THE RIGHTEOUS DIVIDE IN ENVIRONMENTAL POLICYMAKING

Blake Hudson[*]

Both liberals and conservatives have blind spots when pursuing their policy preferences. But those blind spots have become more pronounced in our nation's hyper-partisan political environment, with serious consequences for our country and the globe (e.g., climate change policy). This article explores partisan blind spots through the lens of social psychologist Jonathan Haidt's recent book "The Righteous Mind," where he describes six foundational principles of morality—Care, Fairness, Liberty, Loyalty, Authority, and Sanctity—and analyzes which of those principles are relied upon to greater or lesser degrees by liberals and conservatives. Haidt argues, based upon numerous studies, that moral intuitions come first, and moral reasoning second.[1] *Intuitions can be swayed by reason, but not until a party engages the intuitive impulse of the "other side."*[2] *His findings provide a lens through which to view liberals and conservatives who so often speak past each other—they use different moral frameworks, with profound implications for policymaking. This article first describes Haidt's work, and then details case studies of policy blind spots—three liberal and three conservative—demonstrating how liberal and conservative moral intuitions can lead them to, for example, reject science when it goes against initial intuitive impulses (liberals) or sacrifice values central to their chosen political leaning by readily trading certain foundational principles for others (conservatives). Understanding the balance of moral intuitions relied upon by liberals and conservatives in specific policy scenarios helps us understand how to achieve more effective policy, and the article concludes with some suggestions for how to do so.*

---

[*]Dean and Professor of Law, Cumberland School of Law at Samford University. For their insights into this project, I wish to thank Michael Vandenberg, Shi-Ling Hsu, Nathan Richardson, Victor Flatt, Donald Hornstein, Jonathan Skinner-Thompson, Hannah Wiseman, and the participants in the 2021 Southeastern Environmental Law Scholars Workshop. Thanks also to Ed Richards, for his insights into the specific arguments made in this paper and for always challenging me to think critically about complex issues. Finally, I would like to thank the editors of the *Law & Psychology Review* for their tireless work in editing this article.

1. *See* JONATHAN HAIDT, THE RIGHTEOUS MIND: WHY GOOD PEOPLE ARE DIVIDED BY POLITICS AND RELIGION xiv (2012).

2. *Id.*

TABLE OF CONTENTS

I. INTRODUCTION 99
II. A SOCIAL PSYCHOLOGY EXPLANATION FOR RIGHTEOUS PARTISANSHIP 103
A. The Social-Psychological Premise *103*
B. Foundations of Morality *105*
C. Factors Affecting Liberal and Conservative Blind Spots *108*
1. Accountability 108
2. Teams 110
3. The Conservative Advantage 111
III. LIBERAL BLIND SPOTS 113
A. Genetically Modified Organisms (GMOs) *113*
B. Coastal Restoration *118*
C. Woody Biomass-Generated Electricity *124*
IV. RIGHTEOUS CONSERVATIVE BLIND SPOTS 134
A. Opposition to Renewable Energy *134*
B. Sanctity of Life, Mercury Pollution, and Climate Change *139*
C. Interference in Fossil Fuel Divestment *144*
V. CONCLUDING THOUGHTS: NARROWING THE RIGHTEOUS DIVIDE 148
A. Associational Messaging *149*
B. Private Governance *152*
C. "Know Thyself" *157*

> "On issue after issue, it's as though liberals are trying to help a subset of bees (which really does need help) even if doing so damages the hive. Such 'reforms' may lower the overall welfare of a society, and sometimes they even hurt the very victims liberals were trying to help."[3]

> "[C]onservatives . . . often fail to notice certain classes of victims, fail to limit the predations of certain powerful interests, and fail to see the need to change or update institutions as times change."[4]

I. INTRODUCTION

Imagine liberal activists that support coastal restoration and the renourishment of barrier islands along the Gulf Coast, or that oppose cutting down forests, land development initiatives, and the continued operation of coal-fired power plants. These are exactly the positions one might expect environmental groups to take. But what if by doing so these advocates cause more environmental harm than good?[5] What if, as sea levels and temperatures rise, this activism results in stranded assets in the coastal zone or deltaic river systems, more carbon dioxide in the atmosphere, and increased urban sprawl?

Now imagine conservative groups that advocate for personal responsibility and independence from the government, for the sanctity of life and against abortion, and for private corporations to be free to make investment choices without government interference. These are exactly the positions one might expect conservative groups to take. But what if these conservatives oppose distributed solar generation, even though homeowners gaining energy independence by separating from a government-run electric grid is the definition of personal responsibility? What if they resist mercury pollution regulations that could save the lives of infants living near coal-fired power plants? Is that not a pro-life issue? What if conservatives encourage the Department of Justice to place political pressure on companies divesting from fossil fuels and coerce them not to do so? That sounds more like a tactic of an autocratic Chinese or Venezuelan government than an approach that would be supported by principled U.S. conservatives.What causes the polarized left

3. *Id.* at 361.

4. *Id.* at 343.

5. Examples would include restoration projects that fail and are washed away because they cannot keep pace with sea level rise; opposition to cutting forests that leads to forest owners permanently converting timber to other uses (because they have no market into which to sell their timber and no incentive to reforest); opposition to urban infill projects that result in greater urban sprawl; and calling for an immediate shut-down of a coal plant, which forces capital investments in natural gas conversion, ensuring that fossil fuels will be used at the plant for the next fifty years (as opposed to a slower decommissioning of the coal plant that would allow renewables to phase into use).

and right to have such glaring blind spots? What causes an environmental group to take a position that, while seeming consistent with their general worldview, is in fact wrong based on the science? From climate change to Covid-19, media discussions are rife with talk of how conservative, anti-environment groups oppose science and fact.[6] Although it may be more veiled and receive less attention, environmental activists can be equally prone to denying science and evidence contrary to their policy predispositions, environmental management preferences, and governance worldview.[7]

Likewise, what causes a conservative group to go completely against principles that are supposedly central to conservatism? To retreat from espoused positions just to "own the libs"?[8] To abandon conservative principles just because the policy area in question focuses on environmental protection or other "liberal" goals of government policy?

This article explores some notable examples of how the left and right can be blinded by their own "righteousness," leading to illogical moral compromises. The article grounds reasons for this behavior in the social and behavioral psychology framework provided by Jonathan Haidt in his book, *The Righteous Mind*.[9] The basic premise of Haidt's work is that humans are driven by moral intuitions first and rational reasoning second.[10] As a result, individuals, or even groups that represent like-minded individuals (such as environmental advocacy groups or conservative think-tanks), are pre-disposed to remain on a trajectory in line with their baseline moral intuitions and can only be persuaded otherwise through rational reasoning once those with a competing vision first wrestle with that intuitive point of view. Haidt describes moral intuition as an elephant, while moral reasoning is the elephant's rider.[11] The rider can sway the elephant, but intuition, like an elephant, has great inertia toward a destination and can be difficult to control.[12] Haidt's research identifies six foundations of morality that are utilized to different degrees

6. *See* Matthew Dallek, *The GOP has a Long History of Ignoring Science. Trump Turned it into Policy*, WASH. POST (Oct. 9, 2020, 11:40 AM), https://www.washingtonpost.com/outlook/the-gop-has-a-long-history-of-ignoring-science-trump-turned-it-into-policy/2020/10/09/53574602-0917-11eb-859b-f9c27abe638d_story.html.

7. *See* Mischa Fisher, *The Republican Party Isn't Really the Anti-Science Party*, THE ATLANTIC (Nov. 11, 2013), https://www.theatlantic.com/politics/archive/2013/11/the-republican-party-isnt-really-the-anti-science-party/281219/.

8. Derek Robertson, *How 'Owning the Libs' Became the GOP's Core Belief*, POLITICO (Mar. 21, 2021, 7:22 AM), https://www.politico.com/news/magazine/2021/03/21/owning-the-libs-history-trump-politics-pop-culture-477203.

9. HAIDT, *supra* note 1, at 361.

10. *Id.* at 61, 75, 82–83.

11. *Id.* at 53–54.

12. *See id.*

by the left and the right: Care, Fairness, Liberty, Loyalty, Authority, and Sanctity.[13] Haidt uses these foundations to directly tackle the psychology behind political leanings and uncover some key differences between the mix of moral foundations used by liberals and conservatives. Liberals rely almost exclusively on the Care and Fairness (and sometimes Liberty) foundations, whereas conservatives rely on all six foundations.[14]

Scholars have written extensively on the behavioral science of individual policy preferences (cultural cognition theory, tribalism, etc.).[15] Haidt's work, however, is the first to empirically demonstrate that differences in the moral matrices used by liberals and conservatives predispose the left and right to allow their moral intuitions—what they believe *must* be true about a policy position—to interfere with moral reasoning about what the preferable policy is or should be.[16] This article uses environmental policy case studies to explore Haidt's work because it is a policy area where examples of this phenomenon exist on both sides of the political spectrum.

---

13. *Id.* at 152, 209–10.

14. *Id.* at 183–84.

15. For example, Dan Kahan has argued that as people obtain more scientific knowledge they become more polarized instead of agreeing on conclusions supported by facts. *See* Dan M. Kahan, *Why Smart People Are Vulnerable to Putting Tribe Before Truth*, SCI. AM. (Dec. 3, 2018), https://blogs.scientificamerican.com/observations/why-smart-people-are-vulnerable-to-putting-tribe-before-truth/. Kahan uses climate change as an example of how "people with different values draw different inferences from the same evidence." Dan Kahan, *Why We Are Poles Apart on Climate Change*, 488 NATURE 255, 255 (2012). This polarization is not a result of the public's inability to comprehend information they receive, but rather the desire to form beliefs consistent with those of the group to which they belong. Donald Braman et al., *The Polarizing Impact of Science Literacy and Numeracy on Perceived Climate Change Risks*, 2 NATURE CLIMATE CHANGE 732, 732 (2012). Kahan has explored how individuals reach different conclusions about societal risks, such as climate change, through the cultural theory of risk. *See* Dan M. Kahan & Donald Braman, *More Statistics, Less Persuasion: A Cultural Theory of Gun-Risk Perceptions*, 151 U. PA. L. REV. 1291, 1295 (2003). Individuals often accept or reject risks based on whether the decision corresponds with social norms, instead of appreciating the true measure of a risk. *Id.* at 1296. Mary Douglas has also used the cultural theory of risk to argue that society's attitude about risk and what is dangerous is based not on a rational process, but rather on cultural, moral, and political factors. *See* MARY DOUGLAS & AARON WILDAVSKY, RISK AND CULTURE: AN ESSAY ON THE SELECTION OF TECHNOLOGICAL AND ENVIRONMENTAL DANGERS (1982); *see also* Mary Douglas, *Being Fair to Hierarchists*, 161 U. PA. L. REV. 1349, 1351 (2003) ("[Q]uestions about risk perception [are] concerned with communally shared opinions."). In contrast, Daniel Kahneman has argued for a formal analytical method of risk calculation and decision making where values can be assigned to personal gains and losses. *See* Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263, 263 (1979). Kahneman's views of high-stake decision making are founded on the idea that each person possesses a two-system thought process involving an intuitive system that reacts automatically when faced with a decision, and a second system that requires concentration to make more focused and engaged decisions. *See* DANIEL KAHNEMAN, THINKING, FAST AND SLOW (2013).

16. *See generally* HAIDT, *supra* note 1.

In case studies of liberal rejection of inconvenient science,[17] the scientific questions are, at the least, far more complex than environmental groups are willing to acknowledge, and at the most, contrary to the science. But liberal group reliance on only two moral foundations sometimes causes them to fail to see relevant policy considerations arising out of other foundations that could change their understanding of the science and the potential policy responses to the science. At other times, environmental groups (ironically) let the passion with which they reject other moral foundations blind them to Care and Fairness concerns. Examples of liberal blind spots include the use of genetically modified organisms in agriculture, coastal restoration in rapidly subsiding coastal areas like Louisiana, and the use of woody biomass for electricity generation.

Conservatives reject espoused principles of conservatism in the case studies presented here because it is easier for conservatives to trade certain of the six foundations for others, which can lead to illogical outcomes. This article looks at examples including conservative opposition to distributed (rooftop) solar generation, opposition to mercury and greenhouse gas pollution controls that could save lives, and encouragement of government meddling in markets and private corporate investment decisions. Because conservatives operate across the full spectrum of moral foundations, they are more willing to trade certain moral foundations (Care, Fairness) for others, such as Liberty when government policy is prescriptive in nature (mercury or climate regulations) or Loyalty when vested interests are at risk of becoming displaced (electric utilities in the context of rooftop solar; fossil fuel companies in the context of divestment).

Part II provides an overview of Haidt's social-psychology framework and details three factors that entrench liberal and conservative blind spots and lead to policy-making impasses. Parts III and IV include case studies of liberal and conservative blind spots, first describing the controversies and the standard liberal and conservative responses to them before delving into the social psychology underpinning these responses. Each case study concludes with application of Haidt's moral foundations principles to shed light on the drivers of blind spots so that each side can better understand their own intuitions and the intuitions of the

17. Environmental policymaking is rife with trade-offs, of course. We know that DDT, notwithstanding its effectiveness in killing disease-laden insects, causes cancer. *DDT – A Brief History and Status*, U.S. ENV'T PROT. AGENCY (Apr. 21, 2022), https://www.epa.gov/ingredients-used-pesticide-products/ddt-brief-history-and-status. In the U.S., where malaria is under control it makes sense to ban the use of DDT. But in certain developing countries, where malaria is a problem, the use of DDT may be desperately needed. In a region where a high percentage of the population dies before the age of 20 from malaria, it is worth the heightened risk of dying from cancer at 60. This is a trade-off that is relatively straightforward, and we can fairly assess the costs and benefits of choosing one policy prescription (banning DDT) over the other (utilizing it). But this article is not focused on these kinds of trade-offs (though even in the examples here, there are certainly trade-offs to consider).

other side. Only then can moral reasoning allow them to work together more effectively in these policy areas. Finally, Part V concludes with some thoughts on how to improve engagement with liberal and conservative elephants (moral intuitions) so that moral reasoning (the rider) can shift group intuitions and lead to better policy outcomes.

II. A SOCIAL PSYCHOLOGY EXPLANATION FOR RIGHTEOUS PARTISANSHIP

A. The Social-Psychological Premise

This article introduces into the "policy success"[18] literature the groundbreaking research presented by Jonathan Haidt in his book, *The Righteous Mind*.[19] The book culminates from years of research studies undertaken by Haidt and colleagues to classify the various foundations of morality and to apply those principles in a way that helps explain the growing divide among segments of American society.[20] It is a tendency among the educated to believe that we reason our way through life. That we curb our basest instincts and tendencies through logic, and that those attributes of humans take a backseat as we improve our reasoning over time. But Haidt's work lends strong support for the conclusion that "[moral] *intuitions* come first, strategic reasoning second."[21] Reasoning is not our go to; it is a skill that humans have evolved to justify or defend intuitive impulses and "defend the teams we belong to."[22] Reasoned arguments are "mostly post hoc constructions made up on the fly, crafted to advance one or more strategic objectives."[23]

Haidt raises the issue of E.O. Wilson's inquiry into whether people support concepts like fundamental human rights "because such rights actually exist, like mathematical truths, sitting on a cosmic shelf . . . just waiting to be discovered by Platonic reasoners" (moral reasoning), or whether "people feel revulsion and sympathy when they read accounts of torture, and then invent a story about universal rights to help justify their feelings[]" (moral intuition).[24] Haidt concludes

18. *See generally* Blake Hudson, *Institutional Preconditions for Policy Success*, 89 TUL. L. REV. 669 (2015).

19. HAIDT, *supra* note 1.

20. *Id.* at 373–74.

21. *Id.* at xiv (alteration in emphasis).

22. *Id.*

23. *Id.*

24. *Id.* at 38. *See generally* DAVID SLOAN WILSON, DARWIN'S CATHEDRAL: EVOLUTION, RELIGION, AND THE NATURE OF SOCIETY (2002); David Sloan Wilson & Edward O. Wilson, *Rethinking the Theoretical Foundation of Sociobiology*, 84 Q. REV. BIOLOGY 327 (2007); Edward O. Wilson & David Sloan Wilson, *Evolution for the Good of the Group*, 96 AM. SCIENTIST 380 (Sept.-Oct. 2008); EDWARD O. WILSON, SOCIOBIOLOGY: THE NEW SYNTHESIS (1975); EDWARD O. WILSON, SUCCESS AND

that Wilson's belief in the latter has been proven out in the research though, at the time, Wilson was "excoriated" in public and even called a fascist and a racist.[25] His critics perceived, by saying moral intuition comes first and reasoning second, that Wilson was providing an overly simplistic evolutionary justification for how the mind works. For some, this must have sounded too much like evolutionary arguments made by eugenicists.

Haidt uses the metaphor of an elephant and its rider to describe the relationship between moral reasoning and moral intuition.[26] The elephant is moral intuition, while the rider is moral reasoning.[27] While moral reasoning can sway moral intuition, the way a rider can guide an elephant, the weight of moral intuition carries great inertia toward our ultimate destination (our conclusion about an issue).[28] To change someone or some group's mind about a political issue, Haidt recommends that we "talk to the elephant first" because "[i]f you ask people to believe something that violates their intuitions, they will devote their efforts to finding . . . a reason to doubt your argument or conclusion. They will almost always succeed."[29]

Haidt's conclusions are in line with those of Enlightenment philosopher David Hume who stated that "reason is a servant."[30] But according to Haidt, Hume "went too far" when he stated that reason was an absolute "'slave' of the passions."[31] While "[t]he elephant is far more powerful than the rider, [] it is not an absolute dictator."[32] The rider can keep the elephant from doing something that the rider recognizes is self-destructive, for example.[33] Other people's perspectives—if we will challenge our own moral intuitions and actually listen—can allow our rider to sway our elephant; our reasoning to sway our intuitive impulses.[34] Haidt also cites scientific studies demonstrating that a break in time after our initial flash of moral intuition can give our reasoning time to resume and help us overcome the initial

---

DOMINANCE IN ECOSYSTEMS: THE CASE OF THE SOCIAL INSECTS (1990); EDWARD O. WILSON, CONSILIENCE: THE UNITY OF KNOWLEDGE (1998); Edward O. Wilson & Bert Hölldobler, *Eusociality: Origin and Consequences*, 102 PROC. NAT'L ACAD. SCIS. U.S. 13, 367 (2005).

25. HAIDT, *supra* note 1, at 38. *See also* Elizabeth Allen et al., *Against Sociobiology*, N.Y. REV. BOOKS, Nov. 13, 1975, at 43–44; STEVEN PINKER, THE BLANK SLATE: THE MODERN DENIAL OF HUMAN NATURE (2002).

26. *See* HAIDT, *supra* note 1 at xv.

27. *Id.* at 52–56.

28. *Id.*

29. *Id.* at 59.

30. *Id.* at 79; *see also* DAVID HUME, A TREATISE OF HUMAN NATURE 415 (P.H. Nidditch ed., Oxford University Press, 2nd ed. 1978).

31. HAIDT, *supra* note 1, at 79; *see also* HUME, *supra* note 30, at 415.

32. HAIDT, *supra* note 1, at 79–80.

33. *Id.*

34. *See id.*

swerve of the elephant.[35] Have you ever felt a compulsion to immediately fire off an email to someone with whom you disagreed? But then, you slept on it and had a more productive interaction when you did eventually engage with that person? This is the break we need to allow reasoning to sway our intuition.

Haidt's view is not that we should give up on reason, but that we should understand reasoning in the hierarchy of our mental processes.[36] Intuition, the elephant, comes first while reasoning, the rider, is next, guiding intuition as well as it can (or as well as we will allow it to).[37] Haidt makes clear that we should not abandon reason for gut feelings, the latter of which may be great for "consumer choices and interpersonal judgments"[38] yet "are often disastrous as a basis for public policy, science, and law."[39] But everyone in our polarized society must see themselves as less righteous and understand that their intuitions create inertial force toward their policy preferences that is exceedingly difficult to overcome. Once the intuitive guardrails are down, then reason can do the necessary work of guiding intuition to a more appropriate conclusion.

