143. An empirical study of climate policies by major corporations concluded:

[A] firm is more likely to participate in TCG [transnational climate governance] when the company has an explicit sustainability focus, such as the incorporation of “ESG” (Environmental, Social, and Governance) concerns into corporate decision-making processes and day-to-day operations. The existence of a “policy supporter” at the managerial level who promotes and advocates for sustainability practices and policies is associated with both voluntary climate action and carbon [emissions] disclosure. Furthermore, the “leaders among leaders”—i.e., companies that not only voluntarily report their carbon emissions but have committed to a higher level of disclosure, such as verification by third-party audits—are those that possess complementary capabilities and competencies, namely investments in environmental R&D and certification with the ISO 14001 environmental management standard.

Lily Hsueh, *Transnational Climate Governance and the Global 500: Examining Private Actor Participation by Firm-level Factors and Dynamics*, 43 INT’L INTERACTIONS 48 (2017).

59. VANDENBERGH & GILLIGAN, *supra* note 3, at 411.

bit of information to draw on. One model is provided by Carbon Rationing Action Groups (“CRAG”s), which began in England and are considered “the most intense versions of neighborhood groups” dedicated to sustainable lifestyles.<sup>60</sup> Participation in these groups not only seems to be effective but also gratifying to the participants. A study of members of CRAGs garnered comments such as, “Exchanging tips with other people who were also striving to cut their carbon . . . seemed like a good idea, but I hadn’t appreciated at the time just how valuable a resource my fellow CRAGgers would turn out to be! And nice too.”<sup>61</sup> Researchers have asked CRAG members to comment on how the changes affected their quality of life. Responses were “uniformly positive.”<sup>62</sup> For instance, one busy professional responded that she “learned a lot, life is much better for it.”<sup>63</sup> Participants in CRAGs and in less tightly organized groups expressed “a sense of joy and satisfaction with their actions”: “They claim that ‘no hair shirts’ have been donned; that hanging their laundry makes them happy; that they enjoy walking and biking everywhere; that their actions ‘just feel good . . . .’”<sup>64</sup>

All of this is very encouraging because it provides motivation for individuals to continue and even expand their efforts once they have joined groups seeking to reduce individual emissions. It is not clear how common such associations of individuals are. But as we will see in the next section, corporations have formed a variety of groups and cooperative mechanisms to address carbon emissions.

## 2. Coordinated Corporate Activity

Private offset markets create an opportunity for businesses or individuals to act cooperatively in cutting emissions.<sup>65</sup> An important recent development has been creating equity micro-offsets, combining the offset concept with micro-lending mechanisms, allowing poorer individuals to sell offsets in return for reducing their greenhouse gas emissions.<sup>66</sup>

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60. Sarah Krakoff, *Planetary Identity Formation and the Relocalization of Environmental Law*, 64 FLA. L. REV. 87, 111 (2012). For a discussion of other organized efforts by consumers, see KEVIN DANAHER, SHANNON BIGGS & JASON MARK, *BUILDING THE GREEN ECONOMY: SUCCESS STORIES FROM THE GRASS ROOTS* (2007).

61. Krakoff, *supra* note 60 at 120.

62. *Id.* at 122.

63. *Id.*

64. *Id.* at 131.

65. VANDENBERGH & GILLIGAN, *supra* note 3, at 218.

66. *Id.* at 219.

Standard setting is another form of joint action. Certification systems are one way to improve supply chains but also to validate corporate efforts, though they have their limits.<sup>67</sup> The LEED building standards have been widely followed and result on average in energy savings of twenty-five to thirty percent.<sup>68</sup> The adoption of sustainability standards by groups of commodity producers is another form of collective action.<sup>69</sup> Commodity roundtables for palm oil, for instance, have established a “green palm credit” for oil derived from companies engaged in sustainable forestry, and similar efforts are underway in other industries.<sup>70</sup>

One particularly interesting form of collaboration is presented by the Renewable Energy Buyers Alliance, which “aggregates corporate purchasing power to help smaller firms that otherwise lack sufficient resources to directly purchase renewable energy.”<sup>71</sup>

Similarly, Apple has agreed with the World Wildlife Fund (WWF) to support WWF’s forest preservation effort in China.<sup>72</sup> Apple’s other efforts include issuing green bonds to fund energy efficiency projects at low interest rates and providing Chinese suppliers “the equivalent of two to four power plants of renewable power to enable the suppliers to meet Apple’s carbon requirements.”<sup>73</sup>

