Two Forms of Environmental-Political Imagination: Germany, the United States, and the Clean Energy Transition

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ABSTRACT

The United States and Germany have followed markedly different paths thus far in the 21st century in their efforts to reduce emissions from energy production and thereby combat climate change through national policy. I extend Professor Jedediah Purdy's notion of the "environmental imagination" to discuss the "environmental-political imagination," or implicit vision of the environment, politics, and how they ought to be approached and structured, latent in each country's central 21st-century climate policy initiative. I find that a general spirit of individuation and conflict marks the United States' modern environmental-political imagination, while a general spirit of collective enterprise and continuity marks Germany's. A parallel series of examples is used in each country to illustrate this, including understandings of economy and environment, particular forms of energy and landscape, and ideas of leadership and agency, and finally some objections are considered.

I. Introduction

"'W*e're the first generation to feel the impact of climate change and the last generation that can do something about it.' And that's why I committed the United States to leading the world on this challenge.*"[1] – President Barack Obama

"*Dealing with climate change means facilitating and promoting social and economic change in the best possible way. Germany's Energiewende, or energy transition, is an encouraging example of how that can be done, despite all the challenges its details pose. We intend to continue down this route—with everyone on board,*

1 Barack Obama, "Remarks Announcing the Environmental Protection Agency's Clean Power Plan - DCPD-201500546" (Office of the Federal Register, National Archives and Records Administration, August 3, 2015), https://www.govinfo.gov/app/details/DCPD-201500546.https://www.govinfo.gov/app/details/DCPD-201500546Obama.

including each individual sector of the economy."[2] – Dr. Barbara Hendricks, former German Minister for Environment, Nature Conservation, and Nuclear Safety

"*In a world we can't help shaping, the question is what we will shape.*"[3] – Jedediah Purdy

These are, to say the least and state the obvious, complicated political times in both the United States and Germany. From the midst of the complexity and chaos, though, at least one emergent trend stands out: there is a widespread sense that Germany is overtaking at least part of the mantle of global leadership that has characterized the United States' posture towards the world since the fall of the Soviet Union and before. This phenomenon has been particularly pronounced since the election of President Donald Trump in the US—German Chancellor Angela Merkel has since been pointedly labeled the new "leader of the free world" in numerous news outlets[4]—but is surely reflective of deeper and longer-standing political and ideological currents in both nations. In this essay I wish to trace the legal and philosophical contours of this trend in one particular arena: that of environmental policy, and in particular energy policy.

German and American environmental attitudes have, and have long had, marked differences, and these attitudinal differences manifest in a correspondingly deep divergence between the two countries' environmental laws. A particularly rich and currently relevant pair of examples of this historical disparity can be found in the Clean Power Plan in the United States and the *Energiewende*, Germany's 21st-century suite of goals and policies aimed at a transition to a low-carbon economy. These recent federal policy efforts to spur a transition to lower-emission energy sources in each country reveal a distinctive set of underlying contemporary notions about what Americans and Germans take the environment and its value to be—what the legal scholar and historian Jedediah Purdy has called "the environmental imagination"[5]—and, relatedly, what they take the role of law to be relative to the environment. That is, what an appropriate set of energy and environmental policies looks like, what the nation is responsible for in combating environmental

2 Barbara Hendricks, Foreword, in "The German Government's Climate Action Programme 2020 - Cabinet Decision of 3 December 2014" (Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), December 3, 2014).

3 Jedediah Purdy, After Nature: A Politics for the Anthropocene (Cambridge, Massachusetts: Harvard University Press, 2015),

4 See, e.g., Suzanne Moore, "Angela Merkel Shows How the Leader of the Free World Should Act | Suzanne Moore," The Guardian, May 29, 2017, sec. Opinion, https://www.theguardian.com/commentisfree/2017/may/29/angela-merkel-leader-free-world-donald-trump.

5 Purdy, After Nature, 6.

problems that affect both its own people and other nations, and what roles its different individual and institutional actors ought to have in creating and advancing those policies. Taken together, following Purdy, I label this set of underlying philosophical views connecting the environment, law, state, and society the "environmental-political imagination" of each nation, and later in the paper will have much more to say about this concept.

The structure of the essay is as follows. First, I describe the contents of, and, in a pre-philosophical way, tell the stories of a pair of recent environmental laws/policy initiatives, the Clean Power Plan (CPP) in the United States and the so-called *Energiewende*, or "energy transition," in Germany. While this pair merely scratches the surface of German and American environmental law, I show that they constitute a particularly significant set of policies, and comprise a particularly rich contrast for the exploration of the two nations' dominant ways of understanding the intersection of environment and politics. In the paper's second section I elaborate upon the concept of the environmental-political imagination and its specific utility here, then argue for a particular characterization of the environmental-political imagination that underpins each country's contemporary energy policy initiative. The claim at which I arrive comprises the central philosophical contention of the essay: a spirit emphasizing the individuation and conflict of different spheres of activity, landscapes, interests, and agents pervades the 21st-century American environmental-political imagination, while across the same set of diverse aspects, the contemporary German environmental-political imagination is marked by a sharply contrasting and equally pervasive spirit of collectivism and continuity. After arguing for this view, in the essay's third section I articulate and provide short responses to some potential objections to my argument, attempting to clarify and trace some of its ramifications.

Before beginning in earnest, a few notes on the paper's methodology. First, while German and American environmental law and their underlying imaginative ideologies have rich and compelling histories, rather than sustaining a full historical argument here I confine myself mainly to this century's developments, using the CPP and recent developments in the *Energiewende* as contemporary lenses onto deeply historical phenomena for the sake of scope and analytical clarity. Where necessary, however, events deeper in history are discussed; it should simply be kept in mind that in a larger sense all current laws and ideologies are inextricably rooted in historical factors. I shall have more to say later about how we might understand this temporal issue. Second, it will doubtless be noted that establishing unquestionable causal linkages between such concrete phenomena as environmental laws and such slippery, implicit ones as "environmental-political imaginations" is a difficult, nigh impossible, exercise, particularly without the benefit of a full historical account. To do so is not my aim. Instead, this essay is meant to provide a

form of rational reconstruction: given the issues and policies in question, how they came into being, and the way Germans and Americans both in and outside government think and talk about them, I aim to give the most plausible and revealing characterization of the underlying logics that root them. Some measure of causality running from these imaginative attitudes to the production of the policies at issue is, I believe, necessarily present (as is some causal connection is from earlier law and policy to these recent attitudes), but the paper makes no attempt to account for all the specific social and institutional factors by which such attitudes are mediated before becoming legally manifest. door between government and the private sector has packed corporate boardrooms and staff ranks alike with former intelligence and defense personnel.

II. The Clean Power Plan and the Energiewende

The issue of climate change driven by anthropogenic greenhouse gas (GHG) emissions into the global atmosphere is fundamentally both an economic and environmental one. Carbon dioxide (CO2), the GHG primarily responsible for increasing global temperatures[6], is emitted in fossil fuel combustion that produces electricity and powers industrial equipment, vehicles, and the many other machines of modern economic activity. The historical causal link between CO2 emissions and economic growth is strong and well-documented[7]. In short, emissions-intensive fuels are the lifeblood of today's global economy; CO2 emissions, economic production, and climate change thus constitute a tightly linked trio of phenomena, and the United States and Germany are quite similar nations in a host of ways closely related to it. Both are highly industrialized nations with immense economic and emissions output: the US economy is the world's largest, and Germany's is

6 See, e.g., D.a. Lashof and D.r. Ahuja, "Relative Contributions of Greenhouse Gas Emissions to Global Warming," Nature 344, no. 6266 (April 5, 1990): 529. For more information on secondary GHGs like methane and nitrous oxide, including their industrial and agricultural sources, see United States Environmental Protection Agency, "Sources of Greenhouse Gas Emissions," Overviews and Factsheets, US EPA, December 29, 2015, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.

7 For a general global analysis, see Douglas Holtz-Eakin & Thomas M. Selden, Douglas Holtz-Eakin and Thomas M. Selden, "Stoking the Fires? CO2 Emissions and Economic Growth," Journal of Public Economics 57, no. 1 (May 1995): 85-101. For an early economic analysis linking CO2, growth, and climate, see William D. Nordhaus, William D. Nordhaus, "Economic Growth and Climate: The Carbon Dioxide Problem," The American Economic Review, no. 1 (1977): 341. For an examination of several industrialized nations, including the US and Germany, that provides empirical evidence against the theoretical notion in environmental economics that beyond a certain level of development, emissions and growth vary inversely, see S.M. de Bruyn et al, Economic Growth and Emissions: Reconsidering the Empirical Basis of Environmental Kuznets Curves, 25 Ecological Econ. 161-175 (1998). For an analysis focused on China, see S.S. Wang et al., "CO2 Emissions, Energy Consumption and Economic Growth in China: A Panel Data Analysis," Energy Policy 39 (September 1, 2011): 4870–75, https://doi.org/10.1016/j.enpol.2011.06.032.

fourth largest globally and by far the largest in the European Union (EU)[8]. The US and Germany ranked 13th and 19th in the world, respectively, in per capita GDP in 2015,[9] and 3rd and 8th respectively in per capita CO2 emissions in the same year.[10] The structures of the two economies are strikingly similar: while Germany's economy is somewhat more reliant on industrial production, both derive about 1% of national GDP from agriculture, between 20 and 30% from industry, and the remaining large majority from the service sector.[11]

Beyond these basic economic likenesses, the two federal republics maintain immense bureaucratic apparatuses for research, monitoring, regulation and enforcement related to the environment. Both countries founded federal environmental agencies, the Environmental Protection Agency (EPA) in the US and the German Federal Environment Agency (UBA, for its initials in German), in the early 1970s. Both federal-level agencies help set and enforce national-level policy floors that state-level agencies enforce and can augment in their jurisdictions (though, as will be discussed in greater detail, Germany's federal environment apparatus has expanded significantly since the founding of the UBA).[12] From a distance, then, the two nations appear to share a basic economic and governmental structure relative to environmental issues, with some history in common to boot. Despite social and cultural differences, this might suggest that the United States and Germany would pursue the transition to low-carbon economies based on clean energy along similar pathways. Yet the two nations have in recent years diverged drastically in their federal policy efforts to facilitate this transition. The CPP and *Energiewende* constitute the central components of this divergence. Though they cannot capture all there is to say on the issue, they provide a striking contrast that will allow for interrogation to its heart. For a brief examination of the facts of each, I turn first to the US and then to Germany.

8 "GDP (Current US$) | Data" (World Bank, 2018), https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?year_high_desc=true.

9 "GDP per Capita, PPP (Current International $) | Data" (World Bank, 2018), https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?end=2015&start=1960&year_high_desc=true.

10 "Each Country's Share of CO2 Emissions," Union of Concerned Scientists, October 11, 2018, https://www.ucsusa.org/global-warming/science-and-impacts/science/each-countrys-share-of-co2.html.

11 "The World Factbook," Central Intelligence Agency, 2016, https://www.cia.gov/library/publications/the-world-factbook/.

12 United States Environmental Protection Agency, "Our Mission and What We Do," Overviews and Factsheets, US EPA, January 29, 2013, https://www.epa.gov/aboutepa/our-mission-and-what-we-do; "About Us," Umweltbundesamt, September 6, 2013, http://www.umweltbundesamt.de/en/the-uba/about-us. For a lay overview of the EPA's history and functions, see Robinson Meyer, "How the U.S. Protects the Environment, From Nixon to Trump," The Atlantic, March 29, 2017, https://www.theatlantic.com/science/archive/2017/03/how-the-epa-and-us-environmental-law-works-a-civics-guide-pruitt-trump/521001/.

A. The Clean Power Plan

The CPP emerged from a context of hesitation and failure on the part of the US government to regulate GHG emissions. In 2007, the Supreme Court in Massachusetts v. EPA ruled that the EPA had the authority and duty, if it found CO2 to be a driver of climate change, to regulate CO2 emissions and thereby combat climate change under the Clean Air Act[13]. The decision, while empowering the EPA to promulgate the rule codifying the CPP eight years later, was actually a defeat for it at the time: the Bush-era EPA did not wish to regulate CO2 emissions, and argued in the case that the Clean Air Act did not cover them.

