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Claremont McKenna College

The Politicization and Polarization of Climate Change

Submitted to
Professor John J. Pitney, Jr.

By
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For
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Abstract

In the mid to late 20th-century, climate change and other environmental issues were addressed on a bipartisan basis, with Republican politicians like President Richard Nixon and George H.W. Bush supporting and advancing measures to combat climate change. However, since the 1990s, climate change has become increasingly polarized, with significant polarization in the last decade. This paper dives into the causes behind climate change's politicization and polarization and what the future holds for bipartisan agreement by analyzing peer-reviewed articles, campaign contributions, news stories, political archives, and past interviews with climate experts. The analysis finds that the polarization has been driven by numerous factors, including oil and gas industries funding of climate change denialism, the political realignment of voter geography, the tea party movement, and Trump's war on science. Political polarization on climate change has peaked in 2021; however, there are promising signs for future bipartisan agreement to combat climate change. The financial sector is becoming much more environmentally conscious in their investments, including those towards the energy industry, leading to a more responsive and responsible oil & gas industry. The young GOP is also significantly more receptive to climate change measures, pushing the party to adopt free-market solutions to combat climate change.

Introduction

The roots of the environmental movement in the United States go back to the late 19th century and early 20th century, the Progressive era.¹ It was a period of social activism and political reform in response to the problems stemming from rapid urbanization and industrialization. At the time, there was a major issue with the mass exploitation of natural resources. There was also anger among the public regarding private interests taking over huge swaths of land for their private gain, especially in the newly developed West. Mining companies drew criticism for their reckless and wasteful mining practices polluting and destroying wilderness. This public outrage and fear led to the conservation movement..

The conservation movement had the support of many Republican sportsmen concerned over the possibility of the extinction of game species and the desecration of U.S. lands. Republican President Theodore Roosevelt was one example. Roosevelt was an avid sport hunter and outdoorsman and saw the decimation of and eradication of native U.S. game species as a result of the exploitation of our natural resources. In 1903, Roosevelt went on a camping trip with one of history's most famous environmentalists, John Muir. Muir and Roosevelt sparked a relationship after this camping trip, and they worked together to progress conservation and preservation ideals in the U.S. Roosevelt brought in other conservationists to work in his administration, such as Gifford Pinchot, a Republican from Connecticut, who Roosevelt appointed to be the chief of the US Forest

¹ Stradling, David, ed. *Conservation in the Progressive Era: Classic Texts*. Seattle; London: University of Washington Press, 2004. Accessed May 3, 2021. <http://www.jstor.org/stable/j.ctvcwn9wb>.

Service. Gifford Pinchot is credited with the development of some of the earliest philosophies on resource conservation in the U.S. Roosevelt helped establish 150 national forests, five national parks, eighteen national monuments, and over 230 million acres of public land.² Under Roosevelt, the environmental movement started out on a nonpartisan basis, focused on resource and land conservation. In the following century, environmental issues would broaden as humans' impact on the earth became more apparent.

Following World War II, there was a rise in urbanization and suburbanization and the proliferation of industrial plants. With economic prosperity came many adverse impacts on our environment, including massive amounts of air and water pollution,. Throughout the latter half of the 20th century, multiple environmental catastrophes gained public attention and concern and brought about a new era of environmentalism. Following WW2, smog became a serious issue, killing and sickening thousands of people in Los Angeles, Philadelphia, New York, and other major metropolitan areas in the U.S. In New York City in 1966, anywhere between 169 to 400 people were killed from smog-related illnesses.³ A report from the U.S. Department of Health found that in New York between November 24th and 30th, 1966, the death rate increased by around 24 deaths per day.⁴ For many, the smog of 1966 in New York was an awakening of the dangers of

² "Yellowstone Park Established," HISTORY (A&E Television Networks, November 16, 2009), <https://www.history.com/this-day-in-history/yellowstone-park-established>.

³ Marco Margaritoff, "The 1966 New York City Smog Emergency Was So Toxic That It Killed At Least 169 People," All That's Interesting (All That's Interesting, December 27, 2019), <https://allthatsinteresting.com/new-york-city-smog-1966>.

⁴ Marco Margaritoff, "The 1966 New York City Smog Emergency Was So Toxic That It Killed At Least 169 People," All That's Interesting (All That's Interesting, December 27, 2019), <https://allthatsinteresting.com/new-york-city-smog-1966>.

unchecked industrialization. The hazardous smog and increasingly detrimental air and water quality led to increased public awareness and fear towards pollution. A 1965 survey found that only around a third of Americans surveyed viewed air and water pollution as a severe problem; by 1967, over fifty percent deemed it a serious problem, and by 1970 about seventy percent saw it to be a serious issue.⁵

Richard Nixon, a Republican president well known for his slow ending of the Vietnam war and the Watergate scandal, was also a key player in addressing the environmental issues of the mid to late 20th century. When Nixon took office in 1969, both parties were fighting to align themselves as environmental advocates due to increased public attention towards environmental issues. With the advisement of several of his assistants, such as John Ehrlichman and John C. Whitaker, Nixon took a pro-environment agenda for his time in office. Some of Nixon's most notable environmental achievements include creating the Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA). In response to the dangerous smog and air quality throughout the U.S. in the mid 20th century Nixon signed the Clean Air Act of 1970 to protect public health and the environment.⁶

The 1985 discovery of the ozone hole over Antarctica marks another moment of increased realization of human industrialization's detrimental effects on the environment and climate. British scientists discovered the phenomenon while surveying stratospheric

⁵ Meir Rinde, "Richard Nixon and the Rise of American Environmentalism," Science History Institute, April 18, 2019, <https://www.sciencehistory.org/distillations/richard-nixon-and-the-rise-of-american-environmentalism>.

⁶ Id.

ozone levels in the Antarctic. The depletion of the ozone was caused by humans' use of chlorofluorocarbons in aerosol cans and cooling devices like air-conditioning.⁷ Under Republican President Ronald Reagan, the U.S. and the rest of the world acted to solve this issue, and in March of 1985, the United Nations Vienna Convention for the Protection of the Ozone Layer was signed. The ozone hole was one of the first instances where humans saw the extent to which they could harm the atmosphere and climate. The ozone hole was also one of the first instances where we saw a worldwide political response.