One role of environmental organizations is to exert pressure via public opinion. Apple was chagrined, when, a decade ago, it faced criticism about its environmental efforts.<sup>74</sup> In 2007, after facing criticism from environmental groups about its environmental practices, Apple’s then CEO Steve Jobs admitted in an open letter to Apple’s shareholders and customers that Apple’s less than forthcoming stance about its environmental policies actually hurt the company’s reputation. Referring to Greenpeace’s assessment of Apple, Jobs noted that “[i]n one environmental group’s recent scorecard, Dell, HP and Lenovo all scored higher than Apple because of their plans (or ‘plans for releasing plans’ in the case of HP) . . . [i]n reality, Apple is ahead of all

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67. *Id.* at 195.

68. *Id.* at 422.

69. *Id.* at 422–24.

70. *Id.* at 424. For a less sympathetic view of one of the leading commodity councils, see Richard Conniff, *Greenwashed Timber: How Sustainable Forest Certification Has Failed*, YALE ENV’T 360 (Feb. 20, 2018), <https://e360.yale.edu/features/greenwashed-timber-how-sustainable-forest-certification-has-failed> [https://perma.cc/2X7U-RM7S].

71. VANDENBERGH & GILLIGAN, *supra* note 3, at 426.

72. *Id.* at 192.

73. *Id.* at 217.

74. The discussion in this paragraph is based on research conducted by Erica Sun (Berkeley Law ‘19).

of these companies in eliminating toxic chemicals from its products.”<sup>75</sup> But in 2011, Greenpeace placed Apple at the bottom of its green league table of companies in the technology field because of Apple’s reliance on coal power at its data centers.<sup>76</sup> And in 2012, Greenpeace claimed that coal made up 55.1% of Apple’s cloud energy.<sup>77</sup> In its report, Greenpeace targeted Apple’s new data center in Maiden, NC, whose building obtained LEED Platinum certification and opened in 2010.<sup>78</sup> Greenpeace calculated that this data center in North Carolina would utilize 100 megawatts of power while Apple countered that at maximum, the data center would only use twenty megawatts and that renewable resources would make up greater than sixty percent of the power use there.<sup>79</sup> By 2014, however, Greenpeace listed Apple, Google, and Facebook as the top three cleanest global data center operators,<sup>80</sup> and in 2015, Greenpeace praised Apple as “lead[ing] the charge” regarding powering its internet operations with clean energy.<sup>81</sup>

Partnerships with NGOs provide another form of joint action, in which the NGO working with various firms in effect creates a network of corporations taking action. NGOs have also played a role in organizing shareholder pressure and in leading naming and shaming campaigns to identify executives who stand in the way of climate

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75. Apple Insider Staff, *Steve Jobs Unveils Apple’s Environmental Policy*, APPLE INSIDER (May 2, 2007, 12:00 PM), [http://appleinsider.com/articles/07/05/02/steve\\_jobs\\_unveils\\_changes\\_to\\_apples\\_environmental\\_policy](http://appleinsider.com/articles/07/05/02/steve_jobs_unveils_changes_to_apples_environmental_policy) [https://perma.cc/GD9N-CRMJ].

76. Felicity Carus, *Apple Named ‘Least Green’ Tech Company*, THE GUARDIAN (Apr. 21, 2011), <https://www.theguardian.com/environment/2011/apr/21/apple-least-green-tech-company> [https://perma.cc/9XMT-FERX]. For a discussion of why tech companies have taken the lead on renewable energy, see Lily Hsueh, *Why IT Companies Lead on Proactive Climate Action*, BROOKINGS (Dec. 1, 2015), <https://www.brookings.edu/blog/techtank/2015/12/01/why-it-companies-lead-on-proactive-climate-action/> [https://perma.cc/WXF2-QYGG].

77. T.C. Sottek, *Greenpeace Says Apple and Others Use Dirty Energy to Power Cloud Facilities, Apple Disagrees*, THE VERGE (Apr. 17, 2012), <https://www.theverge.com/2012/4/17/2955890/greenpeace-apple-dirty-coal-cloud-data-report> [https://perma.cc/L7E7-JWDP].

78. Don Carrington, *Analysts Call Apple Renewable Energy Claims ‘Lies’; Maiden Data Center Gets All of Its Power from Duke Energy*, CAROLINA J. (Dec. 2, 2015, 12:00 AM), <https://www.carolinajournal.com/news-article/analysts-call-apple-renewable-energy-claims-lies/> [https://perma.cc/F47R-5WTT].