Two years later, legislative efforts to regulate emissions through a "cap-and-trade" scheme similar to the EU's, wherein a legal limit of GHG emissions is set and emitters can buy and sell permits to emit beneath that cap,[14] failed when the American Clean Energy and Security Act (also known as the Waxman-Markey Bill) passed the House but was never brought to a vote in the Senate. The deadening impact this had on federal climate action, early in Obama's first term with Democratic majorities in both legislative chambers, was palpable: in Purdy's view, "when Waxman-Markey failed, a whole generation of reformist thinking went with it."[15]

Frustrated by legislative stagnation, President Obama later directed the EPA to formulate a rule regulating GHG emissions in the power sector.[16] This rule ultimately became the Clean Power Plan, an EPA regulation designed to decrease power-sector CO2 emissions by 32% by 2030, relative to 2005 levels, by instituting emissions guidelines for fossil fuel-fired power plants and directing states to create and implement their own such standards.[17] About 40% of US CO2 emissions came from the power sector in 2005,[18] so other things equal the CPP alone would cut total US emissions over 12% between 2005 and 2030. This would be the largest legally-mandated emissions reduction in US history, and, accordingly, upon its announcement President Obama labeled the CPP "the single most important step

13 Massachusetts v. Environmental Protection Agency, No. 05–1120 (Roberts Court April 2, 2007).

14 "EU Emissions Trading System (EU ETS)," Climate Action - European Commission, accessed January 2, 2019, https://ec.europa.eu/clima/policies/ets_en.

15 Meyer, "How the U.S. Protects the Environment."

16 "The Clean Power Plan: EPA Interprets the Clean Air Act to Allow Regulation of Carbon Dioxide Emissions from Existing Power Plants.," Harvard Law Review 1152 129, no. 4 (February 2016), https://harvardlawreview.org/2016/02/the-clean-power-plan/.

17 Environmental Protection Agency, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units | 80 FR 64661" (Federal Register, December 22, 2015), https://www.federalregister.gov/documents/2015/10/23/2015-22842/carbon-pollution-emission-guidelines-for-existing-stationary-sources-electric-utility-generating.

18 United States Environmental Protection Agency, "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016," Reports and Assessments, US EPA, January 30, 2018, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2016.

America has ever taken in the fight against climate change."[19]

However, backlash to the CPP from industry and political groups was immediate and intense. Also, before the rule could take effect, the Supreme Court issued an order blocking its entry into force until all litigation challenging it was complete.[20] Then, after President Trump took office, he ordered the EPA to review it, and an EPA proposal to repeal it was soon unveiled.[21] While the CPP remains technically alive as of this writing in August 2018, its repeal is expected to be officially complete soon. When that happens, the rule that the Harvard Environmental Law Program has called "the crown jewel of America's international climate commitments"[22] will be dead before it ever came alive.

The CPP was designed to reduce CO2 emissions predominantly by decreasing the use of coal-fired power plants, which have high emissions intensity relative to other energy sources.[23] Market forces, coincidentally, have recently made a major impact in the direction intended by the CPP, as a dramatic shift in energy prices caused by cheap natural gas usage from shale sources has taken place. US CO2 emissions rose steeply from 1990 to 2005, when shale-sourced natural gas hit the market,[24] and have dropped 12% since then.[25] Still, bracketing this fortunate trend, the overall picture of US climate progress is less rosy: annual US GHG emissions remain about 2% greater than they were in 1990.[26] In the absence of any prospect of federal action to aggressively cut emissions, and in light of President Trump's 2017 decision to withdraw from the Paris Agreement, many cities, states, and private enterprises have taken matters into their own hands and pledged to enforce their own emissions cuts.[27]

B. The *Energiewende*

The idea of *Energiewende*, or "energy transition," in Germany goes back

19 Barack Obama, "Remarks Announcing the Environmental Protection Agency's Clean Power Plan."
20 Robinson Meyer and Matt Ford, "A Major Blow to Obama's Climate-Change Plan," The Atlantic, February 9, 2016, https://www.theatlantic.com/politics/archive/2016/02/supreme-court-clean-power/462093/.
21 40 C.F.R. §60.
22 "Clean Power Plan / Carbon Pollution Emission Guidelines - Environmental & Energy Law Program," Harvard Law School, September 27, 2017, https://eelp.law.harvard.edu/2017/09/clean-power-plan-carbon-pollution-emission-guidelines/.
23 United States Environmental Protection Agency, "FACT SHEET: Clean Power Plan Overview," Overviews and Factsheets, accessed January 3, 2019, fact-sheet-clean-power-plan-overview.html.
24 Robert Rapier, "Yes, The U.S. Leads All Countries In Reducing Carbon Emissions," Forbes, accessed January 3, 2019,
25 US EPA, "Carbon Pollution Emission Guidelines," ES-6.
26 United States Environmental Protection Agency, "Sources of Greenhouse Gas Emissions," Overviews and Factsheets, US EPA, December 29, 2015, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.
27 See, e.g., Hiroko Tabuchi and Henry Fountain, "Bucking Trump, These Cities, States and Companies Commit to Paris Accord," The New York Times, January 20, 2018, sec. Climate, https://www.nytimes.com/2017/06/01/climate/american-cities-climate-standards.html.

to the late 1970s and early 1980s, when environmentalist groups opposed to nuclear energy and fossil fuels called for a transformation of Germany's energy sources in the wake of nuclear plant construction and the 1973 and 1979 oil crises.[28] However, the term did not describe a substantive policy initiative until the turn of the millennium, when Germany's governing coalition of the Green Party and the center-left Social Democrats began to take widespread action to promote a transition to new forms of energy production.

Since the passage of the first Renewable Energy Sources Act in 2000, *Energiewende* has become shorthand for a vast array of goals and timetables for renewable energy production and emissions cuts, research reports supporting these goals and timetables, and legal requirements enforcing them.[29] The action of the *Energiewende* is not localized to one federal ministry or even branch of government. Instead, its regulations spring from multiple sources: administratively, the Federal Environment Agency (UBA), the Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU), and the Federal Ministry for Energy and Economic Affairs (BMWi) all play a part in setting and realizing its goals. The chancellor and legislative branch are heavily involved in *Energiewende* policy creation as well.

The key reports and policy components of the *Energiewende* are as follows. 2000's Renewable Energy Sources Act (EEG) guaranteed a twenty-year period of high prices for electricity from renewable sources sold into the grid[30], and was updated in 2004, 2009, 2012, 2014, and 2017 to increase the law's renewables targets and adjust its pricing mechanisms.[31] 2007's Integrated Energy and Climate Programme, also known as the Meseberg decision, approved a package of fourteen new laws and amendments to provide a policy basis for the doubling of Germany's emissions reductions targets for 2020 from 20 to 40%, compared to 1990 levels.[32] A long-term plan for Germany's use of various sources of energy in different sectors was approved in 2010 as a cornerstone of the *Energiewende*,[33] and in 2014 and 2016 the federal cabinet approved long-term climate action plans for 2020 and

28 Hardy Graupner, "What Exactly Is Germany's 'Energiewende'?" DW.COM, January 22, 2013, https://www.dw.com/en/what-exactly-is-germanys-energiewende/a-16540762.

29 "Sunny, Windy, Costly and Dirty," The Economist, January 18, 2014, https://www.economist.com/europe/2014/01/18/sunny-windy-costly-and-dirty.

30 "Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz EEG)," International Energy Agency, 2000, https://www.iea.org/policiesandmeasures/pams/germany/name-21702-en.php.

31 BMWi - Federal Ministry for Economics Affairs and Energy, "Renewable Energy," 2018, https://www.bmwi.de/Redaktion/EN/Dossier/renewable-energy.html.

32 See generally Federal Ministry for Environment, Nature Conservation, and Nuclear Safety (BMU), "The Integrated Energy and Climate Programme of the German Government," 2007.

33 See generally Federal Ministry of Economics and Technology and Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, "*Energy Concept* for an Environmentally Sound, Reliable and Affordable Energy Supply," September 28, 2010.

2050, respectively.[34]

In addition to CO2 reductions and renewables increases, a central and heavily publicized component of the *Energiewende* is its move to abolish nuclear energy production in Germany. After the Fukushima nuclear disaster in 2011, in which a magnitude 9.0 earthquake off the coast of Japan triggered a tsunami which caused a meltdown at the Fukushima Daiichi nuclear plant, the German government under intense public pressure announced plans to immediately cease operations of eight of its oldest nuclear power plants, with all remaining nuclear plants to be closed by 2022.[35]

The *Energiewende*, for all its progress, has been enormously expensive. Much of the cost of the heavy renewables subsidies has been passed onto consumers: a renewables surcharge on utilities bills has raised the average household's monthly fee by 50% since 2007.[36] Moreover, the decade-long sprint to close the nation's nuclear plants necessitates a costly rapid increase in the use of other sources, since Germany has long sourced a large portion of its power supply from nuclear energy.[37] Even beyond costs caused by solar subsidies and cuts to nuclear energy, the *Energiewende* today faces other challenges: for instance, due to recent rapid economic and population growth, German CO2 emissions reductions have stagnated since 2014 and the country will therefore likely
miss its 2020 target.[38] The fact remains, though, that through a concerted policy effort Germany has cut its total CO2 emissions over 26% from its levels in 1990 (the key baseline year for emissions reductions in international climate policy). In absolute terms, it has cut emissions more than any other EU nation since then,[39] and since the passage of the EEG in 2000 it has sextupled its electric power production from renewables, mainly wind and solar, to a full 36% of national supply in 2017.[40] This is an enormous figure by global standards. The *Energiewende*, though costly and facing obstacles, has made impressive strides.

34 See generally "The German Government's Climate Action Programme 2020 - Cabinet Decision of 3 December 2014" BMU, December 3, 2014; BMU, "Climate Action Plan 2050 – Germany's Long-Term Emission Development Strategy," 2016, https://www.bmu.de/en/topics/climate-energy/climate/national-climate-policy/greenhouse-gas-neutral-germany-2050/.

35 Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, "The Federal Government's *Energy Concept* of 2010 and the Transformation of the Energy System of 2011," 2011.

36 Jeffrey Ball, "Germany's High-Priced Energy Revolution," Fortune, March 14, 2017, http://fortune.com/2017/03/14/germany-renewable-clean-energy-solar/.

37 Kerstine Appunn, "The History behind Germany's Nuclear Phase-Out," Clean Energy Wire, January 2, 2018, https://www.cleanenergywire.org/factsheets/history-behind-germanys-nuclear-phase-out.

38 See e.g., Sören Amelang, "Germany on Track to Widely Miss 2020 Climate Target – Government," Clean Energy Wire, June 13, 2018, https://www.cleanenergywire.org/news/germany-track-widely-miss-2020-climate-target-government.

39 Eurostat, "Greenhouse Gas Emission Statistics - Emission Inventories," June 2018, https://ec.europa.eu/eurostat/statistics-explained/index.php/Greenhouse_gas_emission_statistics_-_emission_inventories.

40 BMWi, "Renewable Energy," 2018.

Thus we have two modern, industrialized, immensely productive nations, expected to be regional and global leaders on a variety of issues, with markedly different policy responses to the climate and energy problem: one with a climate policy crafted, immediately challenged, and quickly repealed upon a change of government, and the other making imperfect but steady progress. Furthermore, despite the two countries' basic similarities, few today would be surprised by this stark contrast. It is generally understood that Germany, to use the jargon of energy policy circles, is "ambitious on climate," while the United States is not.

For the remainder of this paper, I aim to use the facts of these two policy initiatives and their development in order to interrogate this general understanding rather than take it for granted, and thereby go a level or two deeper into the human reasons that might explain why it, and certain facts adjacent to it, hold. Such major differences in the two nations' contemporary laws on energy and climate provide important loci for insights into the imaginative and ideological characteristics of these nations with respect to politics, law, and the environment. Since these policies mandate (or, in the case of the CPP, attempted to mandate) how they, as states and societies, must respond to climate change, such differences provide comparative lenses onto how Germany and the United States view their relationships to their own populations and other nations that climate change will harm, and to the natural world which provides the resource basis for their economic production and which they in turn affect through greenhouse gas emissions. As Purdy puts it, "Law is a circuit between imagination and the material world"[41]; the laws that exist came about through processes expressing an underlying imagination, and can be expected through the realization of what they require to influence the imagination of the future. Examining this pair of policy initiatives, then, what imaginative structures underlying German and American environmental and political life could help account for this vast difference?

