

BOOK REVIEW

Calling the Option Offense on Top-Down Climate Policy: A Review of Vivian E. Thomson's *Sophisticated Interdependence in Climate Policy*

MICHAEL P. SMITH*

Introduction	137
I. Despite Momentum, Opposition to Climate Progress Remains.	139
II. Sophisticated Interdependence: The Framework	143
III. Learning from Germany: Issue Framing	144
IV. Learning from Brazil: Leveraging International Experience and Facilitating Regional Alliances	148
V. Learning from Within: Drivers of Climate Policy in the States.	150

A pool begins with many drops of water.
—President Xi Jinping, China¹

INTRODUCTION

Our focus on top-down climate policy is failing us, both domestically and internationally.² An American President committed to climate change has been in office for nearly eight years, but comprehensive federal attempts to address climate change have faltered: federal statutes do not coherently address greenhouse gases and the prospects of implementing the recently concluded multilateral climate treaty are unknown. Instead, the administration has had to resort to repurposing an obscure provision from the Clean Air Act to promulgate carbon regulations—regulations being broadly challenged by more than half the states,³

* J.D. 2015, Georgetown University Law Center. The author thanks Collmann Griffin, Hampden Macbeth, Rachel Fullmer, and the other editors and staff of the *Georgetown Environmental Law Review* for their editing and assistance. © 2016, Michael P. Smith.

1. Mark Landler, *U.S. and China Reach Climate Accord After Months of Talks*, N.Y. TIMES (Nov. 11, 2014), <http://www.nytimes.com/2014/11/12/world/asia/china-us-xi-obama-apec.html>.

2. Justin Gillis & Somini Sengupta, *Limited Progress Seen Even as More Nations Step Up on Climate*, N.Y. TIMES (Sept. 28, 2015), <http://www.nytimes.com/2015/09/28/world/limited-progress-seen-even-as-more-nations-step-up-on-climate.html>.

3. Elizabeth Harball, *More States Pondering a Challenge to EPA Climate Rule - Source*, E&E NEWS (Dec. 18, 2015), <http://www.eenews.net/climatewire/stories/1060029748/print>.

and ones that the Supreme Court may easily overturn. Even with a reduction in domestic greenhouse gases in the last decade, and even with historic commitments announced in anticipation of and as part of the recent United Nations Framework Convention on Climate Change (“UNFCCC”) conference,⁴ many obstacles remain both domestically and internationally to achieving further progress. Perhaps it is time that policymakers consider all the alternatives.

In *Sophisticated Interdependence in Climate Policy*, Vivian Thomson provides options to circumvent the limitations of top-down climate change policy in what she dubs “sophisticated interdependence.”⁵ Sophisticated interdependence is a framework that allows local, state, and federal governments to pursue collaborative, oftentimes bottom-up strategies for achieving environmental objectives without the need for top-down legal centralism.⁶ As is described below, Thomson’s sophisticated interdependence is a compelling idea, one that may give us a new tactic in the fight against climate change—allowing us to call the option offense on top-down climate policy, so to speak. Thomson’s book focuses on how sophisticated interdependence may assist domestic policymakers, but her analysis may equally extend to other countries.

This review examines and critiques Thomson’s *Sophisticated Interdependence in Climate Policy*, at times supplementing her analysis. First, the review describes the domestic and international obstacles that undermine top-down climate progress. Second, a more in-depth explanation of the sophisticated interdependence framework is provided. Third, the review discusses issue framing in Germany, one of Thomson’s examples of sophisticated interdependence. Fourth, the review recounts Brazil’s leveraging of international resources and its facilitation of regional alliances, two more examples of the framework in action. Finally, this review discusses the diversity of U.S. states’ climate policy as well as Thomson’s analysis of this diversity—analysis that is pertinent to a framework that often relies on local politics.

Although climate change remains an obvious global challenge, Thomson’s roadmap for stronger state and local action in the United States offers promise for

4. E.g., Jonathan Chait, *India’s Climate-Change Plan Means Your Grandkids Might Not Be Underwater*, N.Y. MAG., Oct. 2, 2015; Anna Edgerton & Vanessa Dezem, *Rousseff Pledges to Cut Brazil’s Carbon Emissions 37% by 2025*, BLOOMBERG (Sept. 26, 2015), <http://www.bloomberg.com/news/articles/2015-09-27/rousseff-seeks-climate-spotlight-while-brazil-economy-suffers>; Lisa Friedman, *U.S. Climate Envoy Sees Momentum for Global Deal as U.N. Readies Draft Text*, E&E NEWS, Oct. 1, 2015; N.Y. Times Ed. Bd., *A Big Boost for the Climate Summit*, N.Y. TIMES, Oct. 3, 2015; Bob Perciasepe, *Paris Climate Talks: This Could Be the Start of Something Big*, CTR. FOR CLIMATE & ENERGY SOLS. (Dec. 11, 2015), <http://www.c2es.org/blog/perciasepeb/paris-climate-talks-could-be-start-something-big>; Juan Carlos Rodriguez, *China, US Make New Climate Change Commitments*, LAW360 (Sept. 25, 2015), <http://www.law360.com/articles/707262/china-us-make-new-climate-change-commitments>; Joby Warrick & Chris Mooney, *196 Countries Approve Historic Climate Agreement*, WASH. POST (Dec. 12, 2015), <https://www.washingtonpost.com/news/energy-environment/wp/2015/12/12/proposed-historic-climate-pact-nears-final-vote>.

5. VIVIAN THOMSON, *SOPHISTICATED INTERDEPENDENCE IN CLIMATE POLICY* 120 (2014).

6. *Id.* at 120–21.

tackling the issue outside of a top-down approach. Describing climate progress in 2014, Chinese President Xi Jinping stated, “A pool begins with many drops of water.”⁷ Those drops have already fallen, and Thomson offers pragmatic advice for ensuring that they continue to fall.

I. DESPITE MOMENTUM, OPPOSITION TO CLIMATE PROGRESS REMAINS

As this review is being written, optimism for achieving progress through a comprehensive, transnational framework for climate policy runs high. In November 2014, the leaders of the two largest carbon emitters in the world—President Obama of the United States and President Xi Jinping of China—reached an historic climate agreement.⁸ The United States agreed that by 2025, it would reduce greenhouse gas emissions twenty-six to twenty-eight percent below 2005 levels.⁹ China agreed to peak carbon dioxide (“CO₂”) emissions around 2030, in part by increasing its shares of renewable energy to twenty percent of total energy production by 2030.¹⁰ This agreement had been hailed as “an extremely hopeful sign,”¹¹ a “game changer,”¹² a “landmark” deal,¹³ an “historic agreement,”¹⁴ and a “watershed moment for climate politics.”¹⁵ Building upon such momentum, in September 2015 China announced its plans to launch a national, market-based cap-and-trade program and implement a system to favor clean energy sources.¹⁶ Furthermore, the landmark United States-China deal has been “viewed as essential to concluding a new global accord,”¹⁷ in part by “creating political

7. Landler, *supra* note 1.

8. *Id.*

9. Press Release, White House, Office of the Press Sec., FACT SHEET: U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation (Nov. 11, 2014), <https://www.whitehouse.gov/the-press-office/2014/11/11/fact-sheet-us-china-joint-announcement-climate-change-and-clean-energy-c>.