Another important series of events that raised public awareness on environmental issues, specifically global warming and climate change, was the heat waves and subsequent droughts of the summer of 1988. Until then, the problems of climate change and global warming remained relatively under the radar, with some people accepting and welcoming the idea of a warmer climate. However, public attention on global warming boomed during the summer of 1988, and the press began to take serious notice on the issue. There were two heatwaves in the summer of 1988, one taking place in the first half of July and the other in the first half of August. Throughout the heatwaves, temperatures were consistently in the 90s and 100s in the Midwest and northeast coast. The drought that accompanied the heatwave led to massive agriculture loss and wildfires, including the largest fire in Yellowstone's recorded history.⁸ It is estimated that between 1988 and

⁷ Susan Solomon, "The Discovery of the Antarctic Ozone Hole," Nature News (Nature Publishing Group, October 23, 2019), <https://www.nature.com/articles/d41586-019-02837-5>.

⁸ John Roach, "Heat Wave and Drought Were so Devastating It Had Americans Declaring, 'God Is against Us'," AccuWeather, August 9, 2019, <https://www.accuweather.com/en/weather-news/heat-wave-was-so-devastating-it-had-americans-declaring-god-is-against-us/481031>.

1990, the heatwave and drought caused anywhere between 5,000 and 10,000 deaths.⁹ The heatwave and drought are also attributed to the loss of \$44.2 billion for agriculture and related industries.¹⁰

Around the same time that many of these environmental catastrophes took place, the scientific community began to pay close attention. In 1958, David Keeling of the Scripps Institution of Oceanography established the global atmospheric CO₂ record at the Mauna Loa Observatory in Hawaii. Almost a couple of decades later, in 1975, Wallace Smith Broecker coined the first scientific usage of global warming in his paper titled 'Climate Change: are we on the brink of a pronounced global warming.'¹¹ Broecker is also responsible for his idea of nonlinear and abrupt climate change. Next came James Hansen, who many credits as the father of modern-day climate science in the United States. Hansen was one of the first U.S. scientists to sound the alarm on the dangers of climate change. Following the horrific drought and heatwaves in the summer of 1988, Hansen testified in front of the Senate Energy and Natural Resources Committee. In his testimony he stated that through his work as the director of the NASA Goddard Institute, he was 99% certain that the warming we were witnessing on earth was not due to natural variations but rather was being caused by a buildup of CO₂ and other gases in the atmosphere.¹² Following Hansen's testimony, the United Nations Environmental

⁹ Id

¹⁰ Id

¹¹ Peter de Menocal, "Wallace Smith Broecker (1931-2019)," Nature News (Nature Publishing Group, March 26, 2019), <https://www.nature.com/articles/d41586-019-00993-2>.

¹² Philip Shabecoff, "Global Warming Has Begun, Expert Tells Senate," The New York Times (The New York Times, June 24, 1988), <https://www.nytimes.com/1988/06/24/us/global-warming-has-begun-expert-tells-senate.html>

Programme and World Meteorological Organization established the Intergovernmental Panel on Climate Change (IPCC). The United States, under Republican President Reagan, helped the IPCC. The IPCC's role was to analyze and assess the science of climate change and provide this data and information to governments so they can generate and adopt sound climate policy.

Although combatting climate change began as a bipartisan issue, it would become highly politicized and polarized toward the end of the 20th and the beginning of the 21st century. During this time, large oil and gas companies funded climate science denialism. There was a political realignment of voter geography, specifically with white southerners. And, prominent political figures like George Bush Jr. and Al Gore emerged with a strong point of view on climate change. These factors played a significant role in the early stages of climate change politicization and polarization. The trend toward political polarization accelerated during the Obama administration, as the Great Recession increased fear and a lack of trust in big government and fueled the portrayal of the environmental movement as anti-job and anti-growth – all during a period of vast unemployment and financial distress. The 2010 midterm elections and Trump's presidential victory brought a wave of climate change critics and denialists into political power. This influx of climate critics led to an unprecedented attack on climate science and exacerbated the fear that climate change regulations and remediation would hurt the American economy and workers. A recent 2021 Gallup poll found that in 2001 the divide between conservative and liberal voters on whether global warming would pose a serious

threat to themselves was 13%.¹³ In 2016, it was 38%.¹⁴ And, by 2021, it had ballooned to a whopping 56%.¹⁵ Although climate change has become increasingly polarized, especially during the last decade, there is hope for depoliticization and bipartisan agreement. The oil and gas industries are beginning to allocate resources to the development of renewables. They have made pledges to reach net-zero emissions in the coming decades. Powerful financial institutions are coming together to ensure their investments align with the goals set out by the Paris climate agreement. Also, young GOP members provide a hopeful future for bipartisan agreement on climate change. They are more concerned about the future effects of climate change and are leading the charge in changing their party's opinion on the problem. Although party polarization is at its peak in 2021, with Joe Biden in office, the proliferation of bipartisan climate initiatives, an environmentally conscious young GOP, and a climate-friendly financial industry could lead to a bipartisan approach to remediating the climate crisis.

¹³ Lydia Saad, "Global Warming Attitudes Frozen Since 2016," Gallup.com (Gallup, April 7, 2021), <https://news.gallup.com/poll/343025/global-warming-attitudes-frozen-2016.aspx>.

¹⁴ Id.

¹⁵ Id.

Chapter 1 – Late 20th, Early 21st Century

George H.W. Bush, a Republican born in Milton, Massachusetts, and Vice President under Reagan, was an unlikely champion of policy on climate change. But on September 2nd, 1988, during his presidential campaign, Bush spoke in front of Lake Erie, Michigan, promising that his administration would make it a priority to combat climate change. Notable quotes from his speech include “My plan for how we as a nation, and as a people, can lead the world to a new recognition of the importance of the environment,” and “When we lose forests, we lose part of the answer to global warming. A critical answer to this problem is energy conservation, and that will be a priority of my administration.”¹⁶ George H.W. Bush’s presidential campaign took place soon after the discovery of the ozone hole. During the summer of 1988, there was a significant increase in attention on climate change and global warming, as addressed in the previous chapter. Bush and his campaign team recognized the benefits of portraying Bush as a climate activist in winning over moderate voters, as climate change was still a very bipartisan issue at the time. Bush ended up defeating Democratic Candidate Governor Michael Dukakis of Massachusetts by a solid margin. In the current political landscape surrounding environmental issues, Bush’s acknowledgement of the dangers of global warming and climate change would be unusual in the Republican Party.

¹⁶ George H.W. Bush, “Bush Campaign Speech,” C-Span, August 31, 1988, <https://www.c-span.org/video/?4248-1%2Fbush-campaign-speech>.