III. The Contemporary German and American Environmental-Political Imaginations via the CPP and the Energiewende

Before laying out dominant features of the two nations' environmental-political imaginations, I must briefly elaborate upon the concept of the environmental-political imagination itself, and clarify how it relates to Purdy's concept of the

41 Purdy, After Nature, 22.

environmental imagination. Neither concept refers directly to the explicit ideological statements parties make in their environmental platforms, nor theories of the true, the good, or the just in tracts on environmental or political philosophy; as Purdy says, "Imagination is less precise, less worked out, more inclusive than ideas, and it belongs to people in their lives, not philosophers working out doctrines. Imagination is a way of seeing, a pattern of how things must be."[42] It might be thought of as taking place on the mental level prior to ideology, or as ideology's raw material. It has to do with the way people, individually and in institutions, think and make assumptions about what exists in nature and the human world, how those things are organized, what is valuable about them, and what ought to be done with them, here in particular with respect to climate and energy, and the collective decision-making proper to the political sphere. It is an implicit, blurry set of notions, perhaps internally contradictory, largely submerged or subconscious, that acts as inputs in the formation of laws and policies that then make explicit what may and may not be done.

I borrow this framing of "imagination" from Purdy, but employ it in the discussion of somewhat different material from what is referred to by his concept of the "environmental imagination." As Purdy uses it, the environmental imagination refers primarily, though not exclusively, to how people understand and act upon the environment at the level of landscape, rather than atmosphere and climate.[43] While Purdy acknowledges that, in the future, different nations or regions might develop their own "ethics and politics of climate change,"[44] he does not examine in a descriptive sense how such different environmental-political imaginations are already at work in different places. My analysis here is meant to fill this gap, to focus on the particular environmental, economic, and political issue of climate change and explore how the US and Germany are in fact seeing and acting upon it by using Purdy's framing of the environmental imagination as a conceptual starting point. Purdy's political focus is mainly on how people's imaginative notions of the environment work their way into political life, since decisions about how to approach and use the environment are made in the political sphere. I wish to inquire further about Americans' and Germans' imaginative notions of politics itself: their notions and assumptions about what politics is like, how government ought to be organized and decisions made, and what we owe to others inside and outside the polity. Thus the imagination discussed here is itself both environmental and political. Also, since I shall discuss not only how people imagine the climate or the atmosphere but also how their imaginative notions of the environment—

42 Purdy, After Nature, 22.
43 Purdy, After Nature, e.g., 8, 23, 30, 47.
44 Purdy, After Nature, e.g., 8, 23, 30, 47.

generally, of nature overall—affect their nations' action on climate specifically, "environmental-political" is more appropriate than "climate-political." The term thus seemed to be the best fit for a capacious idea that extends Purdy's notion in a logical way.

A. The 21st-Century American Environmental Imagination

The contemporary American environmental-political imagination, as seen through the story of the Clean Power Plan, can best be characterized by a sensibility of individuation and conflict. By a sensibility of "individuation," I mean that there exists a pervasive imaginative stress on the sharp divisions among different problems, parties, and conceptual categories of environment and politics, rather than on their continuities; particularly emphasized is the split between the environmental and the economic spheres. Normatively, there is a corresponding imaginative insistence that starkly individualized approaches to such disjoint issues must be appropriate. By a spirit of "conflict," I mean that these individuated issues, categories, and parties are often imagined as necessarily at odds with one another: there is a powerful sense that trade-off and adversarial relations are inherent to them and to climate change in particular, and that such conflict cannot be overcome by any sense of reconciliation or unification. Individuation is the more fundamental of the two descriptors here, frequently accompanied with an adversarial tone, since two ideas, issues, outcomes, actors, and so on can only be viewed as conflicting if they are first given sharp individuating boundaries. To illustrate this, I marshal a range of evidence from the CPP and beyond to investigate three aspects of the United States' environmental-political landscape: its view of the relationship between the categories of the "economic" and the "environmental"; its understanding of particular American landscapes and coal, a particularly significant form of energy; and its latent conception of leadership and agency on climate action.

A1. Environment and Economy

The American environmental-political imagination contains, first and foremost, an insistence upon a sharp distinction between the economic and environmental spheres. "Economic" and "environmental" are not understood as merely two ways in which to view a larger human-natural system, two modes of its measurement that can be usefully distinguished, but instead as two ontologically distinct categories which in practice ought, so far as possible, to be governed by different procedures and norms. In the context of the CPP, this can be initially seen from the law's institutional backdrop, the structure of which reflects a sharp conceptual disconnect between economy and environment. President Obama

instructed the EPA, and the EPA alone, to prepare what became the CPP.[45] It is true that the EPA was created during a time in American history when recognition of human-environmental interconnection was ascendant,[46] and aids human safety through its insurance of clean air and water, but the EPA is explicitly dedicated to environmental protection alone rather than some larger joint goal of environmental-economic harmony. The implicit assumption in much of its work is that the environment is distinct from the economy and other human spheres and will need to be guarded against them. Some EPA officials have even suggested that the EPA has done its job of ensuring clean air and water too well, such that many Americans lose sight of ways in which economic production impacts the environment.[47] Conversely, the US Department of Commerce, the cabinet ministry that proclaims to be tasked with just "one overarching goal: Helping the American Economy Grow"[48] (emphasis in the original), mentions no environmental, ecological, or sustainability concerns in any of its five strategic pillars that support its central aim. Thus in the executive branch's structure, the concepts of environment and economy are thoroughly and formally separated. The Department of Energy (DOE) might be expected to mediate the two, but it has a strong defense and pure research bent: at once handling nuclear weapons research, nuclear energy research and operations, and clean and fossil energy research. These specifics of bureaucratic organization may seem somewhat arbitrary, but they dictate both how federal agencies' fields of action are defined and approached and how official discourse regarding those fields is expressed in public. I submit that both of these have significant consequences for how Americans perceive environmental, economic, and energy issues and their nation's ways of handling those issues.

In the context of this division of labor, President Obama's executive assignment of the CPP's preparation to the EPA alone appears symbolic of where climate change fits into the American environmental-political imagination, representing the official assignment of US action on climate change to the environmental sphere alone rather than the economic one. The huge backlash against the CPP illustrates the conflictual, not merely individuating, nature of this aspect of the environmental-political imagination:[49] many perceived the CPP as a conferral of environmental benefits and therefore also a sentence of concomitant economic

45 The White House Office of the Press Secretary, "Presidential Memorandum - Power Sector Carbon Pollution Standards," June 25, 2013, https://obamawhitehouse.archives.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards.

46 Purdy, After Nature, 210.

47 See, e.g., Jonathan Cannon, former EPA general counsel, quoted in Meyer, "How the U.S. Protects the Environment, From Nixon to Trump."

48 "About Commerce | U.S. Department of Commerce," 2018, https://www.commerce.gov/about.

49 See, e.g., "Mission | Department of Energy," accessed January 3, 2019, https://www.energy.gov/mission; and Department of Energy, "Nuclear Security & Nonproliferation | Department of Energy," 2018, https://www.energy.gov/nnsa/nuclear-security-nonproliferation.

sacrifice and degradation. A host of challenges were immediately raised against the proposed law, and the ensuing political warfare was intense.[50]

This is deeply ironic in light of the fact that the government's own study of the Clean Power Plan indicated that, in fact, due to long-term increases in energy efficiency, savings on climate adaptation costs, and savings on health expenditures due to reducing vast quantities of harmful fumes like sulfur dioxide in the air, it would likely have saved the US billions per year by 2030 relative to the status quo.[51] Much has been made of the idea that organizations like fossil fuel companies, many of which stand directly to lose from a transition to low-emission energy sources and lobbied hard against the CPP,[52] are the real villains preventing America's energy transition. Coal and oil companies certainly lobbied hard against the CPP and may have played a large role in spreading the notion that emissions reductions, like environmentally beneficial policies generally, necessarily conflict with economic benefits. However, it was not merely these companies that voiced their concerns: amid both an outpouring of support for and backlash against the proposed rule, the EPA received over 4.3 million comments on it in six months.[53] Much has also been made of the deep partisan divide on belief in and concern about climate change itself,[54] which tracks the two parties' divergent emphasis on action to protect the environment and action to aid the economy. This divide was clearly visible in the battle over the CPP, for instance, when the 11 Senate Republicans of the Environment and Public Works Committee issued a letter in support of repealing the CPP in 2017 that made no mention of the environment or climate change. That letter mentioned only "the pervasive, negative effects [the CPP] would have had on Americans across the country. The CPP would have driven up energy prices, eliminated American jobs, and hurt local communities that

50 See, e.g., Environmental Protection Agency, "Electric Utility Generating Units: Repealing the Clean Power Plan: Proposal," Policies and Guidance, US EPA, October 4, 2017, https://www.epa.gov/stationary-sources-air-pollution/electric-utility-generating-units-repealing-clean-power-plan-0; Robinson Meyer, "How Obama Could Lose His Big Climate Case," The Atlantic, September 29, 2016, https://www.theatlantic.com/science/archive/2016/09/obama-clean-power-plan-dc-circuit-legal/502115/.

51 OAR US EPA, "Clean Power Plan Final Rule – Regulatory Impact Analysis," Reports and Assessments, October 23, 2015, /cleanpowerplan/clean-power-plan-final-rule-regulatory-impact-analysis, 3-23.

52 See, e.g., sections on ExxonMobil, Peabody Energy, and Southern Company in "Who's Fighting the Clean Power Plan and EPA Action on Climate Change?" Union of Concerned Scientists, https://www.ucsusa.org/global-warming/fight-misinformation/whos-fighting-clean-power-plan-and-epa-action-climate.

53 OAR US EPA, "FACT SHEET: Clean Power Plan By The Numbers," Overviews and Factsheets, accessed January 3, 2019, fact-sheet-clean-power-plan-numbers.html.

54 See, e.g., Megan Brenan and Lydia Saad, "Global Warming Concern Steady Despite Some Partisan Shifts," Gallup.com, March 28, 2018, https://news.gallup.com/poll/231530/global-warming-concern-steady-despite-partisan-shifts.aspx.

depend on coal."[55] Importantly, though, the imagined conflict between economic and environmental benefits on climate change policy cannot be merely a result of American partisanship: that Democrats and Republicans predictably gravitated to their sides of that conflict on the Clean Power Plan means that the idea of the environmental-economic conflict itself was already generally accepted, and action to counteract climate change has simply been imaginatively sorted mainly into the pro-environment rather than pro-economy category (this is not to say, however, that both parties are exactly equally narrow-minded in their understanding of climate change). The imagined disconnection and conflict between the two spheres is thus fertile ground for, rather than a simple output of, increased partisan division. Also, while I will not examine the American imagination of markets in depth here, there seems to be a notable similarity between the way Americans notionally separate the economy and the environment and the well-recognized way they notionally separate markets and government intervention in the economy. It seems that in America, pro-environment action is imagined as government interference into the workings of the market, and for that reason is anti-economic. This is despite the fact that in practice governments always set the rules of the market in the first place, and that in many cases, like the CPP, government action would increase overall economic welfare in the context of the market's failure to internalize all costs. That the CPP's emissions reductions would actually save America money and relieve it of immense human suffering in the long term might have saved it in another time or place, but could not in the contemporary United States.

A2. Coal and Landscape

Beyond the pronounced economic-environmental distinction, another form of individuation prominent in the American environmental-political imagination and visible in the narrative of the CPP is the uniqueness assigned to the landscape of America's coal mining country, along with an associated imaginative privileging of coal miners themselves and their imagined conflict with nature to extract its energy. This reflects a more general American notion that a sharp definitional line ought to be drawn between particular landscapes, and between them and humankind, a notion easily recognizable in American lore and law historically; one example of this is the Wilderness Act of 1964, which provided for protected, isolated areas that would remain "untrammeled by man" and would each keep their

55 "EPW Republicans Send Letter to EPA in Support of Clean Power Plan Repeal," U.S. Senate Committee on Environment and Public Works, January 12, 2018, https://www.epw.senate.gov/public/index.cfm/2018/1/epw-republicans-send-letter-to-epa-in.