10. *Id.*; see also Matt Hoyer & Holly Yan, *U.S. and China Reach Historic Climate Change Deal, Vow to Cut Emissions*, CNN (Nov. 12, 2014, 10:04 AM), <http://www.cnn.com/2014/11/12/world/us-china-climate-change-agreement/> (“China has agreed to provide another 800-1,000 gigawatts of nuclear, wind, solar and other zero emission generation capacity by 2030.”).

11. Hoyer & Yan, *supra* note 10.

12. Tim McDonnell & James West, *BREAKING: The US and China Just Announced a Huge Deal on Climate—and It’s a Game Changer*, MOTHER JONES (Nov. 11, 2014, 11:47 PM), <http://www.motherjones.com/environment/2014/11/obama-just-announced-historic-climate-deal-china>.

13. WASH. POST ED. BD., *The U.S. and China Reach a Landmark Climate Deal* (Nov. 12, 2014), http://www.washingtonpost.com/opinions/the-us-and-china-reach-a-landmark-climate-deal/2014/11/12/a1f49f4c-6aa5-11e4-a31c-77759fc1eacc_story.html; Landler, *supra* note 1.

14. David Biello, *Everything You Need to Know about the U.S.-China Climate Change Agreement*, SCI. AMER. (Nov. 12, 2014), <http://www.scientificamerican.com/article/everything-you-need-to-know-about-the-u-s-china-climate-change-agreement>.

15. David Holmes, *U.S.-China Deal: Watershed Moment for Climate Politics*, CNN (Nov. 13, 2014), <http://edition.cnn.com/2014/11/12/opinion/us-china-climate-change-analysis/>.

16. Rodriguez, *supra* note 4.

17. Landler, *supra* note 1.

momentum for other countries.”¹⁸ Prompting historic commitments even before it began,¹⁹ a landmark agreement was indeed finally reached through the UNFCCC’s twenty-first session of the Conference of the Parties in Paris in December 2015.²⁰ The historic and ambitious agreement aims to “hold[] the increase in global average temperature to well below 2°C above preindustrial levels,”²¹ achieve net-zero emissions by mid-century,²² submit and review each country’s “nationally determined [carbon-reduction] contribution every five years,”²³ preserve forests as carbon sinks,²⁴ and encourage developed countries to provide climate finance to developing countries,²⁵ among numerous other goals.

Yet despite such optimistic progress, there is reason for concern. Many Republican lawmakers deny climate change²⁶ and continue to wage an “all-out assault on Obama’s environmental agenda”²⁷ through the appropriations, legislative, and oversight processes.²⁸ One tactic is to thwart the Environmental Protection Agency (“EPA”) in its attempts to reduce carbon emissions through

18. Friedman, *supra* note 4; Mat Hope, *A Detailed Look at the US and China’s Historic Climate Deal*, CARBON BRIEF (Nov. 13, 2014, 3:00 PM), <http://www.carbonbrief.org/blog/2014/11/exploring-the-implications-of-the-us-and-china-historic-climate-deal> (quoting Fatih Birol, the International Energy Agency’s chief economist).

19. *E.g.*, Chait, *supra* note 4; Friedman, *supra* note 4; Edgerton & Dezem, *supra* note 4; N.Y. Times Ed. Bd., *supra* note 4; Rodriguez, *supra* note 4.

20. Framework Convention on Climate Change Adoption of the Paris Agreement CP/2015/L.9/Rev.1 (Dec. 12, 2015).

21. *Id.* at 2.

22. *Id.* at 22.

23. *Id.* at 23.

24. *Id.* at 23–24.

25. *Id.* at 7, 27–28.

26. *See, e.g.*, Sabrina Siddiqui, *Ted Cruz Embodies Republican Climate Change Dilemma*, GUARDIAN (Mar. 27, 2015, 14:36 PM), <http://www.theguardian.com/us-news/2015/mar/27/ted-cruz-climate-change-republicans-2016> (“Buoyed by the oil and gas companies and fossil-fuel-funder mega-donors that increasingly bankroll their campaigns, most prominent Republican politicians have either denied that climate change exists or refused to stake out a clear position, citing their personal lack of scientific knowledge.”).

27. Timothy Cama, *Senate GOP Steeling for Battle Against EPA*, THE HILL (Nov. 9, 2014, 10:00 AM), <http://thehill.com/policy/energy-environment/e2-wire/223398-senate-gop-steeling-for-battle-against-the-epa>.

28. *See, e.g.*, *Obama Vetoes Anti-climate Change Measures*, CBS NEWS (Dec. 19, 2015, 5:42 PM), <http://www.cbsnews.com/news/obama-vetoes-anti-climate-change-measures/>; Rebecca Leber & Adam Peck, *House Republicans Voted Against the Environment More Than 500 Times in the Past Four Years*, NEW REPUBLIC (Dec. 10, 2014), <http://www.newrepublic.com/article/120508/house-floor-votes-against-environment-113th-congress> (“Several of the House’s votes blocked funding for international action on climate change, specifically by defunding the IPCC, a scientific panel that compiles the best research on climate change and helps to inform the decisions of policymakers.”); *see also* Jean Chemnick, *Todd Stern to Testify as Inhofe Bows Out of Paris Hearing*, E&E NEWS (Oct. 19, 2015), <http://www.eenews.net/eedaily/2015/10/19/stories/1060026499> (Senator Inhofe attempting to subject Todd Stern, the U.S. climate negotiator, to an Environment and Public Works Committee subcommittee hearing, despite lacking jurisdiction). For a recent perspective, *see* Ben Adler, *Republicans Still Hope to Throw A Wrench in the Paris Climate Deal*, NEWSWEEK (Dec. 17, 2015), <http://www.newsweek.com/republicans-still-hope-throw-wrench-paris-climate-deal-406635>. For a historical perspective, *see* Helen Dewar and Kevin Sullivan, *Senate Republicans Call Kyoto Pact Dead*, WASH. POST (Dec. 11, 1997), <http://www.washingtonpost.com/wp-srv/inatl/longterm/climate/stories/clim121197b.htm>.

the Clean Power Plan.²⁹ Even before assuming his role as Senate Majority Leader, Mitch McConnell (R-KY) fired a shot across the bow, stating that his number one goal is “to try to do whatever I can to get the EPA reined in.”³⁰ His colleague, Senator Jim Inhofe (R-OK), Chairman of the Environment and Public Works Committee, has compared the EPA to Nazi Germany’s Gestapo and called the United States-China deal a “non-binding charade.”³¹ And yet, Republican lawmakers’ efforts are not limited to opposing the Clean Power Plan.