When Bush took office in 1989, he acted upon his campaign promises. On November 15, 1990, he signed the revised 1990 Clean Air Act. This bill had widespread congressional support, passing in the House with a vote of 401 to 21 and in the Senate with 89 to 11.¹⁷ Such bipartisan support for environmental legislation has been less common in the past ten to fifteen years, but in the early 1990s combatting climate change was still widely bipartisan. The Revised 1990 Clean Air Act is a major piece of environmental legislation, designed to combat four major environmental threats: acid rain, ozone depletion, urban air pollution, and toxic air emissions. The act had an impact on all four of these issues. For example, all 41 areas deemed to have unhealthy carbon monoxide pollution in 1991 now meet health air quality standards, and the legislation was largely effective in stopping the issue of acid rain in the 1990s and phasing out chlorofluorocarbons and halons both of which were major contributors to the ozone depletion.¹⁸ Bush had countless other environmental successes, including his administration's conception of the National Climate Assessment, a study that takes place every four years measuring the impacts of climate change in the U.S. President Bush Sr. also established the U.S. Global Change Research Program and was an advocate for emission trading, or the "Cap-and-trade" model, developed by the Environmental Defense Fund, although this model was never implemented.

Despite the serious actions taken by Bush, many environmental organizations and leaders did not see his progress on combatting climate change as sufficient. William

¹⁷ "The Clean Air Act - Highlights of the 1990 Amendments," EPA (Environmental Protection Agency, January 3, 2017), <https://www.epa.gov/clean-air-act-overview/clean-air-act-highlights-1990-amendments>.

¹⁸ *Id.*

Reilly, the EPA administrator under President Bush Sr., talked about Bush Sr.'s issues with the environmental movement saying, "From the point of view of the environmentalists, he was Reagan's vice president. And he did the Clean Air Act; he got nothing for it." Reilly said that Bush began to realize that his environmental advocacy was not helping him politically, saying, "That was kind of the beginning of Bush's disillusion about his likely winning popularity by things he did for the environment."¹⁹ Reilly was disappointed with Bush's switch on environmental advocacy; however, as EPA administrator, he accepted much of the blame as the agency failed to generate political praise for Bush's initiatives from environmental organizations. Although Bush Sr. may not have been the climate change champion that many environmental organizations hoped for, his legislative and administrative work on climate change would go further than any future Republican President. The 41st president was the last Republican chief executive to back serious legislative action against climate change.

His successor, President Clinton, certainly contributed and took many steps to combat climate change; however, it was his vice president who became most closely associated with this issue. Al Gore's work on climate change galvanized a whole generation of climate activists; however, in the process, he inadvertently contributed to climate change politicization and helped mobilize the anti-environmental sentiment. In June of 1992, right before his election as vice president, Al Gore published his book *Earth in the Balance: Ecology and Human Spirit*, which examined some of the

¹⁹ Scott Waldman, "Bush Had a Lasting Impact on Climate and Air Policy," *Scientific American* (Scientific American, December 3, 2018), <https://www.scientificamerican.com/article/bush-had-a-lasting-impact-on-climate-and-air-policy/>.

world's ecological issues and proposed bold responses. *Earth In Balance* landed on the New York Times bestsellers list and won multiple national awards, including the Robert F. Kennedy Center for Justice and Human Rights 1993 Book award.²⁰ In 2006, the documentary *An Inconvenient Truth* analyzed Al Gore's life story and campaign to educate people regarding the dangers of climate change and global warming. This film grossed around \$50 million worldwide, won two Academy Awards, and helped Gore win the 2007 Nobel Peace Prize.²¹

Gore's success in the climate change campaign thrust him to the forefront as the face of the newly energized environmental movement. Simultaneous, his success in climate alarmism made him the target of attacks by the climate denialist movement. Myron Ebell, a climate denialist who is the Director of Global Warming and International Environmental Policy at the Competitive Enterprise Institute, a libertarian think tank based in D.C., said: "Al Gore was the perfect proponent and leader of the global warming alarmist because he's a very politically divisive and controversial [...] He was a wonderful target for our side."²² Gore's strong alignment with environmental interests led Republicans to paint Gore as anti-business, which in turn led the climate change movement as a whole to be painted as anti-business.

Prior to the release of *An Inconvenient Truth* in 2000, Al Gore ran for President against Republican George W. Bush. Although Bush made some environmental pledges

²⁰ Azmat Khan, "How Al Gore Galvanized the Climate Change Movement -- On Both Sides," PBS (Public Broadcasting Service, October 23, 2012), <https://www.pbs.org/wgbh/frontline/article/how-al-gore-galvanized-the-climate-change-movement-on-both-sides/>.

²¹ Id.

²² Id.

to combat climate change, he also bashed the Clinton administration for their environmental and energy policies, which he believed discouraged oil and gas exploration, and Bush had deep ties to the oil and gas industry. Around this time, the oil industry began to see a friend in the anti-government regulation and intervention sentiment in the conservative party. In 1977, George W. Bush had started his oil and gas exploration firm, Arbusto Energy, and had close ties with many American independent oil companies. Throughout his career, he had received extensive funding from the oil and gas industry, including during his unsuccessful 1978 run for the US House and his successful 1994 governorship campaign in Texas. By June of 2000, Bush had received fifteen times more money from oil and gas interests than Gore.²³ Notable oil companies donating significant sums of money to the Bush campaign, including Enron Oil Company and Koch Industries, who had donated \$92,250 and \$32,200, respectively.²⁴ In total, Al Gore received less than \$100,000 in contributions from the oil and gas industry.

Once in office, President George W. Bush continued to preach his administration's commitment to combat climate change saying in 2002, "my government has set two priorities: we must clean our air, and we must address the issues of global climate change. We must also act in a serious and responsible ways, given the scientific

²³ John M. Broder, "Oil and Gas Aid Bush Bid For President," The New York Times (The New York Times, June 23, 2000), <https://www.nytimes.com/2000/06/23/us/oil-and-gas-aid-bush-bid-for-president.html>.

²⁴ Id.

uncertainties. While these uncertainties remain, we can begin now to address the human factors that contribute to climate change."²⁵

President Bush's administration supported environmental legislation and renewable energy initiatives such as the *Energy Policy Act of 2005* and the *2003 Hydrogen Fuel Initiative*. Despite his rhetoric; however, Bush was also one of the first major U.S. political leaders to begin to cast doubt on the science behind climate change.