79. Sottek, *supra* note 77.

80. David Price, *Why Apple Was Bad For the Environment (and Why That’s Changing)*, MACWORLD (Jan. 3, 2017), <https://www.macworld.co.uk/feature/apple/complete-guide-apples-environmental-impact-green-policies-3450263/> [https://prema.cc/X9Y3-SNDT].

81. Agence France-Presse, *Greenpeace Praises Apple, Google Initiatives; Says Renewable Energy Vital for Internet Age*, GADGETS 360 (May 13, 2015), <https://gadgets.ndtv.com/internet/news/greenpeace-praises-apple-google-initiatives-says-renewable-energy-vital-for-internet-age-691729> [https://perma.cc/U4RZ-T3F5].

action.<sup>82</sup> NGOs have also begun to combine efforts in campaigns to influence corporations.<sup>83</sup>

The Walmart story is particularly interesting because Walmart has acted in partnership with the Environmental Defense Fund (EDF), a leading environmental group.<sup>84</sup> EDF has been the leader among environmental organizations in partnering with business. According to Vandenberg and Gilligan, EDF began its private sector work by helping McDonald's find a replacement for its Styrofoam hamburger containers, then helping UPS reduce emissions with improved packaging.<sup>85</sup> It has now worked on projects with a substantial share of Fortune 100 companies and "has worked on so many projects with Walmart that it located an expert at the Walmart headquarters."<sup>86</sup> EDF does not stand alone. Vandenberg and Gilligan cite work done by the NRDC, the World Wildlife Fund, the Nature Conservancy, and private foundations that have invested in private climate action efforts.<sup>87</sup>

### C. *Economic Incentives*

Individuals have various ways to influence other actors. Social media can be used to increase pressure on corporations.<sup>88</sup> But corporations themselves often seek to influence individual behavior. For instance, Swiss Re has an innovative program that provides incentives to employees to reduce their carbon footprints, as do Sony and others.<sup>89</sup> Similarly, in order to reduce fuel use, UPS and FedEx have promoted changes in habits of their drivers (many if them independent contractors rather than employees).<sup>90</sup> By eliminating routes involving left turns, they save on fuel expenses and reduce emissions. Businesses may also be in a position to influence the behavior of consumers. Vandenberg and Gilligan point to the possibility of nudging consumers so they are more likely to make climate friendly choices but leaving them the option of doing otherwise.<sup>91</sup> For example, the default setting

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82. VANDENBERGH & GILLIGAN, *supra* note 3, at 151.

83. *Id.* at 175 n.135.

84. *Id.* at 120, 155.

85. *Id.* at 412.

86. *Id.*

87. *Id.* For a critique of these activities, at least to the extent that they displace efforts to obtain government regulation, see Joshua Ulan Galperin, *Trust Me, I'm A Pragmatist: A Partially Pragmatic Critique of Pragmatic Activism*, 42 COLUM. J. ENVTL. L. 425 (2017).

88. VANDENBERGH & GILLIGAN, *supra* note 3, at 158.

89. *Id.* at 270.

90. *Id.* at 271.

91. *Id.* at 426–27.

on a machine could be highly fuel efficient, but consumers with other preferences could still be free to modify the setting.

Economic pressure comes closer to the classic model of regulatory governance, since it involves incentives for others to change their actions. This pressure can come from multiple directions, including lenders, investors, and major purchasers. Banks have provided one source of pressure.<sup>92</sup> Major banks have reduced lending to coal companies.<sup>93</sup> Perhaps prompted by disclosure campaigns, some Australian banks decided not to fund a new coal port.<sup>94</sup> Some insurance companies have also reduced investment in fossil fuels.<sup>95</sup> Lloyd's of London recently announced that it would exclude coal companies from its investment strategy beginning April 1, 2018.<sup>96</sup> Roughly \$21 billion has been divested by insurance companies in the past two years.<sup>97</sup> A number of banks have agreed to the Carbon Principles, a joint agreement to take extra steps before loaning to fossil fuel projects.<sup>98</sup>

Supply chain pressure is also important because of the share of global emissions associated with the production of goods.<sup>99</sup> Global supply chains are subject to considerable influence by firms such as Costco and Walmart.<sup>100</sup> Achievements in this sector do not always correspond to corporate reputations, given that Walmart's performance has been much better than Whole Foods'.<sup>101</sup>

Investor groups are another form of joint action. Climate Action 100+ is an investor-led initiative to improve corporate governance on climate change, supported by 256 investors with \$28 trillion in assets under management.<sup>102</sup> BlackRock Inc., the world's largest asset manager (with \$5 trillion under management), has assembled a thirty-

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92. *Id.* at 202.