Congress may also seek to block international climate progress by reducing or eliminating U.S. appropriations to the Green Climate Fund,³² which currently total \$3 billion.³³ Although the recent appropriations bill did not explicitly ban funding for the Green Climate Fund, it did not explicitly authorize it either,³⁴ and Republican lawmakers could exploit such leverage.³⁵ Withholding any U.S. commitments to the Fund would be a significant blow, as U.S. pledges represent almost one third of the total.³⁶ The Green Climate Fund is an essential building block for an international climate change strategy because it “direct[s] invest-

29. Tim McDonnell, *How the GOP’s Senate Takeover Could Derail Global Climate Action*, MOTHER JONES (Nov. 11, 2014, 1:14 PM), <http://www.motherjones.com/environment/2014/11/gop-senate-takeover-midterms-climate-agreement-paris> (“‘Anything that undermines the president’s ability to follow through on his climate plan will undermine Paris,’ said Jake Schmidt, director of the Natural Resources Defense Council’s international program. ‘We expect a full frontal attack from some in the Republican party.’”); John Siciliano, *GOP Ready to Attack Obama’s Climate Agenda*, WASH. EXAMINER (Sept. 8, 2015), <http://www.washingtonexaminer.com/gop-ready-to-attack-obamas-climate-agenda/article/2571239> (discussing legislative measures to block the Clean Power Plan).

30. *Cama*, *supra* note 27.

31. *Id.*; Press Release, Sen. Jim Inhofe, Inhofe: U.S.-China Climate Deal a Non-Binding Charade (Nov. 12, 2014), <http://www.inhofe.senate.gov/newsroom/press-releases/inhofe-us-china-climate-deal-a-non-binding-charade>. For his own charades, see WASH. POST ED. BD., *Sen. Jim Inhofe Embarrasses the GOP and the U.S.* (Mar. 1, 2015), http://www.washingtonpost.com/opinions/a-snowballs-chance/2015/03/01/46e9e00e-bec8-11e4-bdfa-b8e8f594e6ee_story.html (describing Senator Inhofe bringing a snowball to the Senate floor to apparently disprove the reality of climate change).

32. Lisa Friedman, *Head of U.N. Green Fund Shrugs off Republicans’ Criticism*, E&E NEWS (Oct. 22, 2015), <http://www.eenews.net/greenwire/2015/10/22/stories/1060026767> (Senator John Barrasso (R-WY) stating that “the American public does not support paying their hard-earned taxpayer dollars into a slush fund that spends billions on international climate change programs in developing nations”); McDonnell, *supra* note 29.

33. RICHARD K. LATTANZIO, CONG. RESEARCH SERV., R41889, INTERNATIONAL CLIMATE CHANGE FINANCING: THE GREEN CLIMATE FUND (GCF) 8 (2014).

34. Devin Henry, *Funds for Obama Climate Deal Survive in Spending Bill*, THE HILL (Dec. 16, 2015, 11:45 AM), <http://thehill.com/policy/energy-environment/263447-spending-bill-wont-stop-funds-for-obama-climate-deal>.

35. *See, e.g., id.*; Letter from Sen. John Barrasso et al. to Pres. Barack Obama, Nov. 19, 2015, http://www.epw.senate.gov/public/_cache/files/f11df6c8-def5-47d3-b59b-1c8112b1b2d7/gop-climate-letter-11-19-15.pdf.

36. *See* Mat Hope, *Briefing: Country Pledges to the UN’s Green Climate Fund*, CARBON BRIEF (Dec. 10, 2014, 10:00 AM), <http://www.carbonbrief.org/blog/2014/11/briefing-country-pledges-to-the-green-climate-fund>; LIANE SCHALATEK ET AL., THE GREEN CLIMATE FUND 2 (HEINRICH BÖLL STIFTUNG N. AMER., 2014); *Green Climate Fund*, CLIMATE FUNDS UPDATE, <http://www.climatefundsupdate.org/listing/green-climate-fund> (last visited Mar. 28, 2015).

ment flows towards low-emission, climate-resilient growth.”³⁷ Threatening to withhold appropriations to the Green Climate Fund especially jeopardizes the communities that need it most, as the fund aims to support “those developing countries particularly vulnerable to the adverse effects of climate change.”³⁸

Republican lawmakers may even adopt a more direct, interventionist role in future international climate proceedings, like the submission and review of each country’s five-year carbon-reduction contribution.³⁹ Last year, forty-seven U.S. senators attempted this strategy during the United States-Iran nuclear talks.⁴⁰ Penning a letter directly to Iran’s leadership, the senators suggested that any agreement would be scuttled without their consent.⁴¹ More recently, even before the Paris negotiations began, Senator Inhofe openly considered showing up in Paris to “be the bad guy, the one-man truth squad, and tell the truth, that they’re going to be lied to by the Obama administration.”⁴² While this possibility fortunately did not materialize, if U.S. lawmakers believe it is prudent to undermine U.S. negotiations abroad on a matter as serious as nuclear nonproliferation, then it is plausible that they may similarly meddle in climate proceedings in the future. In fact, the lead Chinese negotiator on climate change voiced such concerns about the United States’ internal politics in the run-up to Paris.⁴³ Domestic lawmakers may feel increasingly empowered to intervene in the future, especially as “[t]he domestic political fight over the Paris Agreement has just begun.”⁴⁴

37. GREEN CLIMATE FUND, GREEN CLIMATE FUND 8 (2014), <http://news.gcfund.org/download/PDF/introducing-the-GCF.pdf>.

38. *Green Climate Fund*, GREEN CLIMATE FUNDS, <http://www.climatefundsupdate.org/listing/green-climate-fund> (last visited Nov. 17, 2015); GREEN CLIMATE FUND, DECISION B.06/06 (2015), <http://www.gcfund.org/operations/resource-guide/investment-framework-board-decisions/33-allocation-of-fund-resources.html>; *How It Works*, GREEN CLIMATE FUND, <http://www.greenclimate.fund/ventures/funding/#how-it-works> (last visited Nov. 17, 2015).

39. *See supra*, text accompanying note 23.