In 1997, over 150 countries met in Kyoto, Japan, to construct a climate change protocol to reduce greenhouse gases known as the Kyoto Protocol. This protocol was meant to commit industrialized nations and economies worldwide to limit and reduce their greenhouse gas emissions to ultimately combat climate change. The Kyoto protocol established that the U.S. would work towards reducing their CO₂ and methane levels by 7% below by 2012.²⁶ Conservative legislators thought this pledge to reduce greenhouse gases would hurt the economy and specifically would hurt the oil and gas industry, which at this time was already contributing heavily to conservative political candidates. Senate Republicans called the protocol "dead on arrival," and even a Democratic senator urged a delay in voting on the bill due to its unlikely prospects of being enacted. The head of the Republican Policy Committee, Senator Larry E. Craig, stated that he wanted the Clinton administration to "promptly submit the treaty and allow the Senate to kill it." Before the hearing on the protocol, the Senate passed the Byrd-Hagel resolution with a 95-0 vote,

²⁵ The White House Archives, "National Archives and Records Administration," National Archives and Records Administration (National Archives and Records Administration, 2006), <https://georgewbush-whitehouse.archives.gov/ceq/clean-energy.html>.

²⁶ Julian Borger, "Bush Kills Global Warming Treaty," *The Guardian* (Guardian News and Media, March 29, 2001), <https://www.theguardian.com/environment/2001/mar/29/globalwarming.usnews>.

which ultimately stated that the U.S. should not sign on to any protocol that mandated the reduction of greenhouse gas emissions unless it required other developing countries to limit their greenhouse gas emissions during the same time frame. The Byrd-Hagel resolution doomed the Kyoto Protocol from ever being ratified. Once Bush Jr. and his administration took office many countries and leaders tried to convince Bush to rethink the treaty, as the U.S. was the largest economy and heaviest energy user at the time. Even Bush Jr.'s EPA administrator Christine Todd Whitman tried to persuade Bush to take a closer look at the protocol, with her office saying, "such a treaty would begin to create some certainty that climate change is a lasting policy issue."²⁷ Bush disregarded this advice. He and his advisers sided with his other conservative politicians and the oil and gas industry, and ultimately, the Bush administration never even tried to ratify the treaty. Prior to Bush Jr. taking office, there was a widespread belief behind the science of climate change. After Bush, outside of a few conservative anomalies, including John McCain, the conservative party began to take a very anti-environmental and climate action stance, and this polarization has only gotten worse.

The oil and gas industry is historically and currently one of the largest emitters of greenhouse gases and subsequently one of the largest contributors to climate change. Around two-thirds of the global industrial greenhouse gas emissions over the past two centuries can be traced to just a handful of companies, many of which are in the oil and gas industry.²⁸ From 1988 to 2015, the top 20 oil and gas companies alone have

²⁷ Id.

²⁸ Marco Grasso, "Oily Politics: A Critical Assessment of the Oil and Gas Industry's Contribution to Climate Change," *Energy Research & Social Science* 50 (April 2019): pp. 106-115, <https://doi.org/10.1016/j.erss.2018.11.017>.

contributed roughly 30% of the total industrial greenhouse gas emissions.²⁹ The oil and gas industry is one of the most profitable and powerful industries globally, so when climate change and subsequent proposals to limit greenhouse gas emissions gained political traction in the U.S., the industry began an all-out war to protect its revenues. The large oil and gas companies ran disinformation campaigns to persuade the public to doubt a scientific consensus surrounding climate change and contributed heavily to conservative politicians who were anti-government regulation and intervention and would portray their narrative of climate change denialism.

A review of the history of the oil and gas industry illuminates deep roots in evangelism and subsequent anti-environmental sentiment. In the 1870s, John D. Rockefeller and Henry Flagler founded Standard Oil Corporation, one of the first big oil companies in the world. Standard Oil Co. would control a majority of the oil in the world. With their riches, the Rockefeller family would create The Rockefeller Foundation where they supported missionaries and liberal protestant causes around the world. John Davison Rockefeller, the fourth Rockefeller, even supported climate and environmental organizations. Aside from the Rockefellers, there were many smaller independent family-owned oil companies, the most notable of the time being the Stewards family. These independent small oil companies put their money into evangelizing America. After the Stewards came the Pew family, followed by the Hunt family, all of whom donated significant amounts of money to evangelical causes in America. The evangelicals of the time were quite anti-environmental, as they saw the environmental movement as a push

²⁹ Id.

to put the needs of animals and the planet above or equal to humans, and they believed that humans should be placed above all as that is what God intended. With this sentiment was born the 'Resisting the Green Dragon' movement, which portrayed the environmental movement as deceptive and casted significant doubt on the science of climate change.³⁰ The relationship between evangelism and America's oil companies established a connection between big oil and anti-environmentalism and climate change denialism.

During the middle to late 20th century, many independent oil companies ran their own scientific experiments on climate change. One such independent oil company was Exxon, who became aware of the oil and gas industries impact on climate change as early as 1977, when Exxon's head scientist James Black said, "In the first place, there is general scientific agreement that the most likely manner in which mankind is influencing the global climate is through carbon dioxide release from the burning of fossil fuels."³¹ Exxon also spent over a million dollars on groundbreaking research on carbon dioxides absorption in the oceans and its effects.³² A few years after James Black's discoveries, Marty Hoffert, another scientist working for Exxon, created one of the first models to predict the effects of human-made climate change. Exxon, along with other big American oil companies, were spending massive sums on climate change science, only to

³⁰ Yale Climate Connections, "Eye-Opening Video Explains the Origins of Climate Change 'Polarization'," EcoWatch (EcoWatch, March 15, 2021), <https://www.ecowatch.com/climate-change-polarization-2651062164.html>.

³¹ Shannon Hall, "Exxon Knew about Climate Change Almost 40 Years Ago," Scientific American (Scientific American, October 26, 2015), <https://www.scientificamerican.com/article/exxon-knew-about-climate-change-almost-40-years-ago/>.

³² Id.

go out to the press and contradict climate science. Mr. Hoffert elaborated on this situation, “They were saying things that were contradicting their own world-class research groups,” and Marty goes on to say, “What they did was immoral.”³³ Not only were Exxon, and other major American oil companies, contradicting their own research, they were actively funding climate change denialism and contributing to industry-friendly conservative politicians who were spreading climate denialist rhetoric across their district and the U.S.