93. *Id.*

94. *Id.* at 148.

95. *Id.*

96. Julia Kollewe, *Lloyd's of London to Divest from Coal over Climate Change*, THE GUARDIAN (Jan. 2018), <https://www.theguardian.com/business/2018/jan/21/lloyds-of-london-to-divest-from-coal-over-climate-change> [<https://perma.cc/B96H-PAJZ>].

97. *Id.* I have converted English currency to dollars at the current exchange rate.

98. VANDENBERGH & GILLIGAN, *supra* note 3, at 148

99. *Id.* at 213.

100. *Id.* at 217. A model for group action to improve sustainability in supply chains is provided by the Marine Stewardship Council founded by Unilever and the World Wildlife Fund. See Philip J. Weiser, *Entrepreneurial Administration*, 97 B.U. L. REV. 2011, 2026 (2017). Weiser reports that by 2012, sixty percent of the fish caught in U.S. water were certified by MSC and that major firms such as Walmart had agreed to sell only such fish. *Id.* at 2027. Initially, according to Weiser, the MSC program was criticized as "tilted toward industry and insufficiently transparent and participatory," leading to a series of measures to address these problems. *Id.* at 2046.

101. See VANDENBERGH & GILLIGAN, *supra* note 3, at 208.

102. See *Global Investors Driving Business Transition*, CLIMATE ACTION 100, <http://www.climateaction100.org/> [<https://perma.cc/8TKY-8WKY>].

person team to deal with climate issues.<sup>103</sup> Working with Vanguard, BlackRock was responsible for a shareholder vote forcing Exxon Management to report on business risks related to climate change.<sup>104</sup>

#### *D. Next Steps? Strengthening Private Regulation*

Many major corporations bemoaned Trump's withdrawal from the Paris Agreement and pledged to continue their own environmental efforts. As we have seen, there are already mechanisms for coordinating emissions reduction by businesses and for creating incentives for individual climate action. It is not hard to imagine taking a further step in the direction of formal governance structures. There is power in joint action. Here are four options, from simplest to most ambitious:

The Paris Agreement does allow private parties to register their commitments,<sup>105</sup> an important first step, but monitoring and reporting on results is not required. The business sector could go one better than the Paris Agreement or other existing emissions registers by making the agreement contractually binding.<sup>106</sup> The deal would simply be that

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103. Ross Kerber, *BlackRock Vows New Pressure on Climate, Board Diversity*, REUTERS BUS. NEWS (Mar. 12, 2017), <https://www.reuters.com/article/us-blackrock-climate-exclusive/exclusive-blackrock-vows-new-pressure-on-climate-board-diversity-idUSKBN16K0CR> [<https://perma.cc/D5MU-ZUZG>]. The motivation behind such decisions appears to be economic realism rather than idealism:

For example, in a statement explaining its general position on climate change, Vanguard noted “[O]ur position on climate risk is anchored in long-term economic value—not ideology.” Similarly, BlackRock states it “could see climate-aware portfolios outperform amid tighter regulations, faster technological changes, or more frequent weather events.”

Joseph Kruger, *Climate-Related Financial Disclosure: The New Convergence of Finance, Policy, and Science*, RESOURCES FOR THE FUTURE, Winter 2017, <http://www.rff.org/research/publications/climate-related-financial-disclosure-new-convergence-finance-policy-and> [<https://perma.cc/2JCS-7XL7>].

104. Steven Mufson, *Financial Firms Lead Shareholder Rebellion Against ExxonMobil Climate Change Policies*, WASH. POST (May 31, 2017), [https://www.washingtonpost.com/news/energy-environment/wp/2017/05/31/exxonmobil-is-trying-to-fend-off-a-shareholder-rebellion-over-climate-change/?utm\\_term=.99719bf0363d](https://www.washingtonpost.com/news/energy-environment/wp/2017/05/31/exxonmobil-is-trying-to-fend-off-a-shareholder-rebellion-over-climate-change/?utm_term=.99719bf0363d) [<https://perma.cc/QM2Z-UKKE>].

