Why Did So Many Do So Little? Movement Building and Climate Change Litigation in the Time of *Juliana v. United States*

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In this Note, I argue that advocates should not turn away from climate change litigation in their fight against climate change, even though such litigation presently has a low success rate. Climate change litigation has the potential to diminish some of the cognitive barriers that have, so far, rendered climate-related political action and movement building inadequate. These cognitive barriers include ignorance, uncertainty and risk discounting, and mistrust. The act of litigating itself, even with a hostile or noncooperative judiciary, could encourage the movement building needed to spur other branches and levels of government into action.

Juliana v. United States *is a high-profile piece of climate change litigation, and many advocates were disappointed by the case's dismissal for lack of standing by the Ninth Circuit. Its dismissal is often framed as a moment of reckoning for the future of climate change litigation. This Note investigates what value, if any, cases like this add to the climate change movement, even if the litigation is ultimately unsuccessful.*

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Introduction

In a recent Ninth Circuit decision, which dismissed a climate change lawsuit before it could reach the merits, dissenting Judge Josephine Staton asked a striking question about the law's failure to address climate change:

> If plaintiffs' fears, backed by the government's *own studies*, prove true, history will not judge us kindly. When the seas envelop our coastal cities, fires and droughts haunt our interiors, and storms ravage everything between, those remaining will ask: Why did so many do so little?[1]

The answer is complicated. Our human cognition is not well-equipped to handle a global problem that involves a web of unintuitive causes and catastrophic effects. People tend to (1) be ignorant of climate change's existence, or of its causes and solutions; (2) undervalue the risk that climate change poses; and (3) mistrust the governmental entities that urge climate action and react negatively to their policy proposals. Ignorance, uncertainty, and mistrust are cognitive and psychological barriers that lead to personal inaction and the inability to build the broad movement needed to prompt political action on climate change.

Judge Staton posed another question to the majority: "Where is the hope in today's decision?"[2] In light of the federal judiciary's failure to even address the merits of climate change litigation (and the political branches' ineffectiveness in addressing climate change), hopelessness is a perfectly logical response. However, I argue that advocates should not turn away from litigation in their fight against climate change. Climate change litigation has the potential to diminish some of the cognitive barriers that hinder collective action on climate change. The act of litigating itself—even, or perhaps especially, with a hostile or noncooperative judiciary—could encourage the movement building needed to spur other branches and levels of government into action.

In this Note, I will first briefly review the science of climate change in Part I. In Part II, I will outline three of the psychological barriers to acting on

1. Juliana v. United States, 947 F.3d 1159, 1191 (9th Cir. 2020) (Staton, J., dissenting).
2. *Id.*

climate change, their interaction with movement building, and the potential solutions to each barrier. In Part III, I will describe the state of climate change litigation, with a specific emphasis on *Juliana v. United States*. In Part IV, I argue that climate change litigation should remain one of the pro-climate movement's strategies. This litigation, especially in the hands of strategic advocates, has the potential to alleviate some of the psychological barriers that have so far rendered climate-related political action and movement building inadequate. Even a litigation loss could provide unique value to the pro-climate movement.

I. Climate Change Science

Global warming and resulting climate change occur when artificially increased levels of greenhouse gases[3] in the atmosphere trap heat there that would otherwise be expelled into space—creating an enhanced greenhouse effect.[4] Atmospheric greenhouse gas concentrations have been artificially increased over the past 250 years by humans burning fossil fuels and engaging in detrimental land-use practices, such as widespread deforestation.[5] The greenhouse effect is a worldwide phenomenon because greenhouse gases, once emitted, evenly disperse themselves through the atmosphere.[6] So, a greenhouse gas emission anywhere is a threat to climate everywhere.[7] However, climate change will not manifest itself in exactly the same ways all across the planet, especially in the short term.[8] Some places will get more water, some will get less; some places will get more extreme weather events, others will not.[9] Some places at higher latitudes might even

3. The leading panel of climate change scientists defines greenhouse gases as the following:
> Greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, which absorb and emit radiation at specific wavelengths within the spectrum of thermal infrared radiation emitted by the Earth's surface, by the atmosphere itself, and by clouds. . . . Water vapor (H_2O), carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), and ozone (O_3) are the primary greenhouse gases in the Earth's atmosphere.

Glossary of Terms: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, Intergovernmental Panel on Climate Change [IPCC] 560 (2012), https://archive.ipcc.ch/pdf/special-reports/srex/SREX-Annex_Glossary.pdf [https://perma.cc/3XBZ-WZSY].

4. Holli Riebeek, *Global Warming*, NASA (June 3, 2010), https://earthobservatory.nasa.gov/features/GlobalWarming [https://perma.cc/7UMW-H5NW].

5. *Id.*

6. Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1163–64 (2009).

7. *Id.*

8. *Id.* at 1169–70.

9. *Id.* at 1169.

receive short-term benefits, like a more temperate climate and increased agricultural production.[10]

Carbon dioxide is often the primary focus of climate science and regulation because humans add so much of it to the atmosphere: our contribution has significantly overshadowed the amount of naturally occurring carbon dioxide.[11] Specifically, the 2019 atmospheric concentration of carbon dioxide was approximately 409 parts per million (ppm), which is about a 46% increase since the beginning of the Industrial Revolution and about a 10% increase since 2000.[12] As a result, the global annual temperature has increased at an average rate of 0.07°C per decade since 1880 and over twice that rate (+0.18°C) since 1981.[13] In fact, in 2019, the global land and ocean surface temperature was 0.95°C higher than the average temperatures over the last 140 years.[14] This warming is exacerbated by the fact that, in addition to large-scale and sustained fossil fuel use, humans have removed natural carbon sinks through deforestation and ocean acidification.[15]

The effects of climate change often occur decades after the emissions that cause them.[16] However, because humans have been adding carbon dioxide to the atmosphere for centuries, climate change has already begun and will become catastrophic without intervention. Potential effects include sea level rise, increased flooding and drought, water scarcity, mass animal extinction, shifts in agricultural productivity, increases in insect-borne disease, and the potential for massive human conflict related to resource scarcity.[17] Many climate scientists warn that there are "points of no return" after which the effects will become irreversible and spiral out of humanity's control.[18] The Intergovernmental Panel on Climate Change and other climate scientists urge that we limit global warming to 1.5°C above preindustrial

10. *Id.* at 1169–70.

11. *Id.* at 1162.

12. *See* Rebecca Lindsey, *Climate Change: Atmospheric Carbon Dioxide*, NOAA (Aug. 14, 2020), https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide#:~:text=The%20global%20average%20atmospheric%20carbon,least%20the%20past%20800%2C000%20years [https://perma.cc/2DQU-YJUT] (listing the ppm of carbon dioxide over the last few centuries).

13. *State of the Climate: Global Climate Report – Annual 2019*, NOAA, https://www.ncdc.noaa.gov/sotc/global/201913 [https://perma.cc/496E-YZ4X].

14. *Id.*

15. Lazarus, *supra* note 6, at 1162–63, 1165.

16. *Id.* at 1174.

17. Ove Hoegh-Guldberg, Daniela Jacob & Michael Taylor, *Impacts of 1.5°C of Global Warming on Natural and Human Systems*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [IPCC] 179–80, 211–12, 245 (2018), https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter3_Low_Res.pdf [https://perma.cc/6NAC-YBMD].

18. James Hansen et al., *Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature*, 8 PLOS ONE 1, 13 (2013).

levels in order to avoid these irreversible consequences.[19] Other climate scientists recommend an atmospheric carbon dioxide concentration of 350 ppm or below.[20]

Unfortunately, limiting the earth to the prescribed warming amount or carbon dioxide concentration is not as simple as reducing greenhouse gas emissions.[21] Climate change is controlled by a "stock/flow" relationship in which greenhouse gases stay in the atmosphere up to thousands of years after they are added to it.[22] So, if greenhouse gas emission rates are greater than atmospheric greenhouse gases' natural dissipation rate, the net accumulation will cause overall atmospheric concentration to increase.[23] The stock/flow relationship therefore requires that climate change mitigation strategies include deep cuts to greenhouse gas emissions, not just a slowing of emission increases.[24] In short, the global level of emissions must be lower than the global level of dissipation or "drainage" of greenhouse gases from the atmosphere.[25] The drainage rate can be increased by the use of carbon sinks, but the need for large emissions reductions is inevitable.[26]

II. Psychological and Political Barriers to Climate Action

Despite the looming threat of catastrophic and irreversible climate change, and the many policy mechanisms available for mitigation, the United States has failed to adequately address the problem. Executive actions,

19. Hoegh-Guldberg, *supra* note 17, at 177 ("Overshooting poses large risks for natural and human systems, especially if the temperature at peak warming is high, because some risks may be long-lasting and irreversible, such as the loss of some ecosystems . . . .").

20. Hansen, *supra* note 18, at 5. However, there is some disagreement about the appropriate framing of the threshold-limit conversation. *See* Interview by David Spence with Katharine Hayhoe, Professor of Public Policy and Public Law, Texas Tech University (May 6, 2020), https://www.energytradeoffs.com/2020/05/06/katharine-hayhoe-magic-numbers-in-the-climate-debate/ [https://perma.cc/R7VX-D6KP]. While some scientists and activists have seized upon these temperature and CO_2 targets as absolute imperatives, others stress that they should be viewed as helpful goals. *Id.* Professor Katherine Hayhoe has stated that these metrics are useful targets, but that aiming for them and missing is still drastically better than not trying at all. *Id.* She has also expressed that the psychological framing of these metrics is important for public acceptance and action:

> Psychologically as humans, we need goals and deadlines. . . . But communicating that 'if we do not achieve this exact goal by this exact date then the world will go to hell in a handbasket,' I think that is completely counterproductive . . . because it is a fear-based message. . . . Psychologically, we cannot maintain that level of panic and anxiety over years to decades. We just can't do it. We have to have a vision of a better future, not a vision of an apocalypse that we cannot avoid.

Id.

21. Lazarus, *supra* note 6, at 1164–65.

22. *Id.*

23. *Id.* at 1165.

24. *Id.* at 1165–66.

25. *Id.*

26. *Id.* at 1164.

implemented through regulations[27] and executive orders,[28] can make some progress, but, as has been recently demonstrated, are easily reversible.[29] There are also many effective legislative solutions that could be employed, but Congress has been largely unsuccessful in its sporadic efforts.[30] Our failure to successfully implement mitigation policies can be explained in part by Professor Richard Lazarus's characterization of global warming as a "super wicked" policy problem—capable of defying even the most vigorous

27. *See, e.g.*, U.S. ENVTL. PROT. AGENCY, FACT SHEET: OVERVIEW OF THE CLEAN POWER PLAN (2015), https://archive.epa.gov/epa/cleanpowerplan/fact-sheet-overview-clean-power-plan.html#print [https://perma.cc/8DTT-3JFA] ("On August 3, President Obama and EPA announced the Clean Power Plan – a historic and important step in reducing carbon pollution from power plants . . . ."); Joby Warrick & Juliet Eilperin, *Obama Announces Moratorium on New Federal Coal Leases*, WASH. POST (Jan. 15, 2016, 2:55 PM), https://www.washingtonpost.com/news/energy-environment/wp/2016/01/14/obama-administration-set-to-announce-moratorium-on-some-new-federal-coal-leases/ [https://perma.cc/4G6A-QHQQ] ("The Obama administration . . . ordered a moratorium on new leases for coal mined from federal lands as part of a sweeping review of the government's management of vast amounts of taxpayer-owned coal.").