One of the major oil and gas companies funding and contributing to climate denialism was Koch Industries, which sell various things from fertilizer to paper towels; however, Koch Industries' most critical business is their fossil fuel business. From 1997 to 2018, the Koch Family Foundation spent \$145,555,197 financing roughly 90 groups that have attacked climate change science and climate change policy prerogatives in order to protect their bottom line.³⁴ Koch Industries also operates one of the largest corporate lobbying offices in the U.S. and controls ‘Americans for Prosperity,’ which mobilizes countless employees and volunteers to knock on doors, attend rallies and protests, and contact lawmakers to protest climate change legislation. Koch Industries multifaceted approach to combatting climate change legislation has made them incredibly effective at garnering public attention, and casting doubt on the scientific consensus on climate change.

³³ Phoebe Keane, “How the Oil Industry Made Us Doubt Climate Change,” BBC News (BBC, September 19, 2020), <https://www.bbc.com/news/stories-53640382>.

³⁴ Gus Ruelas, “Koch Industries: Secretly Funding the Climate Denial Machine,” Greenpeace USA, accessed March 31, 2021, <https://www.greenpeace.org/usa/ending-the-climate-crisis/climate-deniers/koch-industries/>.

Science petitions have also been used as a means to cast doubt on climate science and its consensus. In 2008, the Oregon Institute of Science and Medicine (OISM), released the OISM Petition Project which stated, “there is no convincing scientific evidence that human release of carbon dioxide will, in the foreseeable future, cause catastrophic heating of the Earth’s atmosphere.”³⁵ The OISM Petition Project received over 30,000 signatures from various scientists; however, only 39 of the signatories were actual climate scientists and almost none were deemed as credible.³⁶ Although the OISM Petition Project held little actual credibility, its authentic appearance and mass signatures succeeded in convincing many Americans to doubt climate science. As oil and gas companies along with the OISM Petition Project raised doubt on the scientific consensus behind climate change, more Americans began to look to politicians for answers regarding the climate crisis. Many conservative politicians were receiving significant contributions from the oil and gas industry and therefore had a vested interest in perpetuating the narrative that climate change posed no real immediate threat and there was no scientific consensus.

Another key aspect in the political polarization of climate change in the late 20th and early 21st centuries, came from the demographic and geographical realignment of the parties. In the 92nd congress, 1971-1973, the Democrats controlled most of the South, holding office in more energy and mining districts than the Republican party, and the parties held a similar proportion of farming districts. In 1988, big energy states like

³⁵ James Hoggan, “The Climate Change Denial Industry: James Hoggan,” InfoBase (The Green Interview , April 16, 2014), https://digital-films-com.ccl.idm.oclc.org/p_ViewVideo.aspx?xtid=56726.

³⁶ Id.

Oklahoma and Louisiana had Democratic Senators and Representatives. In terms of Presidential election, in 1988 Bush Sr. won California and New Jersey, both of which are now Democratic strongholds, and Dukakis won West Virginia, a key coal mining state. During this time there was internal party disagreement on environmental issues, as Democrats holding power in energy states had to be cautious as to not hurt the coal mining or oil & gas industry. However, by the 114th Congress, there had been a significant geographic realignment, with Republicans controlling the Southern states, and holding significantly more energy, mining, and farming districts compared to Democrats.³⁷ Therefore, key energy and farming states were now firmly with the Republican party and pro-environmental states with Democrats. This realignment led to less internal party differences on climate change and other environmental issues, as Republicans were now representing strongly pro-energy states and Democrats pro-environment states.

³⁷ David Karol, "Party Polarization on Environmental Issues: Toward Prospects for Change," *Niskanen Center*, May 2018.

Chapter 2 – Recent

The 2008 presidential election between Senator Barack Obama of Illinois, and John McCain was a hopeful sign for the climate change movement. Prior to McCain's presidential campaign, he was a staunch supporter of curbing greenhouse gas emission and combatting global warming. In 2003, John McCain worked across the aisle with Democratic Senator from Connecticut Joseph Lieberman to draft the first economy-wide climate legislation to reduce pollution. The bill was called the 2003 Climate Stewardship Act, based on the former cap-and-trade model used to combat the acid rain crisis in the 1990s. The bill was introduced on January 8, 2003 and failed with a vote of 43-55.³⁸ Regardless of the bill's failure, some Republican members of Congress congratulated McCain and Lieberman on their bipartisan approach to climate change. McCain was also a strong supporter of climate science. In a floor speech for his bill with Lieberman, he said, "The overwhelming body of scientific opinion in America and the world believes that human activity is causing climate change in the world, and that is an irrefutable fact, now the opponents of this can shop around for their scientists of their choice, but the overwhelming majority of scientists say this and every year that evidence becomes more compelling."³⁹ The bill was reintroduced in 2005 as the 2005 Climate

³⁸ Marianne Lavelle, "John McCain's Climate Change Legacy," Inside Climate News, November 30, 2020, <https://insideclimatenews.org/news/26082018/john-mccain-climate-change-leadership-senate-cap-trade-bipartisan-lieberman-republican-campaign>.

³⁹ Id.

Stewardship and Innovation Act. It again failed, this time by wider margin with a vote of 38 Yea to 60 Nay.⁴⁰

During McCain's Presidential election campaign, he called for a mandatory limit on greenhouse gas emissions in the U.S. along with a call to engage China and India, the two other largest polluters, to limit their greenhouse gas emissions. In line with his previous statements, he advocated trust in climate science, whereas the Bush administration raised questions and doubts around climate change science. McCain even announced emission reduction targets; in a speech, McCain gave in Oregon, he called for cutting emissions 60% below 1990 levels by as late as 2050 and advocated for the movement towards renewable energy to replace carbon-based energy sources.⁴¹ But his climate support for climate change legislation and defense of climate science was not shared by many other Republicans at the time, as he was the only major Republican presidential candidate to call for mandatory limits on greenhouse gas emissions. And the longer McCain's presidential campaign continued, the less he mentioned climate change and the more he backed off his emissions-cutting policies. McCain even ended up not supporting the revamped cap and trade bill that he had introduced with Lieberman in 2003.⁴² This shift shows how hard it became for a Republican to support climate change legislation or even defend the science behind climate change.

⁴⁰ Climate Stewardship and Innovation Act of 2005. Bill (2005).

⁴¹ Elisabeth Bumiller and John, "McCain Differs With Bush on Climate Change," The New York Times (The New York Times, May 13, 2008), <https://www.nytimes.com/2008/05/13/us/politics/12cnd-mccain.html>.

⁴² Marianne Lavelle, "John McCain's Climate Change Legacy," Inside Climate News, November 30, 2020, <https://insideclimatenews.org/news/26082018/john-mccain-climate-change-leadership-senate-cap-trade-bipartisan-lieberman-republican-campaign>.