40. ASSOC. PRESS, *GOP Senators Send Warning Letter to Iran Over Nuclear Negotiations* (Mar. 9, 2015, 11:03 AM), <http://www.cbsnews.com/news/gop-senators-send-warning-letter-to-iran-over-nuclear-negotiations>; USA TODAY ED. BD., *‘Dear Iran’ Letter Subverts Nuclear Talks: Our View* (Mar. 10, 2015, 8:30 PM), <http://www.usatoday.com/story/opinion/2015/03/10/iran-47-republican-senators-president-obama-editorials-debates/24733603>.

41. Letter from Tom Cotton et al., U.S. Sens., to the Leaders of the Islamic Republic of Iran (Mar. 9, 2015), <http://www.cotton.senate.gov/sites/default/files/150309%20Cotton%20Open%20Letter%20to%20Iranian%20Leaders.pdf>.

42. Jonathan Chait, *Snowball-Chucking, Science-Hating Senator May Crash Paris Climate Talks*, N.Y. MAG. (Oct. 26, 2015), <http://nymag.com/daily/intelligencer/2015/10/snowball-chucking-senator-may-crash-paris-talks.html#>.

43. *See* Lucy Hornby, *China Fears US Republican Opposition in Climate Change Talks*, FIN. TIMES (Nov. 25, 2014, 11:09 AM), <http://www.ft.com/cms/s/0/2593cf7e-748a-11e4-b30b-00144feabdc0.html#axzz3Vibmktaw>.

44. Adler, *supra* note 28; *see also* Devin Henry, *Republicans Grope for Way to Kill Paris Climate Agreement*, THE HILL (Dec. 20, 2015, 10:30 AM), <http://thehill.com/policy/energy-environment/263780-gop-gropes-for-way-to-kill-paris-climate-deal>; Josh Siegel, *Republicans to Keep Trying to Block Obama’s International Climate*

Although an agreement has been reached, there is much work to be done.⁴⁵ Beyond the non-binding nature of the agreement and the challenging political backdrop, as described above, scholars have rightly questioned the prospects and efficacy of a comprehensive multilateral climate change agreement,⁴⁶ asking whether the “objective of a global, unified agreement addressing multiple issues and agreed to by 196 parties is realistically going to reduce domestic emissions.”⁴⁷ Indeed, “[s]everal decades of [UNFCCC] negotiations have brought the international community no nearer to the UNFCCC’s objective of reducing greenhouse gas emissions,” with the UNFCCC framework facing many challenges over the years.⁴⁸ As one scholar describes:

To date, international environmental law generally, and international climate change law specifically, have remained wedded to efforts to create a treaty-based system that establishes a top-down framework. As a result, these efforts have reinforced the traditional “ideology of legal centralism” and, thus, the notion that legitimacy and effectiveness arise from acts taken by official state-sanctioned entities. In so doing, the existing international climate change regime and subsequent global climate change negotiations have failed to embrace the “multifaceted role of law” or to “take seriously the insights of legal pluralism.”⁴⁹

In the face of this opposition to climate progress, thankfully “[t]here seems to be a slow but discernible shift underway toward a more fragmented, bottom-up implementation vision of how to tackle climate change.”⁵⁰

II. SOPHISTICATED INTERDEPENDENCE: THE FRAMEWORK

The director of the Southern Nevada Water Authority, Pat Mulroy, coined the term “sophisticated interdependence” to describe the cooperation among western states in managing the water resources of the Colorado River.⁵¹ It is an

Change Deal, DAILY SIGNAL (Dec. 16, 2015), <http://dailysignal.com/2015/12/16/republicans-to-keep-trying-to-block-obamas-international-climate-change-deal>.

45. See, e.g., Richard Gowan, *Is COP21 Climate Change Deal Multilateralism’s Swan Song?*, WORLD POLITICS REV. (Dec. 14, 2015), <http://www.worldpoliticsreview.com/articles/17455/is-cop21-climate-change-deal-multilateralism-s-swan-song> (“the current generation of U.N. agreements . . . tend to be sprawling but shallow . . .”); Dan Grossman, *Paris Climate Agreement: Between the Lines*, PULITZER CTR. ON CRISIS REPORTING (Dec. 17, 2015), <http://pulitzercenter.org/reporting/paris-climate-agreement-between-lines>.

46. See, e.g., Ruth Greenspan Bell, *Climate Change Policy Through the Rear View Mirror*, 27 GEO. INT’L ENVTL. L. REV. 91, 93 (2015); Cinnamon P. Carlane, *Rethinking a Failing Framework: Adaptation and Institutional Rebirth for the Global Climate Change Regime*, 25 GEO. INT’L ENVTL. L. REV. 1, 2 (2012).

47. Bell, *supra* note 46, at 93–94; Ruth Greenspan Bell, *Change on Climate Change*, FOREIGN POL’Y (Sept. 23, 2015), <https://www.foreignaffairs.com/articles/2015-09-23/change-climate-change>.

48. See, e.g., Carlane, *supra* note 46, at 4–24 (explaining the UNFCCC’s growing pains); see also Bell, *supra* note 47.

49. Carlane, *supra* note 46, at 31.

50. Bell, *supra* note 46, at 116.

51. THOMSON, *supra* note 5, at 120.

unintuitive term for the Colorado River because, as Mulroy describes, many western states have typically been seen as fiercely independent “combatants” competing for water resources—that is, until they recognized the imperative to work together.⁵²

In her book, Thomson applies sophisticated interdependence to the climate change arena, remarking that “Mulroy’s remarks about the ‘fierce independence’ that has characterized the western states . . . recall the United States government’s longtime refusal to meet its Kyoto protocol obligations and its foot-dragging on domestic climate change issues.”⁵³ Even if “sophisticated interdependence” seems unintuitive in a world where governments rarely cooperate on climate change, Thomson’s examples of the concept suggest that the framework may be the foundation for a progressive U.S. state-federal climate policy system.

Thomson provides specific mechanisms by which sophisticated interdependence can work, including:

- (a) comprehensive issue framing that intertwines climate protection, fiscal discipline, renewable energy jobs, environmental justice, energy diversification, and national security;
- (b) connecting domestic actions with those abroad; and,
- (c) integrating the variable constraints and opportunities faced by US state governments into national climate and energy policymaking.⁵⁴

Thomson’s analysis of the German and Brazilian systems offers important insights that may be transferable to the United States. The following sections focus on specific lessons learned from analyzing the policies and dynamics of Germany, Brazil, and the United States.

III. LEARNING FROM GERMANY: ISSUE FRAMING

At first glance, a top-down legal centrist may deem Germany’s system even less favorable to climate progress than the United States. One way to understand Germany’s system is to imagine an alternative version of the U.S. federal system where senators are appointed by state governments rather than elected by a state’s population.⁵⁵ Specifically, Germany’s legislature consists of a directly elected Bundestag, as well as a Bundesrat made up of representatives appointed by the governments of Germany’s sixteen Länder.⁵⁶ The Länder are local-level govern-

52. *Id.*

53. *Id.* at 121.