28. *See, e.g.*, Office of the Press Secretary, *Executive Order — Northern Bering Sea Climate Resilience*, THE WHITE HOUSE: PRESIDENT BARACK OBAMA (Dec. 09, 2016), https://obamawhitehouse.archives.gov/the-press-office/2016/12/09/executive-order-northern-bering-sea-climate-resilience [https://perma.cc/WND6-PNNE] ("[P]revents consideration of these areas for future oil or gas leasing for purposes of exploration, development, or production."); Office of the Press Secretary, *Executive Order—Preparing the United States for the Impacts of Climate Change*, THE WHITE HOUSE: PRESIDENT BARACK OBAMA (Nov. 1, 2013), https://obamawhitehouse.archives.gov/the-press-office/2013/11/01/executive-order-preparing-united-states-impacts-climate-change [https://perma.cc/CL4S-S5ZP] (undertaking action to "enhance climate preparedness and resilience"); Tanya Somanader, *President Obama: The United States Formally Enters the Paris Agreement*, THE WHITE HOUSE: PRESIDENT BARACK OBAMA (Sept. 3, 2016, 10:41 AM), https://obamawhitehouse.archives.gov/blog/2016/09/03/president-obama-united-states-formally-enters-paris-agreement [https://perma.cc/F5NJ-UAEY] (describing the U.S. entry into the Paris accords, which were "the most ambitious climate change agreement in U.S. history.").

29. *See, e.g.*, Rebecca Hersher, *U.S. Formally Begins to Leave the Paris Climate Agreement*, NPR (Nov. 4, 2019, 3:46 PM), https://www.npr.org/2019/11/04/773474657/u-s-formally-begins-to-leave-the-paris-climate-agreement [https://perma.cc/7FDR-93JS] ("The Trump administration has formally notified the United Nations that the U.S. is withdrawing from the Paris climate agreement."); Madison Park, *Six Obama Climate Policies that Trump Orders Change*, CNN (Mar. 28, 2017, 8:34 PM), https://www.cnn.com/2017/03/28/politics/climate-change-obama-rules-trump/index.html [https://perma.cc/Q5SE-UJP2] ("President Donald Trump on Tuesday signed an executive order curbing the federal government's enforcement of climate regulations, a move that represents a sharp reversal from his predecessor's position.").

30. *See, e.g.*, Amanda Reilly & Kevin Bogardus, *7 Years Later, Failed Waxman-Markey Bill Still Makes Waves*, E&E NEWS (June 27, 2016), https://www.eenews.net/stories/1060039422/print [https://perma.cc/2W4N-G4EC] ("It's been seven years since the House passed major legislation to create a cap-and-trade system for heat-trapping greenhouse gas emissions, and though that legislative attempt ultimately failed, the bill's sponsors still say it sowed the seeds for other climate change efforts."); Valerie Volcovici, *House Backs Paris Agreement in First Climate Bill in a Decade*, REUTERS (May 2, 2019, 11:48 AM), https://www.reuters.com/article/us-usa-climate/house-backs-paris-agreement-in-first-climate-bill-in-a-decade-idUSKCN1S81OI [https://perma.cc/C7JZ-P6R5] ("Senate majority leader Mitch McConnell said the Senate would not take up the [Climate Action Now Act] legislation, dismissing the bill as 'political theater' by Democrats.").

efforts by policymakers.[31] The problem's thorniness is attributable to the complicated underlying science, the nature of U.S. policymaking, and the psychological and cognitive barriers that stand in the way of both government action and effective movement building.[32] Some political communication scholars have argued that, to become a lasting force for change, a movement like the pro-climate movement must use persuasion to satisfy six factors:[33]

1. Transform perceptions of reality: "Protestors [or movement participants] must transform how people see their environment—the past, the present, and the future—to convince them that an intolerable situation exists that warrants urgent attention and action."[34] They do this, in part, through communicating the urgency of the problem, storytelling, and framing the future as "bright and full of hope or dark and full of despair."[35]
2. Alter the self-perceptions of protestors: "Protestors [or movement participants] must see themselves as substantive human beings with the power to take on powerful institutions and entrenched cultural norms and values."[36] Movement leaders can achieve this by framing movement members as victims in a struggle for their own rights and freedoms or as people struggling for the rights and freedoms of others.[37]
3. Legitimize the social movement: Movement members must "attain positive relational patterns with the larger society."[38] This requires appealing to "fundamental societal norms and values to transport themselves from the margins of society to the centers where legitimacy resides," or portraying the existing social order as illegitimate.[39]

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31. Lazarus, *supra* note 6, at 1158–59.

32. *Id.* at 1158–60.

33. CHARLES J. STEWART, CRAIG ALLEN SMITH & ROBERT E. DENTON, JR., PERSUASION AND SOCIAL MOVEMENTS 18 (6th ed. 2012).

34. *Id.* at 50. In noting how movements change people's perceptions of reality, some political-communication scholars observe:

> Social movements devote significant portions of their persuasive efforts toward transforming perceptions of the present. They understand that target audiences—even those most affected by issues such as war, the environment, the economy, equality, and justice—may be unaware of the problem, refuse to believe that it exists, believe the problem is not severe enough to require drastic action, believe the problem does not or will not affect them, or believe the problem should be and will be handled by appropriate institutions through normal channels and procedures.

Id. at 52.

35. *Id.* at 53, 56 (emphasis omitted).

36. *Id.* at 58.

37. *Id.* at 58–59.

38. *Id.* at 63.

39. *Id.* at 65, 69.

4. Prescribe courses of action: Members of the movement must prescribe "what must be done, who must do it, and how it must be done."[40]
5. Mobilize for action: Movement members must "educate audiences about their cause and . . . convince them of the urgency to *join together* to bring about . . . change."[41] This task involves "energiz[ing] the discontented," pressuring the institutional opposition to admit that a problem exists, and engendering sympathy and legitimacy in the eyes of opinion leaders.[42]
6. Sustain the social movement: A movement must explain setbacks and delays, remain viable (in terms of fundraising, membership, and media attention), and remain visible.[43]

The pro-climate movement must use various persuasive measures to lower cognitive barriers and achieve each of the six movement-building factors. Psychologists and Professor Lazarus have identified many cognitive barriers. The primary barriers are grouped here into three broad categories—ignorance, uncertainty and risk discounting, and mistrust and reactance.[44] This section describes each category and outlines which movement-building factors it affects. The discussion of each category ends with an overview of psychology-based recommended solutions for overcoming each barrier.

A. Ignorance

The ignorance barrier may include ignorance of climate change's existence, significance, causes, and potential solutions.[45] People who are ignorant of the existence of climate change or who misunderstand its significance are not likely to act to fight climate change.[46] A significant minority of Americans are ignorant of the existence of climate change: while 72% of Americans think global warming is happening, 12% believe that it is not happening, and 16% "don't know."[47] Additionally, 37% of Americans

40. *Id.* at 71.

41. *Id.* at 76.

42. *Id.* at 77–79.

43. *Id.* at 80–83.

44. This is not an exhaustive list. For example, scholars have also identified partisanship as a cognitive barrier to climate action. Hari M. Osofsky & Jacqueline Peel, *Energy Partisanship*, 65 EMORY L.J. 695, 700 (2016).

45. TASK FORCE ON THE INTERFACE BETWEEN PSYCHOLOGY AND GLOBAL CLIMATE CHANGE, AM. PSYCHOL. ASS'N, PSYCHOLOGY & GLOBAL CLIMATE CHANGE: ADDRESSING A MULTIFACETED PHENOMENON AND SET OF CHALLENGES 65 (2009), https://www.apa.org/science/about/publications/climate-change-booklet.pdf [https://perma.cc/9ZZL-A74J] [hereinafter APA TASK FORCE].

46. *Id.*

47. Jennifer Marlon, Peter Howe, Matto Mildenberger, Anthony Leiserowitz & Xinran Wang, *Yale Climate Opinion Maps 2020*, YALE PROGRAM ON CLIMATE CHANGE COMMUNICATION

are "not worried" about global warming, and 29% believe that global warming will not harm people in the U.S., or if it does, the harm will be small.[48] The portion of the population that is unaware of the causes of and solutions to climate change is also quite large. For example, only 57% of Americans think that global warming is caused by human activities.[49]

Of those that do understand the basics, the complexities of the science still pose a substantial barrier to knowledge and subsequent action. Humans understand cause and effect by using their intuition to make logical connections between an activity and its results—a concept known as the "representativeness heuristic."[50] However, the connection between the causes (transportation, construction and development, consumerism, deforestation, agriculture, etc.) and effects (droughts, floods, famine, disease, war, etc.) of climate change are not at all intuitive, so they tend to elude our cognition.[51] Additionally, studies have shown that people do not intuitively grasp the stock/flow relationship of atmospheric greenhouse gas concentrations, even after being taught about it.[52]

Until more of us can make the connections needed to understand climate change's causes and effects, it is unlikely that we will stop participating in climate-change-causing activities or implement effective remedial measures.[53] For example, if people fail to understand that climate change is caused by human activity, they will be less likely to respond to or take personal responsibility for it.[54] Further, if people fail to understand the stock/flow relationship, they may not recognize that effective pro-climate action must include deep cuts to carbon emissions and an increased use of carbon sinks.[55] These and similar misunderstandings will limit the movement building needed to support and sustain climate change lawmaking.[56]

(Sept. 2, 2020), https://climatecommunication.yale.edu/visualizations-data/ycom-us/ [https://perma.cc/Z5G9-448U].

48. *Id.*

49. *Id.*

50. Lazarus, *supra* note 6, at 1178.

51. *Id.*

52. *Id.* at 1177–78.

53. *See id.* at 1178–79 (suggesting that the behavior of well-meaning people engaging in climate-harming activities would be unacceptable if the consequences of the behavior were understood); APA TASK FORCE, *supra* note 45, at 58 (explaining that people would see climate change as a more serious threat if they grasped their responsibility for it).

54. APA TASK FORCE, *supra* note 45, at 58 ("People's willingness to restore or prevent damage is driven by their perceptions of the causes of the damage. . . . [T]he principle 'if you break it, you fix it' has currency in a wide range of cultures.")

55. *See* Lazarus, *supra* note 6, at 1166–67, 1177–78 ("It will not be enough to slow the rate of increases or even to decrease absolute annual emissions. As just described, only if emissions are lower than drainage will greenhouse gas concentrations decrease.").

56. *Id.* at 1186–87; Jeffrey J. Rachlinski, *The Psychology of Global Climate Change*, 2000 U. ILL. L. REV. 299, 302–03, 313 (2000).

In fact, the ignorance barrier relates to many of the movement-building factors that the climate movement must satisfy to create lasting change. For example, with respect to Factor One—transforming perceptions of reality—general ignorance prevents the public from perceiving climate change's existence and urgency, and the representativeness heuristic prevents the public from perceiving the causal chains of climate change. Additionally, if people are unaware of climate change's existence or severity, they will not see themselves or others as its victims—implicating the self-perceptions needed to satisfy Factor Two. Regarding Factor Three, the pro-climate movement cannot gain legitimacy if most of society does not acknowledge the problem it is targeting. Further, the public will not be able to recognize the potential effectiveness of the courses of action prescribed by the movement, Factor Four, if it fails to understand the causes of climate change. Lastly, the ignorance barrier also affects Factor Five, mobilization, since members of the public cannot be convinced of the urgency of a problem that they do not believe exists or do not understand.