105. VANDENBERGH & GILLIGAN, *supra* note 3, at 409.

106. In an early article, Vandenberg conducted an empirical study showing that corporations in private transactions often agreed to environmental standards for toxic chemicals that were stricter than required by regulators. See Michael P. Vandenberg, *The Private Life of Public Law*, 105 COLUM. L. REV. 2029, 2051, 2062, 2094 (2005). Contracts with communities are an interesting variation on this theme. *Id.* at 2064:

At the community level, firms have reached “good neighbor agreements” with local community groups to take particular steps to ameliorate or compensate for the risk the facility poses to the community. Good neighbor agreements often include provisions in which a firm agrees to provide information to the local community beyond that required by law, agrees to reduce emissions below legal requirements, or agrees to provide local subsidies, such as public health clinics or park facilities.

they contract to engage in specified monitoring, to set targets for themselves, and to report annually on their actual emissions. This would be somewhat stronger than Paris because the monitoring and disclosure requirements could be legally binding and would be enforceable through suits by other companies.<sup>107</sup>

A related idea would be a private sector cap-and-trade scheme. For instance, firms could agree to cut their emissions on a schedule of (say) two percent per year for five years. Every year, they would get allowances equal to their current target, which could be traded. Everyone would have to be bound contractually to pay for purchased allowances, coupled with an enforceable obligation to achieve the target.

One could also imagine a private sector carbon tax.<sup>108</sup> A growing number of firms use carbon prices for their own internal decisionmaking. Why not go a step further? Firms could contract with a nonprofit, each agreeing (again) to monitoring requirements and to pay a fee per ton of carbon emissions to the nonprofit. As with a real carbon tax, the fund could be used for just about anything—redistributed back to firms as dividends, used to finance research on emission reduction technologies, or for that matter, paying for low-income housing. Firms might not be willing to set the tax high enough to provide a serious incentive to cut emissions, but they might be willing to set the fee high enough to have a genuine impact if spent on financing renewables or energy efficiency.

Since all of these variations involve agreements by firms to cooperate, a business lawyer's first question is probably about antitrust issues. Current government guidelines on business collaborations are fairly lenient, however, even when firms are competitors.<sup>109</sup> In addition,

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107. A related idea would be a government-permitting program in which firms would set their own emissions limits, pay a fee, and then get a refund depending on how successful they were in reaching the targets. Any surplus could be used to finance some other carbon emissions programs. This could be called the “write your own permit” approach to climate action.

108. This alternative was suggested by my colleague Prasad Krishnamurthy. For discussion of how companies use internal carbon prices and markets, see Sarah E. Light, *The New Insider Trading: Environmental Markets within the Firm*, 34 STAN. ENVTL. L. J. 3 (2015).

109. Federal Trade Commission and United States Department of Justice, *Antitrust Guidelines For Collaborations Among Competitors*, 64 Fed. Reg. 54,483 (2000), [https://www.ftc.gov/sites/default/files/documents/public\\_events/joint-venture-hearings-antitrust-guidelines-collaboration-among-competitors/ftcdojguidelines-2.pdf](https://www.ftc.gov/sites/default/files/documents/public_events/joint-venture-hearings-antitrust-guidelines-collaboration-among-competitors/ftcdojguidelines-2.pdf) [<https://perma.cc/3FF9-JV3E>]. Although the guidelines seem encouraging, the antitrust issues clearly deserve further exploration. For a discussion of some of the antitrust implications of industry cooperation to achieve environmental goals, see Sarah E. Light, *The Law of the Corporation as Environmental Law*, STAN. L. REV. (forthcoming 2018) (manuscript at 28–37). The key to avoiding antitrust problems is to ensure that the emissions reduction program cannot be construed as an effort to limit competition in product markets. Programs that cut across industries also seem more likely to be successful than single-industry programs where the participants are competitors.

there is no reason why any of these schemes need to be focused on firms within the same industry. Obviously, no major company would want to join any of these schemes without some hard scrutiny by antitrust counsel, but at least the initial indications are not unfavorable.

So why would a firm agree to any of these schemes? Basically, the same reasons why it might undertake a unilateral effort to cut emissions—in order to please shareholders, get good PR, improve relations with regulators, and prepare future mandatory emissions limits (not to mention, conceivably, a desire to do the right thing). These schemes simply allow a firm to do all of those things in a more public and effective way. Maybe some foundation or individual firm could take the initiative in proposing one of these schemes, or maybe a state like California or New York could coordinate the effort.