"primeval character" in spite of an expanding, modernizing population.[56]

However, in the realm of energy production, a somewhat different individuating mood is at work than in wilderness protection, one that associates specific energy resources with specific landscapes and imagines a zero-sum conflict for primacy between them. The CPP would have achieved its emissions reductions mainly through cuts in the use of coal-fired power plants.[57] As the letter from the Republicans of the Senate Committee for Environment and Public Works illustrates, a key source of opposition to the CPP was a sentiment that the nation's jobs in coal production must be politically protected. As with the CPP cost-benefit analysis indicating that in the long term the plan would actually have been economically profitable, here too there is a deep and ironic seed of irrationality; just over 160,000 Americans work in coal production, less than half of the number involved in the fledgling solar industry, which the CPP would have benefited,[58] and coal production has already steeply declined because of market forces alone, with cheap natural gas largely supplanting it since 2005.[59] Simple interest-group politics are always, of course, a factor, and support for coal jobs as a public position is due in large part to the rhetoric of President Trump, who has thrust coal production incessantly into the political arena, making it a more partisan issue and implicitly highlighting its racial associations (and, though not discussed extensively here, race is yet another sphere of deep divisions in the American environmental-political imagination, as, for instance, the work of the environmental justice movement has sought to show).[60]

However, as Republicans and Democrats seized upon rather than created an imagined fundamental conflict between the economic and environmental spheres, President Trump seized upon rather than created the American glorification of the coal industry and its imagined battle with forms of energy hostile to it. Many Americans view coal miners as an interest group with a special claim to reverence, in some sense especially American, their connection to coal country's

56 Purdy, After Nature, 190.

57 US EPA, supra note 21.

58 Department of Energy, "2017 U.S. Energy and Employment Report," January 2017, 29.

59 DOE, "U.S. Energy and Employment Report," 21.

60 For a theoretical overview of environmental justice and its critical discussion of race, see David Schlosberg, "Theorising Environmental Justice: The Expanding Sphere of a Discourse," Environmental Politics 22, no. 1 (February 1, 2013): 37–55, https://doi.org/10.1080/09644016.2013.755387); For information about the high proportion of black Americans living near a coal-fired power plant, see "Environmental Racism in America: An Overview of the Environmental Justice Movement and the Role of Race in Environmental Policies," Goldman Environmental Foundation, June 24, 2015, https://www.goldmanprize.org/blog/environmental-racism-in-america-an-overview-of-the-environmental-justice-movement-and-the-role-of-race-in-environmental-policies/; By contrast, for statistics showing employment in the coal industry to be disproportionately white, see United States Department of Labor Bureau of Labor Statistics, "Employed Persons by Detailed Industry, Sex, Race, and Hispanic or Latino Ethnicity," 2018, https://www.bls.gov/cps/cpsaat18.htm.

lifeways and landscape that is morally and aesthetically unimpeachable even as they level its mountains and plumb its depths for the dirtiest fossil fuel available. Our version of fascination with and elevation of coal is uniquely American. Millions of Americans outside of coal country are able to glorify coal production imaginatively, thanks in part to the very fact that they have never been to coal country, because coal is closely associated with one of America's many distinct, individuated landscapes, cultures, and forms of productive connection to the environment. Oil is certainly imaginatively American, in the sense that it can make one rich quickly. But no other source of energy evokes the sort of hardscrabble, manful battle with nature that coal does, up in the mountains and away from the friendly confines of civilization. Actual coal production, of course, is much less attractive than it is imagined to be in its symbolic overcoming of an unfriendly nature: as Purdy notes, "mountaintop-removal mining dynamites hills and hollows into a flat, treeless terrain and buries many hundreds of miles of Appalachian streams."[61] But politically, huge swaths of the country lionize it for its imaginative associations, and even those who resist this celebration must engage with and seek to erode that picture of it. The point is not that no Americans recognize that burning coal pollutes the atmosphere intensely and that relatively few Americans actually make their living in its industry; it is that the fact that the US has been collectively unable to privilege other goals, such as combating climate change through the CPP, over its glorification of the unique landscape and culture of coal bespeaks a deep temperamental inclination toward the particular and the adversarial in the way the nation imagines what ways of relating to the environment ought to be honored and preserved.

Coal also plays a role in the notion of the US as particular and individuated itself because of the role it plays in contributing to US energy independence. The US, despite what political advertisements advocating drilling in yet another remote wilderness might have you believe, is highly energy-independent—on net importing just 7% of its total energy use.[62] This fact provides one strut undergirding the spirit of individuation latent in how the nation views itself globally on climate change. In keeping with its degree of energy independence, there is little sense that the country is truly indebted to other nations in the energy arena. A logic therefore prevails that, politically, it is the United States' right to individuate itself in the international discourse on climate change. This is true even prior to Donald Trump's explicit protectionism and withdrawal from the Paris Agreement, an ultimate act of individuation; the resonance of his "America First" message, despite

61 Purdy, After Nature, 30.

62 International Energy Agency, "Energy Imports, Net (% of Energy Use) | Data" (The World Bank, 2015), https://data.worldbank.org/indicator/EG.IMP.CONS.ZS?locations=US&year_high_desc=false.

its multiple valences, can at least partially be attributed to a widespread sentiment that America is not necessarily dependent on the rest of the globe and can therefore act on its own terms in international affairs. Accordingly, when it is not refusing to participate on a particular issue, it is seen by much of its own population and government as the proper global leader on that issue. This is true of America's action on climate change through the Clean Power Plan, and I therefore turn now to sketching the particular ideal of American leadership on climate change manifest in the law's progression. This ideal is glory-seeking and exceptionalist, placing the US on an imagined pedestal above the other nations attempting to reduce emissions.

A3. Leadership and Agency

While setting about repealing the CPP, the Trump administration has made an extravagant claim about American leadership on climate change: that, because it cut emissions more than any other nation in 2017, it is therefore "leading the world" on addressing climate change overall.[63] These claims are transparently based on bad-faith: the US is the world's second-largest emitter, far ahead of third place and only behind China that has coal-fired its way to yearly emissions increases since 2000,[64] so any proportionally nontrivial American emissions cut in 2017 was likely to be the world's largest in absolute terms that year. Moreover, this "world's largest" title is just one year old, and is due basically entirely to market forces making it increasingly uneconomical to use coal[65] even as the Trump administration attempts to prop it up through the repeal of the CPP.

Nonetheless, Trump's administration is not the only one in the CPP era to loudly proclaim American climate and energy leadership when the full facts of the situation did not support it. As noted in the paper's epigraph, Obama claimed upon announcement of the CPP that he was "[committing] the United States to lead the world on this issue."[66] In hindsight, given Trump's cancellation of the CPP and withdrawal of the US from the Paris Agreement, Obama's idealistic portrayal of the CPP as a legal and political commitment to US climate leadership may look like little more than a cruel joke of history, a genuine and dignified gesture of

63 Nicole Lewis, "Fact Checker: EPA Administrator Scott Pruitt's Claim That the U.S. Is 'Leading the World' in 'C02 Footprint' Reductions," The Washington Post, October 23, 2017, https://www.washingtonpost.com/news/fact-checker/wp/2017/10/23/epa-administrator-scott-pruitts-claim-the-u-s-is-leading-the-world-in-c02-footprint-reductions/?utm_term=.57dfb8ccf34b.

64 Jan Ivar Korsbakken, Robbie Andrew, and Glen Peters, "Guest Post: China's CO2 Emissions Grew Less than Expected in 2017," Carbon Brief, March 8, 2018, https://www.carbonbrief.org/guest-post-chinas-co2-emissions-grew-less-expected-2017.

65 Benjamin Storrow, "Trump's 'Affordable Clean Energy' Plan Won't Save Coal," Scientific American, August 21, 2018, https://www.scientificamerican.com/article/trumps-affordable-clean-energy-plan-wont-save-coal/.

66 Obama, "Remarks Announcing the Environmental Protection Agency's Clean Power Plan."

America's desire to lead for the greater good twisted into a dark irony by a shift in the political winds. Even at the time, it made little sense in light of how much had been accomplished in other portions of the developed world: by 2015, Germany had 15 years of experience with renewable energy tariffs, had set 2020 climate targets, and the whole EU had agreed on 2030 targets with a decade of emissions trading experience behind it.[67] Obama's insistence on American leadership despite this mountain of evidence indicating that the US was far from a position to lead on emissions reductions is therefore revealing. He was certainly aware of how truly far behind America was in 2015 on climate action, but singular American leadership was nonetheless a central thrust of his pitch of the CPP to the American people. Obama's rhetoric reflects an American sensibility that, on environmental issues like all others, the US must be unique, particular, special, glorious.

This sense of entitlement to climate leadership on the global stage manifests today not in widespread federal government action, but in the individual person of the president. The unilateral actions of Presidents Obama and Trump on the CPP—Obama singly directing the EPA to create it, Trump singly directing the EPA to review and replace it—express, despite their different circumstances, a sense of deserved presidential individuality: that is, a right to define
America's international climate leadership in one's own way regardless of its previous instantiations. Beyond making for less stable policy, this feature of contemporary American climate politics has the effect of being, if not anti-democratic, only minimally democratic: whichever section of the population elected the last president gets to determine policy on climate and energy, regardless of later public opinion[68] and congressional intervention aside. Any major climate action requires governmental leadership, but the current American version, with its current structure of top-down leadership, leaves little room for individual Americans to play a major role in a clean energy transition. They are simply not viewed as important actors in this context. Their support is not needed, and political leaders do not think to call upon them to help in direct action on climate and energy. Even when Obama did connect environmental concerns, economic ones, and ordinary Americans in his rhetoric on the CPP, he argued merely that it would help keep energy "reliable and affordable for American businesses and families,"[69] which is not exactly a moving call to purposeful collective action on an issue of immense national and

67 The European Commission, "EU Emissions Trading System (EU ETS)."

68 It seems notable here that for the entire period between Obama's direction of the EPA to craft the CPP in 2013 and his announcement of the final rule in 2015, his approval rating stayed beneath 50%; see Gallup, "Presidential Approval Ratings -- Barack Obama," Gallup.com, accessed January 4, 2019, https://news.gallup.com/poll/116479/Barack-Obama-Presidential-Job-Approval.aspx.

69 The White House Office of the Press Secretary, "Presidential Memorandum -- Power Sector Carbon Pollution Standards," whitehouse.gov, June 25, 2013, https://obamawhitehouse.archives.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards.

global importance.

Meanwhile, while millions of Americans, mainly along partisan lines, recognize climate change as a serious problem and some individuals among them have achieved success in discussing it an environmental, economic, and political issue,[70] there has been no grassroots climate movement that has been successful in shifting the national conversation overall or forcing government action. Obama's unilateral move to force action in a government gridlocked along party lines is ample evidence of this point. A true change in the American popular consciousness analogous to, say, what followed Rachel Carson's Silent Spring seems out of reach on climate in this moment. Ironically, then, the general pattern of individuation of, and emphasis upon the political import of, distinct institutional actors, relevant landscapes, and concepts of different human and environmental spheres in the American environmental-political imagination fails to elevate the individual himself or herself.

Thus a particularly executive-focused version of what is often labeled "American exceptionalism" plays a prominent role in the American environmental-political imagination of climate, as seen through the story of the CPP. But an idea of American exceptionalism is not the fundamental category in that imagination; instead, it fits into its larger spirit of partitioning and antagonism among different notional elements, a sense that—despite the idea that climate change ought to be siloed in the environmental sphere and ought to have no claim on activities outside it—the United States must stand alone at the head of the world's climate change-battling ranks. This imagination is thus both particular to the environmental-political realm and simultaneously reflective of well-recognized aspects and assumptions of American cultural life.

Perhaps nothing captures this better than that the US's spirit of partition and individuation is not an admission of limitation in each partitioned sphere, whether it be the realm of international affairs, executive leadership, the economic sphere, the environmental, or one of the many landscapes Americans insist upon as particularly special. Instead, this partition bespeaks the idea that by conceptually and legally separating each from the other, the US can grasp the infinite in each; it needs not face limitation; it can have its cake and eat it too. This truth of the environmental-political imagination holds now but is profoundly historically rooted: as Purdy notes, "American democracy had taken shape in historically unique exemption from the basic problem of modern and democratic politics: the problem of managing conflicting interests and values in a world of relative scarcity."[71] That

70 See e.g., Naomi Klein, This Changes Everything: Capitalism vs. the Climate (New York: Simon & Schuster, 2014).

71 Purdy, After Nature, 34.

foundational thread is still clearly visible today.

B. The German 21st-Century Environmental Imagination

In a deep contrast to its American counterpart, the essential spirit of the contemporary German environmental-political imagination, as viewed through the lens of the *Energiewende*, can be described by a spirit of continuity and collectivism. The German environmental-political imagination is marked by a sensibility that highlights the ways that humans and the environment are interconnected, believes that all sectors of the human population can (indeed, can only) progress by stewarding nature responsibly, and responds with a persistent, determined concentration upon collectively undertaken gradual reforms designed to benefit domestic society, provide leadership to global society, and preserve nature all at once. In some sense, this notion is similar to the ecological form of the American environmental imagination that Purdy describes, dominant in the latter part of the 20th century,[72] but it is more expansive: it does not merely attempt to capture a fact about how the natural world and humankind are necessarily continuous with each other, but extends also to how different sectors of the human population are interdependent, both inside and outside Germany, and is charged with a forward-looking normative temperament that emphasizes social solidarity in collective action both across society and across time. In order to parallel the American case, I again explore how the economic and environmental spheres are imagined to relate to one another, how culturally important forms of energy and landscape play into prevailing beliefs about how the *Energiewende* ought to be managed politically, and how leadership on reducing emissions is viewed. As in the American case, critical interpretation of the discourse and structure of government provides the primary evidence base, but a range of other sources, like political party platforms to public opinion polling, supports this characterization as well.