B. Foundations of Morality

Haidt recognizes six basic moral foundations that people rely upon (paired with their opposite number): 1) Care (harm), 2) Fairness (cheating), 3) Liberty (oppression), 4) Loyalty (betrayal), 5) Authority (subversion), and 6) Sanctity (degradation).[40] The further to the left one is the more likely they are to rely upon the Care and certain iterations of the Fairness and Liberty foundations almost entirely.[41] Research in the U.S. and abroad concludes that the moral matrix of liberals everywhere rests disproportionately more on the "Care" foundation than does the matrix of conservatives.[42] The further to the right a person is the more likely they are to rely on all six foundations (adding Loyalty, Authority, and

35. *See id.* at 81–82 (citing Joseph M. Paxton et al., *Reflection and Reasoning in Moral Judgment*, 36 COGNITIVE SCI. 163 (2012), https://doi.org/10.1111/j.1551-6709.2011.01210.x).

36. *See* HAIDT, *supra* note 1, at 367–371.

37. *Id.* at 82–83.

38. *See id.* at 105 (citing TIMOTHY D. WILSON, STRANGERS TO OURSELVES: DISCOVERING THE ADAPTIVE UNCONSCIOUS 168 (2002); Timothy D. Wilson & Jonathan W. Schooler, *Thinking too Much: Introspection Can Reduce the Quality of Preferences and Decisions*, 60 J. PERSONALITY & SOC. PSYCH. 181 (1991)).

39. HAIDT, *supra* note 1, at 105 (citing JONATHAN BARON, JUDGMENT MISGUIDED: INTUITION AND ERROR IN PUBLIC DECISION MAKING 179–80 (1998)).

40. *Id.* at 146.

41. *Id.* at 351.

42. *Id.* at 157. *See* Jesse Graham et al., *Mapping the Moral Domain*, 101 J. PERSONALITY & SOC. PSYCH. 366, 379 (2011).

Sanctity) in equal parts.[43] So, Haidt concludes that liberals have a three-foundation morality, and conservatives a six-foundation morality.[44] Haidt's conclusion is based on more studies than can be highlighted in this article, but they include everything from experiments to surveys to brain imaging, and they cover a vast span of time. Consider just a few.

In brain imaging studies, liberal brains showed more surprise than conservative brains in response to sentences that rejected Care and Fairness concerns.[45] They also showed more surprise in response to sentences that endorsed Loyalty, Authority, and Sanctity concerns.[46] Here is an example of such a sentence: "In the teenage years, parental advice should be heeded" (a more likely conservative response) versus ". . . should be questioned" (a more likely liberal response).[47] So, when people self-describe with the labels "liberal" or "conservative," they are not using moral reasoning to choose different values.[48] Rather, "[w]ithin the first half second after hearing a statement, partisan brains are already reacting differently"—this is the dominance of moral intuition.[49] As Haidt notes, "[t]hese initial flashes of neural activity *are* the elephant, leaning slightly, which then causes their riders to reason differently, search for different kinds of evidence, and reach different conclusions. Intuitions come first, strategic reasoning second."[50]

In other experiments, liberals are far more likely to favor dogs that are gentle (the Care foundation) and relate to their owners as equals (the Fairness foundation), while conservatives prefer dogs that are loyal (Loyalty foundation) and obedient (Authority foundation).[51] Studies of their sermons reveal that Unitarian pastors are more likely to use words such as peace, care, compassion, suffer, cruel, brutal (the positive and negative sides of the Care foundation), while Southern Baptist pastors are far more likely to use words such as obey, duty, honor, defy, disrespect, and rebel (the positive and negative sides of the Authority foundation).[52] While I could describe scores of similar studies, Haidt's thorough work over many years demonstrates a marked difference in how liberals and conservatives make moral judgments, primarily by using intuition over reasoning.

---

43. *See* HAIDT, *supra* note 1, at 179, 357.
44. *Id.* at 183–84.
45. *Id.* at 189.
46. *Id.*
47. *Id.*
48. *Id.*
49. *Id.*
50. *Id.* (emphasis in original).
51. *Id.* at 188.
52. *Id.*

Not only do liberals and conservatives rely on different components of moral matrices, but they also interpret specific moral foundations differently.[53] For example, liberals associate Fairness with equality, whereas conservatives view Fairness as "proportionality" (i.e., people being rewarded in proportion to their contributions, even if unequal outcomes result).[54] After adjusting to account for this, Haidt refines his analysis to conclude that liberals actually base their moral worldview almost entirely on Care, Liberty, and Fairness *when it is understood as equality*.[55] When Fairness is limited to proportionality, as opposed to equality, it then becomes a part of the conservative moral framework to a greater degree than liberals'.[56] Liberals will also sacrifice Fairness as proportionality if it conflicts with compassion or fighting oppression (Care), while conservatives are more willing to sacrifice Care to promote the other five foundations.[57] There are even differences in how liberals and conservatives understand Sanctity.[58] While Sanctity on the right might be commonly associated with conservative religious leanings, on the left it may manifest as a view that the degradation of nature is an offense brought about by industrialist capitalism.[59] Ultimately, the mix of moral foundations relied upon by the left and right, the interpretations of specific foundations by liberals and conservatives, and the foundations that each side is willing to trade for others have potentially profound implications for our nation. Specifically, our nation's ability to either overcome the partisan divide or fall deeper into it, with important policy decisions hanging in the balance.

Parts III and IV discuss how these various moral foundations may shape liberal and conservative policy preferences on certain topics, while exposing blind spots on both sides. But first, the next section teases out three key factors that liberals and conservatives weaponize in a way that contributes to their self-perceived righteousness and that cause them to have blind spots that they are unable or unwilling to acknowledge.

---

53. *Id.*

54. *Id.* at 161.

55. *Id.* at 214.

56. *Id.* at 211–14.

57. *See id.; see also* Ravi Iyer et al., Understanding Libertarian Morality: The Psychological Roots of an Individualist Ideology 4 (Aug. 20, 2010) (unpublished manuscript) (on file with the University of Southern California Department of Psychology).

58. *See* HAIDT, *supra* note 1, at 176.

59. *See id.*; DERRICK JENSEN, HOW SHALL I LIVE MY LIFE? ON LIBERATING THE EARTH FROM CIVILIZATION (2008).

C. Factors Affecting Liberal and Conservative Blind Spots

1. Accountability

One reason that liberals and conservatives are increasingly polarized and adhere to their default moral matrices is a lack of accountability. Phil Tetlock is a leading researcher on accountability. His definition of accountability is the "explicit expectation that one will be called upon to justify one's beliefs, feelings, or actions to others" and the expectation that a person will be rewarded or punished based upon the strength of the justification.[60] One of Tetlock's experiments asked participants to study a legal case and make an inference regarding guilt or innocence.[61] Some were told they would have to explain their decision to others, while others knew they would not have to.[62] Tetlock found that the unaccountable group demonstrated typical cognitive errors, including laziness and reliance on gut feelings.[63] The group who knew they had to explain their reasoning to others engaged in more systematic and critical thinking and were "less likely to jump to premature conclusions and more likely to revise their beliefs in response to evidence."[64] However, the latter group's more careful reasoning was exploratory in nature ("evenhanded consideration of alternative points of view") rather than confirmatory thought ("a one-sided attempt to rationalize a particular point of view") only when three conditions were present: 1) decision-makers learn before forming an opinion that they will be accountable to an audience, 2) the audience's views are unknown, and 3) the party believes the audience is well informed and interested in accuracy.[65] If these conditions are not present, which Haidt argues is most of the time, then "accountability pressures simply increase confirmatory thought. People are trying harder to *look* right than to *be* right."[66]

60. HAIDT, *supra* note 1, at 87; *see also* Jennifer S. Lerner & Phillip E. Tetlock, *Bridging Individual, Interpersonal and Institutional Approaches to Judgment and Decision Making: The Impact of Accountability on Cognitive Bias*, *in* EMERGING PERSPECTIVES AS JUDGMENT AND DECISION RESEARCH 431 (Sandra L. Schneider & James Shanteau eds., 2003); Phillip E. Tetlock, *Social Functionalist Frameworks for Judgment and Choice: Intuitive Politicians, Theologians, and Prosecutors*. 109 PSYCH. REV. 451 (2002).

61. HAIDT, *supra* note 1, at 88.

62. *Id.*

63. *Id.*

64. *Id.*

65. *Id.* at 89 (citing Lerner & Tetlock, *supra* note 60, at 438).

66. *Id.* (quoting Lerner & Tetlock, *supra* note 60, at 433).

There has been a decided erosion of accountability in the United States since at least the mid-1990's.[67] In 1995, Republican Speaker of the House Newt Gingrich changed the congressional workweek from 5 days to 3.[68] In a not so veiled effort to prevent "fraternizing" with members of the Democratic Party, he further encouraged members of Congress to live in their home districts.[69] There would be no more socializing with other Congressional families on the weekends and fewer lunches with other Congressional members during the week.[70] Columbia psychology professor Peter T. Coleman argues that what Gingrich did was "remove a basic structure from Washington community life that had served as a civilizing force in our government for over a century."[71] It was a removal of "bonds that are formed in the locations, memberships and institutions—playgrounds, schools, little league teams, places of worship, places of work, and so on—where families from different political parties grow up together."[72] These were the interactions where "members of Congress often became more moderate as they and their families befriended members on the other side."[73] Ultimately, this was a loss of accountability. Members of Congress and their families had far fewer opportunities to justify their beliefs, feelings, or actions to those who had different political preferences.[74] Instead, they went back home to be with like-minded people who would not challenge those beliefs, feelings, or actions.[75]

We have seen the same phenomenon in the geographical self-sorting of Americans based on political ideology, called "The Big Sort" or "The Clustering of Like-Minded America."[76] The increased mobility of the average American means more freedom to choose where one lives, and thus the percentage of Americans living in areas where elections are won in "landslides" has gone up dramatically in recent decades—a proxy for the proportion of like-minded (and like-voting) people

67. *See* Peter T. Coleman, *Lawmakers, to Repair Our Polarized Congress, Make DC Your Home*, HILL (May 16. 2018, 3:30 PM), https://thehill.com/opinion/campaign/388007-lawmakers-to-help-repair-our-polarized-congress-make-dc-your-home.

68. *Id.*

69. *Id.*

70. *Id.*

71. *Id.*

72. *Id.*

73. *Id.*

74. *See id.*

75. *See id.*

76. Jack Cohen, *The Clustering Of Like-Minded America*, MEDIUM (Jan. 10, 2019), https://medium.com/@JackCohen/the-clustering-of-like-minded-america-cf00dc6f6daf; *see also* BILL BISHOP, THE BIG SORT (2009).

living in an area.[77] In 1980, 4% of Americans lived in landslide counties.[78] In 2020, 35% of Americans lived in landslide counties.[79] Again, a lack of accountability reinforces preexisting worldviews and leaves one to entrench within their perpetually unchallenged policy positions.[80] It is no surprise, then, that the percentage of Democratic Party members who viewed Republicans "very unfavorably" rose from 16% in 1994 to 38% in 2014, while the percentage of Republican Party members who viewed the Democratic Party "very unfavorably" rose from 17% in 1994 to 43% in 2014.[81]

2. Teams

A lack of accountability to someone with an opposing worldview or moral matrix leads to a second factor that contributes to liberal and conservative blind spots: the creation of, and dedication to, teams.[82] One of the most compelling aspects of Haidt's analysis is his transparency about the journey he has undertaken as a citizen on the left side of the political spectrum. For a long time, Haidt could not understand how anyone could support what he and others considered to be the "party of evil" (the Republican Party).[83] He and his fellow scholars sought to provide psychological explanations of conservative thought, but not liberal.[84] He explains: "[w]e never considered the possibility that there were alternative moral worlds in which reducing harm (by helping victims) and increasing fairness (by pursuing group-based equality) were not the main goals."[85] Haidt and his peers "could not believe that conservatives were as sincere in their moral beliefs as we were in ours."[86] His cultural psychology research in India changed his perspective and, while he still disagreed that the policy methods preferred by conservatives would achieve desirable social outcomes, he at least understood why conservatives held those moral convictions.[87] Therefore, Haidt "escaped from [his] prior partisan mind-set (reject first, ask rhetorical questions later) and began to think about liberal and conservative policies as manifestations of deeply conflicting but equally

77. Cohen, *supra* note 76; Bishop, *supra* note 76, at 35.

78. *How Politics Has Pulled the Country in Different Directions*, WALL ST. J. (Nov. 10, 2020, 5:30 AM), https://www.wsj.com/graphics/polarized-presidential-elections/.

79. *Id.*

80. HAIDT, *supra* note 1, at 88–89.

81. PEW RSCH. CTR., POLITICAL POLARIZATION IN THE AMERICAN PUBLIC (2014), https://www.pewresearch.org/politics/2014/06/12/section-2-growing-partisan-antipathy/.

82. HAIDT, *supra* note 1, at 365–66.

83. *Id.* at 126.

84. *Id.*

85. *Id.*

86. *Id.*

87. *Id.*

heartfelt visions of the good society."[88] Haidt, though admittedly politically liberal, became critical of research in his field that proposed explanations for what was "wrong with conservatives."[89] The issue of teams forming out of like-minded individuals maintaining the same moral intuitions became, to Haidt, the source of so much of our growing political polarization.[90]

Numerous studies show that groups love "teammates" and hate "traitors," and treat those who they view as traitors worse than enemies (the latter being members of the other team).[91] So, a party who questions an environmentalist group's conclusions might be dealt with more unforgivingly than an anti-environmentalist (from whom the group would expect resistance). Though, to be clear, this is a representation of the Loyalty principle, one that tends to be relied upon more heavily by those on the right.[92] So American liberals, relying heavily on the Care foundation, are critical of American foreign policy that tends toward military conflict, activating the Loyalty foundation in conservatives, who look at liberals as traitors to the country.[93] I have personally experienced this phenomenon when advocating for environmental or climate policy in conservative or religious circles. Because environmental issues have become so politicized, particularly among some religious groups, one might be viewed as speaking heresy when advocating for policies strongly supported by liberals or non-religious groups. I have experienced this from the other side as well. As an environmentalist applying a broad understanding of what it means to be pro-life and protecting the unborn, some liberal colleagues have looked at me aghast at holding these beliefs; as if I were advocating for the complete clear-cutting of the Amazon Rainforest. Ultimately, the pull of team affiliation in our hyper-polarized society is affecting our ability to even talk about different policy responses, much less legislate them.

3. The Conservative Advantage

Since conservatives rely to some degree on all six foundations of morality, Haidt argues that conservative politicians maintain a broader range of ways to connect with voters.[94] He calls this the "conservative advantage,"[95] explaining that

88. *Id.* at 127.
89. *Id.* at 185.
90. *Id.* at 365.
91. *Id.* at 164.
92. *Id.*
93. *Id.*
94. *Id.* at 181–82.
95. *Id.* at 180; *see also* GEORGE LAKOFF, THE POLITICAL MIND: WHY YOU CAN'T UNDERSTAND 21ST CENTURY AMERICAN POLITICS WITH AN 18TH CENTURY BRAIN (2008); DREW WESTEN, THE POLITICAL BRAIN: THE ROLE OF EMOTION IN DECIDING THE FATE OF THE NATION (2008).

"If the left builds its moral matrices on a smaller number of moral foundations, then there is no foundation used by the left that is not also used by the right."[96] In this way, liberals have a more difficult time understanding how conservatives think than vice versa, which may explain why liberals are often shocked when conservatives win certain elections, (e.g., George W. Bush in 2004 or Donald Trump in 2016).[97] Conservatives may disagree with liberal preferences but can at least "get in their head." Liberals are more likely than conservatives to outright reject certain moral foundations, and specifically those other than Care or Fairness.[98] Liberals are more likely to view Loyalty as the basis for groups to exclude others (racism), Authority as oppression, and Sanctity as "mumbo-jumbo" used to suppress individual rights.[99]

Research on how well liberals and conservatives understand one another, designed to study the stereotypes each held about the other, demonstrated results that were "clear and consistent . . . [m]oderates and conservatives were most accurate in their predictions" about the other side.[100] Liberals "were the least accurate, especially those who described themselves as 'very liberal'."[101] The issue that liberals were wrong about most concerned assumptions about how conservatives would respond to questions regarding the Care and Fairness foundations.[102] Liberals assumed conservatives would disagree that Care and Fairness were important outcomes in a variety of scenarios when, in fact, conservatives did value those outcomes.[103]

When trying to change the mind of a group, Haidt notes that if "you do not consider the effect of your changes on moral capital, you're asking for trouble. This, I believe, is *the fundamental blind spot of the left.* It explains why liberal reforms so often backfire . . . liberalism . . . reduce[s] the stock of moral capital inadvertently."[104] Of course, Haidt does not let conservatives off the hook, and the conclusion of his book is decidedly *not* that conservatives use all six moral foundations well and therefore get it all right. Conservatives misapply moral foundations frequently or intuitively (and illogically) trade certain foundations for

96. HAIDT, *supra* note 1, at 334.

97. *See* Jesse Graham, The Moral Stereotypes of Liberals and Conservatives (Dec. 12, 2012) (unpublished manuscript) (on file with the University of Virginia Department of Psychology).

98. HAIDT, *supra* note 1, at 334.

99. *Id.*

100. *Id.*

101. *Id.*

102. *Id.*

103. *Id.*

104. *Id.* at 343 (emphasis in original) (citing JOHN MCWHORTER, WINNING THE RACE: BEYOND THE CRISIS IN BLACK AMERICA (2005); JONATHAN RIEDER, CANARSIE: THE JEWS AND ITALIANS OF BROOKLYN AGAINST LIBERALISM (1985); WILLIAM VOEGELI, NEVER ENOUGH: AMERICA'S LIMITLESS WELFARE STATE (2010)).

others without adequately heeding reason.[105] Haidt notes: "[W]hile conservatives do a better job of preserving moral capital, they often fail to notice certain classes of victims, fail to limit the predations of certain powerful interests, and fail to see the need to change or update institutions as times change."[106]

The next Part details specific case studies that describe how intuitive reliance on a specific mix of moral foundations may cause liberal groups to ignore reason, while Part IV does the same for conservatives. Keep in mind that, when applying the Haidt moral foundations to these case studies, I do not intend to ascribe causation with scientific precision. Rather, the Haidt principles provide a useful frame for hypothesizing what might be going on and to better understand how to overcome the obstacles created when sides allow their elephant to run unconstrained by their reasoned rider. Also, I fully recognize that groups on both sides of the political aisle may *choose* to be unreasoned or illogical as a means of pushing a political point or to generate fundraising or other support. But this article seeks to focus on genuine blind spots that groups might be willing to correct if they would engage in Haidt-guided self-study.

III. LIBERAL BLIND SPOTS

A. Genetically Modified Organisms (GMOs)

> "No matter how long a GMO is eaten without harming anyone, and no matter how many studies are done to demonstrate its safety, there will always be skeptics who warn of unknown risks."[107]

The world is estimated to contain 9 billion people by 2050.[108] It seems clear that genetically modified foods (GMOs) will be essential to feeding this vast global population.[109] GMOs are crops that have been improved at the molecular level, such as insect resistant corn and cotton.[110] Ninety-percent of GMO growers are

---

105. *See* discussion *supra* Part II.B.

106. HAIDT, *supra* note 1, at 342–43.

107. William Saletan, *Are GMOs Safe? Yes. The Case Against Them is Full of Fraud, Lies, and Errors*, SLATE (July 15, 2015, 5:45 AM), http://www.slate.com/articles/health_and_science/science/2015/07/are_gmos_safe_yes_the_case_against_them_is_full_of_fraud_lies_and_errors.html.

108. Population Reference Bureau, *9 Billion World Population by 2050*, PRB (June 1, 2000), http://www.prb.org/references/9-billion-world-population-by-2050/.

109. *See* Cathy Siegner, *Study: GMOs are Needed to Feed the Planet in 2050*, INDUSTRY DIVE (July 18, 2019), https://www.fooddive.com/news/study-gmos-are-needed-to-feed-the-planet-in-2050/559004/.

110. Erik Stokstad, *New Genetically Modified Corn Produces up to 10% More than Similar Types*, AM. ASS'N FOR ADVANCEMENT SCI. (Nov. 4, 2019), https://www.science.org/content/article/new-genetically-modified-corn-produces-10-more-similar-types.

