Climate of Fear: How the Most Privileged Voices in America Have Made Climate Change Denial Mainstream

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Abstract

Climate change is a serious threat to the continued existence of human civilization. Despite this, the United States has yet to pass meaningful legislation to curb greenhouse gas emissions. Although tackling environmental issues once had a broad bipartisan support, the issue of climate change has driven a wedge between Democratic and Republican voters and politicians. Consequently, the United States finds itself deadlocked in the political sphere, unable to come together on any real strategies to adapt to the realities of a changing world. The driving force behind the lack of American action on climate change is the persistence of denial. Climate change denial appeals to those who hold a privileged position in American society. They see climate action as threatening to their lifestyle and thus have an interest in maintaining the status quo. Corporate interests with high carbon emissions have had great success partnering with conservative white males in a union of the privileged elite to form a coalition of denial. Climate change denial has been skillfully developed by fossil-fuel interests and has come to dominate the environmental policy of the Republican party. Analyzing a history of the environmental movement in the United States, this thesis examines the climate change denial movement's origins. It also considers the psychological reasons climate change denial has taken root among the privileged. It then considers the 2016 United States political climate to demonstrate how entrenched denial has become in the lead-up to the presidential election. Finally, this thesis proposes deniers can be taught to support action on climate change by giving them a more thorough understanding of nature at a young age and then showing them that climate change threatens the Earth with which they have developed a deep attachment.
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Introduction: Denial and Division

This thesis examines American political stances on climate change, specifically focusing on the problem of climate change denial. The climate change denial movement seeks to prevent meaningful action on climate change. Their ideology manifests both in outright denials of science, as well as in insistence that there is no reasonable policy that could have any effect on what they will often derisively refer to as “the weather.” Long a divisive issue, the gulf between American Democrats and Republicans on climate change are larger than they have been at any point in history. The majority of the movement on this issue has come from the Republican party. Republicans have traditionally argued for deregulation and free market solutions to problems, but the modern party fails to acknowledge there is a problem at all. The near universally preferred policy of Republican lawmakers is now a complete laissez-faire approach that ultimately seeks to deny, or at minimum, ignore the problem of climate change. The climate change denial movement has severely muddied the water on what might otherwise be a clear issue, and it has successfully prevented meaningful legislation from being passed.

Chapter 1 gives an overview of American views on climate change. The chapter will briefly summarize the statistics surrounding climate change, to demonstrate its reality and then its severity. Next, it will analyze the groups who deny climate change, demonstrating that the climate change denial movement rests in the hands of America’s conservative, white males. Finally, the chapter considers the manipulation of scientific data deniers use to make their studies and their talking points appear more legitimate.

Chapter 2 will focus on the history of the US environmental movement to demonstrate the gradual influence of denial on the national political discourse. Briefly touching on pre-
twentieth century environmental history, the chapter focuses on environmental legislation following the publication of *Silent Spring* and the rapid decline of bipartisan support for environmental legislation since the 1980s with the formation of the climate change denial movement.

Chapter 3 presents a phycological analysis of the decision making that creates climate change deniers. Studying the rationale for system-justifying attitudes, this chapter analyzes the privilege of the climate change denial movement. It considers how deniers’ interest in maintaining the status quo comes from both a rational interest in keeping power and an artificial disconnect between themselves and the rest of the world.

Chapter 4 will focus on the modern politics of climate change denial. Examining the widening political gap between American Democrats and Republicans, the chapter uses the example of the 2016 presidential election to demonstrate how denial has become the dominant ideology of the Republican party.

Finally, the conclusion will consider the effectiveness of the climate change denial movement and seek to learn from this success. Considering how the privileged are sensitive to maintaining their power in the status quo situation, this chapter proposes highlighting the real and active dangers of climate change with no apologies for the lifestyle changes climate policy suggests. I will propose that appeals to fear will be the most effective strategy in accumulating bipartisan support for climate change action. Finally, the thesis concludes with a suggestion that bringing young people in contact with nature can break down the wall of privilege between deniers and the rest of the world. Then, making them aware of the danger the world finds itself
in, a population once afraid of losing its position of power may come to appreciate the needs of
the rest of the world.

Chapter 1—Climate Change, Climate Change Denial, and Climate Change Deniers

Data

The Reality of a Warming World

Global warming doesn’t deserve the fight that has come to define it. The evidence for
human-caused climate change is, and has long been, incontrovertible. According to the
Intergovernmental Panel on Climate Change (IPCC), “human influence on the climate system is
clear and growing, with impacts observed across all continents and oceans. Many of the observed
changes since the 1950s are unprecedented over decades to millennia.”

1 The IPCC, a United Nations delegation tasked with developing and presenting the science of climate change, insist
that the problem is real and serious. Further, they state “the more human activities disrupt the
climate, the greater the risks of severe, pervasive and irreversible impacts for people and
ecosystems, and long-lasting changes in all components of the climate system.” Among
scientists, there is no worthwhile debate to be had about whether human activity is causing
climate change. Studies on the scientific consensus on climate change have found that between
97% and 98% of climate scientists agree with the theory of human-caused climate change.

Further, the proportion of scientists who concur with the consensus increases along with their
expertise, as seen in figure 1.

1 IPCC "Climate Change 2014 Synthesis Report." Intergovernmental Panel on Climate Change. 2014, v
2 Skeptical Science. "The 97% Consensus on Global Warming." Skeptical Science. Accessed May 1,
The IPCC maintains a strong belief that changes in human activity have the potential to dramatically reduce the worst effects of a warming earth. “The [report] highlights that we have the means to limit climate change and its risks, with many solutions that allow for continued economic and human development.”

The most recent assessment report predicts warming by 2100 of between 1.1 and 6.4°C, accompanied by a 18 to 59 cm rise in sea levels. The difference between these two levels of warming could represent the continued existence of the human species or its extinction. Indeed, according to an article in *Scientific Advances*, we are currently in the midst of a mass-extinction event, with species dying off at 100 times their natural rate. The authors of the study determine that die-off is certainly human-caused, and climate change is among the main drivers. This species loss is likely to lead to innumerable losses in benefits to human beings that are provided by naturally occurring biodiversity. It is difficult to say how sensitive human populations are to massive extinction-events like this one, but it certain that the more species go extinct, the worse. Further, the greater the effects of climate change, the more species will die. While even a 1.1 degree rise in temperature would require some adaptations, that scenario is the least likely to be

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3 IPCC. “Climate Change 2014 Synthesis Report,” v


6 Ibid., 4
seen in 2100. Far more likely is that humans will continue to emit greenhouse gasses at present rates until the lower end of the IPCC projections can no longer be achieved via reductions in greenhouse gas emissions. These probable changes are particularly concerning in light of the 2015 Paris Agreement, in which nearly every country on earth recognized that any warming above 2°C, a figure on the low end of that scale, would represent “an urgent and potentially irreversible threat to human societies and the planet.”