## II. INTERACTIONS BETWEEN PRIVATE INITIATIVES, GOVERNMENT, AND POLITICS

Fruitful interactions with government can enhance the effectiveness of private action. This section briefly considers how governments could facilitate private actions and how private action might contribute to changing the politics surrounding the climate issue, a theme of *Beyond Politics*.

### A. Government Facilitation of Private Action

A 2008 law establishing a climate register provides one mechanism for corporations to disclose carbon emissions, with a corresponding potential for pressure to reduce them.<sup>110</sup> State governments, along with their counterparts elsewhere in North America, have established the Climate Registry, a nonprofit collaboration that sets standards for members to calculate and publicly report their emissions, which are verified by independent bodies accredited by the American National Standards Institute.<sup>111</sup> The Climate Register has registered 1.8 billion tons of carbon dioxide, involving a thousand members and ten thousand sites, and claims that members on average have cut emissions by twenty percent.<sup>112</sup>

Another government role is to set voluntary standards around which private firms can coalesce. Vandenberg and Gilligan cite the

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110. See VANDENBERGH & GILLIGAN, *supra* note 3, at 199.

111. See Myanna Dellinger, *Localizing Climate Change Action*, 14 MINN. J.L. SCI. & TECH. 603, 641–42 (2013).

112. See *Our Impact*, THE CLIMATE REGISTRY, <https://www.theclimateregistry.org/who-we-are/our-impact/> [https://perma.cc/UHS3-VHNJ].

example of the Principles for Sustainable Insurance issued by the UN.<sup>113</sup> Although these are not legally binding, eighty organizations, representing about twenty percent of the global insurance market, have voluntarily adopted them.<sup>114</sup>

Government could also strengthen corporate climate initiatives by enhancing their credibility. For instance, when companies intentionally or recklessly misreport their climate emissions, such mistakes might be considered unfair trade practices under state law. State attorneys general might then initiate legal proceedings. States might also provide corporations the opportunity to register enforceable commitments, even for operations outside of state borders. Corporations would then consent to sanctions based on failure to observe agreed monitoring and verification standards.

States could also help catalyze action by individuals. Apart from public education campaigns, they have a number of other available strategies. For instance, they might require carbon labels for some products. They might also require private firms to undertake efforts to reduce carbon emissions by their consumers or require them to follow the lead of Swiss Re by establishing incentive programs for employees to reduce their own emissions.

### *B. Private Sector Facilitation of Government Action*

As Vandenberg and Gilligan note in passing, firms' actions can exert pressure for government policy shifts. For instance, they observe that some states have opened the door for renewable energy in an effort to attract major firms that prioritize renewables.<sup>115</sup> They also note that the Renewable Energy Buyers Alliance has "made significant headway in states that have resisted small-scale renewable energy development such as North Carolina, Kentucky, and Florida."<sup>116</sup> For instance, the Alliance has produced a detailed guide for state utility regulators to assist companies with large energy needs in obtaining renewable energy.<sup>117</sup> This pressure seems to have mattered. In North Carolina, Apple insisted on building its own massive solar farm, while Google "pushed Duke Energy to develop something called a 'Green Source

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113. VANDENBERGH & GILLIGAN, *supra* note 3, at 417

114. *Id.*

115. *See id.* at 5.

116. *Id.* at 426.

117. Priya Barua, *Implementation Guide for Utilities: Designing Renewable Energy Products to Meet Large Energy Customer Needs*, WORLD RESOURCES INST. (June 2017), [http://www.wri.org/sites/default/files/Implementation\\_RenewableEnergy\\_final.pdf](http://www.wri.org/sites/default/files/Implementation_RenewableEnergy_final.pdf) [<https://perma.cc/623R-24LD>].

Rider.’ ”<sup>118</sup> That was the first time a major customer had pushed Duke to supply electricity produced from renewable sources.

Even acting individually, such economic behemoths as Apple or Walmart have considerable political clout. They could have even greater influence acting together. The Renewable Energy Buyers Alliance is one example, but many other initiatives would be possible. For instance, corporations might put pressure on state legislatures to adopt California’s greenhouse gas emission standards or push state public utility commissions to begin planning for greater decarbonization of the grid. Individual states are in widely disparate positions regarding their renewables policies and the mix of generators on which they rely, as I discuss in a recent White Paper.<sup>119</sup> Corporate pressure is probably unneeded for climate change leaders in the Northeast and on the West Coast. But it might be more influential in states that are just beginning to open the door to renewables and in those states that have made only moderate efforts. These are likely to be conservative states where the voice of the private sector could loom particularly large.