"resource-poor, small-holder farmers."[111] Prominent scientists have argued that GMOs have "increased farm income, reduced pesticide use, soil erosion and carbon dioxide emission, and benefited consumers by decreasing fungal toxin contamination of corn."[112] Since the mid-twentieth century, the number of people on Earth has doubled, while food production has tripled.[113] No animals or people have been harmed by consuming GMOs, and while the science has consistently shown that GMOs are safe, "more and more people have come to believe they are dangerous."[114] And this is particularly true among "W.W.W.'s"—"the well, wealthy, and worried."[115] These are the types of people who can afford to pay twice as much for organic foods than for conventionally produced foods or GMOs.[116]

In recent years companies have rushed to submit tens of thousands of products to the "Non-GMO Project," a certification system that demonstrates foods are free of GMOs.[117] Companies like Whole Foods, Chipotle, and Trader Joe's either prohibit GMOs or require products containing them to be labeled to give "peace of mind" to consumers[118] (which, of course, implies that GMOs may be dangerous).[119] The market for products certified as "non-GMO" exploded from roughly $350 million in 2010 to $26 *billion* by 2018. [120] Organic foods, the sales of which increased from $3.6 billion in 1997 to $26.7 billion in 2010,[121] have become the poster child for sustainability and a favorite of environmental groups. The Consumers Union, Friends of the Earth, Physicians for Social Responsibility, the

111. Nina Fedoroff et al., *Americans Need to Rethink Their Concern on GMO vs. Organic Crops*, DES MOINES REG. (Nov. 22, 2014), https://www.desmoinesregister.com/story/opinion/columnists/2014/11/22/rethink-views-gmo-crops/19421459/. Nina Fedoroff is an American molecular biologist known for her research in life sciences and biotechnology, specifically biochemical mechanisms of transposition, microRNA processing, and stress response in plants. *Nina Fedoroff*, SANTA FE INST., https://www.santafe.edu/people/profile/nina-fedoroff (last visited Dec. 17, 2022). Ken Cassman is a biologist with a Ph.D. in Agronomy and Soil Science that researches soil fertility and plant nutrition; crop ecology and yield potential; environmental performance metrics; nutrient cycling processes; soil quality and sustainability of intensive cropping systems; and global food security. *Kenneth Cassman*, UNIV. NEB.-LINCOLN, https://agronomy.unl.edu/cassman (last visited Dec. 17, 2022).

112. Fedoroff et al., *supra* note 112.

113. *Id.*

114. *Id.*

115. Jennifer Kahn, *Learning to Love GMOs*, N.Y. TIMES MAG. (July 20, 2021, 11:09 PM), https://www.nytimes.com/2021/07/20/magazine/gmos.html.

116. *See* Crystal Smith-Spangler et al., *Are Organic Foods Safer or Healthier Than Conventional Alternatives? A Systematic Review*, 157 ANNALS INTERNAL MED. 348, 348 (2012).

117. *See* Saletan, *supra* note 108.

118. *Id.*

119. *Id.*

120. Kahn, *supra* note 116.

121. Smith-Spangler et al., *supra* note 117, at 348.

Center for Food Safety, and the Union of Concerned Scientists have demanded "mandatory labeling of GMO foods," and some states have obliged.[122] Over half of Americans believe GMOs are unsafe and, as is the case with climate change, some have cast doubt on the scientific consensus of GMO safety.[123] Meanwhile, the World Health Organization, the American Medical Association, the National Academy of Sciences, and the American Association for the Advancement of Science say there is no evidence GMOs are unsafe.[124] Even so, one author notes (channeling Haidt) that environmental groups opposed to GMOs are "counting on you to feel overwhelmed by the science and to accept, *as a gut presumption*, their message of distrust"[125]—the elephant of intuition running roughshod over the reasoning rider. What is more, anti-GMO campaigns are full of "fraud, lies, and errors."[126]

If the world relied solely on organic farming, however, only about half of the world's population could be fed.[127] By some estimates, to meet food security over the next 50 years, farmers would need to produce more food during that time than was produced in the last 10,000 years combined.[128] Of course, without GMOs we would need to convert even more natural ecosystems to cropland, which would devastate biodiversity and accelerate species decline. As plant biologist Andrew Allen notes, land conversion is further complicated by climate change: "[I]f we use more land [for agriculture], then we've got to deforest more, and the temperature goes up even more. So what we really need is more productivity. And that, in all likelihood, will require [GMOs]."[129]

Other factors bear more directly on improvements in human health. Every year, up to half a million children go blind from vitamin A deficiency and, within a year, half of these children die.[130] Most are in Southeast Asia, where rice is a staple, because rice does not contain beta carotene (which produces vitamin A when digested).[131] In the late 1990s, scientists created a beta carotene-laden rice: Golden

122. *See* Saletan, *supra* note 108. Other environmental groups leading the charge against GMOs include Greenpeace, the Center for Food Safety, the Pesticide Action Network, and the International Federation of Organic Agriculture Movements. *Id.*

123. *Id.*

124. *Id.*

125. *Id.* (emphasis added).

126. *See id.* (providing a detailed breakdown of the fraud, lies, and errors). In fact, GMOs can lead to more harmful human health impacts, as it can lead to an increased use of chemical pesticides. *Id.*

127. *See* Fedoroff et. al., *supra* note 112.

128. *Id.*

129. Kahn, *supra* note 116.

130. *See* Saletan, *supra* note 108.

131. *Id.*

Rice, which anti-GMO groups, like Greenpeace, opposed in full force.[132] When one argument against GMOs was proven faulty, they shifted to another argument, rejecting sound science time and time again.[133] Yet they were successful in having studies on the health impacts of Golden Rice shut down, even going so far as to destroy fields of rice being grown in the Philippines.[134] This experience turned former anti-GMO activist and environmental writer Mark Lynas away from rejecting GMOs outright.[135] Lynas stated: "Probably the angriest I've ever felt was when anti-[GMO] groups destroyed fields of Golden Rice growing in the Philippines . . . To see a crop that had such obvious lifesaving potential ruined."[136] Golden Rice still is not commercially available.[137] Not one person has been harmed from the innovation, but how many children have gone blind or died from lack of the life-saving Vitamin A they have been prevented from ingesting?[138]

As molecular biologist Nina Fedoroff argues, narratives matter, and while "[t]he organic food industry supplies a mere 4 percent of our food, [it] amplifies its message by promulgating the myth that organic food is more healthful and environmentally sound."[139] Echoing Haidt's finding that intuition comes first, reasoning second, Fedoroff notes that "[b]elief systems are notoriously resistant to facts, even mountains of them. And real people don't change their minds and hearts as fast as characters in stories."[140] Professor Alan Levinovitz argues that "[f]or a majority of people, the anxiety around GMOs is almost entirely untethered to an understanding of what's happening at a scientific level."[141] Scientists have demonstrated that organic foods are no more healthy than conventional foods on a wide range of health parameters,[142] finding that "our comprehensive review of the published literature on the comparative health outcomes, nutrition, and safety of organic and conventional foods . . . does not suggest marked health benefits from

132. *See id.*

133. *Id.*

134. *Id.*

135. *See* Kahn, *supra* note 116.

136. *Id.*

137. Saletan, *supra* note 108.

138. *See id.* A similar controversy surrounds the use of "Bt-Corn": corn that integrates a bacterial gene that contributes to insect-resistance. *See* Drew L. Kershen, *Health and Food Safety: The Benefits of Bt-Corn*, 61 FOOD & DRUG L.J. 197, 197 (2006). Or consider a more recent target of anti-GMO sentiment: a potentially cancer-curbing super tomato that contains a couple of genes from the snapdragon (in order to boost the production of anthocyanin, an anti-inflammatory compound). *See* Kahn, *supra* note 116.

139. Fedoroff, *supra* note 112.

140. *Id.*

141. Kahn, *supra* note 116.

142. *See* Smith-Spangler, *supra* note 117, at 357–58.

consuming organic versus conventional foods . . . ."[143] Others have come to the same conclusion on both the health and environmental impacts of GMOs, while noting that the social and economic effects have been significant.[144] Yet others have noted that, while various health and environmental risks have been "hypothesized" for GMOs, "to date no harm to human health or the environment [has] been demonstrated."[145] By comparison, "there are known cases of human injury from organic foods, including contaminated organic lettuce, alfalfa sprouts, and apple juice."[146] Similarly, "[o]ther health and environmental risks from organic foods have been suggested, including cancer risks from increased mycotoxins in insect-damaged organic vegetables, toxicity from natural pesticides used on organic crops, and infections of [E. coli] from the use of manure in organic farming."[147] Other scholars have noted that, in many instances, organic farming is also more harmful to the environment.[148]

So, what contributes to this liberal blind spot regarding GMOs? One might expect that curing vitamin A deficiency and saving millions of children would directly activate the Care and Fairness foundations that liberals most rely upon. But through the lens of Haidt's framework, there is a strong case that liberal opposition to other foundations, like Authority, may be trumping these intuitions. One reason why GMOs are so vilified is the way in which they were introduced into the market—by the agribusiness giant Monsanto.[149] The company engaged in business practices that harassed and abused farmers.[150] What is more, Monsanto was the company that made Agent Orange, which disfigured up to a million civilians in Vietnam[151] and produced cancer causing PCBs that were ultimately banned by the

143. *Id.* at 359.

144. THE NAT'L ACAD. OF SCI., ENG'G & MED., GENETICALLY ENGINEERED CROPS: EXPERIENCES AND PROSPECTS 2 (2016), https://www.nap.edu/catalog/23395/genetically-engineered-crops-experiences-and-prospects.

145. Gary Marchant, *From General Policy to Legal Rule: Aspirations and Limitations of the Precautionary Principle*, 111 ENV'T HEALTH PERSP. 1799, 1801 (2003); *see also* Wilhelm Klumper & Matin Qaim, *A Meta-Analysis of the Impacts of Genetically Modified Crops*, 9 PLOS ONE 1, 1 (2014).

146. *See* Marchant, *supra* note 146, at 1801 (citing Pam Belluck & Christopher Drew, *Tracing Bout of Illness to Small Lettuce Farm*, N.Y. TIMES, Jan. 5, 1998, at A1).

147. *Id.* (citing Jean-Charles Leblanc et al., *Simulation of the Exposure to Deoxynivalenol of French Consumers of Organic and Conventional Foodstuffs*, 36 REGUL. TOXICOLOGY & PHARMACOLOGY 149 (2002); Anthony Trewavas, *Urban Myths of Organic Farming*, NATURE 410 (2001)).

148. *Id.* For a discussion of changing regulatory body attitudes toward risk and GMO's, see Stuart J. Smyth Peter & W.B. Phillips, *Risk, Regulation and Biotechnology: The Case of GM crops*, 5 GM CROPS & FOOD 170 (2014).

149. *See* Kahn, *supra* note 116.

150. *Id.*

151. *Id.*; *see also* Jessica King, *U.S. in First Effort to Clean up Agent Orange in Vietnam*, CNN (Aug. 10, 2012), https://edition.cnn.com/2012/08/10/world/asia/vietnam-us-agent-orange/.

EPA.[152] Can we expect liberals to trust this company to create safe products for human consumption? Large corporate conglomerates with so much control over a market are figures that implicate the Authority foundation—like the parental advice described in Part II.2 above—that liberals are inclined to believe should be questioned if not outright opposed.

What of other moral foundations? Opposition to corporate conglomerates has become a borderline religious endeavor on the left. The Sanctity foundation may be activated here, as environmental groups seek to oppose large corporate interests that run roughshod over vulnerable farmers.[153] What, other than a zealotry of an almost religious variety, could drive environmental groups to engage in the destruction of a field of rice that could otherwise save children's lives?

Ultimately, in the case of GMOs, Haidt's lens suggests that liberal groups are seemingly blinded to their own Care and Fairness foundations (the need to feed a growing global population or save children suffering from vitamin deficiencies) by the fervor with which they either want to undermine Authority or exalt opposition to large corporate interests (Sanctity).

B. Coastal Restoration

Louisiana has the highest rate of relative sea-level rise in the world.[154] Hurricane Katrina demonstrated how Louisiana's low-lying coastal lands "are already vulnerable to erosion, flooding, storm surges, and tsunamis; and poor development planning has placed trillions of dollars' worth of building and infrastructure directly in the path of these threats."[155] But Katrina was just an early salvo in the battle between Louisiana and the ocean. In 2016[156] and 2021, floods devastated areas of Baton Rouge, LA that had previously never flooded. [157] In a warming world, Louisiana is fighting a losing battle against a rising tide.[158]

---

152. Kahn, *supra* note 116.

153. *See id.*

154. *See* Bob Marshall, *New Research: Louisiana Coast Faces Highest Rate of Sea-Level Rise Worldwide*, THE LENS (Feb. 21, 2013), https://thelensnola.org/2013/02/21/new-research-louisiana-coast-faces-highest-rate-of-sea-level-rise-on-the-planet/.

155. Christophe A.G. Tulou et al., *Climate Change and the Marine Environment*, *in* OCEAN AND COASTAL L. AND POL'Y 571, 578 (Donald C. Baur, Tim Eichenberg & Michael Sutton eds., 2008).

156. *See What Caused the Historic August 2016 Flood, and What are the Odds it Could Happen Again?*, THE ADVOC. (Aug. 5, 2017, 2:00 PM), https://www.theadvocate.com/louisiana_flood_2016/article_3b7578fc-77b0-11e7-9aab-f7c07d05efcb.html.

157. Richard Davies, *USA – Emergency Declared After Floods in Louisiana*, FLOODLIST (May 19, 2021), https://floodlist.com/america/usa/floods-louisiana-texas-may-2021.

158. *See* Marshall, *supra* note 155.

Coastal Louisiana was "created by 7,000 years of sediment deposition from the Mississippi River" as it changed course time and time again.[159] That process of land-building has been halted in its tracks, primarily due to the leveeing of the river.[160] Sediment that once built coastal Louisiana now flows past New Orleans and into the ocean, and "Louisiana is losing about 6,600 acres of coastal wetlands per year."[161] The interruption of the Mississippi River's sediment deposition system, primarily through construction of levees, combined with commercial and residential development, navigational channels, and oil-and-gas infrastructure are the primary drivers of these losses.[162] A vicious cycle ensues, as increased flooding on sinking land results in the construction and maintenance of even more man-made flood control structures.[163] Ultimately, the "[u]nintended consequences of flood protection measures [and] individual public work projects have increased risks to natural resources [and] human settlements resulting in a more dangerous place to live [and] work."[164]

The State of Louisiana's *Comprehensive Master Plan for a Sustainable Coast* (Master Plan) details a variety of projects aimed at building coastal land and fighting inevitable sea level rise.[165] The Master Plan aims to invest $50 billion over upcoming decades to "restore" the Louisiana coast.[166] After Hurricanes Katrina and Rita devastated the Louisiana coast, the Louisiana Legislature created the Coastal Protection and Restoration Authority of Louisiana (CPRA), charged with developing projects aimed at restoration of the coast.[167]

---

159. COASTAL LA. ECOSYSTEM ASSESSMENT & RESTORATION, REDUCING FLOOD DAMAGE IN COASTAL LOUISIANA: COMMUNITIES, CULTURE & COMMERCE (2006), https://ian.umces.edu/site/assets/files/10717/reducing-flood-damage-in-coastal-louisiana-communities-culture-commerce.pdf [hereinafter CLEAR].

160. ROBERT R. M. VERCHICK, FACING CATASTROPHE: ENVIRONMENTAL ACTION FOR A POST-KATRINA WORLD 19 (2010).

161. *Id.*

162. *See id.*

163. CLEAR, *supra* note 160.

164. *Id. See also* KRISTIN DEMARCO ET AL., COASTAL PROT. & RESTORATION AUTH. OF LA., RECOMMENDATIONS FOR ANTICIPATING SEA-LEVEL RISE IMPACTS ON LOUISIANA COASTAL RESOURCES DURING PROJECT PLANNING AND DESIGN: SUMMARY OF THE TECHNICAL REPORT FOR COASTAL MANAGERS 1 (2012), https://research.fit.edu/media/site-specific/researchfitedu/coast-climate-adaptation-library/united-states/gulf-coast/louisiana/Demarco-et-al.-2012.-SLR-Impacts-on-Louisiana-Coastal-Resources.pdf.

165. COASTAL PROT. & RESTORATION AUTH. OF LA., LOUISIANA'S COMPREHENSIVE MASTER PLAN FOR A SUSTAINABLE COAST ES-2, ES-14 (2017), http://coastal.la.gov/wp-content/uploads/2017/01/DRAFT-2017-Coastal-Master-Plan.pdf [hereinafter MASTER PLAN].

166. *Id.*

167. *See* COASTAL PROTECTION AND RESTORATION AUTHORITY, *History*, https://coastal.la.gov/ (last visited Sept. 4, 2022).

It is understandable that the state wishes to do something about land loss. Three hundred eighty thousand jobs depend on the port in New Orleans, leading to $37 billion in economic impact.[168] A ninety-day closure of the port in Fourchon, LA, accessed by vulnerable Louisiana Highway 1, would result in a $7.8 billion reduction nationwide in gross domestic product.[169] The recreational fishing industry in Louisiana creates $3.1 billion in economic revenue each year and provides 34,000 jobs.[170] The Louisiana coast sends $120 billion in goods to the rest of the United States, exports $36.2 billion internationally, and contributes to 23% of the nation's waterborne commerce.[171] Moreover, "Louisiana also produces 25% of the nation's petrochemicals."[172] These economic contributions to the national and global welfare are imperiled by the continued loss of Louisiana's coastal lands.[173]

The Master Plan aims to halt coastal land loss and to restore coastal lands by utilizing complex modeling to assess sea-level rise, subsidence, storm intensity and frequency, river discharge and sediment load, marsh collapse, and potential levee and floodwall failure.[174] Most measures within the Plan involve construction of man-made structures to manage land loss or restore natural processes to do so, such as levee building, bank stabilization, barrier island restoration, channel realignment, hydrologic restoration, marsh creation, bioengineered oyster-barrier reef creation, ridge restoration, and shoreline protection projects.[175] One complex approach touted by the Plan is to allow gates to divert sediment and freshwater through currently impenetrable levees to feed and replenish marshy terrain, theoretically mimicking the natural flood events of the river before the levees were put into place.[176]

While in theory the Master Plan may have the potential to undo some of the past human contributions to coastal land loss, there is a great deal of scientific uncertainty surrounding these measures, especially regarding the efficacy of wetland restoration, sediment diversion, and other human engineering efforts to restore "natural" processes and modeling projections of sea-level rise and coastal land subsidence.[177] The Plan acknowledges as much, noting that "substantial uncertainties remain . . . . For example, we do not know with certainty the rate of

168. *See* MASTER PLAN, *supra* note 167, at ES-12.
169. *Id.*
170. *Id.* at 24.
171. *Id.* at 26.
172. *Id.*
173. *See id.* at ES-14.
174. *See generally* MASTER PLAN, *supra* note 167.
175. *Id.* at ES-16.
176. *Id.* at 62.
177. *Id.* at 46.

sea level rise we can expect over the life of a restoration project, nor can we fully predict all ecological responses to actions such as sediment diversions."[178]

Scientists have argued that restoring wetlands often "fall[s] short of returning wetlands to their former biological complexity and functioning"[179] and have found that "current restoration practice fails to recover original levels of wetland ecosystem functions, even after many decades. If restoration as currently practiced is used to justify further degradation, global loss of wetland ecosystem function and structure will spread."[180] More directly, scientists assert that "current restoration practice and wetland mitigation policies will maintain and likely accelerate the global loss of wetland ecosystem functions."[181] They further insist:

> If we keep degrading or destroying wetlands, for example through the use of mitigation banks, it is going to take centuries to recover the carbon we are losing .... [P]reserve the wetland, don't degrade the wetland .... [C]urrent thinking holds that many ecosystems just reach an alternative state that is different, and you never will recover the original.[182]

Specifically in the context of sediment diversions and barrier island restoration touted by the Master Plan, recent studies demonstrate that marsh drowning will occur more quickly than previously conceived under sea level rise projections.[183] Disconcertingly, marshes in the U.S. are rapidly submerging despite being categorized as stable marshes which have high rates of sediment deposition, while some are submerging despite accreting sediment at rates that exceed the rate of relative sea level rise.[184] Other scientific studies demonstrate that relative sea level

---

178. *Id.*

179. Rachel Nuwer, *Not All Wetlands Are Created Equal*, N.Y. TIMES (Jan. 24, 2012, 5:00 PM), https://green.blogs.nytimes.com/2012/01/24/not-all-wetlands-are-created-equal/?mtrref=undefined&gwh=9748EB5FBDFE884D34072F034C72C2DE&gwt=pay&assetType=PAYWALL.

180. *Id. See also* David Moreno-Mateos et al., *Structural and Functional Loss in Restored Wetland Ecosystems*, 10 PLoS BIOLOGY 1, 1 (2012), https://journals.plos.org/plosbiology/article/file?id=10.1371/journal.pbio.1001247&type=printable.