B1. Environment and Economy

The way the *Energiewende* is discussed by its prominent advocates, policy leaders, and involved government ministries generally integrates humanity and nature, conceptually fusing notions of what benefits the German economy and what benefits the climate and environment. It evinces a recognition of the interconnectedness of human and environmental systems and an ethic of responsible stewardship of both simultaneously, with neither given fundamental priority, even as it eschews the tone of more traditionally environmentalist rhetoric emphasiz-

72 Purdy, After Nature, 207.

ing a profound spiritual interconnectedness of man and nature. For example, the very name of 2007's Integrated Climate and Energy Action Programme, even as it heads a highly technical package of legislation that lays out specific binding mechanisms for Germany's transition to clean energy, suggests continuity between the natural climate system and humanity's economic system. The government's announcement of this package of legislation makes explicit the perspective of unified economic and environmental goals that the name suggests: "The German government's guiding principles for energy policy remain the three objectives of security of supply, economic efficiency and environmental protection."[73] In the government's view, these objectives, while they can be usefully distinguished, are not in a deeper sense truly distinct and competitive, with ever-unavoidable trade-offs that must be weighed and decided. If in some cases trade-offs are present, they are not allowed to distract from the larger continuity of the economic and environmental spheres; individuation and competition do not constitute an imaginative focus. Instead, economic ends and climate action are understood as mutually reinforcing: "Efficient climate protection modernises the economy and society."[74] This language of modernization is telling: in the German environmental-political imagination, human and environmental interconnectedness does not demand the abandonment of current technology or a return, even temporarily, to a pre-industrial way of being, as the American romantic imagination might have it.[75] Instead, humanity can become more modern even as it effectively stewards nature, and along with economic-environmental interconnectedness there is a continuity between today's Germans and future generations, to whom Germans owe fair treatment.[76]

The name of 2010's *Energy Concept for an Environmentally Sound, Reliable, and Affordable Energy Supply* (henceforth simply *Energy Concept*) similarly weaves together economic and environmental goals. The *Energy Concept* describes a plan to attempt to achieve both, arguing that emissions reductions are not just helpful but fundamental for German economic success, and proclaiming that "a high level of energy security, effective environmental and climate protection and the provision of an economically viable energy supply are necessary for Germany to remain a competitive industrial base in the long term"[77] (emphasis mine). The government's Climate Action Programme 2020 claims that "Germany benefits from its pioneering role in climate change mitigation. The technical,

73 BMU, supra note 15, at 2.
74 Id., at 1.
75 See, e.g., Purdy, After Nature, 24.
76 BMU and BMWi, "*Energy Concept* for an Environmentally Sound, Reliable and Affordable Energy Supply," 4.
77 BMU and BMWi, "Energy Concept for an Environmentally Sound, Reliable and Affordable Energy Supply," 5.

cultural and social innovations it entails create added value especially for small and medium-sized companies."[78] Such examples of federal agencies proclaiming the economic benefits of climate change-combating emissions reductions are, in short, abound. However, notably, despite the extensive discussions of the *Energiewende*'s potential benefits for the German economy in government publications, none appear to assert economic health as the fundamental reason for why the *Energiewende* is worthwhile. The vision is instead one of a healthy, collective balance of economic and environmental goals that are irreducibly worthy and in some ways inextricable.

Parallel to how American federal agencies institutionally embed the imaginative view of economy and environment as sharply individuated seen in the narrative of the CPP, the German institutional setup reflects a perception of them as integrated, with neither given explicit priority over the other. For example, rather than having a single agency for environmental protection to which CO2 emissions regulations are assigned, in Germany three agencies split the bulk of the *Energiewende*: the Federal Environment Agency (UBA), the Federal Ministry for Environment, Nature Conservation, and Nuclear Safety (BMU), and the Federal Ministry for Energy and Economic Affairs (BMWi). Although divisions between these bureaucracies are helpful for defining which organization focuses on which aspect of the *Energiewende*, there is clear continuity in the categories and the goals relative to which emissions, sustainable development, and climate are discussed across agencies, as the quotations from multiple agencies in the reports cited above illustrate. The *Energy Concept*, for instance, was prepared jointly by the BMU and BMWi. The economy is not entirely treated as linked to the environment—there is also a ministry for economic cooperation and development, and of course one for finance[79]—but the BMWi's deep involvement in the *Energiewende* shows that on energy issues the economy is not seen as a removed and independent entity to be managed apart from its inescapable linkage points with the natural world, nor is the environment to be managed without due consultation of economic experts. The institutional realization of these viewpoints came early in the *Energiewende* era, with departmental reorganization in 2005.

Also, constitutionally, the German system is conceptually friendlier to the objective of environmental protection than the American one, and has become even more so in recent history. For example, since 1949 the Grundgesetz (GG), Germany's Constitution, has provided for the "protection of the natural foundations of life and animals" by executive, legislative, and judicial action, with explic-

78 BMU, "The German Government's Climate Action Programme 2020 - 2014" 18.

79 "The German Federal Government," deutschland.de, January 23, 2018, https://www.deutschland.de/en/topic/politics/the-german-federal-government.

it reference to the nation's responsibility to future generations.[80] A round of GG reform was completed in 2006, granting the federal government more powers in environmental policymaking.[81] German constitutional tradition also allows for the subordination of private property to environmentally protective uses on the basis of social welfare and human interconnectedness: "The potential obligation to 'sacrifice' [one's] property rights to public needs derives from the concept of a 'situational commitment of the property' that follows from the view of man as an individual who is dependent on society."[82] Thus it appears that a German perspective of environmental and economic solidarity is deeply built into the German legal and political consciousness,[83] with neither sphere deserving of absolute priority, and the legal foundations of this view have evolved alongside the *Energiewende* overall. By contrast, in the absence of explicit constitutional discussion of how nature is to be safeguarded, in the US environmental protection has been defined primarily with reference to and in implicit subordination to the economy: the major US environmental laws derive their constitutional power from the Commerce Clause's permission for the regulation of interstate commerce.[84]

In addition to the foundational structure of the German government that evinces a prevailing integrative imagination of the environment, society, and how they should be legally approached in the *Energiewende*, several other popular sources suggest a similar conceptualization. One is the ways political parties express themselves in their bids for citizen support. That the Green Party has been influential since the beginning of the *Energiewende*, and governed in a coalition with the Social Democrats, is a powerful statement of a popular German belief that environmental considerations should be built into political decision-making. Even more revealing, though, is the stance of the Christian Democratic Union (CDU),[85] Angela Merkel's pro-business, center-right party. While the Republicans in the US have understood 21st-century pro-business conservatism to require general opposition to new environmental protections, the CDU has since 1978 included an environmental pillar alongside its three core party pillars focusing on econom-

80 "Basic Law for the Federal Republic of Germany - Article 20a [Protection of Natural Foundations of Life and Animals]" (Federal Ministry of Justice and Consumer Protection and Federal Office of Justice), accessed January 4, 2019, https://www.gesetze-im-internet.de/englisch_gg/englisch_gg.html#p0119.

81 "The German Environmental Constitutional Law," Umweltbundesamt, January 29, 2016, http://www.umweltbundesamt.de/en/the-german-environmental-constitutional-law.

82 Monika Neumann, "The Environmental Law System of the Federal Republic of Germany," Annual Survey of International & Comparative Law 3, no. 1 (1996): 69–110.

83 Jonathan Cannon, Environment in the Balance (Harvard University Press, 2015), http://www.hup.harvard.edu/catalog.php?isbn=9780674736788.

84 Arlan Gerald Wine, "Enforcement Controversy Under the Clean Air Act: State Sovereignty and the Commerce Clause," Transportation Law Journal 8 (1976): 383–400.

85 See, e.g., Massachusetts v. Environmental Protection Agency, No. 05–1120; wherein the Bush-era EPA opposed regulation of CO2 emissions.

ic growth. The phrase they used when adding this pillar was "quality-oriented growth,"[86] conveying the notion that proper economic progress and proper environmental stewardship are intertwined. That year's platform included the following statement articulating how the party viewed the connection between freedom and responsibility, and the social interconnectedness between generations: "The conservation of our life support system is part of the responsible liberty. He who now irresponsibly exploits this system and alters the environmental relationship damages the solidarity between generations."[87] In 1989, the CDU advocated a tax on CO2 emissions in keeping with an explicitly religious desire to properly care for Creation.[88] All this — which would sound confidently liberal, if not outright radical in the United States — stemmed from Germany's main conservative party, which has been the one constant in a series of coalitions overseeing the *Energiewende* from the German Parliament since 2005. Thus, while highly visible in the policy prescriptions of the *Energiewende* since the turn of the century, the interconnected German imagination I describe has its roots in long-held popular understandings of what nature is and is for, how economic growth ought to be understood, and how citizens of different social stations and ages bear responsibilities to one another.

B2. Nuclear, Coal, and Landscape

Like as with the passage of and response to the CPP, particular sources of energy and their associations with culture and landscape have figured prominently in the story of the *Energiewende*. In Germany, both nuclear energy and coal have been hotly debated. Nuclear energy has been at the center of discussion because of a tension between its convenient lack of emissions and popular sentiment against it, and coal for the exact opposite reasons: its high emissions and historical association with German identity. Unlike the executive-led course reversal in the American case constituted by the CPP repeal, however, the German response to these difficulties has been to alter its path to the *Energiewende*'s original goal of emissions reductions by phasing out nuclear energy and reducing the use of coal.[89] In doing so, Germany has collectively displayed a persistence and willingness to sacrifice for the sake of the demands it believes follow from its interconnectedness with

86 Konrad Adenauer Stiftung, "History of Environmental Policy in Germany: CDU Perspectives 1958–2015,"n.d.,https://www.kas.de/c/document_library/get_file?uuid=57153b6c-1ac9-6dd4-4048-b7e8732ba709&groupId=252038.

87 Konrad Adenauer Stiftung, "History of Environmental Policy in Germany," 2

88 Konrad Adenauer Stiftung, "History of Environmental Policy in Germany," 22.

89 For discussion of coal, see BMU, "Climate Action Plan 2050 – Germany's Long-Term Emission Development Strategy"; for discussion of the abolition of nuclear energy see "German Chancellor Merkel on Energy Nuclear Policy, Jun 9 2011 | Video | C-SPAN.Org" (C-SPAN 3, June 9, 2011), https://www.c-span.org/video/?300059-1/german-chancellor-merkel-energy-nuclear-policy.

nature and with other nations. The abolition of nuclear energy in particular illustrates the political strength of German emphasis on interconnectedness, in multiple senses beyond the previously discussed environmental-economic linkage.

Strong anti-nuclear sentiment in Germany dates back decades. In the 1970s and early 1980s, local activist movements sprang up to oppose the construction of nuclear power plants on the basis of concerns about pollution of beloved local landscapes like the Saxony wine country. These movements occurred alongside a spirit of grassroots opposition to a view of the military, the nuclear industry, and a too-powerful state as noxious bedfellows.[90] In fact, the original use of the term"Energie-Wende" came in the title of a pamphlet imagining "Growth and Prosperity without Oil and Uranium."[91] In 1986, the Chernobyl disaster occurred in nearby Ukraine, increasing fears of nuclear energy and support for the anti-nuclear Green Party.[92] More recently, in 2000 the parliamentary coalition of the Greens and Social Democrats passed a law planning the gradual phase-out of nuclear energy.[93] However, Angela Merkel's CDU reversed this decision when it swept into power in 2009, arguing that, as a zero-emissions energy source, nuclear power would be valuable for achieving the *Energiewende*'s emissions reductions targets as a "bridging technology" that would "[pave] the way for the age of renewable energy" by acting as a buffer against both high fossil fuel emissions and high renewables costs.[94] Thus there were two schools of thought: one Green, activist, and anti-nuclear, in favor of nuclear phase-out for the purposes of environmental friendliness and more localized energy production, the other in favor of nuclear energy with the an established and pragmatic consideration of the costs of the *Energiewende*, and pro-nuclear, at least for the near future.