Most importantly, corporations can contribute by withdrawing their support from think tanks and associations that oppose climate action. This is not a cost-free decision, since those same entities may support initiatives that the corporations favor. But as long as corporations support climate change obstructionists, they are undermining the actions of their own that they like to publicize so widely.

### *C. Bridging the Partisan Gap*

Vandenbergh and Gilligan point to the split between the public, which either does not believe in climate change or views it as a low priority threat, and scientists, who are virtually certain about climate change and take the threat very seriously.<sup>120</sup> Conservatives tend to be particularly adamant in denying that humans cause climate change, or sometimes even that the climate is already changing.<sup>121</sup>

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118. Dave DeWitt, *Big Tech May Determine Fate of Renewable Energy in NC*, NC CLEAN ENERGY TECH. CTR., <https://nccleantech.ncsu.edu/big-tech-may-determine-fate-of-renewable-energy-in-nc/> [https://perma.cc/LTS8-P3ML].

119. DANIEL A. FARBER, CENTER FOR LAW, ENERGY & THE ENV’T, BEYOND THE BELTWAY: A REPORT ON STATE ENERGY AND CLIMATE POLICIES (Feb. 2018), <https://www.law.berkeley.edu/wp-content/uploads/2018/02/Beyond-the-Beltway.pdf> [https://perma.cc/8YXH-8TBH].

120. See VANDENBERGH & GILLIGAN, *supra* note 3 at 315.

121. *Id.* at 325.

The partisan gap is certainly severe, but it is not necessarily hopeless. Individuals may be more receptive to climate action if they hear the message from sources that are not identified with liberalism. The private firms discussed in the book are one possibility. Another possibility is the military.

One very hopeful sign was the passage of the Defense Authorization Act of 2017,<sup>122</sup> HR 1810. The Act is a funding statute for the Pentagon. Section 335 of the Act proclaims a sense of Congress that “climate change is a direct threat to the national security of the United States and is impacting stability in areas of the world both where the United States Armed Forces are operating today, and where strategic implications for future conflict exist.”<sup>123</sup> The statute begins with a series of findings in support of this stern warning, such as a finding that “[a]s global temperatures rise, droughts and famines can lead to more failed states, which are breeding grounds of extremist and terrorist organizations.”<sup>124</sup> A conservative representative moved to strip this section from the bill.<sup>125</sup> The vote on the motion to strip was 185-234, with 46 Republicans crossing the aisle to vote against the amendment and in favor of the climate provision.<sup>126</sup> The motion failed, leaving the climate change provision in the bill. Among the votes to retain the provision were 22 Republican members of the House Climate Solutions Caucus.<sup>127</sup> According to one of its co-chairs, the mission of the caucus is to “educate members on economically-viable options to reduce climate risk and to explore bipartisan policy options that address the impacts, causes, and challenges of our changing climate.”<sup>128</sup> It currently has 70 members, equally split between Democrats and Republicans.<sup>129</sup>

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122. National Defense Authorization Act for Fiscal Year 2018, Pub. L. No. 115-91, § 335, 131 Stat. 1283, 1357–59 (2017) (Report on Effects of Climate Change on Department of Defense).

123. *Id.*

124. *Id.*

125. See Devin Henry, *House Defeats Amendment to Strip Climate Study From Defense Bill*, THE HILL (July 13, 2017), <http://thehill.com/policy/energy-environment/341961-house-defeats-amendment-to-strip-climate-study-from-defense-bill> [<https://perma.cc/XXM5-FQBB>].

126. *Id.*

127. Mark Hand, *46 Republicans Buck Party to Help Democrats Take Down Anti-Climate Action Amendment*, THINKPROGRESS (July 14, 2017), <https://thinkprogress.org/house-defeats-anti-climate-action-amendment-e7a95cc0249c/> [<https://perma.cc/KE33-465U>].

128. Joanna Rodriguez, *Climate Solutions Caucus Welcomes Six New Members; Membership Grows to 58*, CARLOS CURBELO (Sept. 25, 2017), <https://curbelo.house.gov/news/documentsingle.aspx?DocumentID=1694> [<https://perma.cc/F6H6-GXDY>].

129. Steve Valk, *Climate Solutions Caucus Reaches 70 Members*, CITIZENS’ CLIMATE LOBBY (Feb. 7, 2018), <https://citizensclimatelobby.org/climate-solutions-caucus-reaches-70-members/> [<https://perma.cc/HRL7-JC6J>].