181. Moreno-Mateos et al., *supra* note 182, at 2. In other words, "[E]cosystem services may not be fully recovered even when wetlands appear to be biologically restored. If markets for ecosystem services and mitigation offsets from restored or created wetlands are used to justify further wetland degradation, net loss of global wetland services will continue and likely accelerate." *Id.* at 6 (citation omitted). Carbon storage capacity in particular is significantly degraded in restored wetlands. *Id.* at 3.

182. Jeremy Hance, *Protecting Original Wetlands Far Preferable to Restoration*, MONGABAY (Jan. 26, 2012), http://news.mongabay.com/2012/01/protecting-original-wetlands-far-preferable-to-restoration/.

183. Orencio Duran Vinent et al., *Onset of Runway Fragmentation of Salt Marshes*, 4 ONE EARTH 506, 506 (2021).

184. *Id.* at 507.

rise will increase, outstripping even the highest volumes of sediment deposition in deltaic systems.[185]

But it is not only "building land" through diversions that is a highly uncertain prospect, so too are subsidence rates.[186] Louisiana's CPRA has observed that "[w]hile rates of subsidence are highly variable across the Louisiana coastal zone [], our understanding of the exact rates of subsidence at the local level is very limited."[187] In addition, Louisiana officials have noted that "there has been very little work done to predict the specific change in the Gulf of Mexico water surface for the rest of this century" and that without such study, "anticipated sea-level changes in the Gulf of Mexico must be primarily extrapolated from satellite altimetry or tide gauges, which can be less reliable due to the limited period of record."[188] Opponents to wetland restoration projects like those outlined in the Master Plan claim that experimental sediment diversions that have been in place for at least a decade have failed to rebuild land and combat subsidence, and even successful projects have not rebuilt land at rates initially predicted.[189] As such, "restoring wetlands remains a controversial strategy."[190] Even so, the largest portion of money designated by the Louisiana Master Plan—$25 billion—is authorized for coastal wetland restoration and land building projects.[191]

While some sediment building restoration projects may be more efficacious than others in the short term, over the long run (by the end of the century) all are likely doomed by rapidly rising seas.[192] It is highly improbable that we can engineer our way out of coastal land loss given the rate of climate change-induced sea-level rise.[193] So why do so many liberal environmental groups buy into coastal

185. R. Eugene Turner, Michael S. Kearney, & Randall W. Parkinson, *Sea-Level Rise Tipping Point of Delta Survival*, 34 J. COASTAL RSCH. 470, 472 (2018); *see also* R. Eugene Turner & Yu Mo, *Salt Marsh Elevation Limit Determined After Subsidence from Hydrologic Change and Hydrocarbon Extraction*, 13 REMOTE SENSING 49, 49 (2020).

186. See Adrian R.H. Wiegman et al., *The Costs and Sustainability of Ongoing Efforts to Restore and Protect Louisiana's Coast, in* MISSISSIPPI DELTA RESTORATION 93, 108 (J.W. Day & J.A. Erdman eds., 2018).

187. DEMARCO ET AL., *supra* note 165, at 6 (citation omitted).

188. *Id.* at 4–5.

189. *See* Mark Fischetti, *New Orleans Protection Plan Will Rely on Wetlands to Hold Back Hurricanes*, SCI. AM. (Jan. 26, 2012), http://blogs.scientificamerican.com/observations/2012/01/26/new-orleans-protection-plan-will-rely-on-wetlands-to-hold-back-hurricanes/.

190. *Id.*

191. MASTER PLAN, *supra* note 167, at ES-16.

192. *See* Turner, Kearney & Parkinson, *supra* note 187, at 473.

193. *Id.*

restoration? Why do they support throwing good money after bad[194]—$50 billion that is likely far better spent on adapting land-use patterns to retreat from rising seas and moving residential, commercial, and industrial developments from harm's way?[195] A coalition of groups formed an advocacy organization known as "Restore the Mississippi River Delta," who support these coastal restoration efforts.[196] The group's members consist of the Coalition to Restore Coastal Louisiana, the Environmental Defense Fund, the Pontchartrain Conservancy, the National Wildlife Federation, and the National Audubon Society.[197] The coalition continues to receive financial support from organizations like the Walton Family Foundation.[198]

There are a few possible explanations for this environmental group blind spot. The first involves the usual suspects: Care and Fairness. Restoration is what environmental groups do. Advocating for populations vulnerable to environmental calamity is what environmental groups do. That is the "team" that they are on, which is understandable. But in this instance, environmental groups seem to have a hard time decoupling the Care and Fairness intuitions that drive much of what they do from a realistic assessment of the scale of this calamity. To give up on "restoration" could be admitting defeat in these groups' eyes. How could they possibly be against restoration? To a liberal environmental group, that might sound like being against world peace.

An about face from the traditional position could be particularly difficult for these groups now since they have an expanded audience that agrees with them. When the Master Plan was first designed, a full 85% of Louisianans supported it, believing that "it is smart to invest dollars in risk reduction and coastal

194. *See To Throw Good Money After Bad*, COLLINS, https://www.collinsdictionary.com/us/dictionary/english/to-throw-good-money-after-bad (last visited Dec. 17, 2022).

195. Indeed, some local governments have gone on record to officially oppose the state plan, noting the poor scientific basis for sediment diversions. *See* Mark Schleifstein, *The Host Parish for Mid-Barataria Diversion Just Voted Against it; Here's Why*, NOLA.COM (Apr. 9, 2021, 4:23 PM), https://www.nola.com/news/environment/article_a787e932-996f-11eb-9b2a-8b8fd10c9798.html. Even some state level elected officials oppose the state's plan. *See* Mitch Jurisich, *Letters: Billy Nungesser Doesn't Deserve Assaults Because of His Views on Diversion*, THE ADVOC. (July 23, 2021, 6:00 PM), https://www.theadvocate.com/baton_rouge/opinion/letters/article_a9c36fca-eb2a-11eb-845c-17e8c7660efc.html.

196. *See About Us*, RESTORE MISS. DELTA, https://mississippiriverdelta.org/ (last visited Sept. 16, 2022).

197. *Id.*

198. Mark Schleifstein, *$15 Million Pledged to Coalition that Supports Louisiana Coastal Restoration*, NOLA.COM (June 27, 2017), https://www.nola.com/news/environment/article_d124e2d2-d0bb-5ea4-b2f0-bdbd92ce6220.html.

restoration."[199] Giving what we know about voting patterns and other political signals from the state, there is little doubt that 85% of Louisianans are not card-carrying members of Environmental Defense Fund.[200] So, for organizations that have such difficulty breaking through to citizens on the other side of the political aisle, the Master Plan offers an opportunity to expand the tent and to create some converts by extending the Care and Fairness foundations to a broader swath of society that often ignores those intuitions in the context of environmental policy.

The sheer percentage of Louisianans that support the Master Plan also gives us insight into the Sanctity foundation as perhaps relied upon by some liberals. In one telling, the coast is vulnerable because of the exploitations of greedy corporate interests. Saving the coast rectifies these exploitations. Defending coastal Louisiana culture and "way of life" can become its own religion of sorts, as depicted in the theatrical epic "Beasts of the Southern Wild."[201] As Haidt notes, "[m]any environmentalists revile industrialism [and] capitalism . . . not just for the physical pollution they create, but also for a more symbolic kind of pollution—a degradation of nature, and of humanity's original nature, before it was corrupted by industrial capitalism."[202] Thus a battle for coastal restoration may be viewed as a continuation of the ongoing fight for protecting the earth. Unfortunately, if the left's intuitive inertia is compelling it toward these causes, then it is blinding these groups to sound science and leading to poor policy decisions about how to best allocate resources along the coast in a time of rapidly changing climate.

C. Woody Biomass-Generated Electricity

The U.S. has rapidly become the primary provider of woody biomass (or, wood pellets) for growing electricity-generation markets in Europe and Asia, though that market has not grown much domestically.[203] Most of this wood comes from the

199. COASTAL PROT. & RESTORATION AUTH. OF LA., LOUISIANA'S COMPREHENSIVE MASTER PLAN FOR A SUSTAINABLE COAST 51 (2012), https://issuu.com/coastalmasterplan/docs/coastal_master_plan-v2?layout=http%253A%252F%252Fcoastalmasterplan.la.gov%252Fissuu%252Fmpmar2012%252Flayout.xml [hereinafter 2012 LOUISIANA COASTAL MASTER PLAN].

200. For a discussion on the political ramifications of so many Louisianans supporting doomed policy see Blake Hudson, *Coastal Land Loss & the Mitigation-Adaptation Dilemma: Between Scylla & Charybdis*, 73 LA L. REV. 31 (2012).

201. *See* BEASTS OF THE SOUTHERN WILD (Cinereach 2012).

202. HAIDT, *supra* note 1, at 176.

203. In 2019, of roughly 4,127 billion kilowatt-hours (kWh) of electricity generated in the United States, 58 kWh (or 1.4%) was generated by biomass: a small sliver of the 18% of U.S. electricity generated by renewable resources (though this is a roughly 25% increase in biomass generation since 2001). *See What is U.S. Electricity Generation by Energy Source?*, EIA, https://www.eia.gov/tools/faqs/faq.php?id=427&t=3 (last updated Mar. 4, 2022); *see also* Amanda D. Cuéllar & Howard J. Herzog, *A Path Forward for Low Carbon Power from Biomass*, 8 ENERGIES

southeastern U.S.[204] There are now nearly 100 woody biomass manufacturing plants in operation or planned in the U.S.[205] Demand is driven by electricity generators across the world converting from coal-fired to wood-pellet fired boilers,[206] with export growth being the strongest to the UK, Denmark, Belgium, Italy, South Korea, and Japan.[207] In 2018 exports increased 26% over 2017, driven

---

1701 (2015); *Electricity Data Browser*, EIA, https://www.eia.gov/electricity/data/browser/#/topic/0?agg=2,0,1&fuel=0008&geo=g&sec=g&linechart=ELEC.GEN.BIO-US-99.A&columnchart=ELEC.GEN.BIO-US-99.A&map=ELEC.GEN.BIO-US-99.A&freq=A&ctype=linechart&ltype=pin&rtype=s&pin=&rse=0&maptype=0 (last visited Dec. 17, 2022). Much of this generation is used at industrial facilities outside the electric power sector, such as on-site electricity generation at pulp and paper mills. *See* Fred Mayes, *Southern States Lead Growth in Biomass Electricity Generation*, EIA (May 25, 2016), https://www.eia.gov/todayinenergy/detail.php?id=26392. Of the approximately 178 operational biomass power plants in the U.S., 100 are fueled by forest-derived products, 67 by municipal solid waste, and the remainder from sources like refuse. Blake Hudson, *Woody Biomass and Electricity in the United States: A Case Study in Scientific and Policy Uncertainty*, *in* IX ENERGY LAW, CLIMATE CHANGE AND THE ENVIRONMENT 487, 488 (Michael Faure et al. eds., 2001). The Environmental Information Agency lists capacity as 353 generators nationwide. *Id.* The reason for the discrepancy in the number of facilities is unclear. *See Electric Power Annual 2018*, U.S. ENERGY INFO. AGENCY 69 (Feb. 2021), https://www.eia.gov/electricity/annual/pdf/epa.pdf. In 2018, the total installed capacity of biomass plants in the U.S. was 20,156 megawatts, with the state of California leading the way, followed by Florida, Georgia, Virginia, Alabama, Maine, Louisiana, South Carolina, North Carolina, and Michigan—all states with vast forest resources. Sonal Patel, *U.S. Biomass Power, Dampened by Market Forces, Fights to Stay Ablaze*, POWER (Oct. 1, 2018), https://www.powermag.com/u-s-biomass-power-dampened-by-market-forces-fights-to-stay-ablaze/. Biomass generation has dropped over the last few years in states like California and Maine, but has been offset by gains in Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, and South Carolina, which have increased biomass generation by an average of 17%. Sonal Patel & Bentham Paulos, *Interactive Chart: Change in U.S. Biomass Generation (2013 to 2017)*, POWER (Oct. 1, 2019), https://www.powermag.com/interactive-chart-change-in-u-s-biomass-generation-2013-to-2017/. One reason for the lower usage of biomass for electricity usage in the U.S. is because the sector is facing the same market challenges as coal and nuclear-generated power: the abundance of cheaper natural gas, wind, and solar energy sources. Patel, *supra.* Some states, such as Maine, New Hampshire, and Virginia, have attempted to bolster biomass electricity generation by providing above-market payments or subsidies, requiring electric utilities to buy power from struggling biomass power plants for a period of years, or requiring conversion of coal plants to biomass. Hudson, *supra*, at 489. Other states, like Connecticut and Massachusetts have actively sought to curb the use of biomass in electricity generation. *Id. See also* Jessie Stolark, *EPA Declares Biomass Carbon Neutral—Biomass, Forestry Industries Quietly Paved the Way*, EESI (Apr. 27, 2018), https://www.eesi.org/articles/view/epa-declares-biomass-carbon-neutral-biomass-forestry-industries-quietly-pav.

204. Fred Mayes, *Southern States Lead Growth in Biomass Electricity Generation*, U.S. ENERGY INFO. AGENCY (May 25, 2016), https://www.eia.gov/todayinenergy/detail/php?id=26392.

205. *See Monthly Densified Biomass Fuel Report*, U.S. ENERGY INFO. AGENCY (Feb. 20, 2020), https://www.eia.gov/biofuels/biomass/?year=2019&month=11.

206. *See* Jan Gerrit Guert Jonker et al., *Carbon Payback Period and Carbon Offset Parity Point of Wood Pellet Production in the South-eastern United States*, 6 GCB BIOENERGY 371 (2014).

207. Seth Walker, *Pellet Markets Soar in 2018 – a Year-End Review and Outlook*, FUTUREMETRICS 1, 1 (Dec. 19, 2018), https://www.futuremetrics.info/wp-content/uploads/2018/12/FutureMetrics%20White%20Paper%20-

primarily by a 40% increase in demand for imports from Denmark, South Korea, and Japan.[208] In 2018, the U.S. was the leading exporter of wood pellets, shipping out an estimated 6.2 million tons, while Canada came in second at around 2.4 million tons exported.[209] In 2023, the export of pellets in the U.S. is projected to increase to 8.5 million tons.[210]

As with any emerging use of a natural resource, a fierce policy debate has emerged: the carbon "neutrality" of using wood pellets to generate electricity. This debate has provided a foundation for environmental advocacy groups and activists to, at the least, distort and cherry-pick scientific findings and, at the most, spread misinformation. This emerging market, and its environmental consequences, are complex. Just as "coastal restoration" sounds exactly like a goal environmental groups should support, cutting down trees and emitting CO_2 into the atmosphere sound antithetical to environmental protection (a violation of the Care foundation). As such, liberal environmental groups ignore scientific findings and economic analysis that paint a much more complex picture.

Notwithstanding claims by environmental groups that the science is settled, it is decidedly not. The carbon neutrality of woody biomass has been endorsed by several studies.[211] Trees, after all, can re-sequester CO_2 emitted during electricity generation, which gives rise to the potential for net *negative* carbon emissions if biomass generators expand onto currently unforested lands or integrate carbon capture and storage (CCS) into their operations.[212] Most wood pellets are currently processed from residues left on the floor of wood processing mills.[213] Even so, one study—the first to examine dedicated wood harvest for pellet production, rather than wood pellets processed from mill residues—concluded that complete conversion of electricity-generating facilities to wood pellets reduces GHG emissions by 91% relative to coal-fired facilities, and 78% relative to natural gas combined cycle (NGCC) facilities.[214] Another study found that using wood pellets

---

%20Review%20and%20Global%20Outlook%20for%20the%20Wood%20Pellet%20Markets%20-%20December%202018.pdf.

208. Seth Walker & William Strauss, *2019 Global Wood Pellet Markets Outlook*, CANADIAN BIOMASS (Jan. 7, 2019), https://www.canadianbiomassmagazine.ca/pellets/2019-wood-pellet-markets-outlook-7190.

209. *Id.*

210. *Id.*

211. *See, e.g.*, Cuéllar & Herzog, *supra* note 205, at 1703.

212. *Id.*

213. *Wood Processing Residues*, WOOD ENERGY (Sept. 5, 2019), https://wood-energy.extension.org/wood-processing-residues/.

214. *See* Yimin Zhang et al., *Life Cycle Emissions and Cost of Producing Electricity from Coal, Natural Gas, and Wood Pellets in Ontario, Canada*, 44 ENV'T SCI. & TECH. 538, 539 (2010).

reduces CO_2 emissions by up to 93% as compared to coal.[215] Studies of this kind incorporate life cycle analysis of biomass feedstocks to assess the overall impact of wood pellets on GHG emissions.[216] In other words, these studies evaluate the rate at which forests will sequester certain quantities of carbon dioxide and over what time periods they will be regrown.[217]

Yet high-profile press reports and summaries of scholarship challenging the GHG neutrality of biomass electricity generation have been on the rise in recent years.[218] Headlines expressing concerns over the industry are often sensationalist, such as "Deforestation in the US South is Four Times Greater Than Logging in South American Rainforests"[219] and "Renewable Energy Boom Not So Kind to Southern US Forests."[220] Similar statements from activists assert that "these cuts are devastating."[221] These assertions grab attention but are decidedly without precision, nuance, and context. For example, these accounts conveniently ignore the widespread practice of reforestation in the U.S. South.[222] Also, while more CO_2 may come out of a smokestack per kilowatt-hour when burning wood rather than coal or natural gas (since wood is less energy dense),[223] critics' assumption that

215. *See* Cuéllar & Herzog, *supra* note 205, at 1708; *see also* Raghava Rao Kommalapati et al., *Life Cycle Environmental Impact of Biomass Co-Firing with Coal at a Power Plant in the Greater Houston Area*, 10 SUSTAINABILITY 2193 (2018); Puneet Dwivedi et al., *Quantifying GWI of Wood Pellet Production in the Southern United States and its Subsequent Utilization for Electricity Production in the Netherlands/Florida*, 4 BIOENERGY RSCH. 180 (2011).

216. Hudson, *supra* note 205, at 491.

217. *See id.*

218. *See* Sami Yassa, *Money Up in Smoke: How Dominion's Investments in Biomass Electricity Lost Big*, NRDC (May 22, 2018), https://www.nrdc.org/sites/default/files/dominion-investments-biomass-electricity-ib.pdf; John Upton, *Pulp Fiction: The European Accounting Error That's Warming the Planet*, CLIMATE CENT. (Oct. 20, 2015), http://reports.climatecentral.org/pulp-fiction/1/.

219. Danna Smith & Leo Woodberry, *Deforestation in the US South is Four Times Greater Than Logging in South American Rainforests*, TRUTHOUT (May 22, 2018), https://truthout.org/articles/deforestation-in-the-us-south-is-four-times-greater-than-logging-in-south-american-rainforests/.

220. Rachel Frits, *Renewable Energy Boom Not So Kind To Southern US Forests*, ECOSYSTEM MARKETPLACE (June 13, 2018), https://www.ecosystemmarketplace.com/articles/renewable-energy-boom-not-kind-southern-us-forests/.

221. Jacqueline Froelich, *Questions as U.S. Wood Pellet Makers Expand Production*, NPR (Jan. 1, 2018, 4:42 PM), https://www.npr.org/2018/01/01/574986007/questions-as-u-s-wood-pellet-makers-expandproduction.

222. In the seventeenth century, forests covered approximately 46% of the U.S. land base. Sonja N. Oswalt & W. Brad Smith, *U.S. Forest Resource Facts and Historical Trends*, U.S. DEP'T AGRIC. 7 (Aug. 2014), http://www.fia.fs.fed.us/library/brochures/docs/2012/ForestFacts_1952-2012_English.pdf [https://perma.cc/FY5Y-ZG6G]. By 1920, U.S. forest cover had been reduced by 43%, though forest resources have since rebounded to cover approximately 75% of their historical baseline. JAMES RASBAND ET AL., NATURAL RESOURCES LAW AND POLICY 1198–1200 (2d ed. 2009). Forests in the U.S. South have remained remarkably stable even as populations have risen. *Id.*

223. *See* Yassa, *supra* note 220, at 2.

biomass is by default worse for the climate than fossil fuels is misplaced. Looking at the forest system through a life cycle analysis demonstrates that overall carbon dioxide emissions can be reduced over relatively short time frames by the re-uptake of CO_2 within regrown forests.[224] The crux of the debate, then, revolves around the duration of re-uptake timeframes and whether they are acceptable from a climate change perspective—an understudied inquiry.