54. *Id.*

55. See generally Jonathan L. Marshfield, *Models of Subnational Constitutionalism*, 115 PENN ST. L. REV. 1151, 1174 (2011).

56. THOMSON, *supra* note 5, at 64, 114–15 (“[Under] ‘concurrent competence’ areas, . . . the Länder may write their own statutes under the umbrella of a national framework law[,] or . . . the Länder have the power to pass their own laws as long as the national government has not exercised its power in that particular arena.”).

ments analogous to U.S. states in that they retain a measure of sovereignty, including their own executives, legislatures, and judiciaries.⁵⁷ Thus, the German Länder play a much more prominent role in national lawmaking than U.S. states—for example, the Länder may block national legislation in a way U.S. states cannot.⁵⁸ Indeed, it is difficult to imagine the U.S. Congress assuming a similar role as the Bundesrat, which previously had to obtain the Länder's consent for such significant legislation as “Germany's emission trading system and energy policies.”⁵⁹

Nevertheless, Germany's Bundestag and Länder have cooperated to build a dynamic “interlocking, centralized climate federalism.”⁶⁰ Perhaps the most impressive example of German climate policy is the *Energiewende* (“energy transition”) program, which has resulted in a huge expansion of renewables in Germany, especially wind power.⁶¹

How is Germany's climate progress possible given the local Länder governments' greater power in the German system? One element of Thomson's sophisticated interdependence provides the answer: through “agenda setting,” or issue framing, that many German lawmakers employ.⁶² For example, even Germany's “[r]ight-leaning Chancellor Merkel and her [Christian Democrat Union of Germany] party have associated climate and energy action with heightened national security, avoiding waste, and fiscal moderation.”⁶³ She has remained supportive of the *Energiewende* program, whose “legal framework [is] based on the three main principles of German energy law: competition in supply, security of supply, and environmental protection.”⁶⁴ Chancellor Merkel's support remains strong for the *Energiewende*, despite its many challenges,⁶⁵ because “conservative goals and greenhouse gas reduction can be synergistic.”⁶⁶

Fortunately, it appears that the tide may be turning in the United States and such issue framing may be effectively employed domestically. A recent poll indicates “[a] majority of Republicans—including 54% of self-described conservative Republicans—believe the world's climate is changing and that mankind plays some role in the change.”⁶⁷ Moreover, a greater number of Republicans are

57. Marshfield, *supra* note 55, at 1174.

58. THOMSON, *supra* note 5, at 69.

59. *Id.*

60. *Id.*

61. Anna Milena Jurca, *The Energiewende: Germany's Transition to an Economy Fueled by Renewables*, 27 GEO. INT'L ENVTL. L. REV. 141, 149 (2015).

62. THOMSON, *supra* note 5, at 121–22.

63. *Id.*

64. Jurca, *supra* note 61, at 149.

65. See THOMSON, *supra* note 5, at 122; Jurca, *supra* note 61, at 172–77.

66. THOMSON, *supra* note 5, at 122.

67. Coral Davenport, *Many Conservative Republicans Believe Climate Change Is a Real Threat*, N.Y. TIMES, Sept. 28, 2015, at A14.

beginning to privately support climate policies⁶⁸—mirroring some private organizations⁶⁹—which suggests that the issue is beginning to gain more traction on the political right. In fact, organizations like ClearPath,⁷⁰ Conservatives for Responsible Stewardship,⁷¹ ConservAmerica,⁷² and Conservation Hawks⁷³ demonstrate that conservative principles can be harmonious with environmental protection. Despite progress, “a lack of engagement on climate change cuts across both parties . . . [and] it is particularly pronounced among Republicans.”⁷⁴ Echoing Thomson’s point that issue framing is critical, the fundamental “problem . . . is that messages on global warming tend to come from groups associated with the far left, and to a lesser extent, the far right of the political spectrum.”⁷⁵ As Senator Sheldon Whitehouse (D-RI) recently explained of this phenomenon: “It’s not a question of how you communicate, but who communicates.”⁷⁶

Following Thomson’s roadmap for “comprehensive issue framing,” one particularly ripe area for such framing is national security. According to the 2014 Intergovernmental Panel on Climate Change, climate change-caused threats include greater extreme weather events, diminished water resources, shifting wildlife migration patterns, greater vectors of disease, reduced crop yields, and increased violent conflict generally⁷⁷—all of which will affect vulnerable populations the most.⁷⁸ Each of these factors is a driver of instability. As the U.S. Climate Action Plan warns, “[f]ailing to prepare adequately . . . will put millions of people at risk, jeopardize[] important development gains, and increas[e] the

68. See, e.g., Anthony Adragna, *Many Republicans Privately Support Action On Climate*, BLOOMBERG BUS. (Aug. 15, 2014, 12:37 PM), <http://www.bloomberg.com/news/2014-08-15/many-republicans-privately-support-action-on-climate.html>; Valerie Volcovici & Amanda Becker, *On Climate Change, ‘not a scientist’ not Enough for Some U.S. Republicans*, REUTERS (Jan. 27, 2015, 1:10 AM), <http://news.yahoo.com/climate-change-not-scientist-not-enough-u-republicans-061051600.html>. This is also the case for conservatives who still do not believe in climate change, but who nevertheless support investing in renewable energy. Evan Lehmann, *Young Conservatives Huddle on Clean Energy, Not Climate Change*, E&E NEWS (Oct. 22, 2015), <http://www.eenews.net/climatewire/stories/1060026741/feed>.

69. See, e.g., Katie Valentine, *Hundreds Of Hunting and Fishing Groups Voice Their Support For Action On Climate Change*, CLIMATE PROGRESS (Oct. 10, 2014, 11:43 AM), <http://thinkprogress.org/climate/2014/10/10/3578498/hunting-fishing-groups-support-climate-action>.

70. *ClearPath*, CLEARPATH FOUND., <http://www.clearpath.org/#home> (last visited Apr. 5, 2015).

71. *Our Mission*, CONSERVATIVES FOR RESPONSIBLE STEWARDSHIP, <http://www.conservativestewards.org/about-us/> (last visited Nov. 17, 2015).

72. *About ConservAmerica*, CONSERVAMERICA, <http://conservamerica.org/about-us> (last visited Apr. 5, 2015).

73. *About Us*, CONSERVATION HAWKS, <http://www.conservationhawks.org/styled-27> (last visited Apr. 5, 2015).

74. Tom Zeller, *Groups Aim to Lure Conservatives Out of the Closet on Climate Change*, FORBES (Mar. 5, 2015, 5:30 AM), <http://www.forbes.com/sites/tomzeller/2015/03/05/bringing-conservatives-out-of-the-closet-on-climate-change>.