Then, in 2011, the Fukushima Daiichi nuclear disaster hit Japan. Days afterward, Angela Merkel gave a speech announcing that Germany would be immediately closing eight nuclear plants and would shutter the rest by 2022. Given that roughly 30% of German electricity was nuclear-powered at the start of the millennium,[95] and that nuclear energy had been reinvigorated by Merkel's initial rise, such rapid closure represented a sudden and radical shift. On its face, such a strong German reaction to a Japanese disaster thousands of miles away seems surprising. Fundamentally, however, this German response to Fukushima was about an imagination of international interconnectedness, the reawakened ability of the

90 Paul Hockenos, "The History of the Energiewende," Clean Energy Wire, June 12, 2015, https://www.cleanenergywire.org/dossiers/history-energiewende.

91 Hockenos, "The History of the Energiewende."

92 Hockenos, "The History of the Energiewende."

93 Ball, "Germany's High-Priced Energy Revolution."

94 BMU and BMWi, "Energy Concept for an Environmentally Sound, Reliable and Affordable Energy Supply," 15.

95 Appunn, "The History behind Germany's Nuclear Phase-Out."

population and government to imagine a similar disaster happening in Germany. As Merkel put it, "In Fukushima we have to take note that even in a high-tech country like Japan"—and thus a country like Germany—"the risks of nuclear energy cannot be controlled safely."[96] Ironically, the factors to blame for Fukushima, which were a magnitude 9.0 earthquake at sea and a resultant tsunami crashing into nuclear plants on the shore of the open ocean, are not comparable risk factors for Germany, something Merkel even acknowledged.[97] But that was not the point, nor was it the point that Germany produced far less nuclear energy than some other advanced high-tech nations, like France and the US, which did not move to shutter their plants after Fukushima. The point was that Germans viewed their own destiny as remarkably bound up with the rest of the world's, to the extent that a nuclear catastrophe in east Asia meant a whole nation's nuclear supply in west-central Europe must be shut off. This rapid phase-out of a well-established, zero-emissions fuel source makes achieving the near-term emissions cuts targets of the *Energiewende* difficult, and doing so cost-effectively even more so.[98] But, at least as of 2015, opposition to nuclear energy remained high, with one poll showing 81% of Germans still in outright opposition to it.[99] Germany's environmental-political imagination thus has its headstrong elements. That the nuclear phase-out is discussed as central to the *Energiewende* even though the phase-out makes the central *Energiewende* goal of fast, hefty emissions cuts much more difficult indicates that a larger integrative vision of how Germany should relate to its neighbors and to the environment drives both denuclearization and decarbonization.

Coal, another energy source with a potent imaginative valence of landscape and environment in Germany, was also discussed at the coining of the term *Energiewende* in the early 1980s. However, unlike nuclear energy, the use of coal was celebrated rather than attacked. Since coal is a particularly "dirty" fuel, in that it emits more CO2 per unit of heat energy produced than other common fossil fuels,[100] such celebration may seem puzzling now, in the context of an *Energiewende* focused on reducing emissions. However, at the time, the goal of reduced emissions was less clarified, and instead coal was promoted because of its particularly German flavor. The use of *heimische* Kohle, or "domestic coal," in place of oil

96 "German Chancellor Merkel on Energy Nuclear Policy, Jun 9 2011 | Video | C-SPAN.Org."

97 "German Chancellor Merkel on Energy Nuclear Policy, Jun 9 2011 | Video | C-SPAN.Org."

98 See, e.g., Kenneth Bruninx et al., "Impact of the German Nuclear Phase-out on Europe's Electricity Generation—A Comprehensive Study," Energy Policy 60 (September 1, 2013): 251–61, https://doi.org/10.1016/j.enpol.2013.05.026; Hardy Graupner, "What Exactly Is Germany's 'Energiewende'?," DW.COM, January 22, 2013, https://www.dw.com/en/what-exactly-is-germanys-energiewende/a-16540762.

99 Poll by Emnid, cited in "4 Jahre Nach Fukushima: Große Mehrheit Für Energiewende - Politik Inland - Bild.De," Bild, March 14, 2015, https://www.bild.de/politik/inland/atomausstieg/4-jahre-nach-fukushima-grosse-mehrheit-fuer-energiewende-40148648.bild.html.

100 B.D. Hong and E.R. Slatick, "Emissions Factors for Coal," Quarterly Coal Report January-April 1994, 1994, 1–8.

was promoted, where heimische is a version of "domestic" that carries particular warm connotations of the German homeland. Germany has long gotten, and still gets, a huge proportion of its electric power from its vast coal reserves. It remains the world's largest producer of lignite, a particularly inefficient and dirty form of coal.[101] But, unlike in the US, where the current government has dubiously pitched its replacement for the CPP as a savior for the coal industry, despite American coal's uneconomically high cost relative to natural gas,[102] Germany has shown itself to be willing to move away from coal despite its historic connotations, its current potential utility in an energy transition complicated by the nuclear phase-out, and its home sourcing in a nation largely dependent on Russia for other fossil fuels. But the emissions reductions logic is clear: as the country's 2050 Climate Action Plan states, "It will only be possible to meet the climate targets if coal-fired electricity production is gradually reduced."[103] Accordingly, the country has formed an executive commission to oversee the phase-out of coal, and to ensure it is done in an inclusive way that will allow for a transition for its former workers and regions.[104]What explains this willingness to leave coal behind? I contend that, imaginatively, this readiness stems from an inward-facing sense of continuity and collectivism that complements the outward-facing form that motivated the nuclear phase-out decision after Fukushima. Unlike in the US, where coal is associated with one specific, romanticized landscape and culture over any other, in Germany heimische Kohle is not romanticized to the same extent. This is not to say the German coal industry has not battled the *Energiewende*, but it lacks the comparative political support of the US industry, and the resulting political mood is far different. Today, amid the effort to forge a new, more modern national energy identity, the old ideal of self-reliance from national coal production has lost its sway as Germans generally prefer to see a modern country unified in the face of climate change, a collective pursuing a responsible *Energiewende*. They celebrate the connections between landscape and society other ways, like in the country's fifteen recently established UNESCO biosphere reserves which celebrate a balanced relationship of nature and humankind, and its many nature parks that preserve cultural, historical, and environmental sites together.[105] Germans have become quite confident on this issue: as

101 Kerstine Appunn, "Coal in Germany," Clean Energy Wire, October 29, 2014, https://www.cleanenergywire.org/factsheets/coal-germany.

102 Jessica Wentz, "6 Important Points About the 'Affordable Clean Energy Rule,'" State of the Planet | Earth Institute | Sabin Center for Climate Change Law (blog), August 22, 2018, https://blogs.ei.columbia.edu/2018/08/22/affordable-clean-energy-rule/.

103 BMU, supra note 34, at 35.

104 Benjamin Wehrmann, "Germany's Coal Exit Commission," Clean Energy Wire, May 31, 2018, https://www.cleanenergywire.org/factsheets/germanys-coal-exit-commission.

105 "Nature Protection and Biodiversity - National Responses (Germany)," SOER 2010 Common environmental theme (Deprecated), European Environment Agency, accessed January 5, 2019, https://www.eea.europa.eu/soer/countries/de/nature-protection-and-biodiversity-national.

Rainer Baake, a deputy minister of the BMWi, said bluntly in an interview with The New York Times when asked about high energy costs, "The energy transformation in Germany will be carried out by two main sources—those are wind and solar."[106]

B3. Leadership and Agency

Leadership on the energy transition in Germany has long had a public face with deep experience on environmental issues: As Germany's minister for the environment, Angela Merkel (sometimes called the "Climate Chancellor")[107] presided over the first-ever UN conference on climate change, held in Berlin in 1994.[108] However, that Germany happened to elect an experienced former environmental minister as chancellor for the best part of the century's first two decades is far from the whole story of the idea of leadership in the *Energiewende*. This section more deeply examine the components of leadership and agency in Germany's environmental-political imagination: who it sees as responsible for taking action, what latitude leading agents have to change the course of existing initiatives, the nature of Germany's participation on environmental issues in the international sphere, and the values that implicitly drive these understandings. It argues that a collectivist view of leadership focused on reciprocity and persistence prevails, in which each sector of German society (particularly individual citizens) is both empowered and expected to take action that furthers the *Energiewende*. The federal government is respected in its role as overseer of the *Energiewende*, but is expected to provide a fair deal from which all will benefit as a result. Internationally, Germany imagines itself as an environmental first mover that leads by example, its internal collective action a display of good-faith responsibility that ought to spur trust and reciprocity in the larger collective of nations.

As in the United States, an important portion of Germany's direction on climate and energy policy comes from the top. Chancellor Merkel has acquired a reputation as a forceful climate hawk, and, as much of this essay's sourcing thus far has shown, hierarchical federal ministries set a great deal of *Energiewende* policy. But the way figures at the top discuss the action of the *Energiewende* makes clear that they conceive of it as necessarily a collective endeavor. Merkel, when announcing Germany's retreat from nuclear energy, put it this way: "All of us,

106 Melissa Eddy, "German Energy Push Runs Into Problems," The New York Times, December 20, 2017, sec. Business, https://www.nytimes.com/2014/03/20/business/energy-environment/german-energy-push-runs-into-problems.html.

107 Ellen Thalman and Julian Wettengel, "The Story of 'Climate Chancellor' Angela Merkel," Clean Energy Wire, November 26, 2015, https://www.cleanenergywire.org/factsheets/making-climate-chancellor-angela-merkel.

108 Konrad Adenauer Stiftung, "History of Environmental Policy in Germany," 30.

government and opposition, federal, state and local governments, society as a whole, every single one of us, all of us, if we do it properly, can combine ethical responsibility with economic success in this future project. This is our shared responsibility."[109] Dr. Barbara Hendricks, then head of the BMU, wrote in her foreword to the 2020 Climate Action Programme that "All of us—all areas of industry and all individuals—have to step up to the plate."[110] One way this collective spirit manifests is in the federalist relationship between the central government and the Länder, the German states. Whereas the CPP's direction of each state to develop its own scheme for CO2 emissions reductions set off near-immediate battles in court about whether this fragmented approach constituted "bread-and-butter federalism" or gross federal overreach,[111] the German chancellor and minister for energy and economic affairs meet twice yearly with the heads of all of the sixteen Länder to discuss *Energiewende* policy implementation and enjoy a close and generally functional, if not frictionless, relationship.[112]

A rhetorical approach framing reciprocal collective participation as necessary for a successful *Energiewende* prevails especially strongly with respect to individual Germans. As one BMU report puts it, "Particularly here [in the *Energiewende*] it is therefore important to create opportunities for the public to get involved and to support people in becoming aware of their scope for action...Climate action depends far more than any other policy area on the active involvement of as many people as possible."[113] The government says that rather than asking individuals to sacrifice their own time and resources to reduce emissions, it will provide opportunities for citizen participation such that they themselves benefit. [114]Furthermore, the government has pledged to cut its own emissions to demonstrate its own responsibility and commitment to the cause.[115] Its statements of support for a ground-up *Energiewende* have, so far, been more than just so much grassroots talk: a cornerstone incentive of the push for emissions cuts has been the Renewable Energy Sources Act's high federally subsidized prices, guaranteed for renewable energy sold to the grid by small-scale producers like individuals, households, and local co-ops.[116] Early in the century, the government promoted the adoption of small-scale photovoltaic (PV) solar installations with the so-called

109 "German Chancellor Merkel on Energy Nuclear Policy, Jun 9 2011 | Video | C-SPAN.Org."

110 BMU, "The German Government's Climate Action Programme 2020," 6.

111 See Meyer, "How Obama Could Lose His Big Climate Case."

112 BMWi, Monitoring and Steering the Energy Transition (2018), https://www.bmwi.de/Redaktion/EN/Dossier/energy-transition.html.

113 BMU, supra note 34, at 12.

114 See, e.g., BMU, "The Integrated Energy and Climate Programme," 2; 13.

115 BMU, "The Integrated Energy and Climate Programme," 63.

116 Alexander Franke and Energiewende Team, "How Winning over Rural Constituents Changed the Political Discussions on Renewables in Germany," Energy Transition (blog), November 18, 2014, https://energytransition.org/2014/11/german-fit-helped-making-energiewende-non-partisan/.