Perhaps the most prominent example of how critics have misrepresented the science of wood pellets and climate is the 2010 Manomet Center for Conservation Sciences study of the biomass carbon cycle.[225] Following press misreporting, Manomet actually issued a clarification/defense of their findings, stating: "One commonly used press headline has been 'wood worse than coal' for GHG emissions or for 'the environment.' This is an inaccurate interpretation of our findings, which paint a much more complex picture."[226] Manomet clarified that the question turns on the 'debt' period involved,[227] that is, how quickly do new trees sequester CO_2 to repay the carbon debt? Would the biomass have gotten into the atmosphere anyway? At what rate?

One common assumption made by wood pellet critics is that it will take hundreds of years for forests to recapture CO_2.[228] It is true that the carbon debt 'payback' period for wood pellet stocks that have displaced mature forests can be up to 150 years.[229] But these are not the forest stocks most likely to be cultivated for pellet production.[230] When pellets are cultivated from waste product left on the forest or sawmill floor, the payback period is nearly immediate when trees are replanted.[231] This waste wood—the source used by companies like Drax Biomass in England[232]—would have gotten into the atmosphere in relatively short order anyway.[233] The carbon payback period can also be far less for biomass cultivated

224. *See* MANOMET CTR. FOR CONSERVATION SCI.S, BIOMASS SUSTAINABILITY AND CARBON POLICY STUDY: REPORT TO THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENERGY 110–13 (Thomas Walker ed., 2010), https://gfmc.online/vfe/Manomet-Biomass-Report-June-2010.pdf.

225. *See generally Massachusetts & Manomet*, BIOMASS POWER ASS'N, https://www.usabiomass.org/massachusetts-manomet/ (last visited Sept. 19, 2022).

226. *Id.* For an examination of the complexities of comparing carbon pools and wood use alternatives, see Bruce Lippke et al., *Life Cycle Impacts of Forest Management and Wood Utilization on Carbon Mitigation: Knowns and Unknowns*, 2 CARBON MGMT. 303, 314 (2011).

227. *See Massachusetts & Manomet*, *supra* note 227.

228. *See* Yassa, *supra* note 220, at 2.

229. *See* Jonker et al., *supra* note 208, at 372.

230. *See id.*

231. *See* Lippke et al., *supra* note 228, at 314.

232. *What is Biomass?*, DRAX (Aug. 21, 2020), https://www.drax.com/sustainable-bioenergy/what-is-biomass/.

233. *See* Lippke et al., *supra* note 228, at 314.

from fast growing planation-style forests, like the pine forests of the southeastern U.S.—as little as twenty-one years according to Manomet.[234] Other studies have reached similar conclusions.[235] Further, payback periods vary dramatically depending upon how the land was used prior to the planting of the biomass feedstock.[236] While cultivating from an old growth forest can have a payback period of up to 1,000 years,[237] feedstocks that are grown on post-agricultural landscapes can result in payback periods as small as one year.[238]

Other scholars have argued that the total carbon stored within a sustainably managed (perpetually replanted) forest sending products into various markets (housing and construction, energy production, etc.)[239] will exceed carbon accumulation in an unmanaged forest over time, particularly when, in the context of energy production, accounting for displaced fossil fuel emissions.[240] Jonker and colleagues were the first to study the carbon payback period for fast-growing softwood plantations in the southeastern U.S.[241] The study concluded that after only seventeen years, from a carbon storage perspective, harvesting wood pellets from southern forests is preferable to not harvesting the timber at all.[242] Depending on

234. *See* MANOMET CTR. FOR CONSERVATION SCIS., *supra* note 226, at 7.

235. *See* Jon McKechnie et al., *Forest Bioenergy or Forest Carbon? Assessing Trade-Offs in Greenhouse Gas Mitigation with Wood-Based Fuels*, 45 ENV'T SCI. & TECH. 789, 791–92 (2011).

236. *See* Jonker et al., *supra* note 208, at 372.

237. *See id.*

238. *Id.* Other scholars have also challenged the assumptions of wood pellet critics, arguing that the focus should be on the productivity of the forest system as a whole. *See* JIM BOWYER ET AL., LIFE CYCLE IMPACTS OF FOREST MANAGEMENT AND BIOENERGY PRODUCTION 11 (Dovetails Partners ed., 2011), https://www.dovetailinc.org/portfoliodetail.php?id=5e46253579685.

239. Lippke et al., supra note 228, at 311. According to some scholars, the products for which commercial timber becomes a substitute, including in the energy sector, and the way forests are managed will have the most significant impact on the use of forests for climate mitigation. *Id.*

240. *Id.* at 317 ("While much has been made about this time sensitivity—that burning wood is worse than letting it decay—the [longer-term] benefits of sustainable wood production displacing fossil fuel-emissions rotation after rotation far outweighs any short-term impact."). Strauss is also critical of scientific studies that ignore the life cycle of carbon accumulation and that are "strictly about combustion," arguing that the forest system at a landscape level can accumulate more carbon over time through improved management. WILLIAM STRAUSS, HOW MANOMET GOT IT BACKWARDS: CHALLENGING THE "DEBT-THEN-DIVIDEND" AXIOM 2 (FutureMetrics ed., 2011), http://futuremetrics.info/wp-content/uploads/2013/07/Manomet-Got-it-Backwards.pdf. Strauss developed a "dividend-then-benefit" model, showing that forest cultivation and subsequent combustion of wood pellets stays below the zero net carbon level as the closed loop of forests to fuel back to forests cycles through. *Id.* at 5–6. Strauss argues that while total carbon stored in an unmanaged forest can reach a maximum beyond which it can no longer store carbon, a forest managed more productively sequesters carbon and places a host of products into both energy markets and markets where carbon is stored for long periods (like construction). *Id.*

241. *See* Jonker et al., *supra* note 208, at 372.

242. *Id.* at 381.

the forest management approach used, the net carbon balance would be almost seven times greater than a no-harvest scenario after seventy-five years.[243]

Not only are liberal environmental groups (like the Dogwood Alliance[244]) ignoring the findings of reputable scientists, but they also demonstrate a fundamental lack of understanding of history, markets, and private property owner incentives.[245] Markets have been critical to reforesting a heavily deforested United States in the past.[246] Biomass feedstock markets could be the next iteration of that phenomenon, as they can encourage investment in either intensifying current forest management or expanding forestlands onto currently unforested land.[247] In this way, biomass generation could even result in net negative emissions.[248]

A 2018 study by Tian and colleagues concluded that research to date had failed to consider the effect of markets on land use change—a critical omission since landowners respond to market forces and expect a reasonable return on their investment.[249] The U.S. South, which produces more timber than any other region of the world, is exactly the type of highly productive region where market forces have significant impact, since 86% of forests are privately owned.[250] The study noted that carbon sequestration rates may drop 45% over the next twenty-five years, and that forests may even become a net source of emissions in some regions.[251] Aging forests accumulate and store less carbon over time, and "forest sequestration rates will decline unless offset by carbon accumulation in younger and more intensively managed stands elsewhere."[252] Market signals and prices play a key role

243. *Id.* Ultimately, "[t]he degree to which [a] biomass energy system can reduce carbon emissions compared to fossil fuels is directly related to [the] establishment and management of harvesting regimes, forest types, fuel transport, and efficiency." Dan Haugen, *Does Burning Wood Instead of Fossil Fuels Increase GHG Emissions?*, ENERGY NEWS NETWORK (May 10, 2013), https://energynews.us/2013/05/10/does-burning-wood-instead-of-fossil-fuels-increase-ghg-emissions/.

244. *See Our Forests Aren't Fuel Campaign,* DOGWOOD ALLIANCE, https://www.dogwoodalliance.org/our-work/our-forests-arent-fuel/ (last visited Dec. 17, 2022).

245. *See, e.g.,* Blake Hudson, *Harnessing Energy Markets to Conserve Natural Resources? The Case of Southern U.S. Forests*, 44 FLA. ST. L. REV. 995, 1009–13 (2017) (explaining that markets helped the state of Georgia's forests bounce back from near obliteration, and today the state contains 75% more forestland than it did at the turn of the twentieth century).

246. *Id.*

247. *See id.* at 1040.

248. *See id.* at 1002.

249. *See* Xiaohui Tian et al., *Will U.S. Forests Continue to Be a Carbon Sink?*, 94 LAND ECON. 97, 98 (2018).

250. *See* DAVID N. WEAR & JOHN G. GREIS, U.S. DEP'T OF AGRIC., THE SOUTHERN FOREST FUTURES PROJECT: SUMMARY REPORT, 39 (2011), https://www.srs.fs.usda.gov/pubs/gtr/gtr_srs168.pdf.

251. Tian et al., *supra* note 251, at 97.

252. *Id.* at 99.

in determining such management decisions. Increased demand for forest products can intensify forest management in places like the southern U.S., which is currently facing market pressures to convert forests to urban and other forms of development.[253] This intensification would "contribute significantly to the U.S. forest carbon sink."[254] The bipartisan environmental policy think-tank Resources for the Future has made a similar argument, finding that under "market optimizing conditions . . . the response of managers will be to increase the area and intensity of forest production thereby offsetting much and often all and more of the carbon released in bioenergy production."[255]

Liberal environmentalists would do well to understand the importance of markets, but so too would scientists and economists on that side of the political spectrum. Studies focusing on wood pellets and their climate impacts fail to consider what happens when robust forest product markets do not exist—the absence of forest markets leaves forested lands at risk of conversion to non-forest uses.[256] While it may very well prove to be that burning trees for electricity is not preferable as other forms of renewable energy generation (solar, wind, combined with adequate storage technology), it is reckless not to consider the climate implications of taking away the incentives of private property owners to conserve their forests. This is especially true in a region of the country where state and local governments are unlikely to prescriptively regulate for forest protection.[257] After all, when it comes to carbon dioxide concentrations, it would be better to burn trees for energy and replant them than to have no trees at all.

Environmental groups have legitimate concerns when it comes to the wood pellet industry, including potential impacts on native forests and biodiversity if forestry operations are intensified to meet energy demand and maximize carbon sequestration;[258] concerns over the environmental justice impacts of wood pellet facility siting;[259] illegal logging, and, of course, potential climate impacts of not only the carbon released as woody biomass is burned (and if forests are not

253. *See* Blake Hudson, *The Natural Capital Crisis in Southern U.S. Cities*, 92 CHI.-KENT L REV. 529, 535 (2017).

254. Tian et al., *supra* note 251, at 110.

255. Roger Sedjo, *How Carbon Neutral is Bioenergy?, Abstract,* RES. FOR FUTURE (Mar. 1, 2012), https://www.rff.org/events/all-events/how-carbon-neutral-is-bioenergy/.

256. Hudson, *supra* note 247, at 1032.

257. *See generally* Hudson, *supra* note 255.

258. *See* Richard Birdsey et al., *Climate, Economic, and Environmental Impacts of Producing Wood for Bioenergy*, 13 ENV'T RSCH. LETTERS, Apr. 25, 2018, at 1, https://iopscience.iop.org/article/10.1088/1748-9326/aab9d5/pdf.

259. Majile de Puy Kamp, *How Marginalized Communities in the South are Paying the Price for 'Green Energy' in Europe*, CNN (July 9, 2021), https://www.cnn.com/interactive/2021/07/us/american-south-biomass-energy-invs/.

replanted), but also carbon impacts across the entire sector (transportation, production, etc.).

Even so, many concerns of opponents have readily available policy solutions that could allow the industry to capture the above-stated gains while avoiding the pitfalls highlighted by opponents. In prior scholarship, I have shown the holes in opponents' lines of reasoning and addressed how there are adequate policy responses to deal with these issues.[260] Other opponent arguments are based on faulty presumptions or non-sequitur-esque reasoning: illegal logging or environmental injustice occurs within the industry, therefore the entire industry should be abandoned. In the GMO context, one author noted that "[t]he principles [that the anti-GMO movement] claims to stand for—environmental protection, public health, community agriculture—are better served by considering the facts of each case than by treating GMOs, categorically, as a proxy for all that's wrong with the world."[261] This same argument can be made for wood pellets, where environmental justice, illegal logging, biodiversity, and carbon concentration concerns should be taken on a case-by-case basis, rather than using the wood pellet industry as a proxy upon which to place blame for each of these issues.

Ultimately, adopting an oversimplified analytical lens on the issue of wood pellets has two effects: the credibility of legitimate environmentalist claims is undermined and policy judgments are obscured. If liberal environmentalists are on the team opposing carbon dioxide emissions, how can they possibly change teams now? Their Care and Fairness concerns are similar to those discussed above regarding coastal restoration. Here, however, environmental justice concerns come to the forefront. A recent CNN article, titled "How Marginalized Communities in the South are Paying the Price for 'Green Energy' in Europe" is a prime example of how the left can allow its Care and Fairness intuitions to blind it to how its policy positions may "damage[] the hive" by helping a "subset of bees."[262]

Haidt argues that the left's "most sacred value is caring for victims of oppression."[263] Anyone who seeks to provide an alternative explanation for certain forms of oppression "can expect a vehement tribal response."[264] This is why the response is so vitriolic when one suggests that, yes, there are serious environmental justice issues within the wood pellet industry that should be addressed through

260. *See* Hudson, *supra* note 205; Blake Hudson, *Woody Biomass and Electricity in the United States: A Case Study in Scientific and Policy Uncertainty* (Edward Elgar/IUCN, Working Paper, 2019).

261. Saletan, *supra* note 108.

262. HAIDT, *supra* note 1, at 343.

263. *Id.* at 345.

264. *Id.*

governmental policy—but the justice issues presented within that industry are unrelated to the propriety of the industry in the first place and its potential role in keeping trees in the ground and rural local economies intact. Policy-makers should certainly address the environmental justice issues, but there is no need to throw the baby out with the bathwater and undermine an entire industry just because it presents some of the same environmental justice issues that numerous other industries do (and which we nonetheless accept and integrate into society). As Haidt notes, "Care and compassion sometimes motivate liberals to interfere in the workings of markets, but the result can be extraordinary harm on a vast scale."[265] Here, interference with wood pellet markets could very well end up in a deforested southern U.S. and more carbon dioxide in the atmosphere (from coal or natural gas-fired electricity generation).

Overreliance on the Care and Fairness foundations is not limited to environmental justice concerns. There is a strong sense among liberal environmental groups that cutting trees is wrong, that they should be left in the ground and undisturbed.[266] While I will not repost the vitriolic comments I have received in response to op-eds I have written on the subject, I can attest to liberal passion on this front. Yet, this worldview smacks against reality and completely disregards the fact that incentives matter for the owners of 60% of U.S. forests in private ownership.[267] The Liberty foundation causes conservatives to recoil at the notion that they cannot reap economic benefit from their forest resources. Whether one agrees with that perspective or not, the perspective should be understood when thinking about climate policy developments.

Liberals also ignore forest science at their peril. While former President Trump was wrong to lay blame for western wildfires *solely* on forest management (ignoring climate change),[268] he was partly correct. San Isabel National Forest borders a piece of property I own in Colorado. It is a powder keg waiting to explode because of all the downed timber on the forest floor (wood simply decays extremely slowly in the west[269]). Periodic cultivation of forests is a means to avoid catastrophic wildfires and the sudden release of carbon dioxide into the atmosphere, but at both the state

265. *Id.* at 356; *see also* Leda Cosmides & John Tooby, *Neurocognitive Adaptations Designed for Social Exchange*, *in* THE HANDBOOK OF EVOLUTIONARY PSYCHOLOGY, (David M. Buss ed., 2005).

266. *See* Christopher D. Stone, *Should Trees Have Standing?–Towards Legal. Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972).

267. *See Who Owns America's Forests?*, U.S. ENDOWMENT FOR FORESTRY & CMTYS., https://www.arcgis.com/apps/Cascade/index.html?appid=d80a4ffed7e044219bbd973a77bea8e6 (last visited Dec. 17, 2022).

268. *See* Reality Check, *US West Coast Fires: Is Trump Right to Blame Forest Management?*, BBC NEWS (Oct. 14, 2020), https://www.bbc.com/news/world-us-canada-46183690.

269. ROBERT EDMONDS, ORGANIC MATTER DECOMPOSITION IN WESTERN UNITED STATES FORESTS 126 (1990).

and federal levels, policymakers have failed to provide for adequate forest management to reduce fuel loads.[270] If forest products can be placed into markets displacing fossil fuels (substituting for iron and concrete in construction,[271] for coal and gas in electricity generation) at the same time that forests are replanted, forest management and markets could play a critical role in creating more significant carbon sinks in the U.S. and combatting climate change. Wood pellets for electricity generation may turn out *not* to be good for climate change. But we cannot look at that question in a reasoned manner until we move past intuitions that blind us to objective assessment of the science.

IV. RIGHTEOUS CONSERVATIVE BLIND SPOTS

A. Opposition to Renewable Energy

During the Texas ice storm of 2021 conservative politicians were quick to blame everything from wind farms to the "Green New Deal"[272] for the power outages that affected 70% of grid users, caused half of users to be without water, and caused over 100 deaths.[273] A full one-quarter of Texans affected turned on their gas ovens or stovetops to stay warm, with a number using a grill or smoker inside for heat (despite the heightened risk of carbon monoxide poisoning).[274] The storm was one of the costliest in Texas history.[275]

But the accusations that renewable energy was the culprit were nothing more than partisan hyperbole. At most, only one-third of the outages were traceable to renewable sources, with the remaining two-thirds resulting from failures of natural gas or coal-fired generation facilities.[276] Furthermore, the outages attributable to renewables were primarily due to a failure to winterize wind turbines (wind turbines

270. Tony Schick & Jes Burns, *Efforts to Reduce Wildfire Risk Fall Short, Buck Science*, OPB (July 24, 2018, 12:45 PM), https://www.opb.org/news/article/west-wildfire-risks-fuels-treatment-thinning-burning/.

271. Jim Robbins, *As Mass Timber Takes Off, How Green Is This New Building Material?*, YALE ENV'T 360 (Apr. 9, 2019), https://e360.yale.edu/features/as-mass-timber-takes-off-how-green-is-this-new-building-material.

272. Bryan Mena, *Gov. Greg Abbott and Other Republicans Blamed Green Energy for Texas' Power Woes. But the State Runs on Fossil Fuels*, TEX. TRIB. (Feb. 17, 2021), https://www.texastribune.org/2021/02/17/abbott-republicans-green-energy/.

273. Neelam Bohra, *Almost 70% of ERCOT Customers Lost Power During Winter Storm, Study Finds*, TEX. TRIB. (Mar. 29, 2021), https://www.texastribune.org/2021/03/29/texas-power-outage-ERCOT/.

274. *Id.*

275. *Id.*

276. Mena, *supra* note 274.

in Iowa, for example, operate effectively in sub-freezing temperatures).[277] While other jurisdictions require grid operators to winterize both renewable and fossil fuel electricity generating facilities, Texas only *recommends* winterization.[278] Over half of Texas citizens' electricity is generated by natural gas, and pipes froze at those facilities.[279]

Texas is a unique electricity grid that stands on its own and is neither connected to grids elsewhere in the U.S. nor regulated the way those grids are.[280] The Electric Reliability Council of Texas (ERCOT), which operates Texas's electrical grid, decided back in 2013 that not making investments to avoid a low probability event like the 2021 winter storm was a risk worth taking:

> With gas prices being low . . . the risk of 2-3 days of possible freeze-off every several years is a risk that Gulf Coast producers have been willing to take. It is a tradeoff between lost revenue from lost production vs. lost revenue from higher annual operating costs needed to freeze-protect individual wells.[281]

While renewables were the least of Texas's worries during the winter storm, conservative opposition to renewables is not a new trend. Professor Troy Rule has written extensively about efforts to hamstring distributed renewable generation by public utility commissions (PUCs) beholden to the customers they regulate.[282] About rooftop solar, Rule notes that "electric utilities are actively seeking ways to protect themselves against this new form of disruptive innovation in their markets."[283] PUCs have long shielded electric utilities from competition from rival utilities, and "utilities today are understandably now looking to these same regulators to help them protect their interests and incumbent monopoly position against the rooftop solar industry—a totally new type of competitor."[284] Utilities in a number of jurisdictions have received PUC approvals to make rooftop solar less cost-competitive with power supplied from the grid, or to single out homes with

277. *See* Jim Krane et al., *Winterization and the Texas Blackout: Fail to Prepare? Prepare to Fail*, FORBES (Feb. 19, 2021, 10:55 AM), https://www.forbes.com/sites/thebakersinstitute/2021/02/19/winterization-and-the-texas-blackout-fail-to-prepare-prepare-to-fail/?sh=684f49767c83.