1. Recommended Solutions.—Human cognition tends to value experience over analysis.[57] So, when communicating to others about climate change's existence, causes, and severity, it is important to emphasize intuitive and experiential information as well as scientific facts.[58] Advocates should emphasize personal and local experiences with destructive and extreme weather events to influence people's beliefs about the existence and threat of climate change.[59] This can be achieved through the use of "recall, scenarios, and powerful narratives and metaphors."[60] Finally, the scientific information

57. Sander van der Linden, Edward Maibach & Anthony Leiserowitz, *Improving Public Engagement with Climate Change: Five "Best Practice" Insights from Psychological Science*, 10 PERSP. ON PSYCHOL. SCI. 758, 759 (2015). The authors compare the abstract danger posed by climate change with a more visceral threat:

> For example, although the odds of death or injury from a terrorist attack in the United States are very low, terrorism is ranked as a top national priority, whereas the reality of climate change is not. The difference lies in the fact that for terrorism, vivid, memorable experiences readily come to mind (e.g., 9/11, ISIS).

Id.

58. *Id.*

59. *Id.*; Paul A. M. Van Lange, Jeff Joireman & Manfred Milinski, *Climate Change: What Psychology Can Offer in Terms of Insights and Solutions*, 27 CURRENT DIRECTIONS IN PSYCHOL. SCI. 269, 270–71 (2018).

60. Van der Linden, *supra* note 57, at 759. Many scientists, advocates, and politicians point to recent years' extreme hurricane and fire seasons to call for climate action. Umair Irfan, *Why We're More Confident than Ever That Climate Change Is Driving Disasters*, VOX (Sept. 30, 2020, 8:30 AM), https://www.vox.com/21452781/zogg-fire-glass-wildfire-california-climate-change-hurricanes-attribution-2020-debate [https://perma.cc/4JJZ-E3QZ]. For example, while campaigning as the Democratic nominee for Vice President, Vice President Kamala Harris tweeted: "It is not a coincidence that 5 of the 6 largest wildfires in California history happened within the last two months. This is climate change." *Id.*

that is provided should be presented in a concrete manner that is relevant to the local circumstances.[61] For example, advocates should present flooding statistics in areas near the coast and prone to flooding while presenting warming statistics to people who already live in hot climates.[62]

B. Uncertainty and Risk Discounting

Ignorance of climate change naturally leads to the second group of cognitive barriers to climate action: uncertainty and risk discounting. As discussed above, ignorance of climate science can cause uncertainty about climate change's causes and effects. Additionally, climate models, like all scientific models, include degrees of uncertainty and level-of-confidence assessments provided by the scientists who develop them. These characterizations can cause the public to engage in "wishful thinking."[63] As a result, the public tends to discount the findings at a higher rate than appropriate and to systematically underestimate the risks of climate change.[64] Experimental research has shown that this type of uncertainty reduces the rate of pro-environmental behavior.[65] This phenomenon occurs because people tend to use any sign of uncertainty as an excuse to act in short-term self-interest.[66]

The temporal and spatial aspects of climate change also contribute to the discounting, or undervaluing, of its risks.[67] Even if people understand that climate change is happening and will eventually lead to the deterioration of environmental conditions, they can justify inaction through a belief that the problem can be addressed later.[68] This problem is magnified when people believe that the effects of climate change will primarily be felt elsewhere because those people will have less motivation to act locally, let alone in a timely manner.[69] Because people in the best position to mitigate climate change are often spatially and temporally distant from those who will be most

61. Van Lange, *supra* note 59, at 271.

62. *Id.*

63. Grace Nosek, *Climate Change Litigation and Narrative: How to Use Litigation to Tell Compelling Climate Stories*, 42 WM. & MARY ENVTL. L. & POL'Y REV. 733, 743–44 (2018) (citing Barton H. Thompson, Jr., *Tragically Difficult: The Obstacles to Governing the Commons* 24 (Stan. L. Sch. John M. Olin Program in L. and Econ., Working Paper No. 187, 2000)).

64. APA TASK FORCE, *supra* note 45, at 65.

65. *Id.*

66. *Id.* Uncertainty can also lead to a phenomenon called "biased assimilation." Rachlinski, *supra* note 56, at 304. Biased assimilation is a cognitive tendency to accept only the evidence that supports one's preexisting beliefs. *Id*. Therefore, any degree of uncertainty in the scientific evidence of global warming will be seized upon by those predisposed to deny it, and their denial will be further entrenched. *Id.* at 306.

67. APA TASK FORCE, *supra* note 45, at 66; Lazarus, *supra* note 6, at 1175–77; van der Linden, *supra* note 57, at 760.

68. APA TASK FORCE, *supra* note 45, at 66.

69. *Id.*

affected, it is very difficult to form a cohesive and sustainable pro-climate movement.[70] So, the uncertainty-and-risk-discounting barrier relates to many of the movement-building factors implicated by the ignorance barrier. Members of the public will not perceive themselves or others as victims (Factor Two) of an urgent problem (Factor One), or be motivated into action to address that problem (Factor Five), if they are uncertain about its existence or riskiness.

The time gap between climate change's causes and worst effects hinders human cognition and action.[71] This decades-long delay requires people to act immediately to prevent consequences that might not manifest in their most severe form for many years. Unfortunately, this scientific reality is in stark contrast with our tendency to prefer short-term outcomes over long-term investments.[72] The likely result of the temporal gap and consequent short-sightedness is procrastination.[73] People will struggle to implement effective pro-climate laws, but even if these laws are implemented, they are likely to be ignored or overturned.[74] Additionally, our short-term consumption might actually increase due to the anxiety of future unavailability.[75]

The greenhouse effect is also a spatially diverse phenomenon. An action causing climate change in one country will manifest into various effects across the globe: some places will get wetter, others drier, etc.[76] Therefore, the spatial dimension of climate change means that the consequences of human activity are spatially abstract and varied, which causes uncertainty about whether they are truly happening.[77] This uncertainty can become a cognitive barrier to action through the "unavailability heuristic," which provides that a problem like climate change is difficult for people to believe in and take seriously because of their inability to imagine it happening.[78] Relatively unimaginable events are less "cognitively 'available,'" which leads to risk discounting and underregulation.[79] Further, some locations might see some temporary benefits of climate change in the form of a more

70. Lazarus, *supra* note 6, at 1185.

71. Of course, the effects of climate change have already begun. However, even though 72% of Americans believe in global warming, only 56% believe it is already harming people in the U.S. Marlon et al., *supra* note 47. This misunderstanding further compounds the temporal problem.

72. Lazarus, *supra* note 6, at 1174.

73. *Id.* at 1175.

74. *Id.*

75. *Id.*

76. *Id.* at 1170.

77. *Id.* at 1177.

78. *Id.* at 1176.

79. *Id.*

temperate climate with increased agricultural productivity.[80] Those places, primarily in the Northern Hemisphere, are even more likely to delay action.[81]

While these spatial and temporal problems persist, they may be lessening as climate change's effects become less subtle and more widespread. Extreme weather is becoming more extreme: the 2020 hurricane season broke multiple records.[82] Natural disasters are intensifying: 2020's California's wildfire season was one of the most destructive in its history, with over 3 million acres burned.[83] Coastal lands are being swallowed by sea level rise: one Louisiana island is 98% underwater, leaving its Native American population searching for ways to preserve its community.[84] Our aging infrastructure is struggling to rein in the effects of climate change: in May 2020, a dam collapse in Michigan damaged or destroyed an estimated 2,500 properties.[85] As stories like these become more common, and as scientists use "extreme-event attribution"[86] to explain how climate change increases the severity, frequency, and likelihood of these events, temporal and spatial understanding problems may ease. As of September 2020, when asked when global warming will start to harm people in the United States, 56% of Americans answered either "now" or within ten years.[87] This is up from 45% in 2008.[88]

1. Recommended Solutions.—Like the solutions recommended for the ignorance barrier, psychologists instruct that risk discounting can be reduced by communicating "relatable and concrete personal experiences," as well as

80. *Id.* at 1169.

81. *Id.* at 1169–71.

82. Chris Dolce, *All the Records the 2020 Hurricane Season Has Broken so Far*, WEATHER CHANNEL (Oct. 6, 2020), https://weather.com/storms/hurricane/news/2020-09-21-atlantic-hurricane-season-2020-records [https://perma.cc/E3EK-BHDR].

83. Priya Krishnakumar & Swetha Kannan, *The Worst Fire Season Ever. Again.*, L.A. TIMES (Sept. 15, 2020), https://www.latimes.com/projects/california-fires-damage-climate-change-analysis/ [https://perma.cc/L6UX-XWXB].

84. Jenny Jarvie, *On a Sinking Louisiana Island, Many Aren't Ready to Leave*, L.A. TIMES (Apr. 23, 2019, 5:00 AM), https://www.latimes.com/nation/la-na-jean-charles-sinking-louisiana-island-20190423-htmlstory.html#:~:text=Over%20the%20last%20six%20decades,land%20sinks%20below%20the%20surface [https://perma.cc/7SHA-JCU8].

85. Erin Einhorn, *Thousands Fled for Their Lives When Two Michigan Dams Collapsed. More Disasters Are Coming, Experts Say*, NBC NEWS (June 14, 2020, 9:12 AM), https://www.nbcnews.com/news/us-news/thousands-fled-their-lives-when-two-michigan-dams-collapsed-more-n1230841 [https://perma.cc/P369-524Q].

86. Irfan, *supra* note 60.

87. Marlon, *supra* note 47.

88. Matthew Ballew, Jennifer Marlon & Anthony Leiserowitz, *Explore Climate Change in the American Mind*, YALE PROGRAM ON CLIMATE CHANGE COMM. (May 11, 2020), https://climatecommunication.yale.edu/visualizations-data/americans-climate-views/ [https://perma.cc/TVX3-73VV].

other statistical and scientific information.[89] Cultural cognition theorists also recommend using certain people as "vouchers" to communicate risk to the public.[90] "Vouchers are knowledgeable and trusted members of a person's cultural group who can help to build acceptance of a particular issue through 'vouching' for information and showing how it fits with the group's pre-existing worldview."[91] Vouchers can reduce risk discounting because, as discussed above, people tend to recognize risks that reflect their worldviews.[92] Additionally, the use of vouchers can help satisfy movement-building Factor Three: legitimization. If a voucher is both a member of the movement and a trusted member of the wider society, her advocacy for the movement may work to legitimize it in the eyes of the general public.