Despite the severity of the problem, the United States has been unsuccessful in implementing meaningful climate change legislation, especially as compared to the steps the IPCC has recommended for keeping warming below two degrees celsius by 2100.

**Figure 2**


**Figure 3**

![CO2 emissions in the United States have remained basically steady since 1990, with a slight drop-off corresponding with the 2008 financial collapse.](https://source.epa.gov/climatechange/ghgemissions/gases/co2.html)

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7 Many nations, particularly impoverished and island nations who are more sensitive to temperature changes and rising sea levels, see even 2°C as a dangerous amount of warming, and made a successful push to include language in the agreement that encourages efforts to limit warming to 1.5°C.

Although this represents an improvement from the previous state of constantly increasing emissions, it falls dramatically short of the necessary reductions defined by the IPCC. According to their summary, “emissions scenarios leading to CO2-equivalent concentrations in 2100 of about 450 ppm or lower are likely to maintain warming below 2°C over the 21st century relative to pre-industrial levels. These scenarios are characterized by 40 to 70% global anthropogenic GHG emissions reductions by 2050 compared to 2010.” Although the United States cannot single-handedly reduce global emissions, by that amount, the country is responsible for a disproportionately large share of global emissions, second only to China. Any major drop in global emissions must include significant reductions on the part of the United States, and to this point, the US has made almost no reductions at all.

This data points to a rapidly approaching catastrophe. Atmospheric change, according to William Hay, a professor of geology, meteorology, and oceanography at the University of Colorado at Boulder, is “going at a rate between 200 and 400 times faster than anything in the geologic past, except for that accident 65 million years ago when an asteroid struck on the northern coast of Yucatan.” Hay and other scientists warn of an impending ecosystem collapse, on the scale of the meteor that wiped out the dinosaurs. Despite these dire predictions, however, a substantial portion of the American citizenry refuse to acknowledge the clear and present danger presented by climate change, or even the very fact that it is occurring.

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11 Hay, Experimenting on a Small Planet, 97
Who Climate Change Deniers Are

Climate change denial in the United states adopts two forms, each extremely damaging to the prospects of significant political action. The easiest form of climate change denial to identify is the loud, vitriolic science denial coming from high–profile demagogues. These figures, people like Anthony Watts, James Inhofe, and the Koch Brothers, make it their specific goal to obfuscate the science of climate change. They use the media, falsified scientific data, and well-funded lobbying efforts to convince Americans that climate change is not only untrue, but that it is a massive hoax perpetrated to increase government’s stranglehold on citizens. This denial movement has had a significant impact on people’s perceptions of climate science. Despite the high proportion of climate scientists who believe in human-caused climate change, a survey of Americans found that the public thinks only 55% of scientists agree. The influence of these ardent deniers extends beyond their direct followers. Denial affects people on the periphery, who come to understand climate change as an issue mired in debate, rather than one where the science is settled.

The second form of deniers—less newsworthy than the first, is practiced by Americans who either do not engage with the science of climate change and choose not to worry about it, or those who understand some of the science or consequences, yet deny the need for urgent political action. In an article on how to best frame climate change policy proposals, Matthew Nisbet, professor of communication studies at Northeastern University, notes “when asked what should be the top priority in 2009 for President Obama and Congress in a December 2008 poll, just

percent of respondents cited climate change or the environment compared with more than 40 percent of respondents who cited the economy.” Here the data identifies the problem with the more persistent, restarted form of climate denial. Simply putting this issue out of your mind is as bad as actively fighting against legislation. Voters who do not care about climate change legislation will not demand climate change legislation, and the lawmakers who represent them will have no incentives to create it.

Unsurprisingly, denial affects liberals and moderates at a far lower rate than conservatives (members of the Republican Party, more specifically). According to author and activist Naomi Klein, “today [2014], more than 75% of self-identified Democrats and liberals believe humans are changing the climate...In sharp contrast, Republicans have overwhelmingly chosen to reject the scientific consensus. In some regions, only about 20% of self-identified Republicans accept the science. This demonstrates the clear and growing divide between groups of Americans on this issue. Klein points out that Democrats and Republicans are sharply split on the issue, but the divide extends beyond simple identifications of political ideology. In their article “Cool dudes: The Denial of Climate Change Among Conservative White Males In the United States,” Adam McCright and Riley E. Dunlap determine that white, conservative males are the most likely Americans to be climate change deniers. According to their study, 39.9% of white males “do not worry about global warming at all” as compared to only 14.4% of the rest of the population,

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13 Nisbet, Matthew C. "Communicating Climate Change: Why Frames Matter for Public Engagement." Environment: Science and Policy for Sustainable Development 51, no. 2 (August 7, 2010), 14

Klein, Naomi. This Changes Everything: Capitalism vs. the Climate. (New York: Simon and Schuster, 2014), 35-36

including other conservatives. The striking statistics in Table 1 show that there is an extremely strong (0.001% chance of error) correlation between being a white male in the United States and almost any behavior associated with climate change denial. Compared to the American public, conservative white males are more likely to believe that climate change is not occurring, that humans are not contributing to climate change, that scientists don’t believe in it, and every question the authors asked that would suggest denial. They are extremely likely to believe all of the talking points of the climate change denial movement, despite sharing other demographics of people who have different views on the science. Because conservative white males are so much more likely to be climate change deniers than other demographic groups, they are a group worth analyzing and targeting.

\[\text{Table 1}\]

<table>
<thead>
<tr>
<th>Climate change view</th>
<th>Total (N)</th>
<th>Conservative white males (N)</th>
<th>All other adults (N)</th>
<th>(\gamma^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denial belief</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The effects of GW will never happen</td>
<td>11.6% (10,125)</td>
<td>29.6% (1910)</td>
<td>7.4% (8215)</td>
<td>.68***</td>
</tr>
<tr>
<td>Recent temperature increases are not primarily due to human activities</td>
<td>36.5% (6098)</td>
<td>58.5% (1131)</td>
<td>31.5% (4967)</td>
<td>.51***</td>
</tr>
<tr>
<td>There is no scientific consensus that GW is occurring</td>
<td>39.8% (4086)</td>
<td>58.8% (758)</td>
<td>35.5% (3328)</td>
<td>.44**</td>
</tr>
<tr>
<td>Seriousness of GW is generally exaggerated in the media</td>
<td>38.2% (10,125)</td>
<td>63.1% (1910)</td>
<td>29.0% (8215)</td>
<td>.63**</td>
</tr>
<tr>
<td>Does not worry about GW at all</td>
<td>19.0% (9121)</td>
<td>29.1% (1707)</td>
<td>14.4% (7414)</td>
<td>.58**</td>
</tr>
<tr>
<td><strong>Perceived understanding</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understand GW very well</td>
<td>20.3% (9113)</td>
<td>30.4% (1700)</td>
<td>18.0% (7413)</td>
<td>.28**</td>
</tr>
</tbody>
</table>

\[\gamma^a\] Gamma for the relationship between the conservative white male dummy variable and the denial belief variable.

\[\gamma^b\] ‘Most scientists are unsure that GW is occurring’ or ‘Most scientists believe that GW is not occurring’.

\[\gamma^c\] Conservative white males who self-report understanding global warming very well.

\[\gamma^d\] Gamma for the relationship between the confident conservative white male dummy variable and the denial belief variable.