278. *Id.*

279. *Id.*

280. *Id.*

281. *Id.*

282. *See* Troy Rule, *Buying Power: Utility Dark Money and the Battle over Rooftop Solar*, 5 LSU J. ENERGY L. & RES. 1, 1 (2017).

283. *Id.*

284. *Id.* at 5.

rooftop solar, and place monthly fees just on solar users simply because they generate electricity from solar.[285]

One of the most insidious ways utilities have sought to fight solar through PUCs is the use of "dark money" to influence PUC elections in jurisdictions where PUC members are elected and not appointed. The 2010 case *Citizens United v. Federal Election Commission*[286] paved the way for loose interpretations of campaign finance laws that have resulted in never-before-seen quantities of money flowing into PUC commissioner elections. *Citizens United* allows corporations to contribute as much money as they please to political non-profits which, in turn, fund election campaigns. There is no requirement that corporations publicly disclose whether they donated money or how much they donated.[287] These corporations are considered to have free speech rights the same as individual citizens that shield them from inquiries into their political contributions.[288]

Professor Rule highlights the case of Arizona, where solar generation has grown at a blistering pace.[289] The state holds elections to fill all five seats on the Arizona Corporation Commission (ACC).[290] Historically, Rule notes that "elections for seats on the ACC have been relatively quiet and uneventful affairs involving only modest levels of campaign expenditures."[291] But in 2014, when two of the five seats became available, the Arizona Public Service Company (APS), with more than one million in-state customers, utilized *Citizen's United* to funnel millions of dollars into a campaign to elect two specific members to the ACC—both of whom were Republicans[292]—who wanted to increase penalties on homes that relied on

285. *See* Daniel Rothberg, *Regulators Deal a Blow to Rooftop Solar Industry*, LAS VEGAS SUN (Dec. 22, 2015, 4:04 PM), http://lasvegassun.com/news/2015/dec/22/regulators-deal-a-blow-to-rooftop-ma.cc/7FTB-YJAY; Ray Stern, *Home Solar in Arizona Takes Hit After Vote by Corporation Commission Add Surcharge*, PHX. NEW TIMES (Nov. 15, 2013, 12:34 PM), https://phoenixnewtimes.com/news/home-solar-in-arizona-takes-hit-after-vote-by-corporation-commission-to-add-surcharge-6637814 [https://perma.cc/F67T-GHWF].

286. *See generally* Citizens United v. Fed. Election Comm'n, 558 U.S. 310 (2010).

287. *See generally* Jennifer A. Heerwig & Kathryn Shaw, *Through a Glass, Darkly: The Rhetoric and Reality of Campaign Finance Disclosure*, 102 GEO. L.J. 1443 (2014).

288. *See Citizens United*, 558 U.S. 310.

289. *See* Rule, *supra* note 284.

290. *Id.* at 9.

291. *Id.*

292. *Tom Forese*, BALLOTPEDIA, https://ballotpedia.org/Tom_Forese (last visited Sept. 20, 2022); *Doug Little*, BALLOTPEDIA, https://ballotpedia.org/Doug_Little (last visited Sept. 20, 2022).

rooftop solar.[293] These two candidates won in a close election.[294] A mere five months later, APS sought to have the ACC quadruple penalties the utility already assessed to rooftop solar users.[295] The ACC voted to do so in a 3-2 decision, with the two Republican dark money candidates in the majority.[296]

It is understandable that utilities would be nervous about distributed renewables since citizens who generate electricity from rooftop solar purchase less electricity from the utility (or maybe none). Those who are not completely off-grid are likely to still use transmission lines owned and maintained by the utility and might no longer be contributing proportionally to the costs of funding or maintaining those lines. But something else seems to be going on in cases like Arizona's. Vested interests, like government-run utilities, are looking to the government to maintain their monopoly and keep competitors at bay. Here, it seems that conservatives are willing to exchange away the Liberty foundation for the Loyalty foundation. And it creates an odd situation, with conservatives being loyal to the government and its regulations (is limited government not a conservative principle?). At the same time, conservatives seem willing to punish citizens who want to be energy independent and free from a grid run by the government (which would seem to be a prime manifestation of the Liberty principle).

There may be some legitimate reasons for public utilities to be nervous about expanded distributed renewables. In the early 1900's, horse carriage manufacturers were no doubt nervous about the emergence of the automobile; however, it seems unlikely that an adherent to conservatism would have wanted private or public money to flow into propping up the carriage industry to forestall innovation and growth in a new, social welfare-enhancing free market. But utilities' entitlement to government protection of their monopolistic enterprise—an endowment effect of

293. Ryan Randazzo, *Regulator Robert Burns Wants APS to Disclose "Dark Money" Donations*, ARIZ. REPUBLIC (Dec. 1, 2015, 9:12 AM), https://azcentral.com/story/money/business/energy/2015/12/01/regulator-robert-burns-wants-aps-disclose-its-dark-money-contributions-political-candidates/76592810/ [https://perma.cc/NR4W-642Y] ("APS, the state's biggest utility, is widely believed to have contributed about $3.2 million last year to independent political groups that campaigned for . . . Tom Forese and Doug Little.").

294. Ryan Randazzo, *Republicans Forese, Little Win Arizona Corporation Commission Race*, ARIZ. REPUBLIC (Nov. 4, 2014, 9:40 PM), https://azcentral.com/story/money/business/2014/11/04/arizona-corporation-commission-election-night/18427899/ [https://perma.cc/Y6B4-EMVY].

295. Ryan Randazzo, *Regulators Delay APS Solar-Fee Decision*, ARIZ. REPUBLIC (Aug. 18, 2015, 10:18 PM), https://www.azcentral.com/story/money/business/consumer/2015/08/19/regulators-delay-aps-solar-fee-decision/31963553/.

296. *See id.*

sorts[297]—leads to resistance to any market growth that threatens the monopoly. The reason why conservatives are complicit in undermining renewable generation, when it is actually an endeavor in line with principles of conservatism, may have deep roots in the trade-offs underscored by Haidt in his social-psychology studies.

As noted, the Loyalty foundation appears to be implicated because adherence to tradition is a bedrock principle of what it means to be conservative. Conservatism is defined as "a political philosophy based on tradition and social stability, stressing *established institutions*, and preferring gradual development to abrupt change" and as "the tendency to prefer an existing or traditional situation [rather than] change."[298] Since its first use in our nation, our electricity has been supplied by "the grid," primarily through government-operated utilities.[299] It is understandable that a disruptive innovation like rooftop solar would cause such an abrupt shift in how electricity is delivered that conservative intuitions—the elephant—might hesitate to accept this innovation. Renewable proponents should seek to understand this intuitive impulse and address it before engaging in moral reasoning on the issue.

Also implicated is the moral foundation of Fairness as proportionality (not equality, which, as you recall, is the liberal iteration of Fairness). Utilities have invested a great amount of economic and human capital in delivering electricity, so there is likely a sense among conservatives that it would be unjust to allow that to change so abruptly to a new innovation that has, proportionally, not contributed as much to the development and maintenance of our electricity system to date.

The foundation of Sanctity plays a role as well, as there are those in conservative religious circles who, unable to accept the science of climate change, believe that God would not allow catastrophic climate change to happen, or would simply "take care of it," or would even use it to bring about the end of the world.[300] If this is one's belief, why would we need to disrupt a working system (fossil fuel dependent energy grids) for a new technology like solar? Religious conservatives, however, should reconceive Sanctity as integrative of stewardship: a firm biblical

297. Akhilesh Ganti, *Endowment Effect*, INVESTOPEDIA (Jan. 16, 2021), https://www.investopedia.com/terms/e/endowment-effect.asp.

298. *Conservatism*, MERRIAM-WEBSTER, https://www.merriam-webster.com/dictionary/conservatism (emphasis added).

299. James McBride & Anshu Siripurapu, *How Does the U.S. Power Grid Work?*, COUNCIL ON FOREIGN RELS., https://www.cfr.org/backgrounder/how-does-us-power-grid-work (last updated July 5, 2022).

300. Lisa Vox, *Why Don't Christian Conservatives Worry About Climate Change? God.*, WASH. POST (June 2, 2017, 6:00 AM), https://www.washingtonpost.com/posteverything/wp/2017/06/02/why-dont-christian-conservatives-worry-about-climate-change-god/.

principle commanding that Christians take care of God's creation.[301] At the least, lengthening the availability of fossil fuels for future generations to use by transitioning to other forms of electricity generation like solar would be a responsible, conservative use of resources. At the most, caring for our children per God's commands requires us to think of future generations in the context of climate change. There are many instances in the Bible where God gave people over to their greed and pride, and there is no reason He would not do the same in the climate context. So, in this way, obedience to God is acting as good stewards and providing for unborn future generations. Liberals may not understand conservative conceptions of Sanctity in the climate change context, but making an effort to do so could give them the tools to engage conservative intuitions before presenting reasoned arguments.

The same logic could be applied to the Care foundation, and conservatives should not be too quick to sacrifice that foundation for others (like Loyalty) given the potential threat climate change poses to future generations. Finally, I would appeal to conservatives that the form of electricity that most directly implicates the Liberty foundation is rooftop solar: freeing oneself from a system run by the government and tethered to other citizens, which can have cascading negative effects on an individual's usage of electricity (e.g. the Texas winter storm[302]), would seem to be the essence of Liberty. It is the notion that "I am responsible for producing my own energy, and I can choose how I want to do that."

To overcome conservative opposition to renewable energy systems, both liberals and conservatives need to understand the intuitive leanings of those in opposition. Only then will the rider of reasoning sway the intuitive elephant toward sound policy progress.

B. Sanctity of Life, Mercury Pollution, and Climate Change[303]

Shortly after former President Trump announced that the United States would pull out of the Paris Agreement, I ran across the following social media post from a conservative friend:

> I'm not certain how many yet to be born children of the world will fail to see life because of President Trump's decision regarding the Paris Climate

---

301. R.C. Sproul, *What Is Biblical Stewardship?*, LIGONIER MINISTRIES (JUNE 28, 2018), https://www.ligonier.org/blog/what-biblical-stewardship/.

302. McBride & Siripurapu, *supra* note 301.

303. This section substantially derives and adapts my previous blog post for the Rural Environment Project. *See* Blake Hudson, *Protecting Future Generations: The Environment/Abortion Dilemma,* RURAL ENV'T (Sept. 14, 2017), https://ruralenvironment.net/2017/09/14/protecting-future-generations-the-environmentabortion-dilemma/.

> Accord. Based upon the reaction of many, it must be an astronomical number. Because, I know that 900,000 yet to be born Americans will fail to see life this year because of abortion, and folks ain't making a peep about that.[304]

This was the most nuanced and least caustic of the comments I saw using the Paris/abortion dichotomy to highlight what many on both sides of the political spectrum see as a values disconnect between the right and left. You will likely recall a similar controversy linking environmental protection with abortion from 2015, as the simultaneous stories of Planned Parenthood's purported shopping around for aborted fetus parts[305] and the killing of Cecil the Lion in Africa[306] garnered national attention. Controversies where abortion and environmental protection are linked ultimately occur because each affects a shared audience—future generations. Whether it is a future individual who may or may not exist because an embryo is terminated or a future individual who may or may not exist because of a climate-induced increase in disease vectors, such controversies implicate speculative future individuals.

For those who care about environmental protection, abortion creates a problem due to the following sentiment growing in conservative circles: caring about issues like climate change or biodiversity protection (and future possible deaths) is a non-starter when those advocating strongest for climate action or biodiversity protection (liberal groups) are often the same people advocating strongest for abortion rights. Whether or not you believe abortions at any stage are "human deaths" has no bearing on the fact that a large (and apparently increasing[307]) proportion of the voter base believes they are; and, in particular, this proportion includes the segment who held their nose and voted for Donald Trump in 2016[308] and who, after the appointment of three conservative justices to the U.S. Supreme Court, wholeheartedly endorsed Trump in 2020. According to exit polls, 81% of (self-

304. FACEBOOK (on file with author).

305. *See, e.g.*, Eugene Scott, *Anti-abortion Group Releases Fourth Planned Parenthood Video*, CNN (July 5, 2015), https://www.cnn.com/2015/07/30/politics/planned-parenthood-fourth-video/index.html.

306. *See* Don Melvin, *Zimbabwean Officials: American Man Wanted in Killing of Cecil the Lion*, CNN (July 28, 2015, 6:09 PM), https://www.cnn.com/2015/07/28/africa/zimbabwe-lion-killed/.

307. *See* Jeff Jacoby, *American Millennials Rethink Abortion, for Good Reasons*, BOS. GLOBE (June 9, 2015), https://www.bostonglobe.com/opinion/2015/06/09/millennial-americans-rethink-abortion-for-good-reasons/ZCmZNJuCWKVr5brzVfaiuI/story.html.

308. *See* Olga Khazan, *Why Christians Overwhelmingly Backed Trump*, ATLANTIC (Nov. 6, 2016), https://www.theatlantic.com/health/archive/2016/11/why-women-and-christians-backed-trump/507176/.

identifying) white evangelical Christians voted for Trump in both 2016[309] and 2020.[310] While many may have been enthusiastic Trump supporters, I have talked to many others who felt that they "didn't have a choice." The sentiment among these people was that it pained them to vote for a man with such low moral character, but when viewing the bigger picture, they could not get behind a candidate like Clinton who said in debates that she "strongly" supported *Roe v. Wade*.[311] Even Nancy Pelosi blamed Trump's victory in part on her party's "hardline abortion stance."[312] The term "abortion" was one of the top web searches on election day.[313]

Consider that for pure environmental issues, liberal environmental groups are decidedly on the side of life. Carbon dioxide emissions exacerbate climate change and harm the vulnerable and future generations, mercury emissions harm pregnant women and unborn children, and species decline hurts society in the long run (reducing access to life-saving medicines, for example).[314] Conservatives have tended to increasingly deny the sound research and logic supporting scientific facts like these.[315]

As Jim Rasband, Jim Salzman, and the late John Nagle point out, the different values and perspectives people bring to bear on abortion create an apples to oranges scenario in debates like these: "If someone believes that abortion is murder, whether the abortion occurs in the first rather than second trimester is meaningless. Thus . . .

309. *See* Jon Huang et al., *Election 2016: Exit Polls*, N.Y. TIMES (Nov. 8, 2016), https://www.nytimes.com/interactive/2016/11/08/us/politics/election-exit-polls.html.

310. *See* Frank Newport, *Religious Group Voting and the 2020 Election*, GALLUP (Nov. 13 2020), https://news.gallup.com/opinion/polling-matters/324410/religious-group-voting-2020-election.aspx.

311. *See* Thomas Groome, *To Win Again, Democrats Must Stop Being the Abortion Party*, N.Y. TIMES (Mar. 27, 2017), https://www.nytimes.com/2017/03/27/opinion/to-win-again-democrats-must-stop-being-the-abortion-party.html.

312. *See* Karen Tumulty, *Pelosi: Democratic Candidates Should Not be Forced to Toe Party Line on Abortion*, WASH. POST (May 2, 2017), https://www.washingtonpost.com/politics/pelosi-democratic-candidates-should-not-be-forced-to-toe-party-line-on-abortion/2017/05/02/9cbc9bc6-2f68-11e7-9534-00e4656c22aa_story.html?utm_term=.b39797195a36.

313. *See* Jeanne Mancini, *Abortion Lobby Lost Big this Election — Life is a Winning Issue*, HILL (Nov. 11, 2016, 3:41 PM), https://thehill.com/blogs/pundits-blog/presidential-campaign/305619-abortion-lobby-lost-big-this-election-life-is-a.

314. *See* Aaron S. Bernstein & David S. Ludwig, *The Importance of Biodiversity to Medicine*, J. AM. MED. ASS'N., 2997–99 (2008), https://jamanetwork.com/journals/jama/article-abstract/182891.

315. *See* Gordon Gauchat, *Politicization of Science in the Public Sphere: A Study of Public Trust in the United States, 1974 to 2010*, SAGE JS. (Mar. 29, 2021), https://journals.sagepub.com/doi/abs/10.1177/0003122412438225.

the conflicting parties are, quite literally, speaking past one another, making principled compromise a difficult undertaking"[316]

From a conservative perspective, valuing the Sanctity foundation in particular, it makes little sense to make moral claims regarding unborn citizens living in a future, climate-changed world but turn around and readily dismiss ethical or moral questions raised by aborting the unborn currently gestating. A conservative mind says, how can environmentalists invoke the rights of unborn future generations as justification for strong climate change protection policies today, but not actual unborn embryos? Are not future generations that are subject to climate change impacts far more speculative entities than an embryo on its way to becoming a human in a mere matter of months, but for interference by an outside party? How can scientists declare the potential discovery of a single-celled bacteria on Mars proof of "life" on another planet,[317] and yet a two-week-old, multi-celled embryo in a mother's womb is not life?

Just consider conservative standard bearers such as Marco Rubio, who criticized the furor over the killing of Cecil the lion by contrasting it to the national response (or lack thereof) to abortion. His message, echoed in many conservative circles, was basically "why do we care about a dead lion when millions of babies have been aborted?"[318] And of course, it is very hard to gain support for stopping species decline or climate change impacts among conservatives when the most prominent proponents of environmental protection policies readily accept abortion.

Conservatives, however, wrongly use this line of reasoning to dismiss environmental protection. The lesson to be learned from the killing of Cecil is not irrelevant because liberals happen to support the cause, any more than the lesson to be learned from humanity's role in climate change is irrelevant because of Al Gore's advocacy.[319]

316. Edith Brown Weiss, *What Obligation Does Our Gneration Owe to The Next? An Approach to Global Environmental Responsibility*, 84 AM. J. INT'L L. 198, 199–202 (1990), *as reprinted in* JAMES RASBAND ET AL., NATURAL RESOURCES LAW AND POLICY 23–24 (2d ed. 2009).

317. *See generally* Charles Q. Choi, *Mars Life? 20 Years Later, Debate Over Meteorite Continues*, SPACE.COM (Aug. 10, 2015), https://www.space.com/33690-allen-hills-mars-meteorite-alien-life-20-years.html (stating that bacteria in a meteorite from Mars is possibly proof of life).

318. *See* Maxwell Tani, *Marco Rubio Causes Twitter Firestorm by Comparing Cecil the Lion's Death to Planned Parenthood Controversy*, INSIDER (July 29, 2015, 2:36 PM), https://www.businessinsider.com/marco-rubio-cecil-the-lion-abortion-planned-parenthood-2015-7.

319. *See generally* David Brooks, *A Sad Green Story*, N.Y. TIMES (Oct. 18, 2012), https://www.nytimes.com/2012/10/19/opinion/brooks-a-sad-green-story.html?ref=davidbrooks&_r=0.

This logical misstep has led some to query whether evangelical conservatives are pro-life, or rather pro-birth?[320] Consider that air pollution globally leads to 2.7 million premature births each year,[321] putting babies lives at risk (preterm birth is a leading cause of death for children under five)[322] and costing healthcare systems billions of dollars. Mercury and related pollution from coal-fired power plants results in over 11,000 deaths a year in the U.S. alone.[323] Mercury also causes neurological problems in children, lowering IQs, and consigning children to a much lower quality of life than if we had been using cleaner burning fuels or better technologies while burning coal.[324] Even so, a coalition of conservatives, and in particular groups of evangelicals opposed to abortion, staked out the position[325] that reducing mercury emissions from power plants is not a pro-life issue, despite the clear scientific evidence[326] that both unborn children and infants face increased risk of death and cognitive impairment in life due to mercury pollution.[327] A letter written by a group of evangelicals in 2012 (through the Cornwall Alliance) opposed the EPA's mercury rules as needless government regulation.[328]

Ultimately, many conservatives are inconsistent when it comes to their views on environmental protection and abortion. If one truly cares about the unborn, why would we knowingly subject them to increased risk of death, a world of reduced cognitive abilities due to pollution, rising sea levels, social and economic upheaval due to climate change, and reduced quality of life resulting from the continued loss of biodiversity?

---

320. *See* Warren J. Blumfield, *The Hypocrisy of 'Pro-Life' and the GOP*, HUFFPOST (May 19, 2015), https://www.huffpost.com/entry/the-hypocrisy-of-prolife-and-the-gop_b_7294178.

321. *Outdoor Air Pollution Tied to Millions of Preterm Births*, SCIENCEDAILY (Feb. 16, 2017), https://www.sciencedaily.com/releases/2017/02/170216105914.htm.

322. *See Preterm Birth*, WORLD HEALTH ORG. (Feb. 19, 2018), https://www.who.int/en/news-room/fact-sheets/detail/preterm-birth.