With respect to dealing with the temporal and spatial barriers to climate change mitigation, psychologists recommend drawing attention to the people who will face the worst of climate change in the future and emphasizing that climate change is already occurring everywhere.[93] First, policymakers and advocates should stress that children and the already-vulnerable will bear the brunt of climate change in the future.[94] Our biological connections to future generations should be emphasized as much as possible since kinship bonds were fundamental to the evolution of human cooperation.[95] Second, policymakers should emphasize that climate change is already occurring by highlighting regional and local effects.[96] In fact, this will help overcome both the temporal and spatial barriers to addressing climate change because "[r]esearch has shown that policy frames focusing on the regionally relevant impacts of climate change . . . are often more effective than those that use *distant global* frames."[97]

C. Mistrust and Reactance

Finally, mistrust and reactance serve as psychological and cognitive barriers to climate action. A majority of Americans (62%) say they have little or no confidence in elected officials to act in the best interest of the public.[98] This mistrust can lead to a negative reaction to pro-climate policy proposals,

89. Van der Linden, *supra* note 57, at 759.
90. Osofsky & Peel, *supra* note 44, at 714.
91. *Id.*
92. *Id.* at 713–14.
93. Van Lange, *supra* note 59, at 271; Van der Linden, *supra* note 57, at 760.
94. Van Lange, *supra* note 59, at 271.
95. *Id.*
96. Van der Linden, *supra* note 57, at 760.
97. *Id.* (emphasis added).
98. Cary Funk & Brian Kennedy, *Public Confidence in Scientists Has Remained Stable for Decades*, PEW RES. CTR. (Aug. 27, 2020), https://www.pewresearch.org/fact-tank/2020/08/27/public-confidence-in-scientists-has-remained-stable-for-decades/ [https://perma.cc/HN9Z-B87X].

especially when the policy is seen as freedom-restricting.[99] Such proposals can conflict with the human instinct for overconsumption.[100] Additionally, humans are unlikely to give up benefits they already have to obtain other benefits—a reaction known as loss aversion[101]—which could exacerbate the negative reactions people have to proposed policy.[102] As a consequence, climate advocates must be mindful of the mistrust and reactance barrier when engaging in movement building with respect to Factor Four—prescribing courses of action. As will be discussed below, the course of action should be framed in a way that emphasizes a benefit that the public will receive (cleaner air and water, more jobs, etc.) as opposed to a way that emphasizes austerity.

Finally, pro-climate policies will affect some industries and other groups more than others, and those entities are likely to create obstacles to implementing policy.[103] In fact, powerful organized interests have weaponized mistrust for decades to spread misinformation about climate science and pro-climate policy.[104] Many businesses and industry groups have funded climate-denial efforts to protect short-term economic interests.[105] Similarly, many elected officials have cast doubt upon climate science and opposed pro-climate policy.[106] They do this in part because they depend on

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99. APA TASK FORCE, *supra* note 45, at 65.

100. Lazarus, *supra* note 6, at 1175.

101. Rachlinski, *supra* note 56, at 307.

102. *See* APA TASK FORCE, *supra* note 45, at 65 (explaining that mistrust can slip into actual denial).

103. Lazarus, *supra* note 6, at 1185–86.

104. APA TASK FORCE, *supra* note 45, at 65; Lazarus, *supra* note 6, at 1185.

105. *See, e.g.*, Douglas Fischer, *"Dark Money" Funds Climate Change Denial Effort*, SCI. AM. (Dec. 23, 2013), https://www.scientificamerican.com/article/dark-money-funds-climate-change-denial-effort/ [https://perma.cc/5L56-6J2S] ("140 foundations funneled $558 million to almost 100 climate denial organizations from 2003 to 2010."); Amy Westervelt, *How the Fossil Fuel Industry Got the Media to Think Climate Change Was Debatable*, WASH. POST (Jan. 10, 2019, 5:00 AM), https://www.washingtonpost.com/outlook/2019/01/10/how-fossil-fuel-industry-got-media-think-climate-change-was-debatable/ [https://perma.cc/8AUS-NN68]. Powerful business interests have strategically worked to discredit climate change science:

> Documents uncovered by journalists and activists over the past decade lay out a clear strategy: First, target media outlets to get them to report more on the "uncertainties" in climate science, and position industry-backed contrarian scientists as expert sources for media. Second, target conservatives with the message that climate change is a liberal hoax, and paint anyone who takes the issue seriously as "out of touch with reality."

Id.

106. Ellen Cranley, *These Are the 130 Current Members of Congress Who Have Doubted or Denied Climate Change*, BUS. INSIDER (Apr. 29, 2019, 12:36 PM), https://www.businessinsider.com/climate-change-and-republicans-congress-global-warming-2019-2 [https://perma.cc/A5WD-AEGQ]. "In a 2014 interview with CNN, [Senator Ted] Cruz directly challenged the idea of global warming, saying, 'The last 15 years, there has been no recorded warming. Contrary to all the theories that they are expounding, there should have been warming over the last 15 years. It hasn't happened.'" *Id.* "'They believe that Americans driving around in trucks on farms, or commuting from the suburbs . . . are a fundamental threat to the world, and they have to have the

industry donations and because their constituents are primarily concerned with short-term interests—in large part due to the psychological barriers discussed here.[107] Essentially, those who are in the best position to mitigate climate change, through economic control and decision-making power, are disproportionately responsible for climate change because of irresponsible business practices and a failure to legislate. They not only fail to address the problem themselves but also use mistrust to actively encourage others to delay action.[108] To overcome the mistrust engendered by these interests and mobilize the public (movement-building Factor Five), climate advocates should find ways to pressure these groups to admit that a problem exists.

1. Recommended Solutions.—Lowering the mistrust and reactance barrier is vital because trust is an essential element in behavioral change, especially when the change involves a personal cost.[109] To make these behavioral changes, people must trust that the changes are "effective, valuable, and equitable," and that the decision-makers are not taking advantage of them.[110]

Additionally, emphasizing group norms can be an important tool in promoting trust in scientific data and getting public support for pro-climate action.[111] For example, drawing attention to the high degree of scientific consensus around climate change can result in greater public acceptance of the science and support for pro-climate action.[112] Further, if people know that others are taking pro-environmental actions, they are more likely to engage in those actions as well.[113] Finally, to overcome loss aversion and similar reactions, psychologists recommend shifting to a conversation about the positive benefits of climate action.[114] An overemphasis on losses or the negative consequences of inaction will not be as successful as an emphasis on the gains of immediate action.[115]

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power and the control of those Americans' lives to implement their radical vision for humanity,' [Senator] Cotton said." *Id.*

107. Lazarus, *supra* note 6, at 1185.

108. *See id.* (arguing that those who believe they may gain from the predicted future economy are more reluctant to fight climate change).

109. APA TASK FORCE, *supra* note 45, at 65.

110. *Id.*

111. Van der Linden, *supra* note 57, at 760.

112. *Id.*

113. *Id.* ("[F]ield experiments have demonstrated that when people are informed about the average energy consumption of their neighbors, they tend to adjust their own energy use to conform to the group norm.").

114. *Id.* at 760–61.

115. *Id.*

III. Climate Change Litigation

A. Overview

Perhaps in light of climate change's "super-wicked" policy problems, an increasing number of climate activists are using another tool in the legal toolbox: climate change litigation.[116] In the United States, climate change litigation is typically filed against a government entity or fossil fuel manufacturer.[117] Claims in climate change suits are based in federal statutes,[118] the Constitution,[119] state law,[120] common law,[121] the public trust doctrine,[122] securities and financial regulation,[123] and more.[124] The overarching goals of these lawsuits are to hold governments to their commitments, link the impacts of fossil fuel extraction and manufacturing to climate change, and establish liability for failing to adapt to or mitigate the effects of climate change.[125] The typical remedies sought include declaratory judgments on the legality of the challenged actions or inactions, injunctions to compel or cease actions, and damages.[126]

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116. *See* Michael Burger & Justin Gundlach, The Status of Climate Change Litigation: A Global Review, United Nations Environment Programme 8 (May 2017), https://ssrn.com/abstract=3364568 [https://perma.cc/A4UG-BW3F] ("Litigation has arguably never been a more important tool to push policymakers and market participants to develop and implement effective means of climate change mitigation and adaption than it is today. Technological developments and non-climate policy initiatives cannot be counted on to stave off climate destabilization.").

117. *See U.S. Climate Change Litigation*, COLUM. L. SCH., http://climatecasechart.com/us-climate-change-litigation/ [https://perma.cc/G7NY-CHU6 [hereinafter U.S. Climate Change Litigation].

118. *Id.* These statutes may include the Clean Air Act, The Endangered Species Act, the Clean Water Act, the National Environmental Policy Act (NEPA), the Freedom of Information Act, and more. *See, e.g.*, California v. EPA, 385 F. Supp. 3d 903, 908 (N.D. Cal. 2019) (Clean Air Act).

119. U.S. Climate Change Litigation, *supra* note 117. The constitutional provisions at issue include the Commerce Clause; the First, Fifth, Ninth, and Fourteenth Amendments; the Take Care Clause; and the Property Clause. *See, e.g.*, Juliana v. United States, 947 F.3d 1159, 1165 (9th Cir. 2020) (Fifth, Ninth, and Fourteenth Amendment claims).

120. U.S. Climate Change Litigation, *supra* note 117.

121. *Id.* Common law claims include public and private nuisance, unjust enrichment, negligence, fraudulent misrepresentation, civil conspiracy, and trespass. *See, e.g.*, Comer v. Murphy Oil USA, 585 F.3d 855, 859–60 (5th Cir. 2009) (nuisance, trespass, negligence, unjust enrichment, fraudulent misrepresentation, and civil conspiracy claims).

122. Burger & Gundlach, *supra* note 116, at 23 ("The public trust doctrine is a widely recognized common law duty on the sovereign of a given jurisdiction to act as trustee for present and future generations by maintaining the integrity of the public trust resources in that jurisdiction."); *see also, e.g.*, *Juliana*, 947 F.3d at 1165 (describing plaintiffs' public trust doctrine claim).

123. *See, e.g.*, Massachusetts v. Exxon Mobil Corp., No. 19-12430-WGY, 2020 WL 2769681 (D. Mass. May 28, 2020) (defrauding investors and consumers).

124. *See* U.S. Climate Change Litigation, *supra* note 117 (describing the many different types of cases brought).

125. Burger & Gundlach, *supra* note 116, at 14.

126. *Id.* at 39.

U.S. climate change trials rarely reach the merits because they are hampered by procedural stumbling blocks like standing, the political question doctrine, the separation of powers principle, the doctrine of legislative displacement, and the doctrine of foreign affairs preemption.[127]

B. Juliana v. United States

Juliana is a paradigmatic example of climate change litigation against a government entity. In 2015, the plaintiffs—a group of young people between the ages of 8 and 19, a nonprofit of environmental advocates, and Dr. James Hansen acting as "guardian for future generations"—represented by Our Children's Trust, filed the case against President Obama and the heads of various federal agencies (the government).[128] The plaintiffs alleged that the government knew for over fifty years that the carbon dioxide emissions associated with the burning of fossil fuels are causing global warming, and knew that this was a threat to "human life, liberty, and property."[129] The plaintiffs alleged that, despite this knowledge, the government has "continued to permit, authorize, and subsidize fossil fuel extraction, development, consumption and exportation."[130]

The plaintiffs contended that these actions by the government have: (1) deprived them of their rights to life, liberty, and property in violation of the Fifth Amendment; (2) discriminated against young citizens who will bear the brunt of the consequences of climate change in violation of the Equal Protection Clause; (3) resulted in a failure to hold natural resources in trust for its citizens as required by the public trust doctrine; and (4) violated their Ninth Amendment Rights.[131] The plaintiffs claimed that these violations resulted in psychological harm, physical harm, property damage, and impairment to recreational interests.[132] The plaintiffs sought injunctive and declaratory relief and emphasized the limited time left for action before climate change will reach the point of no return.[133] Specifically, the plaintiffs asked for an injunction ordering the government to phase out fossil fuels and remove excess atmospheric carbon dioxide.[134]

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127. Michael Burger, Jessica Wentz & Radley Horton, *The Law and Science of Climate Change Attribution*, 45 COLUM. J. ENVTL. L. 57, 226, 228 (2020).

128. Juliana v. United States, 339 F. Supp. 3d 1062, 1070–71 (D. Or. 2018), *leave to appeal granted*, 949 F.3d 1125 (9th Cir. 2018), *mandamus denied sub nom.*, *In re* United States, 140 S. Ct. 16 (2019), *and rev'd and remanded*, 947 F.3d 1159 (9th Cir. 2020).