75. *Id.*

76. *Id.*

77. CHRISTOPHER B. FIELD ET AL., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [IPCC], *Summary for Policymakers*, in CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY 3–8 (2014).

78. *Id.* at 6.

security risks that stem from climate change.”⁷⁹ Similarly, the 2014 Quadrennial Defense Review cautions that “[t]he impacts of climate change may increase the frequency, scale, and complexity of future missions”⁸⁰

Thomson also posits that “[p]erhaps many centuries of devastating wars have solidified German resolve to include natural resource independence as part of their national security strategy.”⁸¹ So too may be the case for the United States and its recent wars in the Middle East. Although the U.S. military has already begun communicating the real threats posed by climate change,⁸² and although some national security-focused organizations have already appropriately prioritized climate change as one of their central planks,⁸³ much opportunity remains. Public opinion of the military remains high,⁸⁴ especially as compared against other government institutions, Wall Street, and the media.⁸⁵ This makes the military, and national security entities generally, trusted spokespersons for communicating the alarming threats that climate change presents.⁸⁶ Just as German lawmakers effectively communicate how core conservative principles and climate action are complementary, such “agenda setting,” or issue framing, may help further develop public consensus towards stronger climate action in the United States.

79. EXEC. OFFICE OF THE PRES., THE PRESIDENT’S CLIMATE ACTION PLAN 20 (June 2013).

80. U.S. DEP’T OF DEF., QUADRENNIAL DEFENSE REVIEW 2014 vi (2014).

81. THOMSON, *supra* note 5, at 70–71.

82. *See, e.g.*, Coral Davenport, *Pentagon Signals Security Risks of Climate Change*, N.Y. TIMES (Oct. 13, 2014), <http://www.nytimes.com/2014/10/14/us/pentagon-says-global-warming-presents-immediate-security-threat.html>; Laura Barron-Lopez, *Pentagon: Climate Change a National Security Threat*, THE HILL (Oct. 13, 2014, 1:32 AM), <http://thehill.com/policy/energy-environment/220575-pentagon-unveils-plan-to-fight-climate-change>; DOD: *Climate Change Is A Volatile Factor In International Security*, NAT’L PUB. RADIO (Oct. 19, 2014), <http://www.npr.org/2014/10/19/357341772/dod-climate-change-is-a-volatile-factor-in-international-security>; Ariel Wittenberg, *DOD Is Praised for Helping ‘De-Politicize’ Climate Change*, E&E NEWS (Oct. 22, 2015), <http://www.eenews.net/greenwire/2015/10/22/stories/1060026769>.

83. One such group is the Truman National Security Project, which manages Operation Free as one of its projects. *See Climate Change*, TRUMAN NAT’L SEC. PROJECT, <http://trumanproject.org/tag/climate-change/> (last visited Apr. 5, 2015); *Operation Free*, TRUMAN NAT’L SEC. PROJECT, <http://operationfree.net/> (last visited Apr. 5, 2015).

84. *Public Esteem for Military Still High*, PEW RESEARCH CTR. (July 11, 2013), <http://www.pewforum.org/2013/07/11/public-esteem-for-military-still-high>.

85. HARVARD UNIV. INST. OF POLS., SURVEY OF YOUNG AMERICANS’ ATTITUDES TOWARD POLITICS AND PUBLIC SERVICE: 25TH EDITION, 18 (2014).

86. Defense experts may be particularly helpful in rebutting common arguments against climate action, including lack of scientific consensus. For example, at a recent conference, the Oceanographer and Navigator of the U.S. Navy and Director for Space and Maritime Domain Awareness, Rear Admiral Jonathan White, stated that “nature has its own law of eminent domain,” and “uncertainty is not an excuse for inaction.” *Threat-Multiplier: Exploring the National Security Law and Policy Implications of Climate Change*, GEORGETOWN CLIMATE CTR. (Mar. 20, 2015), <http://www.georgetownclimate.org/threat-multiplier-exploring-the-national-security-law-and-policy-implications-of-climate-change> (46:35 of video).

IV. LEARNING FROM BRAZIL: LEVERAGING INTERNATIONAL EXPERIENCE AND FACILITATING REGIONAL ALLIANCES

As with Germany, a top-down legal centrist may also be pessimistic about Brazil's ability to achieve climate progress. First, Brazil's political parties are fragmented to an extent unheard of in the United States. In 2014, "[f]ourteen parties or party groups split[] control of the national Câmara dos Deputados (Chamber of Deputies)," and the President's party filled only seventeen percent of the seats.⁸⁷ Second, both the United States and Brazil have a federalist system, but Brazilian power is far more decentralized than that of the United States. Divergent appropriations distributions reflect the significant differences in decentralization between the two countries. In Brazil, federal-level spending constitutes thirty-six percent of overall government spending, while state-level spending totals forty percent.⁸⁸ This is in stark contrast to the United States where federal-level spending constitutes fifty-nine percent of overall government spending and state-level spending comprises only twenty-three percent.⁸⁹

Despite such fragmentation and decentralization, Brazil has been successful in reducing carbon emissions. Undoubtedly, some of this success is due to the country's less carbon-intensive energy development.⁹⁰ However, two other features of Brazil's climate policies offer lessons. First, the leveraging of international expertise and experience in its land use and deforestation policies in the Amazon region is instructive for the United States. Brazil implemented many conservation policies between 2003 and 2008 to prevent deforestation in the Amazon, a massive international carbon sink, including:

[I]mproved remote sensing that gives reliable information on forest cover in 15-day intervals, which helps enforcers identify recent illegal activities and move against those responsible; improved qualification requirements for monitoring personnel; a five-fold increase in fines levied; designating over 180,000 square kilometers as protected areas; the participation of many more government actors in combating illegal activities, including the Federal Police and the Brazilian Army; stricter policies and enhanced monitoring in municipalities with especially high levels of problematic activity; and, tightened credit in targeted areas, including requirements for borrowers engaging in agriculture to show compliance with environmental laws.⁹¹

87. THOMSON, *supra* note 5, at 76.

88. *Id.* at 80.

89. *Id.*

90. *Id.* at 87–88, 120. Strictly applying Brazil's energy policies to the United States is less helpful because Brazil's lower carbon footprint is, in large part, attributable to sugar cane ethanol, which can grow at a large scale year-round in Brazil, but not in the United States. Moreover, corn-based ethanol entails an array of negative externalities. *See id.* at 119–20.

91. *Id.* at 83–84.