323. *See* Robert F. Kennedy Jr. & Marc A. Yaggi, *Mercury Poisoning is a Growing Global Menace We Have to Address*, GUARDIAN (Jan. 10, 2013, 8:30 AM), https://www.theguardian.com/commentisfree/2013/jan/10/mercury-poisoning-global-menace-treaty.

324. *See id.*

325. *See* Ben Geman, *Evangelical Group Holds Firm on 'Pro-Life' Link to EPA Rule*, HILL (Feb. 10, 2011), https://thehill.com/policy/energy-environment/209831-evangelical-group-holds-firm-on-pro-life-link-to-epa-rule.

326. *See generally Mercury and Air Toxics Standards (MATS)*, EPA, https://www.epa.gov/mats (last visited Sept. 13, 2022).

327. Kennedy & Yaggi, *supra* note 325.

328. *See* Mark D. Tooley, *Green Evangelicals 'Masquerade' New EPA Rule as 'Pro-Life,'* FRONTPAGE MAG (Feb. 13, 2012), https://archives.frontpagemag.com/fpm/green-evangelicals-masquerade-new-epa-rule-pro-mark-d-tooley/; *see also* E. Calvin Beisner, *EEN's Machiavellian Mercury Campaign Threatens Pro-Life Movement*, CORNWALL ALL. (Dec. 21, 2011), https://cornwallalliance.org/2011/12/eens-machiavellian-mercury-campaign-threatens-pro-life-movement/.

This might be described as a circumstance where conservatives have sacrificed the Care and Fairness foundations for Loyalty to their team, which unfortunately has become opposed to many, if not most, environmental policies that liberals support.[329] Conservatives may also be sacrificing the Sanctity foundation for the same reasons, even though the same logic (moral reasoning) applies to protecting life in the context of mercury pollution, climate change, abortion, Covid-19, and a variety of other environmental and human health scenarios. Conservatives may be too quick to utilize the Authority foundation to follow lockstep with what their charismatic leaders (who are trying to earn political points by presenting themselves in opposition to liberals) tell them they should do.[330] There seems to be very little critical questioning of those authorities, which may also help explain why conservatives seem to present such a united ideological, cultural, and racial front in national politics.[331] Ultimately, conservative trading of certain moral foundations for others causes a major blind spot in the area of protecting life and the environment. By engaging with the intuition first, moral reasoning has room to operate in showing conservatives the logical fallacies they make in rejecting what really are core conservative principles.

C. Interference in Fossil Fuel Divestment

In 2019, during halftime of the Yale-Harvard football game, over 150 protesters from both schools rushed the field and delayed the resumption of the game for nearly an hour.[332] Their message? "Nobody wins. Yale and Harvard are complicit in climate injustice,"[333] and "Disclose, divest, or this will be our death."[334] The protesters, from student organizations called Fossil Free Yale and Fossil Fuel Divest Harvard, were calling on the universities to divest from fossil fuel companies and

---

329. *See* Justin Worland, *Climate Change Used to Be a Bipartisan Issue. Here's What Changed*, TIME (July 27, 2017, 2:15 PM), https://time.com/4874888/climate-change-politics-history/.

330. *See, e.g.*, Dan Hopkins & Hans Noel, *How Trump Has Redefined Conservatism*, FIVETHIRTYEIGHT (June 24, 2021, 6:00 AM), https://fivethirtyeight.com/features/how-trump-has-redefined-conservatism/.

331. *See* Alexandra Villarreal, *White Male Minority Rule Pervades Politics Across the US, Research Shows*, GUARDIAN, (May 26, 2021, 6:00 AM), https://www.theguardian.com/us-news/2021/may/26/white-male-minority-rule-us-politics-research. In the 2020 national primaries, 93% of Republicans were white, and fewer than one in four were women (compared with 68% white and 32% women in the Democratic party). *Id.*

332. Sam Gringlas, *Activists Disrupt Harvard-Yale Rivalry Game to Protest Climate Change*, NPR (Nov. 24, 2019, 2:39 PM), https://www.npr.org/2019/11/24/782427425/activists-disrupt-harvard-yale-rivalry-game-to-protest-climate-change.

333. *Id.*

334. Michelle G. Kurilla, *Hundreds of Divestment Protesters Storm Field, Interrupting Harvard-Yale Game*, THE HARV. CRIMSON (Nov. 24, 2019, 10:55 PM), https://www.thecrimson.com/article/2019/11/24/protesters-interrupt-the-game/.

give up their multi-million-dollar endowments from those companies.[335] One protester stated:

> We know that we don't have a lot of time to act to curb the effects of climate change, and the longer it takes for our universities to acknowledge their role in the climate crisis and accept responsibility, the longer the urgent action we need to take on climate change is going to be delayed.[336]

Many protesters were arrested and charged with disorderly conduct.[337] This might be characterized as deep devotion to the Care and Fairness foundations.

The responses from politicians were, well, predictable. Senator Elizabeth Warren stated, "I support the students, organizers, and activists demanding accountability on climate action and more at #HarvardYale. Climate change is an existential threat, and we must take bold action to fight this crisis."[338] Senator Bernie Sanders stated, "When people come together to stand up for justice, we win. Congratulations to the young people demanding a sustainable future for our planet. We are with you in this fight."[339] The conservative National Review, on the other hand, quipped "Environmentalist Killjoys Are Coming for Your Football," and asserted that "Harvard–Yale climate-change protests last weekend help explain why Americans aren't buying global-warming extremism or the tantrums of angry youngsters."[340]

At least one study has shown that even if every university divested from fossil fuels, the economic impact would be negligible (though their biggest impact might be the economic consequences of an organization being shamed).[341] The president of the Harvard Republican Club called divestment "financial theater" that demonized fossil fuel companies at the expense of developing real climate

---

335. *See* Gringlas, *supra* note 334.

336. *Id.*

337. *See* Britton O'Daly, *Climate Change Protesters Disrupt Yale-Harvard Football Game*, N.Y. TIMES (Nov. 23, 2019), https://www.nytimes.com/2019/11/23/us/harvard-yale-game-protest.html.

338. Elizabeth Warren (@ewarren), TWITTER (Nov. 23, 2019, 7:10 PM), https://twitter.com/ewarren/status/1198408492677246976.

339. Bernie Sanders (@BernieSanders), TWITTER (Nov. 23, 2019, 4:30 PM), https://twitter.com/berniesanders/status/1198368218542415872; *see also* Kurilla, *supra* note 336.

340. Jonathan S. Tobin, *Environmentalist Killjoys Are Coming for Your Football*, NAT'L REV. (Nov. 27, 2019, 6:30 AM), https://www.nationalreview.com/2019/11/climate-change-activists-disrupt-harvard-yale-football-game/.

341. *See* David Gelles, *Fossil Fuel Divestment Movement Harnesses the Power of Shame*, N.Y. TIMES (June 13, 2015), https://www.nytimes.com/2015/06/14/business/energy-environment/fossil-fuel-divestment-movement-harnesses-the-power-of-shame.html.

solutions.[342] But what about corporations and providers of financial services? The efficacy of fossil fuel divestments has proponents[343] and detractors,[344] but if scaled up beyond just universities to include a broad swath of the corporate world it could impact the ability to develop fossil fuel energy resources in the future.

Given this growing trend, certain fossil fuel interests and their supporters are getting nervous and arguably desperate. As professor Shi-Ling Hsu recounts in his book, "In May 2020, during the COVID-19 crisis . . . fourteen Republican senators and twenty Republican congressmen wrote then President Trump, urging him to 'use every administrative and regulatory tool at [his] disposal to prevent America's financial institutions from discriminating against America's energy sector."[345] Specifically, Republicans were appalled that investment firms, like Blackrock, were deciding to divest "their holdings in fossil fuel energy stocks."[346] Blackrock announced in 2020 that it was divesting from coal-fired power.[347] As a result of that news, gas, coal, and petroleum prices plummeted.[348] Republican members of Congress then took the extraordinary step of asking the President of the United States to use government powers to interfere with private corporate investment choices, and specifically "to prevent banks from halting loans and investments with companies that produce oil and other fossil fuels."[349] The Congress members argued that corporations were only taking these steps to "placate the environmental fringe,"[350] and that they were "bending to a radical environmentalist lobby."[351]

---

342. Nicholas Konrad, *Should Colleges Divest From Fossil Fuels?*, N.Y. TIMES (Feb. 23, 2020), https://www.nytimes.com/2020/02/23/opinion/letters/colleges-divestment-fuels.html.

343. *See* David Carlin, *The Case For Fossil Fuel Divestment*, FORBES (Feb. 20, 2021, 12:11 PM), https://www.forbes.com/sites/davidcarlin/2021/02/20/the-case-for-fossil-fuel-divestment/.

344. *See* Tim Quinson, *The Case Against Fossil Fuel Divestment*, BLOOMBERG GREEN (July 7, 2021, 5:00 AM), https://www.bloomberg.com/news/articles/2021-07-07/pension-fund-director-makes-a-case-against-fossil-fuel-divestment-green-insight.

345. SHI-LING HSU, CAPITALISM AND THE ENVIRONMENT: A PROPOSAL TO SAVE THE PLANET 56 (Cambridge Univ. Press, 2021) (quoting Letter from Dan Sullivan, U.S. Sen. et al., to Donald J. Trump, President (May 7, 2020), https://www.sullivan.senate.gov/imo/media/doc/2020.05.07%20Letter%20to%20POTUS%20Re%20Energy%20Financial%20Institutions[1].pdf [https://perma.cc/5GBW-4M57]).

346. *Id.*

347. *See* Valerie Volcovici, *Republicans Urge Trump to Bar Banks From Shunning Fossil Fuel Loans, Investments*, KFGO (May 8, 2020, 2:48 PM), https://kfgo.com/2020/05/08/republicans-urge-trump-to-bar-banks-from-shunning-fossil-fuel-loans-investments/.

348. *See* HSU, *supra* note 347, at 56.

349. *See* Volcovici, *supra* note 349.

350. *Id.* (quoting Letter from Dan Sullivan. U.S. Sen.et al., to Donald J. Trump, President, *supra* note 347).

351. Press Release, Dan Sullivan, U.S. Sen. for Alaska, Members of Congress to Trump: Don't Let Big Banks Discriminate Against Energy Sector (May 5, 2020), https://www.sullivan.senate.gov/newsroom/press-releases/-member-of-congress-to-trump-dont-let-big-banks-discriminate-against-energy-sector.

Senator Kevin Cramer stated that "[a]s every sector of our economy struggles to survive the COVID-19 pandemic and seeks financial stability from the federal government, environmental extremists are using the pandemic to accelerate their goal of putting America's energy jobs in the grave."[352]

Hsu calls this a "shocking ask, for the White House to dictate investments to private firms."[353] Hsu notes:

> Critics of capitalism might seize on this and blame capitalism for the naked greed displayed by the oil industry . . . [but] *this is not capitalism*! There is nothing more socialist than to have government dictate investments to private firms. How ironic that this request for government intervention came from the party that so vociferously denounces socialism.[354]

Indeed, conservatives often face a clash of moral intuitions and their access to all six foundations sets the stage for unprincipled inconsistency. Conservatives can "misuse," so to speak, the wide range of moral foundations they tap into to advocate for policies completely antithetical to conservative principles. While we might view conservative access to all six moral foundations as a benefit, it can also be a detriment.

As demonstrated in this case study and the prior two, tapping into a broader range of foundations allows conservatives to more readily trade them out (reasoning be damned) for others based upon their intuitive impulses to achieve a particular policy result. And they do so primarily driven by the invocation of teams. The Congress members' letter to President Trump stated: "For too long, Democrats and their allies have attempted to destroy the fossil fuel industry . . . ."[355] This "us versus them" dichotomy sets the stage for a sort of moral foundation exploitation, as conservatives trade certain moral foundations for others to suit their policy preferences.

Accountability also plays a role. If you look at the regions these Congresspeople represent, they are all areas with historical ties to fossil fuel industries.[356] From an accountability perspective, and with Americans congregating in areas with likeminded people, conservatives are less likely to be held to account by those with opposing views in these jurisdictions. And the citizens who support them are just as likely to be blinded to how "unconservative" this letter is, because they too have

352. *Id.* (quoting Letter from Dan Sullivan, U.S. Sen. et al. to Donald J. Trump, President, *supra* note 347).

353. *See* HSU, *supra* note 347, at 56.

354. *Id.*

355. Press Release, Dan Sullivan, U.S. Sen. for Alaska, *supra* note 353.

356. *See id.*

joined teams opposed to climate and divestment and are less accountable to fellow citizens by nature of where they live.

Perhaps this is the perfect case study to end the article with, since every moral foundation is implicated. The Care and Fairness concerns come through strongly in the statements from liberal activists and politicians, as expected. Yet conservatives apply those foundations differently. Conservatives see Care and Fairness as relevant to their local citizens' economic interests in fossil fuels (jobs), rather than citizen vulnerability to climate change. Here, Fairness is proportionality—we should treat the fossil fuel industry and those who contribute to it fairly based upon their past investment in and reliance on our energy system, rather than with equality in avoiding climate change impacts as liberals conceive. Care is transposed to citizens that are reliant on the fossil fuel industry from those who may be impacted by climate change.

Conservatives have typically valued the principle that people can do what they wish with their own money (Liberty foundation). And if you ask conservatives on the street if companies should be free to invest how they choose free from government intervention, they will almost certainly agree. That is economic Liberty, after all. That stance is also related to Authority—we should not question how private entities choose to spend their money. But conservatives readily trade the Liberty and Authority foundations for Loyalty to vested fossil fuel interests (including the citizens that work in those industries) and to their political team. As with opposition to renewable energy, discussed above, Sanctity even plays a role given that the severity of climate change is discounted by so many of these Congresspeople's constituents on religious grounds.[357]

Ultimately, conservative policy blind spots are created at least in part by their access to so many intuitive impulses, which can lead to some very unreasoned outcomes. A conservative elephant sees many paths it can go down, and sometimes before the rider can course-correct and get the elephant on the right path, the elephant plows ahead.

V. CONCLUDING THOUGHTS: NARROWING THE RIGHTEOUS DIVIDE

The case studies presented here illustrate Haidt's findings that liberals are prone to intuitively rely almost exclusively on Care and Fairness foundations of morality (and certain conceptions of Liberty).[358] This can blind them to reasoned considerations arising out of other moral foundations. Or their hostility to other

357. Shay Meinecke, *God and the Earth: Evangelical Take on Climate Change*, DW (July 03, 2019), https://www.dw.com/en/god-and-the-earth-evangelical-take-on-climate-change/a-47781433.

358. See HAIDT, *supra* note 1, at 181–85.

moral foundations may overpower their Care and Fairness intuitions, contributing to blind spots.[359]

Conservatives rely on all six moral foundations, which gives them access to more intuitive impulses and can give an advantage to conservative politicians trying to understand voters.[360] It also means conservatives can understand liberal motivations better than liberals can understand conservative intuitive impulses.[361] The downside is that access to so many intuitive options allow conservatives to trade certain intuitions more readily for others when it suits their preferred (though potentially unreasoned) policy preferences. Thus, conservatives can often take stances that appear illogical when considering their espoused values.

How do we go about addressing the Righteous Divide in American politics and circumvent the liberal and conservative logical inconsistencies that undermine reasoned policy formation? Three possible approaches are outlined below, though this is a non-exhaustive list.

A. Associational Messaging

Spencer and I have previously written about changing the perspectives of people who ignore science by means of what we call "associational messaging."[362] The specific topic was climate science denial culture in the U.S. South.[363] Though the southeastern U.S. is poised to suffer more economic and societal harm than other regions of the country,[364] climate science denial in the South is more robust than anywhere else.[365] In this way, the situation bears a resemblance to the ironic and illogical positions taken by liberals and conservatives described above. The suggestions we made for curbing science denial among southerners are an extension of the "vouchers" theory of risk communication, proposed by Dan Kahan and others, whereby trusted members of an individual's cultural group help convince members of the group that information is consistent with the group's pre-existing

359. *See id.* at 189.

360. *See id.* at 214–16.

361. *See id.* at 182–89.

362. *See* Blake Hudson & Evan Spencer, *Denying Disaster: A Modest Proposal for Transitioning From Climate Change Denial Culture in the Southeastern United States*, 40 U. ARK. LITTLE ROCK L. REV. 545 (2018).

363. *Id.* at 562–72.

364. Solomon Hsiang et. al., *Estimating Economic Damage from Climate Change in the United States*, 356 SCI. 1362 (June 30, 2017), http://science.sciencemag.org/doi/10.1126/science.aal4369.

365. Hudson & Spencer, *supra* note 364, at 545–548.

values.[366] What we termed "associational messaging," however, was not the conveyance of information by a member of the same cultural group (*e.g.* a pure voucher), but rather conveyance of information *about organizations* with which the cultural group—here, southern climate skeptics—are likely to identify with the goal of assuaging their skepticism."[367]

We suggested that climate-concerned groups should undertake concerted efforts to convey to southerners (through mass media) that organizations they associate with are investing in climate mitigation and adaptation efforts.[368] Specifically, we recommended highlighting the climate action programs of (1) the United States' military, (2) specific Fortune 500 companies (as representative of "the private sector" and "free market" that many southerners generally support), (3) the insurance industry (also representative of the "private/free market"), and (4) sports and recreation groups and related industries (outdoor groups, like hunting and fishing, and college and professional sports teams).[369] Entities within all these groups are taking serious climate actions, rather unaffected by the partisan politics of our time.[370] From the U.S. military (which has particularly strong support in the South)[371]; to companies like Walmart, Coca-Cola, General Motors, and Fed-ex; to free-market insurance companies; to sports organizations like NASCAR and the NFL—each maintain climate action programs and well-established public relations operations that provide freely accessible, neatly packaged information that can be used to sway the perception of climate science among southern climate change skeptics.[372] The problem is that much of the public simply seems unaware of these organizations' climate actions. We argued that environmental groups should take out thirty-second TV spots that package publicly available information regarding the climate action efforts of these groups for mass media dissemination and consumption targeted toward the intended audience.[373] The idea, an outgrowth of

366. *See id.* at 563; *see also* Dan Kahan, *Fixing the Communications Failure*, 463 NATURE 296, 297 (2010); *see also* Robert R. M. Verchick, *Culture, Cognition, and Climate*, 2016 U. ILL. L. REV. 969, 982 (2016); Hari M. Osofsky & Jacqueline Peel, *Energy Partisanship*, 65 EMORY L.J. 695, 704 (2016).

367. Hudson & Spencer, *supra* note 364, at 563.

368. *Id.*

369. *Id.* at 563–64.

370. *Id.*

371. *See* Sean Braswell, *Why the US Military is So Southern*, OZY (Nov. 20, 2016), https://www.ozy.com/acumen/why-the-us-military-is-so-southern/72100; OFFICE OF THE UNDER SEC'Y OF DEF., PERS. & READINESS, POPULATION REPRESENTATION IN THE MILITARY SERVICES: FISCAL YEAR 2016 SUMMARY REPORT 21–22 (2016), https://www.cna.org/pop-rep/2016/summary/summary.pdf; Nigel Barber, *Is Southern Violence Due to a Culture of Honor?*, PSYCH. TODAY (Apr. 2, 2009), https://www.psychologytoday.com/us/blog/the-human-beast/200904/is-southern-violence-due-culture-honor.

372. Hudson & Spencer, *supra* note 364, at 567–72.

373. *Id.* at 563–64.

the empirical work done by Kahan and others, is that Southerners who identify with these entities and support them would be less skeptical of the science if they knew these groups were accepting of it and were aware of the climate actions they were taking.

A similar approach could be taken for our case studies. Organizations should provide the public information about how science supports, for example, the use of GMOs and the negative consequences on children and others of not utilizing GMOs in some circumstances.[374] The information should be brought to GMO skeptics by a group that they tend to trust or identify with, perhaps a non-governmental organization (NGO) that understands the science and has overcome its own blind spot. Groups can run TV spots or otherwise disseminate information about how wood-pellet markets can halt deforestation and help forest restoration and expansion, but while being honest about the complexity of climate change science and the need for more study.[375] The same could be conveyed regarding how the Louisiana Coast is likely to erode more quickly than land can be built by the coastal Master Plan and the need to retreat from the coast in a planned, orderly manner.[376]

Similar messages could be disseminated by conservative groups (or other groups conveying the conservative message) about how renewable energy frees consumers from the grid and from reliance on the government, but how that freedom of choice is being hamstrung by the government (local utilities and public utility commissions). This could cause people of all stripes to ratchet up political pressure to remove governmental hurdles (like the often arbitrary taxes placed on renewable solar systems) to foster more widespread use of distributed renewables. Tying mercury pollution regulation to the concept of pro-life might affect conservatives who have not yet considered that perspective.[377] Disseminating media regarding how government interference with divestiture decisions of private corporations runs afoul of free market principles could persuade more than a few conservatives to oppose such actions.