129. *Id.* at 1071.

130. *Id.*

131. *Id.*; *Juliana*, 947 F.3d at 1165.

132. *Juliana*, 947 F.3d at 1165.

133. *Juliana*, 339 F. Supp. 3d at 1071.

134. *Juliana*, 947 F.3d at 1165.

The case survived various motions to dismiss, and in January 2017, the federal government defendants filed an answer in which they agreed with many of the plaintiffs' allegations.[135] The government agreed that climate change is occurring and is caused by human activity; that climate change poses a "monumental danger" to Americans; and that the government's policies play a role in climate change (although the government still contested causation).[136]

Later that month, Barack Obama left the presidency and Donald Trump assumed the office. Then, the government moved for summary judgment and judgment on the pleadings.[137] The district court granted summary judgment on the Ninth Amendment claim.[138] It also dismissed the equal protection claim in part, holding that strict scrutiny would be applied, not because the plaintiffs represented a suspect class, but because the right to a climate system capable of sustaining human life is fundamental.[139] The district court denied all other components of the government's motions and held that the plaintiffs had standing to bring the remainder of their claims.[140]

On appeal, the Ninth Circuit reversed the district court, holding that the plaintiffs lacked standing to bring their claims.[141] Article III standing requires that the plaintiff has "(1) a concrete and particularized injury that (2) is caused by the challenged conduct and (3) is likely redressable by a favorable judicial decision."[142] The third prong requires that the relief sought is (i) substantially likely to redress the plaintiffs' injuries and (ii) within the court's power to award.[143] The Ninth Circuit held the first and second prongs to be satisfied, but ruled that the plaintiffs' argument for standing failed on the third prong.[144]

The Ninth Circuit agreed with the district court that the plaintiffs met the injury requirement through claiming concrete and particularized injuries.[145] For example, water scarcity and flooding forced two plaintiffs to leave their homes.[146] The Ninth Circuit reasoned that the fact that climate change affects everyone is irrelevant—it does not matter how many people have been injured as long as the plaintiffs have been injured as well.[147]

135. *Juliana*, 339 F. Supp. 3d at 1072.
136. *Id.* at 1072–73 (quotations omitted).
137. *Id.* at 1073.
138. *Id.* at 1102.
139. *Id.* at 1102–04.
140. *Id.* at 1096–98, 1101–02.
141. *Juliana*, 947 F.3d at 1165, 1175.
142. *Id.* at 1168.
143. *Id.* at 1170.
144. *Id.* at 1168–69, 1173.
145. *Id.* at 1168.
146. *Id.*
147. *Id.*

The Ninth Circuit also agreed with the district court with respect to the causation prong.[148] It found that the plaintiffs sufficiently established the causal chain by presenting evidence of sustained government policies that have increased fossil fuel extraction, production, and transportation, thereby increasing carbon emissions—the ultimate cause of the plaintiffs' injuries.[149] And, since the United States had generated over 25% of worldwide emissions from 1850–2012 and is currently responsible for 15% of worldwide emissions, the Ninth Circuit held that the plaintiffs created a "genuine factual dispute as to whether [the government's] policies were a 'substantial factor' in causing the plaintiff's injuries."[150]

In contrast to the district court, the Ninth Circuit held that the plaintiffs' injuries were not likely redressable by a favorable judicial decision and ordered the district court to dismiss the case for lack of standing.[151] The court addressed its skepticism that the first redressability prong—that the requested relief was substantially likely to redress the plaintiffs' injuries—was satisfied.[152] It noted that the injunction sought by the plaintiffs would not "suffice to stop catastrophic climate change."[153]

Finally, the court determined that the second prong of redressability was not fulfilled because the requested relief was not within the court's power to award.[154] The plaintiffs had requested that the district court order the political branches to create a plan to phase out fossil fuel emissions and decrease levels of atmospheric carbon dioxide.[155] While this relief would have left the policy-making in the hands of the political branches, the Ninth Circuit still concluded that it involved too much judicial intervention in the form of supervision and enforcement.[156] It noted that the requested intervention implicated separation of powers principles, especially since there were no clearly defined standards (other than an optimal level of atmospheric carbon dioxide) by which to guide its potential enforcement and supervision.[157] It concluded by suggesting that climate change represents a "clear and present danger" and that "the other branches may have abdicated their responsibility to remediate [it]," but stated that those extraordinary circumstances do not give the courts the power to step in.[158]

148. *Id.* at 1169.
149. *Id.*
150. *Id.*
151. *Id.* at 1171, 1175.
152. *Id.* at 1171.
153. *Id.* at 1170.
154. *Id.* at 1171.
155. *Id.* at 1172.
156. *Id.* at 1173.
157. *Id.* at 1172–73.
158. *Id.* at 1174–75.

In her dissent, Judge Staton characterized the majority's decision as a surrender to the government's reckless course of action that will lead to the destruction of the nation as we know it.[159] She argued that the Constitution implicitly and structurally enshrines the maintenance of the nation as a "guardian of all other rights."[160] She asserted that while such implicit fundamental rights can be enforced through the political system, they are independently protected by the courts.[161]

Additionally, Judge Staton would have found both redressability prongs satisfied.[162] With respect to the efficacy prong, she argued that the majority erred in basing much of its analysis on the proposed relief's ability to stop climate change.[163] Instead, she argued, it should have focused on the relief's ability to "curb by some meaningful degree what the record shows to be an otherwise inevitable march to the point of no return."[164]

Judge Staton would have found the second redressability prong—that the relief sought is within the court's power to award—fulfilled as well.[165] She reiterated that the plaintiffs sought to vindicate a foundational and fundamental constitutional principle, which, in her view, requires the courts to "instruct the other branches as to the constitutional limitations on their power."[166] She argued that this requirement should have overridden the majority's concern about separation of powers unless the government could establish a reason why it should not.[167] Judge Staton asserted that the majority did not explicitly require such an argument in this case but instead relied on separation of powers principles as a way to avoid this "messy" and "intimidating" case of "great complexity and magnitude."[168]

IV. The Hope in Today's Decision?

The Ninth Circuit's dismissal of *Juliana* was undoubtedly a setback, but there are glimmers of hope in the majority opinion, the dissent, and the advocates' responses that show the potential of climate change litigation to overcome, or at least weaken, the barriers to climate change action discussed above. Climate change litigation has the potential to encourage the movement building needed to pressure every branch and level of government into action.

159. *Id.* at 1175 (Staton, J., dissenting).
160. *Id.* at 1178 (quoting Plyler v. Doe, 457 U.S. 202, 217 n.15 (1982)).
161. *Id.* at 1180.
162. *Id.* at 1181.
163. *Id.* at 1181–82.
164. *Id.* at 1182.
165. *Id.* at 1181.
166. *Id.* at 1184.
167. *Id.*
168. *Id.* at 1184–85.

As time passes and the effects of climate change become increasingly obvious, more judges might come to view their role as the one articulated by Judge Staton in her dissent:[169] the "ultimate backstop" in "curb[ing] acts of the political branches that contravene those fundamental tenets of American life so dear as to be constitutionalized and thus removed from political whims."[170] If so, some climate change litigation will proceed on to the merits, and perhaps even succeed. The ideal outcome of such success would be thorough and effective remedial regimes, which might include cuts to CO_2 emissions, removal of CO_2 from the atmosphere, infrastructure improvements, and money damages. However, even if the remedy is not adequately implemented or enforced, a win might still bring value to the pro-climate movement. Some legal scholars claim that litigation victories, even in the absence of effective remedies, may raise consciousness about a cause, shape the public's opinions, "lend legitimacy to a cause, mobilize constituents . . . provide much-needed publicity . . . generate elite support, pressure adversaries, and increase a social movement's bargaining power"[171]—implicating all six movement-building factors.

However, it is increasingly possible that traditional litigation "wins," or even trials on the merits, will remain few and far between. In that case, the act of litigation itself could still contribute to the formation of a broad and self-sustaining movement that will, in turn, hold all branches and levels of the government accountable.[172]

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169. In other contexts, strategic advocates seeking to mobilize activists have seized upon the arguments articulated in dissents. Douglas NeJaime, *Winning Through Losing*, 96 IOWA L. REV. 941, 987, 992, 999 (2011). Savvy advocates have used a model of "prophetic litigation" in which they emphasize to supporters that "[h]istory has shown that in cases of this magnitude the opinions of the dissenting justices later become the law of the land." *Id.* at 986 (quoting Press Release, Lambda Legal, Washington State Supreme Court Rules Against Marriage for Same-Sex Couples (July 26, 2006), https://www.lambdalegal.org/news/wa_20060726_wa-supreme-court-rules-against-marriage-for-same-sex-couples) [https://perma.cc/MWU8-3D62].

170. *Juliana*, 947 F.3d at 1181, 1184 (Staton, J., dissenting). Judge Staton also points out that courts have filled this function before, even if it involved sweeping remedies and enforcement. *Id.* at 1188–89 (citing Brown v. Bd. of Educ., 347 U.S. 483 (1954)). The advocates in *Juliana* emphasized Judge Staton's rhetoric in a subsequent press release, in which one of the plaintiffs wrote: "We will continue this case because only the courts can help us. . . . Much like the civil rights cases, we firmly believe the courts can vindicate our constitutional rights and we will not stop until we get a decision that says so." Press Release, Our Children's Trust, Decision of Divided Ninth Circuit Court of Appeals Finds Primarily for Juliana Plaintiffs, but Holds Federal Judiciary Can Do Nothing to Stop the U.S. Government in Causing Climate Change and Harming Children (Jan. 17, 2020), https://static1.squarespace.com/static/571d109b04426270152febe0/t/5e22508873d1bc4c30fad90d/1579307146820/Juliana+Press+Release+1-17-20.pdf [https://perma.cc/Q2QT-882P].

171. NeJaime, *supra* note 169, at 944, 954; *see also* JACQUELINE PEEL & HARI M. OSOFSKY, CLIMATE CHANGE LITIGATION 222–23 (2015) (citing interviews with research participants who noted "the capacity of litigation to shift social perceptions").

172. PEEL & OSOFSKY, *supra* note 171, at 236–37. Pending litigation interests people who are outside of the courtroom:

This section will first examine how climate change litigation, win or lose, could lower the psychological barriers outlined above. Then, this section will discuss how even climate change litigation losses could help form a broad pro-climate movement that could motivative a psychologically primed public to demand action from the government. *Juliana* will act as the case study to frame the discussion, but many of the comments reference, and are applicable to, other climate change lawsuits.

A. Lowering Psychological and Cognitive Barriers[173]

1. Ignorance.—As outlined above, many Americans are ignorant about climate change's existence, causes, and solutions, which prevents movement building and political action. Psychologists recommend overcoming this barrier by relaying experiential and localized information: emphasize personal experiences with extreme weather events, highlight powerful narratives, promote concrete and specific scientific information, and communicate through metaphors.

The *Juliana* litigation repeatedly emphasized the plaintiffs' personal experiences with climate change, often in narrative form. To show that there was a redressable injury, the young plaintiffs made detailed and personal declarations of the effects that climate change is already having on their lives: a plaintiff named Jaime had to leave her home and family on a Navajo Reservation because of water scarcity.[174] Extreme weather events and sea level rise caused the repeated flooding of multiple plaintiffs' homes.[175] Still more plaintiffs described the property, health, and recreational harms caused by the increased rate and intensity of wildfires in the West.[176] Many plaintiffs detailed the ways in which the effects of climate change were already adversely affecting their safety, mental and physical health, cultural practices, recreation, economic stability, and access to food and water.[177] The

> At a grassroots level, several interviewees spoke of the important role litigation can play in galvanizing a campaign by providing 'an event that the community can organize and rally around, focus on and use as a basis for fundraising.' A number of successful campaigns have built community support for climate action from the ground up utilizing a mix of tools, but with litigation often serving as a focal point for local efforts.