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16 Which itself, is among the less climate-conscious in the developed world, making these results stand out even more
White males are particularly likely to identify as Republicans, which gives context to the power this group holds over the party. Although white, conservative males represent only about 31.5% of the United States population, 57% of them identified as Republicans by 2012.

Additionally, that percentage has demonstrated a clear divergent trend since 2008, when it was only 51%. By the midterm congressional elections in 2014, 64% of white men cast ballots for Republican candidates.

Climate change denial runs particularly rampant in the United States due to a well organized disinformation campaign, the history of which is discussed in chapter 2. Figure 3 demonstrates the disparity between the

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19 Ibid.

United States and other developed countries in terms of its rate of climate change denial. Although most respondents claim to believe in the science of climate change, these rational citizens represent barely more than a majority, whereas those who have been convinced or made doubtful by the climate change denial industry loom well larger than any other country on the list, creating a dramatic drop-off between the rate of denial in the US and the next most denying country: The UK.

**The Phony Science of the Denial Movement**

The climate change deniers rely on complexity and false interpretations of data in order to instill their movement with a strong sense of confidence. Figure 4, drawn from a statement by the authors of the Federal Advisory Committee that authored a report called “Global Climate Change Impacts in the United States,” demonstrates a typical use of misleading statistics by climate change deniers. The CATO institute, a think tank that promotes a denier ideology, uses data like the global temperature graph at the bottom of the report to ape the style of legitimate policy documents and intentionally confuse people. In this particularly egregious example, CATO made their report appear to be an addendum to the Advisory Committee’s. In this way, they act as parasites on valid scientific inquiry,
simultaneously making themselves appear more legitimate, and weakening the communications-level effectiveness of the original studies. The author of “Global climate Change Impacts in the United States” complain that CATO employs “numerous citations of marginal relevance and exclud[ions] or misrepresent[ations of] key publications that, in fact, contradict its interpretations.” CATO, and similar organizations, create documents that have only the thinnest veneer of legitimate science, hoping that simply looking official will convince people that they are.

Another tactic deniers use to fake legitimacy is to cherry-pick data that appears conclusive, in order to obfuscate the reality of the situation. Climate change deniers commonly cite statistics regarding recent warming trends, arguing that they demonstrate a long term stable temperature. This kind of argument can be seen in the top chart in figure 5, which claims to show a short-term “pause” in global temperature increases.

This kind of chart purposefully maintains an

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22 I will put aside for this example that the data used in this chart are uncorrected and represent a purposefully inaccurate representation of global temperatures.
inaccurate demonstration of the data. The chart is from climate change denier Marco Marano’s website: Climate Depot. In fact, it is simply a zoomed-in portion of the more accurate data presented in the NASA graph in the lower portion of figure 5. This kind of purposeful scientific obfuscation can be extremely misleading, especially because the sources of the data are legitimate. Tactics like this prey on those at risk of becoming deniers, even those with some understanding of scientific data, because the sourcing and science appears so legitimate.

Organizing for Action, the nonprofit group dedicating to advancing President Barack Obama’s agenda, has a campaign entitled “Call Out the Climate Change Deniers.” The campaign identifies high-profile national political figures who deny the science of climate change or the necessity of action. As of March 2016, their website lists 162 climate change deniers, whom they are targeting with petitions. This list included only elected officials—governors and congresspeople, so even their long list does not even begin to reflect the true influence of climate change denial on American politics—extending down to state and local levels of government.23

Climate change denial has a clear and disturbing effect on American attitudes toward science and policy. Despite overwhelming scientific consensus, voters reject the science, and firmly reject policy changes that are necessary to combat the effects of global greenhouse emissions. This denial is most prevalent among conservative white males—those who are the least inclined to want any sort of change in their daily lives. The denial movement has contributed to an unprecedented split between Americans on whether anything should be done about climate change. However, environmental issues were not always so divisive.

Chapter 2: A US Climate History

Environmental History

US Environmental History Before Climate Change

The United States has a rich history of pre-modern environmental thinkers who shaped the way Americans engage with the earth. Environmental philosophy has affected American political thinking as it has emerged as a popular political issue in the twentieth century. Although discussions of climate change and policy action mostly came later, the life and writings of Aldo Leopold, Henry David Thorough, and John Muir influenced the early environmental consciousness of the American people. The work of these authors and others provided the early grounding for the environmental fights of the future, pitting the Romanticism of those authors against the Conservationism of thinkers like Theodore Roosevelt, who saw value in nature as a resource to be exploited.24 This fundamental battle continues to play out in environmental legislation to this day, with another group emerging: those irrational deniers who seems unable to even understand the value of conservation as a necessity for maintaining sustainable economic welfare.

Environmentalism did not coalesce into a broad political movement until the mid twentieth century. Environmental historian Steven Stoll begins his discussion of the United States’ environmental policy in 1945. He reasons that following the devastating nuclear attacks on Hiroshima and Nagasaki, Americans gained a greater consciousness of the kind of power they wielded to destroy.25 This, in turn, caused them to reflect on the catastrophic impact they were


25 Ibid., 1
able to make on nature, something that, until that point, seemed too big to ever be particularly
damaged by human activities. Following the end of World War II, according to Stoll, the
American environmental movement took on a more urgent and politicized nature. Still, that
movement bore little resemblance to the environmental work being done today. At the time, there
was a consensus about the necessity of conservation, particularly when there was clear evidence.
The publication of Silent Spring in 1962 spurred the United States to ban the pesticide DDT, a
powerful insecticide that was being used in enormous quantities with no understanding of its
external effects. However, the movement truly hit its stride in 1970 with the first Earth Day
celebrations, coinciding with the beginning of the Nixon administration.26 As Stoll describes,

Congress and President Richard Nixon responded [to the first Earth Day celebration] with a remarkable series of acts, including the revised Clean Air Act of 1970; the sweeping National Environmental Policy act of the 1970, which created the Environmental Protection Agency, and the Council on Environmental Quality and required environmental impact statements for all construction projects affecting land owned by the federal government; the Federal Water Pollution control Act of 1972; and the Endangered Species Act of 1973.27

These four pieces of environmental legislation represent the greatest steps the United States has
ever taken toward maintaining and improving their environmental quality. In fact these pieces of
legislation, and the institution of the EPA, still serve as the backbone of the country’s
environmental protection efforts.