According to Thomson, “[t]hese conservation policies form the cornerstone of the national government’s climate change plan.”⁹²

Beyond the programs noted by Thomson, the Amazon also enjoys a highly integrated patchwork of conservation and environmental protection regimes, including the public-private partnership Amazon Region Protected Areas (“ARPA”) program. The ARPA program alone, which is itself a “part of the Brazilian National System of Protected Area, the Sustainable Amazon Plan, the Legal Amazon Deforestation Prevention and Control Action Plan, the National Protected Areas Plan, and the National Plan for Climate Change,”⁹³ is “projected to prevent 430 million tons of carbon emissions by 2050.”⁹⁴ Although Brazilian national sentiment may hold that “the Amazon is a domestic issue not open for discussion in the international arena,”⁹⁵ the ARPA program has elicited “the international participation of the World Bank, the German development bank Kreditanstalt für Wiederaufbau (“KfW”), and nonprofit organizations such as the World Wildlife Foundation (“WWF”).”⁹⁶ Such international cooperation is especially valuable for the “Amazon states, [which] . . . have fewer institutional resources at their disposal.”⁹⁷

Brazil’s leveraging of international expertise and experience can be directly applied to the United States. As Thomson notes, “[e]nhancing and formalizing connections with decision makers and experts in other countries will help advance the [Clean Air Act] Section 111(d) process.”⁹⁸ This is because “Germany and other EU member states have a vast reservoir of experience to offer with respect to reducing greenhouse gas emissions, structuring meaningful trading programs, improving energy security, and reducing energy consumption.”⁹⁹ Thomson persuasively argues that such international cooperation could lead to the implementation of specific, achievable policies. Linking the European Union’s Emissions Trading System (“ETS”) program with those of U.S. states, for example, could significantly expand the carbon market and drive down the cost of climate change mitigation.¹⁰⁰ More broadly, the United States could support an

92. *Id.* at 84.

93. Maria Augusta Ferreira, *The Brazilian Amazon Region Protected Areas (ARPA) Program: The Challenges to a Public-Private Partnership*, 26 GEO. INT’L ENVTL. L. REV. 389, 393 (2014).

94. *Id.* at 392.

95. THOMSON, *supra* note 5, at 96.

96. Ferreira, *supra* note 93, at 390, 395.

97. THOMSON, *supra* note 5, at 96.

98. *Id.* at 124. Section 111(d) is a provision of the Clean Air Act that empowers the EPA to regulate any air pollutant not regulated in other specified sections of the Act. 42 U.S.C. § 7411(d) (2015). The EPA has used this authority to finalize carbon regulations to combat climate change. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662 (Oct. 23, 2015) (to be codified at 40 C.F.R. pt. 60). Without a federal carbon statute, this is arguably the sharpest tool the federal government has to regulate carbon and slow climate change.

99. THOMSON, *supra* note 5, at 124.

100. *Id.*

international emissions trading program that “provide[s] states proposing cap-and-trade programs with additional flexibility and provide avenues for international partnerships.”¹⁰¹

Beyond the leveraging of international expertise and experience, the second significant feature of Brazil’s climate policies is that it has made room for regional alliances based on common interests. According to Thomson, the forest conservation policies outlined above succeeded in large part because they “reinforce the idea of regionally developed but nationally coordinated solutions,”¹⁰² despite the “tension [that] exists between energy policy at the national and state levels.”¹⁰³ The same could be said of the ARPA program, which relies heavily on state interests and energy.¹⁰⁴ Brazil’s experience supporting regional alliances is also relevant to the United States, which “should make room for regional alliances based on common interests, resources, environmental circumstances, and values.”¹⁰⁵ Perhaps the best U.S. example of such an alliance is the Northeast Regional Greenhouse Gas Initiative, which has made substantial progress and offers a blueprint for regional alignment of “states with like energy resources or shared political values.”¹⁰⁶

V. LEARNING FROM WITHIN: DRIVERS OF CLIMATE POLICY IN THE STATES

Thomson’s analysis of Germany and Brazil is valuable, but the foundation of her book rests on analyzing and explaining individual U.S. states’ climate policy. Sophisticated interdependence often relies on local actors, and so it is important to understand the factors that drive their actions.

Thomson’s analysis of the United States begins by noting the diversity in states’ approaches to climate change. Specifically, she selects nine states—California, Florida, Louisiana, Maryland, New York, South Carolina, Texas, Virginia, and Washington¹⁰⁷—and analyzes these states’ climate policies along four dimensions:

- (1) climate change and green energy policies and their impacts on environmental and economic outcomes;
- (2) “energy profiles, including their dependence on fossil fuels, their experiences with energy shocks, their relative electricity prices, and their energy consumption per capita”;
- (3) “human factors,” such as “political culture, leadership, and legislative professionalism”; and

101. *Id.* at 125.

102. *Id.* at 118.

103. *Id.* at 119.

104. Ferreira, *supra* note 93, at 393.

105. THOMSON, *supra* note 5, at 119.

106. *Id.* at 119.

107. *Id.* at xxx–xxx.

- (4) “political culture, legislative professionalism, and campaign finance patterns that might affect policymakers’ inclination to take action on greenhouse gas emissions.”¹⁰⁸

According to the above dimensions, Thomson classifies California, New York, and Washington as “active” on climate policy, and Louisiana, South Carolina, and Virginia as “passive”¹⁰⁹—results that are perhaps to be expected. However, Thomson classifies Florida, Maryland, and Texas as “surprise” states, or states that are more active on climate policy than one may expect.¹¹⁰ This portion of the book is particularly informative, perhaps due to Thomson’s years of experience as a member and vice chair of the Virginia State Air Pollution Control Board, which make her well suited to discuss state climate dynamics.¹¹¹

Thomson then seeks to explain the differences in the climate policies of active, passive, and surprise states. She highlights two illuminating factors that inform state climate policy: political culture and “legislative professionalization.”

Political culture refers to Daniel Elazar’s classification system and its three underlying considerations:

- (1) the set of perceptions of what politics is and what can be expected from the government, held by both the general public and politicians;
- (2) the kinds of people who become active in government and politics, as holders of elective offices, members of the bureaucracy, and active political workers; and
- (3) the actual way in which the art of government is practiced by citizens, politicians, and public officials in the light of their perceptions.¹¹²

Based on these considerations, Elazar classifies governments as exhibiting “moralistic,” “traditional,” or “individualistic” behavior, or some combination thereof.¹¹³ Intriguingly, Thomson finds that her classifications of states’ climate policy correlate with Elazar’s classification of state behavior.¹¹⁴ To wit: the three passive climate states exhibit Elazar’s traditional behavior; the three active states blend Elazar’s moralistic and individualistic behaviors; and the three surprise states blend individualistic and traditional behaviors.¹¹⁵ Thus, Elazar’s political culture seems to have some explanatory power for climate policy.