Obama was also a committed supporter of climate change action. His campaign promises to limit emissions were even more aggressive than McCain's, proposing cutting them by greenhouse gas emissions 80 percent below 1990 levels by 2050.⁴³ But he entered the White House amid the biggest financial crisis since the Great Depression. The Great Recession, which started in late 2007, hobbled the U.S. economy and shifted attention away from climate change. A 2008 Gallup poll found that for the first time since Gallup started polling on the question in the 1980s, the American public valued economic growth above environmental protection.⁴⁴ Americans were much more preoccupied dealing with their immediate financial needs. A study by Lyle Scruggs and Salil Benegal titled "Declining public concern about climate change: Can we blame the great recession?" analyzes the decline in public concern regarding climate change and the increasing skepticism surrounding climate science during the great recession. The study found that the unemployment rate better explained the shift in public concern surrounding climate change than by negative media coverage, "Climategate," recent weather, or partisanship.⁴⁵ Therefore, it makes sense that during the great recession, when unemployment reached 10%, public concern surrounding climate change to plummet. Professor Lyle Scruggs, one of the authors of the study, said that "History shows that the

⁴³ Elisabeth Bumiller and John M. Broder, "McCain Differs With Bush on Climate Change," *The New York Times* (The New York Times, May 13, 2008), <https://www.nytimes.com/2008/05/13/us/politics/12cnd-mccain.html>.

⁴⁴ Adam Aton, "POLITICS: Skepticism Soared during the Last Recession. Will It Again?," *E&E News* (E&E News, April 2, 2020), <https://www.eenews.net/stories/1062762797>.

⁴⁵ Lyle Scruggs and Salil Benegal, "Declining Public Concern about Climate Change: Can We Blame the Great Recession?," *Global Environmental Change* 22, no. 2 (2012): pp. 505-515, <https://doi.org/10.1016/j.gloenvcha.2012.01.002>.

environment, for better or worse, tends to be what we call a fair-weather friend." The Great Recession also enabled opponents of climate change legislation to frame it as an anti-growth and anti-jobs. This framing led many Americans to question the science behind climate change and the scientific consensus surrounding climate science. In a 2010 Gallup tracking poll, they found that nearly half of Americans believed the science behind global warming was exaggerated, this was a 15% surge from 2007, and the belief in science would not go back to 2007 levels until 2016.⁴⁶

In 2007, some Republican legislators and voters were backing John McCain's climate agenda, Newt Gingrich starred in an ad on climate change alongside Democrat Speaker of the House Nancy Pelosi. But by 2010, legislators and the public's view had drastically shifted. With the rise of the tea party movement in 2009, conservative politicians and activists seized on the opportunity and portrayed climate legislation and regulation as another way that the government was taking away people's freedom and increasing taxes. During the Great Recession, President Obama passed a \$787 billion stimulus package going towards tax cuts and spending on infrastructure, schools, and green energy.⁴⁷ Conservatives portrayed renewable energy industry subsidies as a pork-barrel giveaway when ordinary families were struggling financially. These factors gave more ammunition for climate skeptics to use against climate change activism and legislation, and it made it significantly easier to cast doubt on climate science.

⁴⁶ Adam Aton, "POLITICS: Skepticism Soared during the Last Recession. Will It Again?," E&E News (E&E News, April 2, 2020), <https://www.eenews.net/stories/1062762797>.

⁴⁷ History.com Editors, "Great Recession," History.com (A&E Television Networks, December 4, 2017), <https://www.history.com/topics/21st-century/recession>.

The increase in climate change skepticism also stemmed from the 2009 “Climategate,” where more than 1,000 emails between scientists at the Climate Research Unit of the U.K.’s University of East Anglia were hacked and made public.⁴⁸ Many climate skeptics used these hacked emails as a way to cast doubt on climate science and claim misconduct regarding climate scientists. Even though these leaked emails showed no evidence to refute the scientific consensus on global warming, they were still all-over mainstream media, and it raised a significant amount of public concern. Republican politicians jumped on the opportunity to cast doubt on climate change and portray Climategate as significant. For example, Republican Rep. John Shadegg from Arizona was quoted saying, “Anyone who thinks that the emails are insignificant, that they don’t damage the credibility of the entire movement, is naive.” Republican Rep. Jim Sensenbrenner from Wisconsin stated that these hacked emails show “a massive scientific international fraud.”⁴⁹ ClimateGate and the great recession were massive opportunities for the Republican party to attack Democrats, who had already fully aligned with the climate change movement, which led to increasing polarization on the issue, which would only be increased upon in the upcoming years.

The 2010 midterm elections continued to divide the parties along climate change. The 2010 midterm elections saw the Tea Party’s impact. The fiscally conservative Tea Party movement stood for an overall smaller government and believed that the free

⁴⁸ Robin McKie, “Climategate 10 Years on: What Lessons Have We Learned?,” *The Guardian* (Guardian News and Media, November 9, 2019), <https://www.theguardian.com/theobserver/2019/nov/09/climategate-10-years-on-what-lessons-have-we-learned>.

⁴⁹ Lisa Lerer, “GOP Pushes on ‘Climategate,’” *POLITICO* (POLITICO, December 6, 2009), <https://www.politico.com/story/2009/12/gop-pushes-on-climategate-030172>.

markets are the best means to generate jobs and continue economic growth. In the wake of the Great Recession, Americans were looking for an answer on how to pick up the economy and quench the fear of an overreaching, big government, and the Tea Party movement claimed to have the answers. The Republican party and specifically the Tea Party Republicans won big in the 2010 Midterm elections, picking up 60 seats in the House, their party's biggest election win since 1938.⁵⁰ The Republicans subsequently took control of the House,. Regarding the Tea Party movement, in the 2010 election, there was a total of 138 races with members of the Tea Party, with Tea Party Candidates at least winning 44 of the races, including notable Tea Party advocates such as Marco Rubio in Florida and Rand Paul in Kentucky winning their races.⁵¹

The Tea Party movement's electoral victory was a loss for the climate change movement as Tea Party supporters tended to be the most skeptical on climate change. A 2011 study from Yale analyzed how different groups of voters, Republicans, independents, democrats, and tea party supporters, viewed the issue of climate change. They found that 78% of democrat, 71% of independents, and 53% of Republican voters believed global warming was occurring; however, only 34% of tea party supporters felt the same.⁵² The same poll found that a majority of voters studied identifying as Democrats, Republicans, and Independents to some degree supported an international

⁵⁰ Paul Harris, "US Midterm Election Results Herald New Political Era as Republicans Take House," The Guardian (Guardian News and Media, November 3, 2010), <https://www.theguardian.com/world/2010/nov/03/us-midterm-election-results-tea-party>.