The next major victory came with Ronald Reagan’s ban on chlorofluorocarbon (CFCs).
These chemicals, which were released primarily from refrigerators aerosols, were destroying the

26 Ibid., 16, 19.
27 Ibid., 19.
ozone layer—the part of the Earth’s atmosphere that blocks harmful UV rays.28

Environmentalists frequently cite Reagan's participation in crafting the Montreal Protocol, an international agreement to ban CFCs, as an inspiring success story. In particular, it is seen as comparable to the kind of legislation it would take to have a meaningful impact on climate change. Ozone depletion and climate change suffer the same basic problem with their most basic drivers: both CO₂ and CFC emissions are invisible to the human eye, and thus easy to ignore. Despite an undercurrent of denial among Republicans, conservative president Ronald Reagan pushed forward on aggressive legislation to ban the use of CFCs, ignoring objections that he was moving too quickly. Reagan justified his aggressiveness by reasoning that even if it is not true that CFCs were thinning the ozone, it was a better choice to be safe than sorry. According to a cost-benefit analysis, a trademark of Reagan’s administration, his economists found that the costs of phasing out ozone-depleting chemicals were significantly lower than the costs incurred by the potential risks of doing nothing.”29 Of course, Ronald Reagan was no Teddy Roosevelt. He was not an environmentally conscious individual nor a president. In fact, his weakening of the EPA and dismissal of acid rain marked the beginning the environmental divide between the parties.30 Yet precisely because he was such a difficult president for environmentalists, his rejection of “ozone-denial” demonstrates the power the climate change denial movement has now taken on the United States. Even a starchy pro-business conservative like Reagan saw the importance of


#sthash.Ekk0mp1E.dpuf.


30 Stoll, US Environmentalism Since 1945, 20-21
stopping ozone depletion. A move like his would be unthinkable for any Republican today, in particular for a president expected to represent his or her party.

The History of Climate Change Denial

Unlike most develop and developing countries, climate change denial has taken a firm foothold in the United States. Loren Cass notes that climate change has been a part of the political agenda since nearly the beginning of the environmental movement, but never developed a firm policy foothold in the US.\textsuperscript{31} He notes how the Reagan administration, though supportive of climate change research, “developed a “wait and see” attitude toward climate policy, in contrast to his work on the ozone layer, with the justification that “if scientific evidence actually demonstrated that climate change was a significant danger to the United States, then the government would initiate appropriate responses” However, Reagan’s actions did not reflect this kind of careful consideration. When his Environmental Protection Agency released a report in 1983 claiming climate change was “not a theoretical problem, but a threat whose effects will be felt within a few years.”\textsuperscript{32} Reagan dismissed it. However, by that point, the American public was beginning to come around to the growing scientific consensus that climate change was real and something very worth worrying about.

Despite the Reagan administration’s lax attitude toward climate change action, scientific and public perceptions of the issue began to coalesce throughout the 1980s. In 1988, Dr. James Hansen testified in a well-publicized hearing before congress in which he declared with certainty


\textsuperscript{32} Weart, Spencer R. The Discovery of Global Warming; Revised and Expanded Edition. Cambridge, MA: Harvard University Press, 2008, 141
that climate change was real and potentially devastating. The next day, the New York Times ran an article about the hearing on the front page with the headline “Global Warming Has Begun.”33 The testimony and the associated publicity rocketed climate change awareness to new heights.34 This moment represented an early high-water mark for climate change activism, but almost immediately, a coordinated denial machine began to take shape.

In “The Hockey Stick and the Climate Wars,” climatologist and geophysicist Michael E. Mann writes

In the 1990s, as the scientific evidence for human-caused global warming grew stronger and calls for action to curtail greenhouse gas emissions grew louder, fossil fuel industry executives made a critical decision. Rather than concede the potential threat climate change posed and the necessity of ultimately reducing fossil fuel use, they would instead engage in a massive, media-savvy public relations campaign...Oil companies and allied economic and political interests would, behind the scenes, use various means to sow debt about the validity of the underlying science of climate change.35

Beginning in 1989, the first such group, called the Global Climate Coalition (GCC) was organized. Calling itself an “organisation [sic] of business trade associations and private companies established…to coordinate business participation in the scientific and policy debate on global climate change,”36 the group was composed of a series of business interests with distinct incentives to limit climate action. They were coal, oil, and car companies, all of whom

35 Mann, Michael E. The Hockey Stick and the Climate Wars: Dispatches from the Front Lines. (New York: Columbia University Press, 2012), 59
had a lot of lose if the United States were to implement any sort of CO$_2$ reduction program. The GCC was soon joined by a very similar group calling itself the Information Council on the Environment (ICE). Composed primarily of fossil fuel energy companies, ICE was more blatant about its intention, aiming to “reposition global warming as a theory rather than a fact.”

Together, these groups began the process of supporting individuals who would become the public faces of the climate change denial movement. Names like Fred Singer and Willie Soon began to saturate the media market. Developing a strategy to get climate change deniers in the media as much as possible, these organizations began their early efforts at wearing away public trust in science. An Exxon-backed organization called The George C. Marshall Institute was particularly effective in casting doubt on the linkages between carbon emissions and climate change. Using techniques the tobacco industry had developed in attempting to limit regulations on tobacco use, the Marshall Institute was the first to develop the kinds of phony science that give the climate change denial movement its first-glance appearance of legitimacy. These organizations carried out their efforts for years, producing phony science, buying out unqualified and amoral scientists to give it their stamp of approval, and doing everything they could to make the case to the American people that the science just didn’t exist to connect greenhouse gas emissions to climate change.