"100,000 Roofs" initiative, which provided government loans for people to buy rooftop solar systems. Germans have responded by engaging: by 2003, the program was successfully completed,[117] and by the end of 2017 there were 1.6 million PV installations nationwide,[118] with over 40% of total renewable capacity owned by citizens.[119] Much of this subsidizing has aided rural areas in particular, with farmers coming to own a greatly disproportionate percentage of PV installations and the generally conservative farmers' association pushing the CDU to greater support of the *Energiewende*.[120] The mere thought of today's rural, conservative Americans strongly supporting federal climate change policy illustrates both how vast the gulf is between Germany and the US on this issue and how powerful subsidies can be.

For the most part, then, the German population does not aid its country's climate policy as a sacrifice: it does so while gaining generous federally-designed benefits. But this profitability is part of the nation's imagination of climate change as an integrated social-environmental problem that offers the opportunity to progress and modernize. The *Energiewende* is not fully democratic, per se, since the executive branch of the federal government from the beginning has played a strong role in setting its policies, but it has become truly collective in its implementation and its expansion of renewable energy enjoys 95% popular support.[121] Thus, in its rhetoric and action, Germany has to a significant extent successfully cast climate change not merely as an international political issue but as a collective German one, and as an opportunity to be addressed by the fulfillment of a social contract. Everyone must do their part, and accordingly, the benefits will be reaped by all. Unlike the autocratic "picking [of] winners and losers"[122] which the CPP was imagined to be by many in the US, the *Energiewende* is an "an investment in our own future."[123] The understanding of this investment transcends the merely financial. For instance, the environment ministry stresses the need not just for

117 Gerhard Stryi-Hipp, "THE EFFECTS OF THE GERMAN RENEWABLE ENERGY SOURCES ACT (EEG) ON MARKET, TECHNICAL AND INDUSTRIAL DEVELOPMENT," 2004, https://doi.org/10.13140/2.1.1444.6404, 1.

118 BMWi, "Renewable Energy," 2018.

119 Craig Morris, "Share of German Citizen Renewable Energy Shrinking," Energy Transition (blog), February 7, 2018, https://energytransition.org/2018/02/share-of-german-citizen-renewable-energy-shrinking/.

120 Franke et al, "How Winning over Rural Constituents Changed the Political Discussions on Renewables."

121 David Meyer, "95% of Germans Support Green Energy Subsidies Despite Their High Price," Fortune, August 8, 2017, http://fortune.com/2017/08/08/germans-renewable-energy-energiewende-subsidies/. Just as remarkably, 56% of Germans said their average annual electricity bill surcharge of around 240 euros was either reasonable or too low.

122 Former EPA Administrator Scott Pruitt, quoted in "Scott Pruitt Signs a Measure to Repeal the Clean Power Plan," The Economist, October 10, 2017, https://www.economist.com/democracy-in-america/2017/10/10/scott-pruitt-signs-a-measure-to-repeal-the-clean-power-plan.

123 BMU supra note 29; see also, e.g., BMU, "The Integrated Energy and Climate Programme," 14: ("it is therefore...their own interest").

technical research and development, but social and cultural research to increase understanding of "how people perceive climate change, what consequences it has for their lives, and...how all sections of the population can be included and social acceptance fostered."[124] This sort of holistic environmental-political idea—linking often-separated human categories like "social," "cultural," and "economic" into a continuous whole addressing the state of the public under the banner of the issue of climate change—is, as we have seen, quintessentially modern German.

If the *Energiewende* is supposed to be an endeavor which involves all sectors of society and is positively viewed by both the government and the public—the first and third of Hegel's three spheres of consciousness in ethical life[125]—where does that leave German businesses, the key element in Hegel's second sphere of civil society? How do economic actors understand this initiative that has cost so much? For one, the high level of popular support, combined with consistent governmental action, guarantees that German businesses—though they might not be automatically inclined to accommodate the demands of the *Energiewende*—have little choice but to make the best of it and adapt, as they are squeezed from above and below. This is particularly true of energy companies: as one former utilities executive put it, the *Energiewende* is "an irreversible process now."[126] The country's two largest power companies have both in recent years split in two, with one company emerging dedicated to traditional fuels and one to renewables.[127] Germany's environmental-political imagination as realized in the *Energiewende* is thus not a utopian one, where achievement of the large social transition demanded by sharp emissions reductions arises from simple good will and is painless for all. However, given the demanding goal, what is required is clear: as the 2020 climate plan put it, "The energy industry is the sector with the highest greenhouse gas emissions and the greatest technical and economic potential for reduction."[128] But while certain big businesses may not be happy, others are, as smaller companies dedicated to the production, installation, equipment, and maintenance of renewable energy technology have sprung up and the *Energiewende* has gained the support of industry groups like the German Confederation of Small and Medium-Sized Enterprises.[129] Plus, the collectivist temperament of the *Energiewende* extends to the hurt businesses: The government has pledged to work, including at EU level,

124 BMU, "The Integrated Energy and Climate Programme," 65.

125 Paul Redding, "Georg Wilhelm Friedrich Hegel," in The Stanford Encyclopedia of Philosophy, ed. Edward N. Zalta, Summer 2018 (Metaphysics Research Lab, Stanford University, 2018), https://plato.stanford.edu/archives/sum2018/entries/hegel/.

126 Thomas Birr, quoted in Ball, "Germany's High-Priced Energy Revolution."

127 Ball, "Germany's High-Priced Energy Revolution."

128 BMU, supra note 34, at 16.

129 Franke et al, "How Winning over Rural Constituents Changed the Political Discussions on Renewables"; for a more general discussion of the Energiewende and small- to medium-sized enterprises (SMEs), see "The German Government's Climate Action Programme 2020," BMU, 15.

to create job opportunities in regions most affected by the switch to renewables.[130]

The dominant German conception of political leadership on environment outside its own borders is close to the imagination just described inside them. The federal government claims and demonstrates responsible leadership by example, acknowledging its interdependence with other nations without which a major dent cannot be made in international environmental issues like climate change, then expects them to follow suit just as it expects its own citizens and private enterprises to contribute to the *Energiewende*. This ideal of leadership, as read through Germany's public statements and actions, is recognizable on both the European stage and the global stage. At the European level, Germany casts itself as a proudly trustworthy friend acting in solidarity for the larger collective European cause of which it is a part, willing to take on heavy burdens to encourage action by others. In the BMU's words, "Germany's climate policy is embedded in European and international agreements and legal obligations. Germany has always been a reliable partner in international and European climate policy."[131] Since the early 2000s, it has shown leadership multiple significant times in the EU. First, following the publication of the Stern Report on the Economics of Climate Change in 2006, which argued that the worst effects of climate change could still be prevented with rapid and concerted action,[132] Germany led the EU during its Presidency of the Council of the European Union to its landmark 20-20-20 targets, which committed the EU as a whole to 20% reductions in CO2 emissions, 20% of power from renewable energy, and 20% increased energy efficiency levels by 2020.[133] Shortly after, in 2007, it passed major *Energiewende* legislation doubling these EU baseline commitments, pledging to cut its own CO2 emissions 40% by 2020.[134] For the most part, the EU has followed suit. As of August 2018, it is on track to meet its 20-20-20 commitment,[135] and several EU countries have now caught up to Germany in terms of emissions cuts and renewables production.[136] To exactly what extent these positive changes would have occurred without Germany taking leadership on the issue through the *Energiewende* is impossible to say, but its leadership has been

130 "The Energy of the Future: Fourth 'Energy Transition' Monitoring Report – Summary" (The Federal Ministry for Economic Affairs and Energy (BMWi), November 2015), https://www.bmwi.de/Redaktion/EN/Publikationen/vierter-monitoring-bericht-energie-der-zukunft-kurzfassung.pdf?__blob=publicationFile&v=1.

131 BMU, supra note 34, at 18.

132 Nicholas Stern, The Economics of Climate Change: The Stern Review (Cambridge, UK ; New York: Cambridge University Press, 2007).

133 European Environment Agency (EEA), Overall Progress Towards the European Union's '20-20-20' Climate and Energy Targets (2018), https://www.eea.europa.eu/themes/climate/trends-and-projections-in-europe/trends-and-projections-in-europe-2017/overall-progress-towards-the-european.

134 BMU, "The Integrated Energy and Climate Programme," 3.

135 EEA, supra note 127.

136 Kerstine Appunn et al, Germany's Energy Consumption and Power Mix in Charts, Apr. 3, 2018, Clean Energy Wire, https://www.cleanenergywire.org/factsheets/germanys-energy-consumption-and-power-mix-charts.

immensely publicized and other nations have both followed in its footsteps and learned from its mistakes.

Germany's actions on the global stage in the 21st century have also evinced an imagination of itself as a responsible actor seeking to initiate a reciprocal exchange of actions rather than to gain credit for its own glory. The aforementioned 2007 decision to cut CO2 emissions 40% by 2020, the "Meseberg decision," also immediately preceded the 2007 UN Climate Change Conference (COP13) in Bali. The government's statement on the legislation proclaimed,

> By implementing the key elements adopted in Meseberg, Germany is demonstrating that climate protection can be implemented in all sectors in an economically viable way. With Meseberg we are moving away from the attitude in international climate policy of "you first" towards "this is what I'm doing, what about you?" This is the only way to break the deadlock in international negotiations.[137]

The negotiations at COP13 in Bali ultimately achieved somewhat underwhelming results,[138] in part due to strong US objections to a proposal by developing countries. However, Germany's 21st-century form of climate leadership by example has been durable and persistent despite international mediocrity: seven years after Bali, it put forth a new and more ambitious emissions reductions plan ahead of the 2015 UN Climate Change Conference (COP21) in Paris, which finally produced a (limited) international breakthrough in the form of the landmark Paris Agreement. Recycling their argument from the domestic context that emissions reductions and renewable power are crucial for economic modernization, ahead of Paris, Germany wrote that "Germany can, and must, play a key role internationally and must demonstrate that taking climate action in an industrialised country does work and, in fact, is crucial for any economy that wants to be competitive in the 21st century."[139]

While climate change is today's signal international environmental issue, it is not the case that Germany's sharp international environmental-political desire for responsible, reciprocal action is limited to climate and energy. There is a broader environmental conceptual connectivity, a common language for understanding environmental issues that must be politically approached, at work. For instance, in the context of biodiversity preservation, one of the UN Sustainable Development Goals,[140] a prominent German environmental NGO argued, "only if we in Germa-

137 BMU, "The Integrated Energy and Climate Programme," 14.
138 Peter M. Haas, Climate Change Governance after Bali, 8:3 Global Environmental Politics 1-7 (2008).
139 BMU, supra note 34, at 9.
140 "About the Sustainable Development Goals," United Nations Sustainable Development, accessed January

ny take the lead and preserve...habitats from destruction, will we also be able to expect such conservation ideas to take root in poorer countries."[141] A likely important factor contributing to this keen perception of international interdependence and leadership on environmental issues in Germany is its position in the center of Europe, caught as the most important nation in a terrestrial geographic web of dense population, commerce, borders, and laws. This position plays a part in both cross-border environmental issues that Germany must aid in solving, and issues of energy dependence: Germany depends on nearby, oil-rich, unfriendly Russia for 40% of its oil imports[142] and a significant quantity of natural gas to boot, a position that increasing its supply of renewables through the *Energiewende* aims to help it escape.

The last feature of leadership and agency as understood in the modern continuous, collectivist German environmental-political imagination that I shall discuss here is its leaders' respect for the temporal continuity of policy. This is well exemplified in the logical coherence of *Energiewende* policy since the turn of the millennium. Successive German central governments, for the most part, do not feel empowered or motivated to craft a climate and energy policy that is entirely their own. Instead, they adjust old policies and craft innovative ones atop an established structure that keeps the original fundamental goals intact, bespeaking a respect for prior action and an effective norm that holds it unacceptable to simply throw out the work of previous governments and attempt to start over. This pattern is a temporal corollary to the emphasis on social solidarity and collective action discussed so far that characterizes German environmental leadership.

This persistent, collective gradualism is visible in the official discourse of the *Energiewende*: most laws, policy announcements, and statements by political leaders include provisions for frequent recalibration of the policies designed to cut emissions and increase renewables use.[143] For instance, the government in 2007 assured people at the outset of its doubling of emissions cuts targets that, in the event of ineffectiveness or cost-inefficiency in the design of the policy, its mechanisms would be redesigned.[144] Such assurances are often accompanied by exhortatory language about the value of determination and staying the course. For

5, 2019, https://www.un.org/sustainabledevelopment/sustainable-development-goals/.

141 "Wilderness in Germany," Zoologische Gesellschaft Frankfurt, accessed January 5, 2019, https://fzs.org/en/projects/wildnis/.