Id.

173. For additional analysis on this issue, with an emphasis on heuristic-driven information processing and the "framing" of climate change in public discourse, see generally Nosek, *supra* note 63.

174. *Juliana*, 947 F.3d at 1168.

175. Juliana v. United States, 339 F. Supp. 3d 1062, 1087 (D. Or. 2018), *leave to appeal granted*, 949 F.3d 1125 (9th Cir. 2018), *mandamus denied sub nom.*, *In re* U.S., 140 S. Ct. 16 (2019) and *rev'd and remanded*, 947 F.3d 1159 (9th Cir. 2020).

176. *Id.* at 1087–88.

177. *Id.*

plaintiffs and advocates widely publicized these claims and reiterated them at the district and circuit court levels.[178] There are twenty-one plaintiffs in *Juliana* but millions of similar stories all over the country. If climate change litigation became more prevalent and started receiving more publicity, more people would hear similar stories from members of their own communities. When people are exposed to concrete and visible examples of climate change's effects and documented evidence of causation, the barriers posed by ignorance and the representativeness heuristic[179] can fall.[180]

In fact, the proliferation of these lawsuits would disseminate concrete scientific data about climate change's causes and effects, both on a local and national scale.[181] Even in dismissing the *Juliana* suit, the Ninth Circuit accepted and clearly and authoritatively summarized the climate change data presented by the plaintiffs:

> The record leaves little basis for denying that climate change is occurring at an increasingly rapid pace.
>
> . . . .
>
> Copious expert evidence establishes that this unprecedented rise stems from fossil fuel combustion and will wreak havoc on the Earth's climate if unchecked.
>
> . . . .

178. *See, e.g.*, Lee DeVito, *Little Miss Flint featured in new GapKids campaign*, DETROIT METRO TIMES (Aug. 12, 2020, 12:50 PM), https://www.metrotimes.com/city-slang/archives/2020/08/12/little-miss-flint-featured-in-new-gapkids-campaign [https://perma.cc/FQS4-D6ZS] ("GapKids unveiled the new campaign on Wednesday, which features all youth activists. . . . [including] Levi Draheim (13), the youngest plaintiff on the constitutional climate lawsuit *Juliana v. United States*."); Karenna Meredith, *Meet Levi Draheim, a 13-Year-Old Suing the US Government over Climate Change*, POPSUGAR (Aug. 12, 2020), https://www.popsugar.com/news/levi-draheim-gap-be-the-future-campaign-interview-47688338 [https://perma.cc/CWE2-5WL7] (describing an interview with one of the plaintiffs in regards to the *Juliana* litigation); Julia Rosen, *Is It Our Constitutional Right to Live in a World Safe from Climate Change?*, L.A. TIMES (June 3, 2019, 7:00 AM), https://www.latimes.com/science/la-sci-youth-climate-trial-juliana-20190603-story.html [hhttps://perma.cc/GF9W-QJ3W] (describing some plaintiffs' experiences); *see also* Nosek, *supra* note 63 at 785 ("One of the most significant aspects of the press release [accompanying the complaint in *Juliana v. U.S*] is its focus on the diverse stories of the young Plaintiffs.").

179. As well as uncertainty and risk discounting, discussed below, *infra* section IV(A)(2).

180. *See* PEEL & OSOFSKY, *supra* note 171, at 237–38 (describing the effectiveness of communication in simple terms lay people can understand). The authors discuss how a courtroom setting can combat climate change ignorance:

> [T]he lay public struggles to grasp many of the complexities of the scientific data and have difficulty relating to the rather abstract global-scale effects from climate change discussed in the scientific literature. In a courtroom setting, however, there is the need to communicate information about climate change and its impacts in a way that fits with prevailing legal and social norms.

Id. (citation omitted).

181. It is well-documented in other contexts that litigation can result in raising consciousness about a particular cause. NeJaime, *supra* note 169, at 955.

> The record also conclusively establishes that the federal government has long understood the risks of fossil fuel use and increasing carbon dioxide emissions.
>
> . . . .
>
> The record also establishes that the government's contribution to climate change is not simply a result of inaction. The government affirmatively promotes fossil fuel use in a host of ways.[182]

Judges and advocates might also use unique and attention-getting methods for making factual findings in these cases. For example, in a public nuisance case against major oil and gas companies, U.S. District Judge William Alsup held a climate change "classroom" in his court.[183] In the publicized hearing, climate change scientists presented "the history of climate change research, carbon dioxide's role as a greenhouse gas, melting ice caps, rising sea levels and extreme weather."[184] An attorney for Chevron Corporation, a defendant, also presented and agreed with the scientists that humans were extremely likely to be the predominant cause of modern climate change, although he noted his disagreement with various mitigation strategies.[185]

The capacity of judges to educate themselves (as well as the public) and to compel admissions from defendants has undeniable value that will only be multiplied if more of these lawsuits are pursued. Like Chevron's admission in the climate change classroom, the federal government made salient admissions in *Juliana*. As described above, the federal government agreed with many of the plaintiffs' contentions, including that climate change is happening, is dangerous, and is caused by humans burning fossil fuels, which is in part authorized and subsidized by the federal government.[186] If courts allowed climate change litigation like *Juliana* to proceed to discovery, the public would likely find much more compelling information that it could use to hold the government accountable. Requests for production of internal documents could reveal discussions of climate risks within corporations and government entities that otherwise downplay or question the risks in public-

182. Juliana v. United States, 947 F.3d 1159, 1166–67 (9th Cir. 2020). The *Juliana* advocates immediately seized upon this recognition and used it in their communication with the press. *See* Press Release, Our Children's Trust, *supra* note 170 ("The Court recognized that climate change is exponentially increasing and that the federal government has long known that its actions substantially contribute to the climate crisis.").

183. Sudhin Thanawala, *Court as Class: Judge Gets Climate Change Lesson in Oil Suit*, AP NEWS (Mar. 21, 2018), https://apnews.com/47127ac8fd2f4328a1835e24ab9ecc2c/Court-as-class:-Judge-gets-climate-change-lesson-in-oil-suit [https://perma.cc/5MKA-RREG].

184. *Id.*

185. *Id.*

186. Juliana v. United States, 339 F. Supp. 3d 1062, 1072–73 (D. Or. 2018), *leave to appeal granted*, 949 F.3d 1125 (9th Cir. 2018), *mandamus dismissed sub nom.*, *In re* U.S., 140 S. Ct. 16 (2019) and *rev'd and remanded*, 947 F.3d 1159 (9th Cir. 2020).

facing statements.[187] This could also help combat some of the mistrust that is weaponized by these entities to create public uncertainty.

Finally, some psychologists recommend the use of metaphor as a way to lower the ignorance barrier by relating climate change to more concrete and widely imaginable events.[188] Judges often use metaphors in their opinions, in part because metaphors and similar tropes "have become institutionalized and relied upon as principles, standards, doctrines, and premises in arriving at judicial judgments."[189] The opinions in *Juliana* are no exception. Judge Staton compared the looming point of no return to an "asteroid . . . barreling toward Earth,"[190] and the injuries experienced so far by the plaintiffs to "the first small wave in an oncoming tsunami—now visible on the horizon of the not-so-distant future—that will destroy the United States as we currently know it."[191] She also used metaphor to illuminate aspects of the stock/flow problem and point of no return:

> The majority portrays any relief we can offer as just a drop in the bucket. In a previous generation, perhaps that characterization would carry the day and we would hold ourselves impotent to address plaintiffs' injuries. But we are perilously close to an overflowing bucket. These final drops matter. *A lot*. Properly framed, a court order—even one that merely postpones the day when remedial measures become insufficiently effective—would likely have a real impact on preventing the impending cataclysm.[192]

In sum, because of the focus on individual and particularized plaintiff injuries, the information sharing mandated by litigation, and unique modes of judicial communication—like Judge Alsup's classes and Judge Staton's reliance on metaphorical imagery—climate change litigation could be well-poised to lower the ignorance barrier.

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187. *See, e.g.*, Suzanne Goldenberg, *Exxon Knew of Climate Change in 1981, Email Says - But It Funded Deniers for 27 More Years*, GUARDIAN (July 8, 2015, 4:41 PM), https://www.theguardian.com/environment/2015/jul/08/exxon-climate-change-1981-climate-denier-funding [https://perma.cc/K23N-XPWC] ("ExxonMobil, the world's biggest oil company, knew as early as 1981 of climate change – seven years before it became a public issue, according to a newly discovered email from one of the firm's own scientists."); Dana Nuccitelli, *Scientists Warned the US President About Global Warming 50 Years Ago Today*, GUARDIAN (Nov. 5, 2015, 6:00 AM), https://www.theguardian.com/environment/climate-consensus-97-per-cent/2015/nov/05/scientists-warned-the-president-about-global-warming-50-years-ago-today [https://perma.cc/D3NP-L4ZQ] (describing a report made to President Johnson about climate change risks).

188. Van der Linden, *supra* note 57, at 759.

189. HAIG BOSMAJIAN, METAPHOR AND REASON IN JUDICIAL OPINIONS 1 (Robert K. Burdette ed., 1992).

190. Juliana v. United States, 947 F.3d 1159, 1175 (9th Cir. 2020) (Staton, J., dissenting).

191. *Id.* at 1176.

192. *Id.* at 1182 (citation omitted).

2. Uncertainty and Risk Discounting.—As previously discussed, ignorance of climate change and the inherent indefiniteness of scientific models causes uncertainty, which leads to risk discounting and a reduction in the rate of pro-environmental behavior. Additionally, climate change's temporal and spatial dimensions also contribute to risk discounting, procrastination, and an overall unwillingness to participate in and advocate for climate change mitigation. Recommended solutions to these barriers include communicating relatable personal experiences, explaining that climate change is already occurring,[193] emphasizing the people who will be affected the most by climate change, and engaging vouchers to "vouch for" risk information and show how it fits within the public's worldview.

The *Juliana* advocates implemented many of these recommendations throughout the case. *Juliana* is one of the "children's cases" that have been brought by and on behalf of children and future generations against state and federal governments.[194] These cases emphasize the consequences that children are already facing as a result of climate change but also ways in which the situation will worsen for them in the future if no action is taken. The children's cases fall directly in line with the theory that temporal barriers to climate action can be reduced by stressing that children and our biological descendants will face the worst of climate change unless we help them.[195]

The young plaintiffs in *Juliana* were joined by a co-plaintiff, Dr. James Hansen—the grandfather of a plaintiff and a climate scientist acting as "guardian for plaintiff 'future generations.'"[196] He essentially acted as a physical manifestation of humanity's innate desire to protect our descendants. Similar guardian plaintiffs in the future might cause members of the public to see themselves in the litigation and become more supportive of pro-climate action. Additionally, plaintiffs like Dr. Hansen could be effective vouchers.[197] He is a well-regarded figure in climate science and advocacy, and he positioned himself in the litigation as both an expert and a concerned grandfather. It is possible that the public, which tends to trust

193. Since these first two solutions were also discussed in the ignorance section, *supra* notes 57–62 and accompanying text, they will not be discussed again here.