The organizations began to have success by the mid-1990s, as public perceptions of climate change began to shift away from the overall agreement felt after James Hansen’s testimony. Peoples’s assuredness about the scientific consensus surrounding climate change grew

37 Ibid., 4

murky. A Newsweek poll at the time found that 42% of respondents believed the press “exaggerates the threat of climate change.”³⁹ This is an ironic view considering the media was buying into the climate denial efforts as much as the public. Former EPA chief William K. Reily noted with disdain how the press had begun to qualify every mention of climate change by noting only “some scientists believe, where the reality is that the vast preponderance of scientific opinion accepts that human-caused [greenhouse] emissions are contributing to warming.”⁴⁰

One of the most damning pieces of evidence proving the willful obfuscation of climate science was a memo leaked to the New York Times in 1998. The document came from a group called the American Petroleum Institute, and it detailed a plan to spend $5 million to spread climate change denial.⁴¹ The document included details of their plans to “train” up to 20 climate scientists on methods to spread doubt about the scientific underpinnings of the recently drafted Kyoto Protocol.⁴² According to the leaked memo, the group would consider themselves victorious when

- Average citizens understand (recognise) uncertainties in climate science; recognition of uncertainties becomes part of the ‘conventional wisdom’
- Media ‘understands’ (recognises) uncertainties in climate science
- Those promoting the Kyoto treaty on the basis of extant science appear to be out of touch with reality.⁴³

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³⁹ Ibid.

⁴⁰ Ibid.


⁴² Begley, Sharon. “The Truth About Denial”

The ominous quotation marks around “understand” speak for themselves. The American Petroleum Institute *knew* they were wrong, but continued to mislead the public, in a purposeful effort to protect their business efforts, despite potentially unprecedented human consequences. Representatives of the institute claim these specific policy proposals never went into practice, but regardless, these goals are representative of the aims of the climate change denial movement in general, and those goals were largely successful. Despite the US having signed the Kyoto Protocol, the first major international agreement to reduce greenhouse gas emissions, President Clinton did not even submit it to the GOP-controlled Congress for ratification. He knew it stood no chance of passing. According to then-Senator John Kerry, there was no space at that point for rational debate on climate change, largely because of how many congresspeople were influenced—or controlled—by the American Petroleum institute and other climate change denying think tanks. Kerry lamented how “the questioning of the science made it to the Hill through senators who parroted reports funded by the American Petroleum Institute and other advocacy groups whose entire purpose was to confuse people on the science of global warming.”

Climate change denial gained even more concrete standing in the Bush White House, where the president disavowed his campaign pledge to cap carbon emissions and withdrew the United States from the Kyoto agreement. Two years later, in 2003, the denial movement’s efforts to secure political power reached new heights when James Inhofe, an ardent climate change denier, ascended to the chair of the Senate Energy Committee. Inhofe would testify on the house of the Senate that year that global warming was “the greatest hoax ever perpetrated on the

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44 Begley, Sharon. “The Truth About Denial”
American people.” Inhofe represented the perfect proxy for the climate change denial movement. He was a conservative white male whose top two funders during his senate bid were Murray Energy and Koch industries. With Inhofe in charge of the very committee responsible for drafting the kinds of bills that would cap carbon emissions, climate change denial had become the *de facto* position of the Republican party, even if not everyone was yet on board. The massive fossil-fuel funded industry had infiltrated American hearts and minds all the way from average citizens, to the media, to national politicians.

Although environmental legislation in the United States once had relatively bipartisan support, the climate change denial movement has bifurcated the American public and lead to a reality where neither the public nor the politicians are even able to agree that there is a problem. The United States is in the midst a war between those who are willing to see the imminent danger posed by climate change and those who are too rooted to their current lifestyles, by politics, history, and their own psychology, to even engage with the issue.

**Chapter 3: The Psychology of Fear and Separation**

*Psychology*

In their thorough report on the interplay between psychology and climate change, the American Psychological Association examines the linkages between climate communication and the American psyche. Highlighting the most fundamental problem with climate change as a catalyst for political will, they note “people do not directly experience climate change. They

45 Ibid.

experience representations of climate change that are presented to them via various media and educational sources and personal interactions." To the human psyche, then, climate change can never be as real as other environmental or political issues because it cannot be directly seen. People are able to deny the science of climate change with astounding efficacy, and that success can be disarming, but the most basic reason the reality of climate change is so hard to drive home is that there is no single image or data point that can “prove” the atmosphere is changing. This is what deniers latch on to. While there may be debate and denial of the importance of waste management and recycling, no one can contend that litter, in fact, does not make the streets dirty, and it would be impossible to argue that pouring sewage into a lake does not adversely affect the water quality. Matthew Nisbet discusses the inherent problems convincing people that climate change represents an urgent threat, writing:

Past environmental events centered on a particular place or striking visual, such as the toxic disasters of Love Canal, New York, and Bhopal, India; the Exxon Valdez oil spill in Alaska; or the iconic images of the ozone hole, helped trigger collective concern. However, the complex nature of climate change means no single news headline or visual image will catalyze widespread public attention or policy action.

Climate change advocates have attempted to find images that make climate change clear, but their best efforts—polar bears on melting icecaps—have grown tired and largely ineffective. Climate change is too complicated and too slow moving to be demonstrated in any single image, especially because the worst effects of climate change have yet to occur. To many people, the

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48 Nisbet, Matthew C. "Communicating Climate Change: Why Frames Matter for Public Engagement", 15
impacts of climate change are something for future generations to worry about and not something they have to face in their own lives.

Climate change is not only invisible, it is occurring on a geologic timescale. Unlike habitat destruction, oil spills, or any of the other visible environmental phenomena which receive comparatively more political traction, climate change takes place over years and lifetimes as opposed to days and months. Human psychology makes people more likely to react quickly to small, immediate threats. They are willing to invest significant effort in something if they expect to reap clear rewards from their efforts. However, human beings respond poorly to long-term existential threats. When individual or rapid action won’t have any meaningful effect on a problem, people are hard-wired to look away rather than approaching these kinds of issues with care and creativity.

In the United States, people have largely been shielded from the most destructive impacts of climate change to this point. The APA claims “for most people in the United States, perceptions of the risks of climate change that rely on personal experience will lead to the judgment that the risks are low.” They base this on a well document psychological phenomenon wherein individuals will base their risk assessment on personal experience, rather than considering data from a variety of sources. According to the report,

Small probability events tend to be underestimated in decisions based on personal experience, unless they have recently occurred, in which case they are vastly overestimated. Many think of climate change risks (and thus of the benefits of mitigating them) as both considerably uncertain and as being mostly in the future and geographically distant, all factors that lead people to discount them. The costs of mitigation, on the other hand, will be incurred with certainty in the present or

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50 Ibid., 22
This discounting of future risks makes the status quo seem all the more attractive, and to people in the United States, their impressions of climate change fulfill a repeating cycle. A reasonably built-up infrastructure and a disparate population make the United States less vulnerable to immediate impacts of climatic changes, meaning climate change remains an abstract concept to many US citizens. Most of the United States’ population can thus be described as privileged, in the sense that they are in less danger than residents of other countries. To Americans, the threat remains mostly hypothetical, and their engagement in the issue continues to manifest more as an idea of action than a necessity. White males, though, occupy an even greater position of disconnect from the real, present effects of climate change. In “Cool Guys,” McCright and Dunlap note how “given the expansive challenge that climate change poses to the industrial capitalist economic system, it should not be surprising that conservative white males’ strong system-justifying attitudes would be triggered to deny climate change.” System Justification is the psychological theory that “evaluations of social systems and institutions are influenced by epistemic needs to maintain a sense of certainty and stability, existential needs to feel safety and reassurance, and relational needs to affiliate with others who are part of the same social systems.” System-justifiers tend to avoid contact with people outside of their immediate experience, and thus have little opportunity to develop connections with people who are more

51 Ibid., 6

52 Although the visible impacts of climate change, in particular drought and major storms, are becoming more and more prevalent every year.


aware of and connected to the reality of climate change. McCright and Dunlap propose that white males, being at an advantage in American society, would be particularly subject to system justification, because they experience such a strong sense of safety. Consequently, they have little connection to others who don’t share their viewpoints and demographics.