142 Sören Amelang and Julian Wettengel, "Germany's Dependence on Imported Fossil Fuels," Clean Energy Wire, June 22, 2015, https://www.cleanenergywire.org/factsheets/germanys-dependence-imported-fossil-fuels.

143 See, e.g., Hendricks, Foreword, in "The German Government's Climate Action Programme 2020 - Cabinet Decision of 3 December 2014"; BMU supra note 15, at 13; BMU, "The Integrated Energy and Climate Programme," 13: ("the reduction requirement may be higher or lower and will be constantly reviewed until 2020."

144 BMU, "The Integrated Energy and Climate Programme," 11.

instance, from the minister of the BMU's foreword to the 2020 Climate Action Programme: "Germany's *Energiewende*, or energy transition, is an encouraging example...despite all the challenges its details pose. We intend to continue down this route—with everyone on board, including each individual sector of the economy."[145] As in the case of its domestic inclusion and international leadership, this ambitious talk has generally in the *Energiewende* been convincingly backed by action. The sheer volume of legislation passed each year to update and fine-tune the *Energiewende*, usually in the direction of greater policy ambition, is a testament to a deep-seated incrementalist perseverance. The repeated revisiting of the 2000 Renewable Energy Sources Act is a good example of this. New versions of the act have been passed five times since its original passage, in order to update its pricing mechanisms and the rates of its energy subsidies in light of new evidence and emissions reductions progress, but the core structure has remained in place.[146] This is undoubtedly thanks in part to the way it and other *Energiewende* policies have intentionally involved and benefited individual citizens, such that reversing it would be fatally unpopular, but updating it remains popularly accepted.

This patience of the German environmental-imagination when it comes to leadership and effective action also guarantees that beneficial policy experiments are encouraged, and the government can learn from its mistakes. For instance, after a successful experimental cross-border wind energy auction with Denmark, Germany laid plans to expand its cross-border renewables connectivity within Europe.[147] Such experimentation and improvement within a broader continuity rarely occurs in a modern US environmental-political context defined largely by the desire of each administration to craft its own signature policies on key issues like energy. In the US, more typical than a rhetoric of adjustment, gradual improvement, and persistence are words like "repeal," "rule unconstitutional," and "replace."[148] This pendulum effect on climate and energy policy in the US reflects an environment of partisan hostility, certainly, but also a vision of environmental politics as a zero-sum game played between individuated competing parties. Moreover, the German imagination of temporal continuity and gradual adjustment of laws dovetails with a conceptual continuity of environmental outcomes, which is the opposite of the American case. In contemporary Germany, the climate problem, along with environmental problems generally, tends not to be framed as a binary with either an outcome of glorious victory or devastating failure depending on which of competing policies is selected. Instead, a more realist, incremental

145 Hendricks, Foreword, in "The German Government's Climate Action Programme 2020 - Cabinet Decision of 3 December 2014" 6.
146 BMWi, "Renewable Energy."
147 BMWi, "Renewable Energy."
148 See, e.g., Meyer, "How Obama Could Lose His Big Climate Case."

perspective prevails: better environmental outcomes can be achieved on a spectrum of possible outcomes by improving the design and implementation of laws. As a BMU dossier explaining Germany's climate policies put it, "Climate change cannot be reversed...Nevertheless, it is still possible to slow down climate change and limit its impacts on humans and the environment."[149] Words like "fighting" climate change, rather than "solving" it or "defeating" it, are common.[150] Accordingly, Germany has not just emissions reductions plans, but an official strategy for adaptation to climate change.[151] The US, where action on climate change tends to be framed as either part of a once-and-for-all climate solution or a total failure, has no such plan. There is no place in American environmental-political rhetoric for a reasoned gradualism, even an urgent one: as Obama put it, ours is "the last generation"[152] that can do something about climate change, and that "doing something" is cast usually as "solving" climate change, or failing to do so.[153] Rather than climate change becoming progressively worse the less each generation acts to prevent it, in this imagination the generation of today becomes "the last generation" that can act, the glorious individual agent who either succeeds or fails. The desire in the US political imagination for glorious leadership by a particular individual or group is not limited to competing parties or economic interests, then, but extends over time: America particularizes the present. In Germany, by contrast, persistence, gradualism, and the principle of "fairness between generations"[154] deeply influences the German moral and political compass and produces an approach to policy better suited to the problem of CO2 emissions itself: needful of sustained cuts over time and productive of a problem that can get a bit worse when policy is a bit less effective.

To conclude this section: in the German environmental-political imagination, climate change is an issue of collective responsibility on which Germany ought to lead in a persistent, patient, and reciprocal way, both domestically and internationally, with participation from the top to the bottom of society and benefit

149 Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, "What is climate action about?," Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit, accessed January 5, 2019, https://www.bmu.de/en/topics/climate-energy/climate/what-is-climate-action-about/.

150 See, e.g., "Fighting Climate Change," Energy Transition, accessed January 5, 2019, https://book.energytransition.org/fighting-climate-change.

151 See generally German Federal Government, "German Strategy for Adaptation to Climate Change," December 17, 2008, https://www.bmu.de/fileadmin/bmu-import/files/english/pdf/application/pdf/das_gesamt_en_bf.pdf.

152 See Obama, "Remarks Announcing the Environmental Protection Agency's Clean Power Plan.

153 See, e.g., "Global Warming Solutions: Reduce Emissions," Union of Concerned Scientists, accessed January 5, 2019, https://www.ucsusa.org/our-work/global-warming/solutions/global-warming-solutions-reduce-emissions.

154 BMWi and BMU, "Energy Concept for an Environmentally Sound, Reliable and Affordable Energy Supply."

for all involved.

III. Objections and Clarifications

Here, I shall briefly outline and answer a few objections to the arguments I provide in the following sections. One potential question raised by the discussion of Germany's stance toward international action concerns the EU is the following: given the EU's size and active role in coordinating climate action, might it not be more productive to compare the US with the entire EU than with Germany alone? Comparing the EU directly to the US in terms of climate policy and environmental-political imagination would itself be an interesting case study. However, given the size, diversity, and complex, sui generis institutional structure of the EU, this is a task of far greater magnitude than a comparison between two nation-states alone. The idea behind this objection retains some force to the extent that, because of the influence of the EU, Germany and the US are no longer ruled by as fundamentally similar a system of laws as they used to be, and the emergent culture and society of the EU likely has relevant imaginative properties worth examining apart from Germany's, particularly in the area of climate change where the EU acts as one to a significant degree. In a sense, it is impossible to discuss Germany's environmental-political imagination without considering the influence of the EU, because, as argued briefly in the essay, it seems likely that Germany's position within the EU helps explain the German environmental-political imagination's crucial emphasis on interconnectedness and reciprocal collective action. The US has no comparably binding commitments to simultaneously lead and follow, and accordingly has comparatively little imaginative capacity for the idea of American connectedness with the rest of the world, except when that connectedness means unchallenged American leadership.

Another potential question raised by the essay's argument is that, while factors of basic economic structure cannot fully account for the divergence in the two nations' climate policy, could we not consider this divergence more an accidental outcome of political structure in the two nations than anything more deeply philosophical, a matter mainly of accidental differences in electoral outcomes and how specific interest groups in each country behave? This objection, at bottom, rests on a misunderstanding of the nature of the environmental-political imagination as an object of analysis and of its ability to causally account for events in the world. I do not wish to discount the impact on policy of political structures and mechanisms that might be studied by, say, a quantitatively-oriented social scientist. The environmental-political imagination concept is not meant to displace such explanations, but to orient our view of them from the perspective of the notions at work within individuals and institutions so that the human inputs to

such political structures can be more fully understood. On the issue of electoral structure and outcomes, there is certainly a degree of randomness inherent in the policy outcomes of any large modern democratic state, some of which depends on how the party system is structured. However, the fact remains that these are participatory democracies, and their elected officials can still be taken to reflect the will of their people—informed by the environmental-political imagination—to a significant degree. Interest group politics can be understood to a significant extent by using the environmental-political imagination concept as well: the environmental-imagination can be thought of as both an input into and an output of the political views of any particular interest group. Our views on what course of action should be taken regarding the environment, or any other issue, are never merely a function of one-dimensional group or individual interest alone; such one-dimensional expressions of support or opposition are formed through complex systems of values as well as perceptions of political fairness and agency, which can change over time and are influenced by what other people and groups express and do. The environmental-political imagination attempts to capture the emergent aspects of this murky sphere of underlying mental content as it continuously works its way through human political systems, in this case by critically scrutinizing the complex, highly varied, sometimes internally contradictory process of (in this case, federal) policy creation.

Still another possible response to this characterization of the German and American imaginations is that, given America's deep division and Germany's relative unity, perhaps it is not useful to speak of a single "American environmental-political imagination" at all, and instead decompose the US imagination into different forms for the two competing political camps or for different regions. It is true that views on what should be done with respect to the environment generally, and climate and energy particularly, are quite polarized in the US. However, all Americans still operate in the context of federal government policy, are influenced by it, and respond to it in some way, which, as I have attempted to show, creates a set of broadly held imaginative patterns which are more general than opposing ideological views on particular policies. Putting it briefly, the American imagination of the environmental and economic spheres is a shared substratum upon which people build their polarized views by sorting their preferences into different of these sharply defined categories. American division is itself part of the American environmental-political imagination. It is also important to note, however, that my characterization of the environmental-political imagination in both the US and Germany ought to be taken as a sketch, a discussion of contours I see as certainly present and probably dominant but also non-exhaustive. My aim was not to provide the last word on this underlying substance, but to discuss it in its relation to a pair of policies of great and undoubtable importance to climate change.

Conclusion

Viewed from the perspective of global climate change, the future of these laws is, in a sense, the only thing that ultimately matters. But the future of the CPP and the *Energiewende* remain deeply unclear. Will a Democrat be elected president in 2020 and reinstitute the CPP or something much like it, swinging the pendulum of American climate policy to the left, imaginatively pro-environmental and anti-economic side again? Will high energy costs or an economic downturn finally begin to erode public support for the *Energiewende*? Time will tell if the ideals of solidarity and persistent, collective leadership that have characterized German energy policy to this point in the century will remain robust in the face of future obstacles. Open legal and political questions whose outcomes could set off important effects in the environmental-political imagination, particularly in the US, include how the many climate-related lawsuits making their way through the courts will ultimately turn out, and whether individual states can succeed in doing what the federal government will not. We are in a position now to say that prediction of these outcomes is more or less impossible given only the information discussed here, largely because examination of these attitudes and logics in their 21st-century context has shown how rooted in deeper history they are, shaped by constitutional law, institutional structure, and cultural attitudes dating back decades or further. It is easy to see, though, that, assuming that cutting emissions to curb climate change is a global goal, and that progress toward it ought to be led by richer countries more historically responsible for greenhouse gas emissions and better-equipped than developing countries to adapt to climate change, Germany has made vastly more progress than the United States. This is not to say that Germany is perfect; despite its significant progress in cutting emissions, not all of its goals are being met on time. It remains the EU's largest CO2 emitter, and among the largest several EU economies it has fallen behind the UK in terms of percentage CO2 emissions reductions since 1990. Even given comparative German success, though, it is an open question whether the US should attempt to learn from Germany's example, whether it could hope to intentionally piece together within its borders some of the imaginative elements that make for Germany's relative success in crafting effective policy on climate and energy. Simple normative commentary in support of the general idea that the US ought to "learn from the German imaginative example" seems, for the most part, facile, because what is at issue are complex and multifaceted mental arrangements engaging many different ideas about nature, morality, economy, and national identity. Saying the US should attempt to generally approximate the German example just seems wrong.

The most honest answer, in this era of crisis across so much of American

law and politics, is that we simply don't know what will happen to US climate politics, or indeed what the range of possibilities might be for when we are spit out the other side. This admission tempts many to despair, to "compose their feelings into the right existential attitude" about the fate of the planet and our capacity to act, and feel that has been enough. I maintain instead that there can be a deep well of hope in unpredictably. The stakes are high for both the United States and Germany, and their climate action itself turns out to be, after all, inextricably interconnected: because of Germany's relatively small share of global CO2 emissions, the *Energiewende* can, despite its imperfections, still be judged successful in climate terms—and can only be judged successful in climate terms—if it inspires other nations to follow its example. There is no more significant nation, on a global scale, that could follow suit than the United States. As Purdy writes, "addressing climate change means making new values or adapting old ones"; therefore, with public support in its own nation overwhelmingly behind it, old values adapted and new values forged, the meaning of Germany's climate project may depend more than anything now on the changing of American minds.

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