The national security context of the bill is a plausible explanation for why Republican representatives felt safe in supporting it. The military has long taken a proactive stance on climate change. Defense Secretary James Mattis has been clear about the impact of climate change on national security: “Climate change is impacting stability in areas of the world where our troops are operating today. . . . It is appropriate for the Combatant Commands to incorporate drivers of instability that impact the security environment in their areas into their planning.”<sup>130</sup>

Framing climate change as a threat to national security seems promising as a way of transcending ideological barriers.<sup>131</sup> Vandenberg and Gilligan argue that shifting the focus to private action may also be effective, since it helps avoid what Ed Rubin has called “regulation phobia” that may be at the root of climate change denial.<sup>132</sup> As a further way of reaching conservatives, Vandenberg and Gilligan propose creation of climate prediction markets as a way of appealing to conservative free-market allegiances.<sup>133</sup> One problem with their proposal is that it will take a long time for the actual predictions to be validated. It might be useful to organize a shorter-term market—say, regarding whether the average temperature over the next decade will be higher or lower than in the past decade. Although there are many fluctuations in weather patterns, the trend in global temperatures makes it very likely that the next decade will be warmer. This would provide feedback about the validity of the climate market that could help persuade skeptics.

So far, no one has found the silver bullet for penetrating climate change denial and moving minds and hearts. But the Vandenberg and

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130. Andrew Revkin, *Trump’s Defense Secretary Cites Climate Change as National Security Challenge*, PROPUBLICA (Mar. 14, 2017), [https://www.propublica.org/article/trumps-defense-secretary-cites-climate-change-national-security-challenge?utm\\_source=Daily+Carbon+Briefing&utm\\_campaign=2016c9ce4d-cb\\_daily&utm\\_medium=email&utm\\_term=0\\_876aab4fd7-2016c9ce4d-303476449](https://www.propublica.org/article/trumps-defense-secretary-cites-climate-change-national-security-challenge?utm_source=Daily+Carbon+Briefing&utm_campaign=2016c9ce4d-cb_daily&utm_medium=email&utm_term=0_876aab4fd7-2016c9ce4d-303476449) [<https://perma.cc/AXR8-TZNP>].

131. Sarah Light has focused attention on the Pentagon’s constructive role in addressing climate change. See Sarah E. Light, *The Military-Environmental Complex*, 55 B.C. L. REV. 879 (2014). She has also addressed the possible appeal to conservatives of reframing the climate issue as a national security problem. See Sarah E. Light, *Valuing National Security: Climate Change, the Military, and Society*, 61 UCLA L. REV. 1772 (2014). In addition to the military framing, it may also be helpful to frame climate issues in terms of disaster resilience. See Harry M. Osofsky & Jacqueline Peel, *Energy Partisanship*, 65 EMORY L.J. 695 (2016). Pointing out the elements of environmentalism in the conservative tradition may also be helpful. See Daniel A. Farber, *The Conservative as Environmentalist: From Goldwater and the Early Reagan to the 21<sup>st</sup> Century*, 59 ARIZ. L. REV. 1005 (2017).

132. See Edward L. Rubin, *Rejecting Climate Change: Not Science Denial, But Regulation Phobia*, 32 J. LAND USE 103 (1016).

133. See VANDENBERGH & GILLIGAN, *supra* note 3, at 327–36.

Gilligan argument is certainly a plausible one. The trick will be to present individual action in a way that does not identify it with “West Coast Hippies” or “New York Elites.”

#### CONCLUSION

Climate change is one of the great global challenges confronting us. As Vandenberg and Gilligan realize full well, private actions alone will not be enough. Governments and international institutions will play a vital role. But in confronting a problem of this magnitude, we cannot afford to overlook any possible channel for action.

Vandenberg and Gilligan show that private action can make a limited but genuine contribution to cutting carbon. Their evidence is weaker on this point, but there is reason to hope that private action can also help shift the terms of an increasingly bitter and divisive political debate. In present circumstances, it would be a serious mistake to overlook these positive potentials. Ronald Reagan once famously said “government is not the solution to our problem; government is the problem.”<sup>134</sup> That statement reflects a fundamental misunderstanding of how to address problems needing collective action, of which climate change is perhaps the worst. But if it is wrong to view government as the problem, it is also wrong to assume that government is the complete solution.

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134. Ronald Reagan, Inaugural Address (Jan. 20, 1981), <http://www.presidency.ucsb.edu/ws/?pid=43130> [<https://perma.cc/SJ37-YD5S>].