Kirsti Häkkinen and Nazar Akrami confirm the statistics suggesting that conservatives are more likely to deny the science of climate change, but identify an even stronger correlation for people who test highly for Social Dominance Orientation (SDO). These individuals tend to support group-based hierarchies—even as it pertains to placing humans in their own dominion above nature. White, conservative males are so stuck in their system-justifying mindset that they are able to place themselves in a different plane of existence that only exists in their minds. This enables them to see themselves as different entities not only from less privileged people, but from nature itself. These two ideas are not so different to someone with so much privilege. White, conservative males are able to view other people and nature as totally irrelevant to their way of life. They construct a worldview with themselves at the very top so they are unable to see the myriad problems posed by climate change, even when they are presented with evidence that their ideas are wrong.

In “Our Crying Planet: An Approach to the Problem of Climate Change Denial,” Donald Moss proposes the idea that all of civilization has built an artificial distinction between individual human beings and other elements of the natural world. In his view, the world, wrecked by climate change, is a helpless and pitiful site, but one that modern, self-absorbed humans are


56 Häkkinen, Kirsti, and Nazar Akrami. "Ideology and climate change denial." Personality and Individual Differences 70 (2014), 64
unable to see. Per this view, all of humanity has placed itself on a separate plane, just as the most privileged Americans have done. Despite the fact that there are no real barriers between human beings and the rest of the world, people have constructed false dichotomies between themselves and animals, or even the mind and body. This perspective has given people the wherewithal to put themselves before the wellbeing of nature. White males are simply the furthest removed from a connection with the natural world, but civilization itself has created its downfall.

According to Moss, helplessness is the most stirring condition to witness. He encourages the adoption of an anthropomorphized perspective on the planet earth, in which one sees the plight of the planet as a distractingly helpless being. A greater awareness of nature and the planet will encourage awareness and understanding of the world’s desperate condition. He claims “the message sent to all of us by the planet’s kicking and crying is clear: the object under our care is now helpless, reduced as a result of our systematic indifference from self-sufficiency to dependency, from abundance to abjection.”

Moss is not alone is attributing peoples’ callous attitude toward nature as a consequence of a psychological separation from it. Sherry Cable claims “because nobody eats us, we are out of touch with the environment that supports us.” In her view, humanity built up its separation from nature after reaching the top of the food chain, protected from the constant fear of being eaten. Human beings have a privileged relationship with nature that mirrors the societal structures which divide them from each other. Being both solipsistic and unconcerned about the basic structure which traditionally ties organisms to the

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57 Moss, Donald. 2016. "Our crying planet: An approach to the problem of climate change denial." The Psychoanalytic Quarterly 85, no. 1: 193

58 Cable, Sustainable Failures, 201
rest of their environment, human beings can much more easily ignore the helpless, wailing Earth surrounding them.

White conservative males represent the epitome of privilege in the United States, and this gives them psychological reasons to ignore the necessity of climate change action. Changes to their lifestyle are unwelcome because they already live at the top of the social hierarchy, both in their own minds, and in the structures of American life, where women, people of color, and the plant’s ecosystems and resources are routinely marginalized. White, conservative males set themselves apart from these concerns on the most basic levels, leaving then unable to engage with those who recognize the seriousness of climate change. Even if this psychological separation is inevitable, their impacts have been especially far-reaching, because privilege tends to manifest itself in the political sphere, where meaningful climate change action has been nowhere to be seen.

Chapter 4: Denial in American Politics

In the closing minutes of the Republican Party’s second presidential debate of the 2016 cycle, moderator Jake Tapper asked a carefully worded question. Citing Reagan’s plan of attack against the growing hole in the ozone, he asked the candidates if they would consider taking out an “insurance policy” against climate change akin to the strategy Reagan took to combat CFCs. Marco Rubio, at that point considered an establishment choice, as well as one of the so-called “moderate” Republicans on stage responded, “we're not going to make America a harder place to
create jobs in order to pursue policies that will do absolutely nothing, nothing to change our climate.”

As part of a trend of political polarization, the 2016 United States Presidential election dramatically highlights the rise of climate change denial as a mainstream political opinion. Rubio’s response puts the modern Republican Party’s climate change denial in clear focus. Jake Tapper’s carefully worded question was designed to goad Rubio into explicitly stating a position of denial. Rubio’s politic strategy was to attempt to suggest a policy of climate change denial without explicitly stating he didn’t buy it. Although Rubio did not go out of his way to rebut the science of climate change in his response, his answer demonstrated that he has been influenced by the architects of climate change denial. His assertion that pursuing action on climate change would harm the American economy speaks directly to those in privileged positions who fear the implications of policy change. Naomi Oreskes identifies this kind of denial as a new and dangerous element of the American political system. She identifies a strain of climate change denial where people, instead of outright stating their denial, insist that climate change mitigation is a lost cause. Rubio’s answer seems at first to at least acknowledge the reality of climate change, but, in fact demonstrates a commitment to the idea that there is no reasonable solution to climate change that would be worth the costs. In other words, from his privileged position, he cannot see the benefit of giving up his current position in society for the risks of a new economic order—even though that order would help prevent climate disaster.

59 Holthaus, Eric. “‘America Is Not a Planet’: The Only Thing Marco Rubio Got Right on Climate Change.” Slate. September 17, 2015.

Rubio’s response seeks to cast him as a more moderate denier, one who simply denies the solution to climate change rather than the problem. However, when pressed Rubio will outright deny the science, even if he is slightly reticent to do so. In a later debate, Tapper was once again the moderator and he asked Rubio point-blank if he would “acknowledge the reality of the scientific consensus of climate change and pledge to do something about it.” Rubio’s response was firm: “sure the climate is changing,” he said, “and one of the reasons is because the climate has always been changing. There has never been a time when the climate was not changing.”