108. *Id.* Thomson acknowledges the contribution of Georgetown University Law Center Professor Vicki Arroyo, with whom she co-authored a law review article that laid the foundation for this analysis. *Id.* at xxix. See generally Vivian E. Thomson & Vicki Arroyo, *Upside-Down Cooperative Federalism: Climate Change Policymaking and the States*, 29 VA. ENVTL. L. J. 3 (2011).

109. THOMSON, *supra* note 5, at xxx–xxxii.

110. *Id.* at 4.

111. *Id.* at 39.

112. *Id.* at 36 (quoting DANIEL ELAZAR, *AMERICAN FEDERALISM: A VIEW FROM THE STATES* 112 (1967)).

113. *Id.* at 36–38.

114. *Id.* at 38.

115. *Id.*

Legislative professionalism refers to Peverill Squire and Gary Moncrief's "concept that assesses the capacity of both legislators and legislatures to generate and digest information in the policymaking process."¹¹⁶ Under legislative professionalism are two derivative factors: compensation and opportunity for advancement.¹¹⁷ Some states, like Louisiana, South Carolina, Texas, and Virginia, have "dead-end" legislatures, whose "members cannot use their service to advance politically" and which "pay so poorly that they cannot realistically be a member's primary source of income."¹¹⁸ According to Thomson, such factors align closely with whether a state has pursued an active climate policy.¹¹⁹

Compensating legislators such that they are virtually forced to work only part-time to advance important public goals presents obvious issues, however, other factors warrant inquiry. One related factor may be the effects of term limits on legislative professionalism.¹²⁰ A state like Colorado, which has a limit of two terms,¹²¹ arguably may be more insulated from political influence and electoral bias.¹²² Such states may not be "'springboard' states that provide their members with 'substantial electoral advancement opportunities' to run for higher elective office,"¹²³ but these states may enjoy greater professionalization precisely because legislators may be unconcerned with the prospects of reelection to the same office a third time.¹²⁴ This is because such a system may avoid the situation where "[p]ublic officials . . . feel most beholden to individual donors"—an explanation Thomson considers when discussing campaign finance but not term limits.¹²⁵ Alternatively, a countervailing consideration is that term-limited legislatures may create a more professional legislative staff, as they enjoy a relative permanence.¹²⁶ As such, legislative staff may constitute the true powerbrokers rather than the more transient class of elected officials.¹²⁷ Although the effect of term limits on policy and political outcomes is uncertain, term limits do not fit well into Squire and Moncrief's normative scales, nor do they conform to

116. *Id.* at 40.

117. *Id.* at 40–41.

118. *Id.* at 40 (quoting PEVERILL SQUIRE & GARY MONCRIEF, *STATE LEGISLATURES TODAY: POLITICS UNDER THE DOME* 89 (2013)).

119. *Id.*

120. Thomson passingly offers that term limits can magnify legislators' reliance on outside experts, especially for technically complicated areas such as climate change, but does not offer further discussion. *Id.* at 41–42.

121. COLO. CONST. art. IV, § 4; *id.* art. V, § 3.

122. See Elizabeth Garrett, *Term Limitations and the Myth of the Citizen-Legislator*, 81 CORNELL L. REV. 623 (1996); GEORGE WILL ET AL., CATO INST., *THE POLITICS AND LAW OF TERM LIMITS* 75–76 (Edward H. Crane & Roger Pilon eds., 1994).

123. THOMSON, *supra* note 5, at 41.

124. See Bruce E. Cain, *The Varying Impact of Legislative Term Limits*, in *LEGISLATIVE TERM LIMITS: PUBLIC CHOICE PERSPECTIVES* 21, 29 (Bernard Grofman ed., 1996).

125. THOMSON, *supra* note 5, at 42.

126. Garrett, *supra* note 122, at 678–81; see WILL ET AL., *supra* note 122, at 75–76.

127. WILL ET AL., *supra* note 122, at 75–76.

Elazar's political culture breakdowns of individualistic, moralistic, and traditional cultures. Thomson's book would be strengthened by greater discussion of these themes.

Another area the author could explore more deeply is the connection between campaign finance laws and climate policy. This theme is explored briefly, though only as part of the question of whether "patterns of campaign finance differ across these states for interest groups that might support or oppose climate change action" ¹²⁸ Accordingly, Thomson examines the breakdown of contribution categories but does not adequately account for wide variations, such as energy and natural gas donations amounting to seventy-five percent of California's total, compared with a mere thirty-seven percent in New York. ¹²⁹ This unexplained juxtaposition is puzzling considering New York's then-ongoing deliberations over a moratorium of its rich Marcellus shale deposits, ¹³⁰ and California's already-stringent environmental laws and policies. Acknowledging that "PG&E, a major electric utility in California and a generous campaign donor, supports the state's climate change statute" ¹³¹ offers a partial explanation; but the analysis would benefit from a more rigorous examination of *why*. For example, it would be helpful to consider whether California's Renewable Portfolio Standard ("RPS") offers favorable incentives for investor-owned utilities like PG&E to invest in renewable energy. Thus, rather than attributing the support for climate change policy to a moralistic culture (as Thomson does), such support could be attributable to pure economics, which is more characteristic of Elazar's traditional political culture.

This is not to point out shortcomings in Thomson's work, but rather to illustrate the difficulty of analyzing the U.S. domestic climate policy landscape, not to mention its constraints and opportunities. Indeed, Thomson's discussion of the domestic political environment is the strongest section of her book and forms its analytical core. This section comes to a measured and well-reasoned conclusion that "a productive state-national program in climate change must anticipate wide variation in state-level economic, political, social, and cultural grains." ¹³² By analyzing the domestic landscape, Thomson effectively frames the aforementioned comparative analysis of Germany and Brazil's federalism regimes.

Ultimately, as Thomson notes, "[t]o understand coalition building in the climate change arena and to formulate a successful state-national partnership in the greenhouse gas arena, we must understand the economic and political

128. THOMSON, *supra* note 5, at 42.

129. *Id.* at 42–43.

130. See Thomas Kaplan, *Citing Health Risks, Cuomo Bans Fracking in New York State*, N.Y. TIMES, Dec. 18, 2014, at A1.

131. THOMSON, *supra* note 5, at 443.

132. *Id.* at 46.

motivators for climate change policymaking in the states.”¹³³ Vivian Thomson’s *Sophisticated Interdependence in Climate Policy* provides just such an understanding. It presents such domestic lessons and filters them through the lens of Germany and Brazil to “help[] point the way to a productive climate federalism path in the United States.”¹³⁴ These insights are important for the United States to assume greater leadership in the climate fight and help fill the pool with many more drops of water.

133. *Id.* at xix.

134. *Id.*