⁵¹ "How the Tea Party Fared," The New York Times (The New York Times, November 4, 2010), <http://archive.nytimes.com/www.nytimes.com/interactive/2010/11/04/us/politics/tea-party-results.html>.

⁵² "Poll: the Tea Party and Climate Change," Carbon Brief (Carbon Brief, September 8, 2011), <https://www.carbonbrief.org/poll-the-tea-party-and-climate-change>.

treaty to cut CO2 emissions. But 55% of the tea party voters said they strongly opposed such a treaty.⁵³ Another 2013 poll from the Pew Research Center found that the Tea Party Republicans were the only group of voters who did not believe that the earth was warming. An abysmal 25% of Tea Party Republicans said that global warming was happening.⁵⁴ Therefore the influx of Tea Party Republicans into congress during the 2010 midterm elections created a tremendous issue for the climate change movement. The success of the Tea Party candidates in the 2010 midterm showed the Republican party that anti-environmental stances on climate change could prove to be quite beneficial to rally their base and win elections. Support for climate change action became toxic within the party.

An example is a Republican Bob Inglis who served as the U.S. Representative for South Carolina's 4th congressional district from 1993 to 1999 and then again from 2005 to 2011. For most of Bob Inglis's time in office, he was a persistent climate change denier. In an interview with EcoWatch, Bob Inglis acknowledges pretty much all he knew about climate change is that Al-Gore and the Left supported, and that was enough to fight against climate legislation.⁵⁵ In 2009 Bob Inglis changed his stance on climate

⁵³ Id.

⁵⁴ Juliet Eilperin and Scott Clement, "Tea Party Republicans Are Biggest Climate Change Deniers, New Pew Poll Finds," The Washington Post (WP Company, April 28, 2019), <https://www.washingtonpost.com/news/the-fix/wp/2013/11/01/only-tea-party-members-believe-climate-change-is-not-happening-new-pew-poll-finds/>.

⁵⁵ Yale Climate Connections, "Eye-Opening Video Explains the Origins of Climate Change 'Polarization'," EcoWatch (EcoWatch, March 15, 2021), <https://www.ecowatch.com/climate-change-polarization-2651062164.html>.

change and even went as far as to 2009 introduce a carbon tax bill.⁵⁶ Koch Industries, which previously helped fund Inglis's campaign, immediately supported his primary opponent Trey Gowdy, a member of the Tea Party movement, and even organized Tea Party activists to protest Inglis's town hall meetings. Inglis lost his primary with 29% of the vote compared to Trey Gowdy's 71%.⁵⁷ Again, we see the political consequences of a Republican politician advocating for climate change legislation and activism. Bob Inglis's loss served as a warning to other Republican lawmakers sympathetic to the climate change movement; there was no space for them in the new Republican party.

In the 2012 Presidential race, we saw another Republican candidate, Mitt Romney, who was sympathetic to the climate change movement, and in his campaign, advocated measures to cut emissions. In Mitt Romney's 2010 book, *No Apology*, Romney stated, "I believe that climate change is occurring. [...] I also believe that human activity is a contributing factor."⁵⁸ In the early parts of the presidential campaign, Romney advocated the reduction of pollution and greenhouse gas emissions. However, once Texas Governor Rick Perry, a staunch climate change denialist entered the race and posed a serious threat in the primary, Romney moved away from his climate change campaign position. By October of 2011, Romney presented at a fundraiser held at the Consol Energy Center, Consol Energy is a U.S.-based Coal Energy Company, where

⁵⁶ James Rainey, "Bob Inglis, a Republican Believer in Climate Change, Is out to Convert His Party," NBCNews.com (NBCUniversal News Group, October 2, 2018), <https://www.nbcnews.com/news/us-news/bob-inglis-republican-believer-climate-change-out-convert-his-party-n912066>.

⁵⁷ "House Races," The New York Times (The New York Times, December 10, 2010), <https://www.nytimes.com/elections/2010/house/south-carolina/4.html>.

⁵⁸ Coral Davenport, "Mitt Romney's Shifting Views on Climate Change," CBS News (CBS Interactive, October 28, 2011), <https://www.cbsnews.com/news/mitt-romneys-shifting-views-on-climate-change/>.

he said, "My view is that we don't know what's causing climate change on this planet. And the idea of spending trillions and trillions of dollars to try and reduce CO2 emissions is not the right course for us."⁵⁹ The issue of climate change had become a litmus test for the Republican party, with Republican politicians who took pro-climate change stances being cast out by their party and likely failing to raise support among their constituent base.

The 2016 Presidential election was a nightmare for the climate change movement with Republican frontrunners Donald J. Trump and Ted Cruz. In an NPR interview, Cruz said, "Climate change is the perfect pseudoscientific theory for a big-government politician who wants more power."⁶⁰ Cruz has also likened climate change and global warming believers to "the equivalent of the flat-Earthers" in an interview with the Texas Tribune.⁶¹ However, this pales in comparison to Trump's rhetoric regarding climate change. In 2012, Trump tweeted that Global warming was a hoax created by the Chinese, "The concept of global warming was created by and for the Chinese to make U.S. manufacturing non-competitive."⁶² In 2014, Trump went on Twitter to again cast doubt on global warming, saying, "NBC News just called it the great freeze – coldest weather in

⁵⁹ Id.

⁶⁰ Morning Edition Podcast, "Scientific Evidence Doesn't Support Global Warming, Sen. Ted Cruz Says," NPR (NPR, December 9, 2015), <https://www.npr.org/2015/12/09/459026242/scientific-evidence-doesn-t-support-global-warming-sen-ted-cruz-says>.

⁶¹ Sabrina Siddiqui, "Ted Cruz Embodies Republican Climate Change Dilemma," The Guardian (Guardian News and Media, March 27, 2015), <https://www.theguardian.com/us-news/2015/mar/27/ted-cruz-climate-change-republicans-2016>.