This response comes straight from the climate change denier handbook. With this answer, Rubio made it clear that he is influenced by the fake science from climate denying think tanks, which frequently tries to cast climate change as a simple blip on the radar when put in the perspective of climate history. Of course, the more moderate Marco Rubio was not the winner of the 2016 nomination, suggesting that perhaps even his tempered denial was too liberal for the modern GOP.

With Donald Trump securing status of presumptive nominee, the state of climate change denial among the GOP remains perhaps the only part of the Republican platform that seems clearer than ever. Although Trumps’ policy positions can be difficult to pin down, he is the perfect demonstration of white, conservative, male privilege that harkens climate change denial. On the subject, Trump offers a familiar, conspiratorial perspective. In an interview with the Washington Post, Trump explained how according to him:

I think there’s a change in weather. I am not a great believer in man-made climate change. I’m not a great believer. There is certainly a change in weather that goes — if

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you look, they had global cooling in the 1920s and now they have global warming, although now they don’t know if they have global warming. They call it all sorts of different things; now they’re using “extreme weather.” I guess more than any other phrase. I am not – I know it hurts me with this room, and I know it’s probably a killer with this room — but I am not a believer. Perhaps there’s a minor effect, but I’m not a big believer in man-made climate change.\textsuperscript{62}

For all of Trump’s political volatility, he has been remarkably consistent on this point, with a long Twitter history demonstrating a flippancy on the subject, in one tweet even conspiratorially blaming China for inventing global warming to weaken the US manufacturing sector.\textsuperscript{63} Of course, Donald Trump is the prototypical denier, white, male, and conservative. Not only that, but he is as close to big business personified as can exist. His political nativism caters to the exact demographics that are particularly likely to deny climate change. Trump supporters, just like climate change deniers, are disproportionately white and male,\textsuperscript{64} and now with Donald Trump having taken on the mantle of presumptive GOP nominee, his voters represent a new mandate for the Republican party. The fact that his supporters fit the demographics of climate change deniers has created a perfect storm of climate change denial. It seems there is no turning back now for a Republican Party which has drifted so far to the right on this issue that even its moderate wing is represented by an only slightly reluctant denier. The party’s presidential candidate by popular mandate is a conspiracy-dried denier that would make Anthony Watts proud.


\textsuperscript{63} Trump, Donald, Twitter post, November 6th, 2012, 2:15 am., https://twitter.com/realDonaldTrump/status/265895292191248385?ref_src=twsrc%5Etfw

According to Pew, about 2% of the American population has run for elected political office. Of those 2%, 82% are white and 75% are male.65 These numbers are strikingly out of proportion to the 66% of the general population that is white and 49% that is male. This is a clear demonstration of the power of these individuals in American society. Their political power is well out of proportion to their share of the population, but they feel entitled to twist the system to their whims.

Privileged, conservative white males are so incentivized to maintain the status quo, there is a twisted political rationality to maintaining their attempts on the system. Naomi Klein proposes that, in regards to protecting their own interests, climate change deniers are more rational than the moderates who think climate change can be solved with minimal changes to American lifestyles.66 Owing to the massive systemic privileges enjoyed by the most fervent climate change deniers—white, conservative men and fossil fuel interests, it makes sense that they would coordinate into a political party with the ability to block climate change legislation at every turn.

As Organizing For Action’s roundup up of notable climate change deniers suggests, Rubio is far from the only denier in his party, and the presidential campaign cycle is far from the only place climate change denial is exerting its influence. Much of the meaningful environmental legislation that has been able to pass in the United States has happened at the state level, making state and local officials just as important to the climate change movement. The Center For American Progress Action Fund found that, as of 2016, 21 sitting governors were climate change deniers.

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66 Klein, This Changes Everything, 3
deniers, under a strict definition limiting it only to those who have publicly denied the connection between greenhouse gas emissions and warming.67

Further, 54% of Americans are represented by either a governor or an attorney general68 who denies climate science.69

As the need to address climate change has become more urgent, the Republican party has dug in its heels, only recently becoming the party of absolute denialism. The divide between the parties on this issue has mirrored a growing divide that is manifesting itself across the political sphere. A study conducted by Harry Enten at FiveThirtyEight found that, in 2014, congress was as divided as it has ever been (at least since 1912, when his data set begins).70

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68 Climate-aware attorneys general have been pursuing legal action against Exxon Mobil for their obfuscation of the reality of climate change. Thus, having a climate change denier as an attorney general is particularly relevant.

69 Ellingboe and Koronowski. “Is Your Governor Or Attorney General A Climate Denier?”

highlights the extent of the divide, while also demonstrating that the most recent ideological shift has come from Republican members of congress, who have moved further to the right than either party has been since 1929. In contrast, Democrats’ positions have remained relatively stable, albeit also historically liberal. The Republican’s shifting perspective on climate change is an ideal demonstration of the development of this divide.

In 2008, former Speaker of the House Newt Gingrich appeared in a now (in)famous advertisement alongside Democratic Congresswoman Nancy Pelosi to advocate for legislative solutions to climate change. The advertisement came at just the historical moment before the two parties began to dramatically diverge. In retrospect, it seems strange to see that kind of bipartisan cooperation on display in the commercial, and Newt Gingrich, a man with no small political aspirations, found himself regretting his participation in the advertisement almost immediately. Two years later, by which point the Republican party had already flown to the far right of the graph, Newt Gingrich felt the need to renounce the advertisement and the belief in climate change it advocated. In 2011, while running for the Republican presidential nomination, he appeared on Fox News’ Center Seat, where he took the opportunity to renounce his support of climate change action. During the interview, he claimed the ad was “the stupidest thing [he had] done recently,” and further went on to deny the science of climate change, saying, “I actually don’t know whether global warming is occurring.” Newt Gingrich serves such a perfect example of the Republican Party’s rapidly shifting ideology because he is so clearly focused on

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political advancement. Gingrich has shifted his policy positions to whichever is most likely to get him elected, and despite his lack of success in the 2012 election, his shift from a strong Republican voice for climate change advocacy to a climate change denier is telling.