194. *See* Laura Cassels, *Youth Climate-Change Lawsuit: We Have a Right to Grow to Adulthood Safely*, FLORIDA PHOENIX (Jan. 3, 2020), https://www.floridaphoenix.com/2020/01/03/youth-climate-change-lawsuit-we-have-a-right-to-grow-to-adulthood-safely/ [https://perma.cc/VB58-N7FL] (describing a suit by eight Florida teenagers and children); Rowan Walrath, *Washington Judge Just Dealt a Blow to the Youth-Led Fight over Climate Change*, MOTHER JONES (Aug. 15, 2018), https://www.motherjones.com/environment/2018/08/washington-judge-just-dealt-a-blow-to-the-youth-led-fight-over-climate-change-aji-p-v-state-of-washington-our-childrens-trust/ [https://perma.cc/GCX8-U5YY] (describing a similar suit against Washington state).

195. Nosek, *supra* note 63, at 790–91.

196. Juliana v. United States, 339 F. Supp. 3d 1062, 1070 (D. Or. 2018), *leave to appeal granted*, 949 F.3d 1125 (9th Cir. 2018), *mandamus dismissed sub nom.*, *In re* U.S., 140 S. Ct. 16 (2019) and *rev'd and remanded*, 947 F.3d 1159 (9th Cir. 2020) (quotations omitted).

197. Nosek, *supra* note 63, at 792.

scientists[198] and is motivated to protect kinship bonds,[199] will be uniquely receptive to the risk information conveyed by plaintiffs like Dr. Hansen.[200]

3. Mistrust and Reactance.—Lastly, mistrust of government, often exacerbated by loss aversion and by the actions of climate-denying industries and politicians, serves as a strong psychological barrier to climate action. Psychologists recommend many strategies for overcoming this barrier. Court victories and scientific consensus can overcome mistrust by showing that support for pro-climate policy is a group norm. Additionally, to combat the mistrust engendered when policies appear to require a personal cost, psychologists recommend shifting to a conversation about the gains of immediate action. Finally, people must trust decision makers to implement "effective, valuable, and equitable" changes.

When courts affirm a group's claims, they often legitimize those claims in the eyes of the public and elites.[201] This legitimization could strengthen certain group norms, such as a belief in the existence of climate change and in the importance of taking immediate action. As a result, more people could be mobilized or recruited into the movement and other government actors would be pressured into action.[202]

Group norms could also be strengthened through litigation that emphasizes the scientific consensus regarding climate change. Public trust in the scientific community is relatively high—87% of Americans have either a great deal or a fair amount of confidence in scientists to act in the best interest of the public.[203] However, a much lower percentage of Americans, about 55%, believe that most scientists think that global warming is happening.[204] Messaging about the overwhelming scientific consensus with respect to climate change could leverage public trust in scientists to lower the mistrust barrier.[205]

198. *See infra* note 203 and accompanying text for a discussion of public trust in the scientific community.

199. Van Lange, *supra* note 59, at 271.

200. Nosek, *supra* note 63, at 792.

201. NeJaime, *supra* note 169, at 962–63.

202. *Id.* at 954. The most famous example of this is *Brown v. Board of Education*: "For instance, while *Brown* may not have produced the desired remedial action, scholars who stress the indirect benefits of litigation credit *Brown* with fueling a powerful social movement by raising consciousness, driving fundraising, legitimizing a cause, and influencing other state actors." *Id.*

203. Funk & Kennedy, *supra* note 98.

204. Marlon, *supra* note 47.

205. Van der Linden, *supra* note 57, at 760.

Further, concerning loss aversion, a savvy litigator should frame litigation successes as "wins" for their plaintiffs and for everyone. The requested remedial action should be detailed in full and framed as an opportunity for members of the public to *receive* something that has been previously withheld from them. This could help counter the portrayal of remedial strategies as policies which require Americans to "give up" aspects of their lives. This method could be particularly effective because there is widespread public support for the solutions to climate change. For example, large bipartisan majorities support tree planting to draw down atmospheric carbon (90%), carbon-capture tax credits (84%), power-plant-emission restrictions (80%), and carbon taxes on corporations (73%).[206]

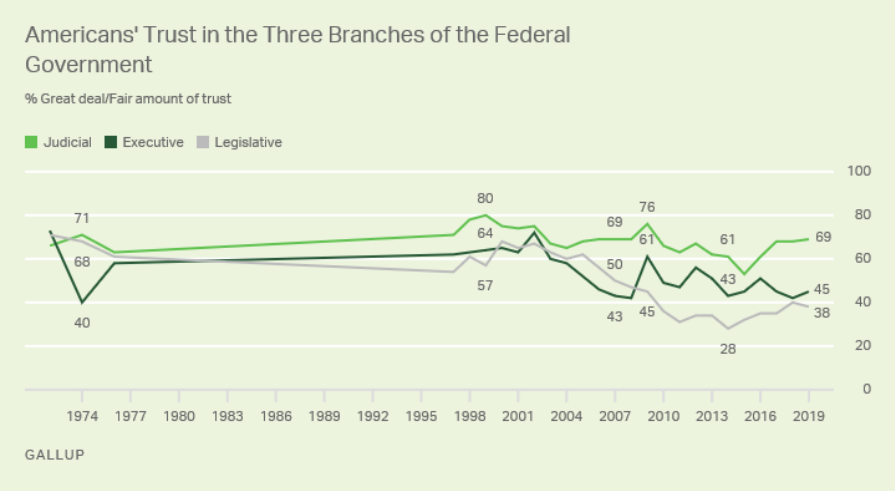
Finally, regarding trust in decision-makers, Americans consistently trust the judiciary more than the executive or legislative branches of government.[207] This trend has remained constant since the mid-1970s (around when the Gallup polls began) and, typically, Americans trust the judicial branch at higher rates than the other two branches, as can be seen below.[208]

206. Alec Tyson & Brian Kennedy, *Two-Thirds of Americans Think Government Should Do More on Climate*, PEW RES. CTR. (June 23, 2020), https://www.pewresearch.org/science/2020/06/23/two-thirds-of-americans-think-government-should-do-more-on-climate/ [https://perma.cc/A96M-XRUA]. In certain public nuisance cases, cities sue oil companies for the cost of climate-change-abatement infrastructure projects, such as sea walls. Alejandro Lazo & Bradley Olson, *Two California Cities Sue Oil Majors over Climate Change*, WALL ST. J. (Sept. 20, 2017, 7:43 PM), https://www.wsj.com/articles/two-california-cities-sue-oil-majors-over-climate-change-1505950981 [https://perma.cc/HB5B-4254]. In these cases, emphasizing the requested remedies would be particularly persuasive because it is framed as a reimbursement for taxpayers, who are forced to "foot the bill" for climate change caused by highly profitable oil companies. Nosek, *supra* note 63, at 774, 778. This framing, and its emphasis on fairness, might be particularly persuasive to otherwise skeptical members of the public. *Id.* at 774.

207. Jeffrey M. Jones, *Partisans' Trust in Legislative Branch Has Shifted in Past Year*, GALLUP (Sept. 25, 2019), https://news.gallup.com/poll/267041/partisans-trust-legislative-branch-shifted-past-year.aspx [https://perma.cc/MG8Z-V5K7].

208. *Id.*

Figure 1[209]



Americans' general trust in the judiciary makes intuitive sense. Federal judges serve life appointments and therefore may be perceived to face less pressure to conform to political forces. Judges also interpret, rather than make, law, so their decisions are sometimes perceived as less inflammatory. Finally, the judicial branch tends to get less media attention than the other two branches, which insulates it from some sways in political opinion.[210] Thus, the courts could lower the mistrust barrier by capitalizing on public trust and making "effective, valuable, and equitable" decisions.

Of course, some of this trust could be lost. For example, in 2015, the public's trust in the judiciary reached a record low of 53%, which was potentially attributable to the polarization of the American public combined with the Supreme Court's decisions that year to legalize same-sex marriage and uphold provisions of the Affordable Care Act.[211] So, perceived judicial oversteps in climate change litigation could result in a dip in trust among segments of the American public.[212] But judicial inaction on an issue as

209. Jeffrey M. Jones, *Partisans' Trust in Legislative Branch Has Shifted in Past Year*, GALLUP (Sept. 25, 2019), https://news.gallup.com/poll/267041/partisans-trust-legislative-branch-shifted-past-year.aspx [https://perma.cc/PE6Y-F7VC].

210. Jeffrey M. Jones, *Trust in U.S. Judicial Branch Sinks to New Low of 53%*, GALLUP (Sept. 18, 2015), https://news.gallup.com/poll/185528/trust-judicial-branch-sinks-new-low.aspx [https://perma.cc/55UH-BVGS]. Climate advocates should be aware of this fact and should work to find publicity strategies if they wish to use climate litigation as a movement-building tool.

211. *Id.*

212. As could increasingly partisan and contentious fights about judicial appointments. *See* Grace Sparks, *CNN Poll: Americans Are Divided Over Amy Coney Barrett*, CNN (Oct. 7, 2020, 12:00 PM), https://www.cnn.com/2020/10/07/politics/cnn-poll-scotus-aca-october/index.html

pressing as climate change could result in mistrust as well. This mistrust could be strategically weaponized by pro-climate activists and lead to robust movement building.

B. Movement Building and Mobilization Through Losing

Legal scholars have posited that litigation losses can result in many positive outcomes, especially in the hands of skilled litigators and activists.[213] These outcomes include increased mobilization, activism, and public involvement: key components of movement building that spur other branches and levels of government into action.[214]

First, a litigation loss may generate outrage in those already supportive of the pro-climate cause and signal to them a need for increased mobilization and activism.[215] When a court rejects a claim, the deprivation of rights is "crystallize[d]" and the injustice can feel more acute.[216] Thus, the claim becomes more pressing and signals to movement members that increased activism, organizing, protesting, and fundraising is needed.[217] This can help to satisfy movement-building Factors Five and Six: mobilization and sustaining the movement.

Second, a litigation loss may be used by activists to increase the general public's involvement in the cause. The adversarial, win-or-lose framing of litigation draws people into taking sides.[218] This can prompt previously uninvolved or apathetic people to form an opinion and enter into the public discussion.[219] The opinions that the public forms as a response to a litigation loss can be shaped by "narratives that engender empathy" for the plaintiffs.[220] These narratives abound in children's cases like *Juliana* and can help to satisfy movement-building Factor Five, mobilization. They can also help people see the young plaintiffs as victims of climate change and prompt members of the public to join the movement to protect them—contributing to movement-building Factor Three, legitimatization.

[https://perma.cc/TBL3-Q9J7] ("Initial reactions to Barrett are among the worst in CNN and Gallup polling on 12 potential justices dating back to Robert Bork, who was nominated by Ronald Reagan and rejected by the Senate.").

213. NeJaime, *supra* note 169, at 969–71; Ben Depoorter, *The Upside of Losing*, 113 COLUM. L. REV. 817, 820–21 (2013).

214. NeJaime, *supra* note 169, at 969; Depoorter, *supra* note 213, at 834–36.

215. NeJaime, *supra* note 169, at 985.

216. *Id.* at 984, 987.

217. *Id.* at 984–86. For example, "[s]cholars have shown how in the wake of *Roe v. Wade*, the abortion-rights movement's activism declined, while the activity of opponents increased dramatically. Losing movements might experience a new (or renewed) motivation, while winning movements might relax, believing judicial victory has secured the desired change." *Id.* at 984 (citations omitted).

218. Depoorter, *supra* note 213, at 834.

219. *See id.* (describing litigation an "opinion-formation process").