In the end, those seeking to change the illogical narratives highlighted in this article must meet the public where they are. In an age where TV and internet dominate and people are more likely to reject information from sources on the

374. *See supra* Part III. A.

375. *See supra* Part III. C.

376. *See supra* Part III. B.

377. *E.g.*, Jeremy Hance, *Media Campaign Says Mercury Pollution a Pro-life Issue*, MONGABAY (Dec. 14, 2011), https://news.mongabay.com/2011/12/media-campaign-says-mercury-pollution-a-pro-life-issue/.

"other" side of some debate,[378] associational messaging through mass media has the potential to effectively highlight righteous blind spots and foster a move toward political action that better aligns with science. Will this approach change the minds of the most deeply vested interests who have staked out these illogical positions (e.g. public utilities that benefit from taxes on distributed solar or environmental groups fundamentally opposed to GMOs)? Perhaps not. But for others it can be a step toward circumventing blind spots of influential groups and result in more effective policy formation.

B. Private Governance

Another potential mechanism for short-circuiting blind spots that contribute to policy failures is private governance. Private environmental governance occurs when "private organizations perform traditionally governmental functions, including reducing negative externalities and managing public goods or common pool resources."[379] Michael Vandenbergh and Jonathan Gilligan (among others) have been increasingly focused on harnessing private governance to tackle climate change, given the extreme political polarization that makes legislative action at the federal level unlikely.[380] Private governance solutions result when "private actors (such as corporations, households, universities, hospitals and churches) take on roles we traditionally think of as governmental . . . ."[381] These scholars have highlighted the profound impact that Apple, Google, Coca-Cola, Walmart, and Goldman Sachs (among others) can have on reducing carbon emissions, as evidenced by early results from policies they have initiated.[382] Private governance has the potential to reduce emissions by 1 billion tons per year for the next decade, which can "buy enough time until strong government action becomes a viable solution."[383] Vandenbergh and Gilligan developed a framework for assessing the potential of private governance focused on: 1) technical potential (impacts that would occur if the actions promoted were pursued by all relevant actors); 2)

---

378. *See* Christopher A. Bail et al., *Exposure to Opposing Views on Social Media Can Increase Political Polarization*, 115 PNAS 37 (2018).

379. Michael P. Vandenbergh & Jonathan M. Gilligan, *Beyond Gridlock*, 40 COLUM. J. ENV'T L. 217, 219 (2015).

380. *See.e.g.*, Jonathan M. Gilligan & Michael P. Vandenbergh, *A Framework for Assessing the Impact of Private Climate Governance*, 60 ENERGY RSCH. & SOC. SCI. 1, 2 (2020). One hurdle highlighted by Gilligan and Vandenbergh is that "[s]tates comprising less than 20% of the U.S. population control more than half of the seats, so these Senators, many of whose states are significant fossil fuel-producers, can block climate legislation." *Id.*

381. Janet L. Swim & Ashley K. Gillis, *Time to Re-think Solutions*, 8 NATURE CLIMATE CHANGE 186, 186 (2018), reviewing MICHAEL P. VANDENBERGH & JONATHAN M. GILLIGAN, BEYOND POLITICS: THE PRIVATE GOVERNANCE RESPONSE TO CLIMATE CHANGE (2017).

382. *Id.*

383. *Id.*

behavior plasticity (what fraction of relevant actors would actually take the actions); and 3) initiative feasibility (the difficulty of enacting and implementing the actions).[384]

Not only do private organizations have a great deal of influence on greenhouse gas emissions but, related to the associational messaging discussed in the previous section, private action can spur greater acceptance of climate science and support for climate action among conservatives and moderates. Vandenbergh and colleagues found that "[c]onservatives and moderates are more supportive of climate change mitigation when exposed to information about mitigation actions taken by the private sector."[385] Their work extends the work of others finding that moral framings,[386] patriotic messaging,[387] and endorsements from religious figures[388] can change "attitudes about climate change."[389] These findings support social psychological research that suggests "messages emphasizing mitigation options that are consistent with political conservatism could bridge partisan gaps."[390] This is especially important since "people are more likely to downplay or doubt a social problem when they are opposed to the proposed policy solution and become more open to dealing with the problem when the solutions are consistent with their ideology."[391]

Examples of private governance include: insurance companies charging higher rates to high carbon dioxide emitters to pressure corporations to reduce emissions;[392] companies procuring renewable sources of power, requiring suppliers

384. *Id.*; Gilligan & Vandenbergh, *supra* note 382, at 3.

385. Ash Gillis et al., *Convincing Conservatives: Private Sector Action can Bolster Support for Climate Change Mitigation in the United States*, 73 ENERGY RSCH. & SOC. SCI. 1, 1 (2021).

386. *See* Alexander W. Severson & Eric A. Coleman, *Moral Frames and Climate Change Policy Attitudes*, 96 SOC. SCI. Q. 1277 (2015); *see also* Matthew Feinberg & Rob Willer, *The Moral Roots of Environmental Attitudes*, 24 PSYCH. SCI. 56, 61 (2013).

387. *See* Christopher Wolsko et al., *Red, White, and Blue Enough to be Green: Effects of Moral Framing on Climate Change Attitudes and Conservation Behaviors*, 65 J. EXP. SOC. PSYCH. 7 (2016).

388. *See* Jonathon P. Schuldt et al., *Brief Exposure to Pope Francis Heightens Moral Beliefs About Climate Change*, 141 CLIMATE CHANGE 167 (2017).

389. Gillis et al., *supra* note 387, at 2.

390. *Id. See generally* P.S. Hart & E.C. Nisbet, *Boomerang Effects in Science Communication: How Motivated Reasoning and Identity Cues Amplify Opinion Polarization About Climate Mitigation Policies*, 39 COMMC'N RSCH. 701 (2012); Z. Kunda, *The Case for Motivated Reasoning*, 108 PSYCH. BULL. 480 (1990); T.H. Campbell & A.C. Kay, *Solution Aversion: On the Relation Between Ideology and Motivated Disbelief*, 107 J. PERS. SOC. PSYCH. 809 (2014); D.M. Kahan et al., *Geoengineering and Climate Change Polarization: Testing a Two-Channel Model of Science Communication*, 658 ANNALS AM. ACAD. POL. & SOC. 192 (2015); G. Dixon, J. Hmielowski & Y. Ma, *Improving Climate Change Acceptance Among US Conservatives Through Value-Based Message Targeting*, 39 SCI. COMMC'N 520 (2017).

391. Gillis et al., *supra* note 387, at 2.

392. Swim & Gillis, *supra* note 383, at 187.

to meet environmental standards, placing environmental elements in their supply chain contracts, and supplying employees with discounts on renewable energy technologies for their homes; companies like Google, Amazon, and Facebook agreeing to site facilities in a locality as long as utilities and state regulators agree to allow the use of renewable energy sources;[393] and divestment from fossil fuel investments[394] (one of our case studies, above).

Private environmental governance might impact the case studies presented here in several ways. GMOs, woody biomass, and coastal restoration might all be the target of what Vandenbergh and Gilligan call "myth busting."[395] Information campaigns or other forms of targeted information can be used to address myth-driven behaviors, examples of which include the belief that it is better to leave motor vehicles idling than turning them on and off (it is not) or that hand washing is more effective in hot water (it is not), which consumes more energy.[396] These types of behaviors "should be more amenable to change than many other behaviors because they do not require an individual to act altruistically, just to update beliefs and stop acting against his or her own interests."[397] Dangers of GMOs fall most clearly in the myth category, and while the benefits and costs of wood pellets and coastal restoration are complex and fact dependent, there are large myth elements to each perpetuated by environmental groups.

Regarding wood pellets, private firms could perform/sponsor more research on carbon life cycle analysis to help shore up scientific perspectives. A private certification scheme can be established for wood pellet sourcing, much like the Forest Stewardship Council does for lumber production generally.[398] Certification can account for the many legitimate environmental and social concerns that environmentalists maintain regarding the cultivation of biomass for energy production: protecting water quality and biodiversity, ensuring reforestation, and ensuring that the siting of facilities considers environmental justice impacts. Utilities could only purchase pellets from sourcing and processing companies certified as achieving these goals. Certification standards could be enforced through a variety of supply chain, investor, and lender pressures. Similarly, biomass criteria for wood-pellet electricity could be adopted by a large group of firms as part of an

393. Gilligan & Vandenbergh, *supra* note 382, at 2.

394. Vandenbergh & Gilligan , *supra* note 381, at 264–65.

395. *See id.* at 283–84.

396. *See id.* at 284–85.

397. *Id.* at 284.

398. *See How the FSC System Works*, FOREST STEWARDSHIP COUNCIL, https://fsc.org/en/how-the-fsc-system-works (last visited Dec. 17, 2022).

Environmental, Social, and Governance[399] strategy seeking to cultivate support from investors and implemented through electricity procurement restrictions and supply chain contracting provisions.[400]

A certification scheme could also be utilized for GMOs to provide assurances for skeptics that environmental and health concerns, as well as the effects of GMOs on small farmer operations, are accounted for in the production of GMO products. Also, B Corporations[401] can sell only GMOs that meet strict environmental and health standards supported by green equity investors, green bonds, and green insurers. New forms of ecolabeling[402] can change the messaging on GMOs by labeling certified GMOs "Green GMOs" (to counter the "GMO free" labels used by those in opposition). While "GMOs are bad" has become an almost ironclad belief by those farthest on the left,[403] such messaging could nevertheless change the perspectives of those in the moderate left to centrist GMO camp.

For coastal restoration, private developers and industry can retreat from the coast without government prodding. While this is unlikely for residential developers who would see no advantage to giving up profit today when they will not be the ones bearing the cost of future harm, industry (and the jobs that go along with it) would have an incentive to do so: they have a longer time horizon for any investments made in facilities and operations likely to be affected by rising seas. Insurance companies can also refuse to insure development in these areas, driving development further inland to lower risk areas.[404] Lenders may be even more influential, given their long investment time horizons. An NGO led lender-investor initiative could set standards on refusal to lend for the purchase of high-risk properties subject to increased threat of sea level rise or other climate-related flooding events.

---

399. *ESG Investing and Analysis*, CFA INST., https://www.cfainstitute.org/en/research/esg-investing#:~:text=ESG%20stands%20for%20Environmental%2C%20Social,material%20risks%20and%20growth%20opportunities.&text=This%20guide%20takes%20fiduciary%20duty,important%20ESG%20issues%20into%20account (last visited Dec. 17, 2022).

400. *See* Alan Palmiter, *Capitalism, Heal Thyself*, OXFORD BUS. L. BLOG (Nov. 11, 2021), https://www.law.ox.ac.uk/business-law-blog/blog/2021/11/capitalism-heal-thyself-0.

401. *About B Corp Certification, Measuring a Company's Entire Social and Environmental Impact*, B LAB, https://www.bcorporation.net/en-us/certification/ (last visited Dec. 17, 2022).

402. ENV'T PROT. AGENCY, *Introductions to Ecolabels and Standards for Greener Products*, https://www.epa.gov/greenerproducts/introduction-ecolabels-and-standards-greener-products (last updated Sept. 12, 2022).

403. *See supra* Part III. A.

404. Although even if all private insurers refused to act as agents for the federal government under the National Flood Insurance Program (NFIP), the federal government could /would presumably continue to provide flood insurance in high-risk areas.

Private companies could place pressure on energy companies to reduce mercury pollution. Of course, they would need another source of electricity to make the threat of going off-grid credible. They might also refuse to operate in states that do not tighten up mercury standards on polluters or divest from firms that refuse to do so. Given mercury's direct association with carbon emissions from coal-fired electricity generation, private governance focused on decarbonization will have a corollary effect on mercury pollution. So increased participation in the Clean Energy Buyers Association,[405] net-zero commitments from corporations, supply-chain contracting pressure and other methods highlighted in the work of Vandenbergh and colleagues to reduce carbon emissions will also have positive impacts on mercury pollution.

It is ironic that one of the tools in the private governance toolkit is divestiture, considering that approach is the target of interference by conservative politicians who would like to remove it from the toolkit in the context of climate change. Through lobbying and other efforts, firms can make clear to politicians that interference with corporate investment choices is a gross interference with the market that should not be tolerated in a free society. If divestiture can survive political interference, it can be an effective private governance tool for creating change. Of course, not only can investors and organizations divest from fossil fuels, but they can utilize new low or no-carbon index funds that allow individual investors to ensure that their investments do not support fossil fuel producing companies.[406] Examples include SPYX, the SPDR S&P 500 Fossil Fuel Reserves Free ETF.[407] This places influence in the hands of individual investors that can create change from the bottom up, while more investor engagement (requiring climate change-related disclosures in SEC filings, for example) can lead to top-down reductions in corporate emissions.

As noted above, private companies such as Google, Amazon, and Facebook have already conditioned siting within certain jurisdictions on the ability to use renewable energy,[408] which can also be used to pressure public utility commissions who penalize the use of distributed solar to stop doing so. And there is some evidence that while politician efforts to thwart transition to renewables may be effective in the short term, over the longer term the inertia toward a clean energy

405. *See generally* CLEAN ENERGY BUYERS ASS'N, https://cebuyers.org/ (last visited Dec. 17, 2022).

406. *See, e.g.*, Mike Scott, *Fossil Fuel-Free Index Will Help Investors Manage Climate Risk*, FORBES (May 1, 2014, 7:44 AM), http://www.forbes.com/sites/mikescott/2014/05/01/fossil-fuel-free-index-will-help-investors-manage-climate-risks/ [http://perma.cc/YWK9-GHHH].

407. SPYX, SUMMARY PROSPECTUS, https://www.sec.gov/Archives/edgar/data/1064642/000119312516757492/d152871d497k.htm

408. Gilligan & Vandenbergh, *supra* note 382, at 2; *see also supra* text accompanying note 392.

transition will be too significant to overcome.[409] Private corporation pressure on local government holdouts will be critical to speeding up that transition.

In short, in addition to changing minds through messaging to circumvent blind spots and create better policy, policy formation pitfalls can be avoided altogether through private governance. When the left and right are prone to blind spots, removing government from the equation has its advantages.

C. "Know Thyself"

Haidt argues that the polarization that is affecting sound policymaking in the U.S. "is not something we can address by signing pledges and resolving to be nicer. Our politics will become more civil when we find ways to change the procedures for electing politicians and the institutions and environments within which they interact."[410] Changing the way we elect candidates via the primary system[411] (through the introduction of ranked-choice voting, perhaps[412]), fixing the gerrymandering and redistricting problem,[413] bringing back weekly bipartisan senate meetings and creating multimember house districts, [414] and even having Congress members move back to Washington D.C.[415] have all been suggested.

These are important institutional changes that can help us make better policy by overcoming the partisan divide. And I have argued many times in the past that we must pay attention to institutions before we can expect the policymaking process to work effectively.[416] But making institutional changes requires a change in voters' and their representatives' behavior. That cannot occur unless we study and understand that behavior. The whole point of Haidt's work, and one that I do not

---

409. Michael P. Vandenbergh & Jonathan M. Gilligan, *Essay: Forks In the Road*, 31 DUKE ENV'T L. & POL'Y FORUM 163, 164 (2020).

410. HAIDT, *supra* note 1, at 366.

411. David Greene & Shankar Vedantam, *Is The Primary System to Blame for Partisanship?*, NPR (Dec. 18, 2013, 4:35 AM), https://www.npr.org/2013/12/18/255185863/is-the-primary-system-to-blame-for-partisanship.

412. *Yes, Americans are Deeply Divided. But There are Ways to Reduce Partisanship*, POLITICO, https://www.politico.com/interactives/2019/how-to-fix-politics-in-america/polarization/ (last visited Sept. 26, 2022).

413. Alex Tausanovitch, *The Impact of Partisan Gerrymandering*, CTR. FOR AM. PROGRESS (Oct. 1, 2019, 9:01 AM), https://www.americanprogress.org/issues/democracy/news/2019/10/01/475166/impact-partisan-gerrymandering/.

414. *Yes, Americans are Deeply Divided. But There are Ways to Reduce Partisanship*, *supra* note 412.

415. *See* Coleman, *supra* note 67.

416. *See* Hudson, *supra* note 18; *see also* Blake Hudson, *Structural Environmental Constitutionalism*, 21 WIDENER L. REV. 201 (2013); Blake Hudson, *Federal Constitutions: The Keystone of Nested Commons Governance*, 63 ALA. L. REV. 1007 (2012).

believe is fully appreciated in the legal academy, is that liberals and conservatives have unique intuitions and major blind spots at a psychological level. Each side needs to understand how those blind spots come about. There are people on both sides interested in being self-critical and assessing the blind spots of their "side." This is a particularly important role for those in the legal academy, who can influence others to become more self-critical of their political party. Those people, in turn, can then act as trusted members of their cultural group to convince others in the group that information conforms with the group's pre-existing worldviews (e.g., convince conservatives that rooftop solar is in line with a focus on personal responsibility, independence from government, and self-sufficiency). This, of course, is a direct exercise of Kahan's "vouchers" theory of communication.[417]

Liberal and conservative scholars need to engage in more self-study within the Haidt framework. Apollo's temple at Delphi is inscribed with "Know Thyself."[418] The left and right would gain much from studying their intuitive tendencies so that they can allow reasoning to guide their policy choices. After all, both groups most likely *believe* that reasoning controls, even if according to Haidt it comes second.[419] It would seem both sides would want to reduce barriers to reason. One way legal and other scholars can help the left and right understand themselves and each other better is by engaging in more scholarship from the moral foundation framework. The policies and moral foundation analysis presented in this article happen to be in the environmental policy context, but there are countless other issue areas where this frame would be useful to achieve more practically applicable policy suggestions. This will require scholars to assess their own blind spots to be honest brokers for their areas of study. Frankly, the legal academy is just as full of righteous partisanship as other communities. That needs to change.

Hopefully with more research and advocacy, liberals and conservatives who are concerned with a specific policy sphere—the environment, energy security, human health, and others—will come together regarding any shared policy goals and seek to understand why their intuitions about how to achieve those goals differ. I care about preserving forests and mitigating climate change. The Dogwood Alliance cares about preserving forests and mitigating climate change.[420] We agree on the basics. We disagree on some of our intuitions about how to achieve those goals. But if we can understand the intuitions of the other, then we can better reason with each other and perhaps make some policy headway. This same principle applies to those

417. Dan Kahan, *Fixing the Communications Failure*, 463 NATURE 296, 297 (2010); *see also* Robert R. M. Verchick, *Culture, Cognition, and Climate*, 2016 U. ILL. L. REV. 969, 982 (2016).

418. Kenneth Best, *Know Thyself: The Philosophy of Self-Knowledge*, UCONN TODAY (Aug. 7, 2018), https://today.uconn.edu/2018/08/know-thyself-philosophy-self-knowledge/.

419. HAIDT, *supra* note 1, at 1.

420. *See Wood Pellet Biomass*, *supra* note 240.

performing scientific research. I so often see, for example, 200 scientists signing a letter in support of a policy prescription and 300 scientists signing a letter in opposition. I have been a part of these letters and rebuttals, most recently in the context of the wood pellet debate.[421] Never mind that opponents of wood pellets misconstrued our letter,[422] we share the same goal of protecting forests. It would be better that we met and reasoned over that shared goal than to continue to let our elephants stride right past one another in opposite directions. As Haidt notes,

> if you really want to open your mind, open your heart first. If you can have at least one friendly interaction with a member of the "other" group, you'll find it far easier to listen to what they're saying, and maybe even see a controversial issue in a new light.[423]

In the end, we must seek to be more understanding of others, but that only comes by first being more critical of ourselves.

421. *See Scientists Response to US Advocacy For Burning Forest Biomass* (Mar. 11, 2011), https://forestdefenders.eu/wp-content/uploads/2021/03/Scientists-rebuttal-of-Hudson-letter-March-11-2021.pdf.

422. For example, our letter did not suggest that we should only assess the carbon dioxide benefits of biomass over a 100-year timeframe, as opponents suggest, but rather that to make assessments of biomass benefits *relative* to fossil fuel benefits, you have to use consistent time frame analysis so as to compare apples to apples. That way, when broken out into proportional increments (20 years, for example), the comparison can be more valuable.

423. HAIDT, *supra* note 1, at 364.