Conclusion—Fighting Fear with Fear

The success of the climate change denial movement in shaping the environmental policy of the Republican party demonstrates the power of their appeals to the status quo, and climate change activists must use similar techniques to persuade people that to do nothing is the most dangerous thing they could do. Naomi Oreskes offers fear as an explanation for why climate change denial continues to proliferate despite being constantly mocked and proven wrong by climate scientists:

There are many reasons why people resist bad news, but it is clear that a major driver here is fear. Fear that our current way of life is unsustainable. Fear that addressing the issue will limit economic growth. Fear that if we accept government interventions in the market place—through a cap-and-trade system to control greenhouse gas emissions, a carbon tax, or some more severe approach—it will lead to a loss of personal freedom.73

It is this very fear from which climate change activists should take a lesson from the success of climate change deniers. This fear of change has motivated white, male conservatives and big, dirty corporate interests to stand up against environmentalism. Already in positions of comfort, the fact that they made the effort to build a movement demonstrates that, on some level, the interests behind climate change denial understand the severity of the problem. There is a part of every climate change denier that knows they are wrong, yet they continue to bury their head in the sand. Selfishness, overconfidence, and a belief that they stand separate from the natural

world trumps their ideology and motivates them to drive the world toward the warmest possible future.

Plenty of people have attempted to appeal to reason to try to sway climate change deniers, but to little avail. The psychology of denial can’t be described as purely rational, as Naomi Klein argues. Although the choice to fight change may make sense for the deniers, the real effects of climate change exist today, and ignoring them borders on psychopathic behavior. Climate change denial comes from a deep rooted sense of fear that information has little hope of penetrating.

In order to reach climate change deniers, they must be hit in the same place they are operating. Climate change is kept too quiet, and its destructive potential is consistently undersold. In an effort to act rationally in the face of an existential crisis, believers in climate change, not expecting to have to play the role of pitchmen, have turned the communication over to scientists. While this makes some strategic sense, it has left a large subset of the population to develop a poisonous ideology that caters to the psychological triggers dry, rational facts cannot reach.

The terrifying images of climate disasters already rocking the world must be broadcast frequently and loudly. Instead of shying away from exploring the most terrifying consequences of climate change, apologizing for focusing on “depressing” or “scary” possibilities, the most dire consequences of climate change must be cited at every opportunity. People can get information on climate change from a variety of sources, and there is no way to block out the voices of climate change denial. However, the voices of those speaking the truth about climate change will become louder when they cease to shy away from the people speaking the truth
about climate change. The time for optimism is over, and the best way to change minds is to force people to confront the human-caused disaster of climate change, without apologizing for it. The status quo is not going to remain the status quo for very long, and making sure that people understand that their place in the world is fragile will help motivate action.

What makes climate action so difficult is that, unlike denial, there is a step beyond fear that is necessary to create real change. Even those who may not want to enforce the status quo may be unwilling to put in the extra effort to change it. However, those who truly understand the danger of climate change in relation to themselves and the natural world are those who are willing to change their lifestyles to protect the earth and victims of the changing climate. Donald Moss’s psychological interpretation of climate change denial—that it stems from a disconnect between the human psyche and the rest of the world, suggests the mechanism by which a change of heart may occur. Part of scaring climate change deniers, of making them realize that they are in more danger by doing nothing than by doing something, is understanding and targeting the privileged relationship they keep between themselves and the rest of the world. They must be made to interact with everyone and everything they hold themselves separate from. This means developing a connection with nature—gardening, planting trees, taking hikes. It also means developing a connection with other people—people with whom they do not normally interact.

According to a study from the American Institute of Biological Sciences, contact with nature not only increases people’s connection to the natural world, but it also promotes social cohesion.74 Participants who experiences more contact with nature throughout the court of the study were

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74 American Institute of Biological Sciences. "Contact with nature may mean more social cohesion, less crime: Human exposure to nature is linked to safer communities with better social, community interactions." ScienceDaily. www.sciencedaily.com/releases/2015/11/151125125105.htm (accessed May 12, 2016).
more likely to form social bonds. This finding suggests that increased contact with nature scale will have a significant impact on the way that people see themselves in relation to others.

Of course, it is difficult to persuade people to leave their homes, especially those who are already deep within their own planes of existence which is why it is contingent upon the media and climate activists to promote connections with nature. Films and TV shows that portray outdoor activities in a positive light will motivate people to step outside their houses. However, to push these connections faster and further, nonprofit organizations should offer subsidies, in the form of free produce, or even cash stipends, for people to participate in community gardens. By offering a specific incentive for people to put their hands in the dirt, programs like these will accelerate the process of bringing the privileged in closer contact with the earth.

Of course, educating adults can be difficult, which is why the role of climate change in education must be expanded dramatically. By including mandates for climate change education in the common core curriculum, the United States can gradually phase out the prevalence of climate change denial. Beyond simple discussions of atmospheric science and the greenhouse effect, student science curricula must include continuous discussions about the devastating effects of extreme weather and sea level rise. Discussion should also include video lessons, including footage of areas destroyed by storms, such as New Orleans after Hurricane Katrina. These images are scary, and despite the risk of traumatizing young children, they will be effective both in driving home the already present impacts of climate change, as well as building home a connection between students and those in different parts of the world, simply by giving them access to these experiences.
Once people have an understanding of the devastating impact of climate change on others, that lesson can be brought further by engaging students with the natural world. Educational standards must include mandates for field trips that bring students into the natural. These experiences should also be tied into the idea that climate change is already having an effect on the United State. Increased fires, storms and very hot days are already making the effects of climate change clear. Coastal communities can consider the impacts of rising sea levels.

These personal connections with nature need not be planned exclusively through government action, where of course, the denial machine will work to halt any efforts that are intended to influence their key demographic. Philanthropists dedicated to taking action on climate change can donate money to childcare centers, stipulating that some or all of the money must be used to bring children into the natural world. Whether it is through local field trips, community gardening, or far-flung travel, the experiences will keep children, especially white males at risk of climate change denial, on the same plane as their peers and natural environment.

As children age, their increased connection to the natural world can be supplemented with increased discussion of eastern philosophy. In contrast to the European philosophers who take a dualism between the body and mind as a given, many Eastern philosophers, including Buddhists, reject this idea. Earlier and more in-depth exposure to this idea can contrast civilization’s contention that it stands above the rest of the nature.

Allowing people to see themselves in this way will tear down the remaining walls they have built that prevent them from seeing the desperate wailing Earth before them. When this
more thoughtful generation is more afraid of the status quo than of change, climate change denial will be a thing of the past.
American Institute of Biological Sciences. "Contact with nature may mean more social cohesion, less crime: Human exposure to nature is linked to safer communities with better social, community interactions." ScienceDaily. www.sciencedaily.com/releases/2015/11/151125125105.htm (accessed May 12, 2016).


Holthaus, Eric. ""America Is Not a Planet": The Only Thing Marco Rubio Got Right on Climate Change." *Slate*. September 17, 2015.


Klein, Naomi. *This Changes Everything: Capitalism vs. the Climate*. (New York: Simon and Schuster, 2014)


Mann, Michael E. *The Hockey Stick and the Climate Wars: Dispatches from the Front Lines*. (New York: Columbia University Press, 2012)