220. *Id.*

Further, a litigation loss also engages the public by showing gaps between "normative conceptions of justice" and actual legal reality.[221] In this way, a litigation loss can transform the public's perceptions of reality, movement-building Factor One. A loss also illustrates the tangible outcomes of these legal realities in the context of specific stories about real people,[222] which can engage the public and increase involvement in the underlying movement.[223]

Finally, public involvement may increase after a loss if advocates assert the need to rein in a "dangerously countermajoritarian" judiciary.[224] If strategic advocates are able to weaponize a litigation loss in this light, they have the potential to inspire the general public to become more concerned about climate change and to vote to support pro-climate policy and elected officials.[225]

Thus, a litigation loss can funnel the movement's momentum into concentrated pressure on other levels and branches of government.[226] In this way, a litigation loss can clarify a course of action for the movement, helping to satisfy movement-building Factor Four, providing a course of action. Advocates can target governments and demand legislative action to counter judicial inaction.[227]

This strategy is potentially effective because political actors will often defer action on inflammatory issues if they believe that the courts will take up the issues instead.[228] Courts may even strengthen the movement's

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221. *Id.* at 834–35.

222. Like the *Juliana* plaintiffs: children left with no legal recourse to vindicate their rights to a habitable environment.

223. Depoorter, *supra* note 213, at 835.

224. NeJaime, *supra* note 169, at 1011.

225. *See id.* (describing how anti-same-sex marriage activists responded to a litigation loss by employing "activist court" rhetoric to persuade the public).

226. *Id.* at 988–89.

227. *Id.* Of course, pro-climate legislation will face its own set of hurdles, including the proliferation of lobbying pressure from anti-climate industries, but a highly motivated public that is responding to a perceived crisis might be enough to spur legislative action. *See* James Gray Pope, *Republican Moments: The Role of Direct Popular Power in the American Constitutional Order*, 139 U. PA. L. REV. 287, 292–93 (1990) (describing mass movements' ability to overcome interest groups). The author describes these mass movements as "republican moments":

> Our history has from the outset been characterized by periodic outbursts of democratic participation and ideological politics. And if history is any indicator, the legal system's response to these 'republican moments' may be far more important than its attitude toward interest group politics. The most important transformations in our political order—independence, abolition, the rise of economic regulation, the integration of the industrial working class into capitalist democracy, and the extension of formal legal rights to women and minorities—were brought on by republican moments. . . . During republican moments, social movements exert direct popular power on governmental and private institutions.

Id. (citations omitted).

228. NeJaime, *supra* note 169, at 998.

argument by explicitly assigning the responsibility for changing the legal status quo to the other branches.[229] This is precisely what happened in *Juliana*, where the Ninth Circuit proclaimed the following: "We reluctantly conclude, however, that the plaintiffs' case must be made to the political branches or to the electorate at large, the latter of which can change the composition of the political branches through the ballot box."[230]

The advocates and plaintiffs in *Juliana* have indeed made their case to the political branches. Our Children's Trust created the #Congress4Juliana campaign, which implored members of Congress to support the *Juliana* plaintiffs on social media and cosponsor a resolution recognizing "Children's Fundamental Rights and Climate Recovery."[231] The *Juliana* plaintiffs are personally involved in the campaign—plaintiff Vic Barrett is quoted on #Congress4Juliana's webpage:

> We have been calling on the judicial branch to help hold the executive branch of our federal government accountable for its role in causing the climate crisis. Now, it is more critical than ever for the legislative branch to join us and cosponsor the resolution recognizing children's fundamental rights and the need for climate recovery. Let's make this happen.[232]

Targeting political branches after a litigation loss can have positive outcomes even if those branches are hostile to the movement and even if the possibility of pro-climate legislation is slim-to-none.[233] Increased mobilization and public scrutiny could at least slow anti-climate, deregulatory trends.[234]

So, a litigation loss in federal court can clarify the need for legislative or administrative action.[235] But it can also prompt advocates to pursue state law claims in state courts.[236] If successful, those cases will result in important

229. Depoorter, *supra* note 213, at 846–47.

230. Juliana v. United States, 947 F.3d 1159, 1175 (9th Cir. 2020).

231. *#Congress4Juliana*, OUR CHILDREN'S TRUST, https://www.ourchildrenstrust.org/congress4juliana [https://perma.cc/WNP6-ZXXD].

232. *Id.*

233. Depoorter, *supra* note 213, at 837.

234. *Id.*

235. Such action could include supporting climate change litigation itself. For example, President Joe Biden's presidential campaign suggested that his administration will support certain climate change litigation. Ellen M. Gilmer & Stephen Lee, *Biden's Climate Support Could Spawn More Cases Against Big Oil*, BLOOMBERG L. (July 22, 2020, 5:00 AM), https://news.bloomberglaw.com/environment-and-energy/bidens-climate-support-could-spawn-more-cases-against-big-oil [https://perma.cc/4279-BCY2] ("Biden's sweeping clean energy plan, unveiled July 14, includes a pledge to instruct the attorney general to 'strategically support ongoing plaintiff-driven climate litigation against polluters,' a reference to more than a dozen lawsuits seeking money from fossil fuel companies for local harms related to global temperature rise.").

236. *See* Nate Bilhartz, Ashley Parrish, Tracie Renfroe, Oliver Thoma & Carol Wood, *Ninth Circuit Climate Change Ruling Opens Door to Increased Litigation*, JD SUPRA (June 1, 2020), https://www.jdsupra.com/legalnews/ninth-circuit-climate-change-ruling-48961/ [https://perma.cc

(though smaller-scale) pro-climate gains and could lay the groundwork for a reversal of course in the federal courts, which sometimes look to an emerging consensus among the states.[237]

However, not every litigation loss will have equally beneficial movement-building outcomes. Professor Ben Depoorter analyzed the strategic decisions of so-called "litigation entrepreneurs": ideologically motivated lawyers "who pursue litigation with the awareness that losing the case can provide substantial benefits to a cause."[238] These entrepreneurs seek out cases that have the potential to persuade the public.[239] They do not necessarily set out to lose, but they choose cases that will benefit the movement, *win or lose*.[240] The *Juliana* advocates, Our Children's Trust, employed many methods used by successful litigation entrepreneurs that can contribute to multiple movement-building factors.

Our Children's Trust's mission statement acknowledges its status as a litigation entrepreneur by explaining its role as advocate in both the courtroom and in the wider public movement:

> Our Children's Trust is a non-profit public interest law firm that provides strategic, campaign-based legal services to youth from diverse backgrounds to secure their legal rights to a safe climate. . . . We support our youth clients and amplify their voices before the third branch of government in a highly strategic legal campaign that includes targeted media, education, and public engagement work to support the youths' legal actions.[241]

In choosing their cases, legal entrepreneurs should consider a variety of factors to ensure post-loss success. First, the prospect of a settlement, if a plaintiff is willing to accept, could dramatically reduce the publicity and mobilization potential of a lawsuit since most settlement offers are accompanied by nondisclosure agreements.[242] So, it is optimal if the plaintiffs "strongly identify with the underlying cause," and are therefore willing to

/4SHP-2RN2] (describing recent action in this area as state and local governments have pursued state law claims in state courts against fossil fuel companies).

237. NeJaime, *supra* note 169, at 992. For example, after a Supreme Court loss in *Bowers v. Hardwick*, 478 U.S. 186 (1986), the gay rights movement turned to state courts, eight of which decriminalized sodomy through their courts. NeJaime, *supra* note 169, at 990, 992. Then, in *Lawrence v. Texas*, 539 U.S. 558 (2003), the Court overruled *Bowers* and "Justice Kennedy, writing for the majority, noted the emerging consensus against sodomy restrictions among the states." NeJaime, *supra* note 169, at 992.

238. Depoorter, *supra* note 213, at 839.

239. *Id.* at 839, 841.

240. *See id.* at 839–41 (explaining that litigation entrepreneurs strategically select cases that will allow them to shape the public discourse even if the case is not successful).

241. *Our Mission*, OUR CHILDREN'S TRUST, https://www.ourchildrenstrust.org/mission-statement [https://perma.cc/GJ2Y-XHRL].

242. Depoorter, *supra* note 213, at 841–42.

turn down such settlement offers.[243] Our Children's Trust seems to have chosen plaintiffs who understand the symbolism of the case and are themselves skilled and passionate advocates.[244]

Second, Professor Ben Depoorter recommends that legal entrepreneurs carefully select disputes to try to prevent the strengthening of an adverse judicial precedent that could weaken the larger movement.[245] Advocates must walk a fine line and choose a nonfrivolous dispute with "a more stable adverse judicial precedent" and, of course, some prospect of winning.[246] Such claims may include "novel interpretations of longstanding legal precedents or creative approaches to constitutional interpretation."[247] The *Juliana* advocates made a variety of creative constitutional arguments, such as that children and future generations should be a protected class under the Equal Protection Clause and that the Due Process Clause guarantees a fundamental right to a climate system capable of sustaining human life.[248] While the *Juliana* litigation has been unsuccessful in court up to this point, the plaintiffs and advocates are using strategies that could result in successful movement building, win or lose.

Conclusion

While the Ninth Circuit recently denied the *Juliana* plaintiffs' petition for rehearing en banc,[249] the plaintiffs and advocates are still pursuing other avenues to resolve the case.[250] They have filed a motion to amend their complaint in district court and have expressed their openness to settlement talks with the Biden Administration.[251] They are also simultaneously preparing a petition for a writ of certiorari to the U.S. Supreme Court, which

243. *Id.* at 842.

244. *See generally Meet the Youth Plaintiffs*, OUR CHILDREN'S TRUST, https://www.ourchildrenstrust.org/federal-plaintiffs [https://perma.cc/PC6W-PW6L]. For example, the named plaintiff, Kelsey Cascadia Rose Juliana, has organized for the Sierra Student Coalition's organizing camp, participated in the Great March for Climate Action, "represented #youthvgov work of Our Children's Trust at film festivals, classrooms, rallies, conferences, and throughout the US and internationally," and worked with iMatter, 350.org, Greenpeace, and Earth Guardians. *Kelsey Cascadia Rose Juliana*, OUR CHILDREN'S TRUST, https://www.ourchildrenstrust.org/kelsey [https://perma.cc/YP9Q-Z3AC].

245. Depoorter, *supra* note 213, at 843.

246. *Id.*

247. *Id.*

248. Juliana v. United States, 947 F.3d 1159, 1165, 1165 n.3 (9th Cir. 2020).

249. Juliana v. United States, 986 F.3d 1295, 1296 (9th Cir. 2021).

250. Press Release, Our Children's Trust, Youth Plaintiffs in Constitutional Climate Change Case Ask Court's Permission to Amend Complaint, Adjust Remedy Requested In Line With 9th Circuit Ruling (Mar. 9, 2021), https://static1.squarespace.com/static/571d109b04426270152febe0/t/6047b082456ca3052391eb61/1615310978432/Motion+to+Amend+030921.pdf [https://perma.cc/2XDG-AQEM].

251. *Id.*

they will consider submitting if their motion to amend is denied.[252] A clear win for the plaintiffs with effective judicial enforcement, or a comprehensive and fully-executed settlement, are very likely the best outcomes for mitigating climate change. However, no matter what happens, there is hope that the litigation was not a waste. *Juliana*, and the cases like it, expose inarguable scientific truths in ways that speak to our human cognition. Even a loss could spur massive grassroots action and a corresponding response in all branches and levels of government. These cases should continue to be a part of the pro-climate movement's strategy. If anything, they make it harder for so many to do so little.

252. *Id.*