⁶² Louis Jacobson, "PolitiFact - Yes, Donald Trump Did Call Climate Change a Chinese Hoax," @politifact, June 2, 2016, <https://www.politifact.com/factchecks/2016/jun/03/hillary-clinton/yes-donald-trump-did-call-climate-change-chinese-h/>.

years. Is our country still spending money on the GLOBAL WARMING HOAX?"⁶³ During Trump's 2016 campaign, he stated his displeasure with the Paris climate accord, saying that it would hurt American workers and the U.S. economy. Kellyanne Conway, Trump's campaign manager, noted that Trump believes "global warming is naturally occurring," insinuating that humans were not the primary cause of global warming.⁶⁴ Trump was also a champion for the oil & gas industry throughout his campaign, advocating U.S. oil independence through untapped U.S. oil reserves and renewal of the Keystone XL Pipeline. Another concerning rally point of Trump's campaign was his support of the U.S. coal industry, discussing 'clean coal' at many of his rallies in coal-mining states such as West Virginia and Pennsylvania. The U.S. coal industry has been declining for decades; however, Trump gave hope to the flailing industry, promising that he will reopen coal mines across the states. The oil & gas and coal industries are some of the most significant contributors to our climate crisis, making Trump's alignment with these industries particularly troubling for climate change advocates.

Trump's administration took a heavy-handed approach to silence any dissenting viewpoints on the climate. Several employees in his administration who supported climate science and climate legislation were forced out or voluntarily resigned. In 2019, Rod Schoonover, who worked in the State Department, left due to the systematic suppression of climate science. Mr. Schoonover planned to testify on the national security

⁶³ Id.

⁶⁴ "Donald Trump Presidential Campaign, 2016/Climate Change," Ballotpedia, accessed May 3, 2021, https://ballotpedia.org/Donald_Trump_presidential_campaign,_2016/Climate_change.

implications and threats of climate change; however, the White House blocked his testimony. The month before he resigned, he also testified in front of the House Intelligence Committee on the climate crisis, but the White House blocked his written testimony from entering the congressional records, and they heavily edited his proposed climate change assessment. Mr. Schoonover is not the only one who was silenced. In 2019, climate scientist Maria Caffrey, who worked for the National Park Service, was pushed out of her job due to her position on climate science. Another example of the suppression of climate advocates involved Dan Coats, Trump's former Director of National Intelligence. Mr. Coats brought up the threat that climate change poses on national security, such as competition for resources and more intense and frequent natural disasters, subsequently stepping down from his position in August of 2019.

It wasn't just high-ranking federal government employees undermining climate science under the Trump administration, but mid-level managers also attacked climate science to keep their jobs. A 2018 report by the inspector general of the EPA found that 400 EPA employees surveyed believed that a manager had suppressed the release of scientific information; however, nobody had ever reported these violations.⁶⁵ Another 2018 survey conducted by the Union of Concerned Scientists surveyed 63,000 federal employees and found the EPA and Department of the Interior to have the least trustworthy leadership and integrity.⁶⁶ Hundreds of government employees have stated

⁶⁵ Monica Brynn et al., "Further Efforts Needed to Uphold Scientific Integrity Policy at EPA," 20-P-0173 Further Efforts Needed to Uphold Scientific Integrity Policy at EPA § (2020).

⁶⁶ Lisa Friedman, "A War Against Climate Science, Waged by Washington's Rank and File," The New York Times (The New York Times, June 15, 2020), <https://www.nytimes.com/2020/06/15/climate/climate-science-trump.html>.

that they were asked to omit or avoid discussing climate change, likely due to the fear of being fired or facing repercussions from senior management. The Trump administration created an environment of fear in government agencies regarding discussing climate change.

Not only is the Trump administration pushing out "disobedient" workers, but they are also silencing any mentioning of climate change government websites. A study conducted by the Environmental Data & Governance Initiative found that around a quarter of all mentions of climate on governmental websites have been removed since the Trump administration took office.⁶⁷ In 2019, the Trump administration was found to have deleted mentions of climate change from the U.S. Geological Survey (USGS) press releases. The study showed that California would face upwards of \$150 billion in climate change-related property damages, such as sea-level rising by 2100.⁶⁸ However, when Trump administration officials got their hands on the study, they deleted mentions of the impact of climate change for their press release; therefore, painting a distorted picture of the future of California's infrastructure. One federal researcher talks about the silencing of climate science under the Trump administration, saying, "It's been made clear to us that we're not supposed to use climate change in press releases anymore. They will not be authorized."⁶⁹ Another example of the Trump Administrations' censorship of climate

⁶⁷ Robbie Gramer, "Trump's Shadow War on Climate Science," *Foreign Policy*, July 31, 2019, <https://foreignpolicy.com/2019/07/31/trumps-shadow-war-on-climate-science-state-department-intelligence-analyst-resigns-white-house-muzzles-intelligence-assessment-climate-change-environment/>.

⁶⁸ Scott Waldman, Sofia Moutinho, and Adrian Cho, "Trump Officials Deleting Mentions of 'Climate Change' from U.S. Geological Survey Press Releases," *Science*, July 9, 2019, <https://www.sciencemag.org/news/2019/07/trump-officials-deleting-mentions-climate-change-us-geological-survey-press-releases>.

⁶⁹ *Id.*

science is the 2019 National Preparedness Report written by the Federal Emergency Management Agency (FEMA). The 2019 report did not mention climate change; whereas, nearly every previous report had discussed how to best prepare for the impacts of climate change.

The Trump Administration also waged war on climate science by decreasing funding and employment in government agencies working on climate science and other environmental issues. During Trump's presidency, the EPA lost 672 scientists, as did the U.S. Geological Survey. The U.S. Fish and Wildlife Service lost 231 staff members. And, the Department of the Interior's Bureau of Ocean Energy Management lost nine scientists.⁷⁰ Trump's budget proposal for FY2021 cut significant funding across many different government agencies, including the EPA, where Trump proposed to cut funding by 26.4%, and the Department of the Interior, where cuts were proposed at 16% compared to FY2020 funding levels.⁷¹ The silencing of climate science under the Trump administration has led the U.S. public to look for answers to the climate crisis outside the scientific field, causing more people to look to their politicians for answers and subsequently increasing the politicization of the issue.

The Media has played a substantial role in politicizing climate change as well. A 2020 study by Sedona Chinn, Sol Hart, and Stuart Soroka titled *Politicization and Polarization In Climate Change News Content, 1985-2017*, analyzes how climate change

⁷⁰ "Silencing Science Tracker," Silencing Science Tracker | Sabin Center for Climate Change Law, accessed May 3, 2021, <https://climate.law.columbia.edu/Silencing-Science-Tracker>.

⁷¹ Id.

has been portrayed in the news over the past few decades. The study gathered data from eleven different major newspapers from 1980 to 2017, screening for dialogue on climate change and analyzing the actors cited in the articles talking about climate change.⁷² The study found that in the 1980s and 90s, there were significantly more mentions of scientists when discussing climate change than politicians; however, by the 2000s, the references to scientists among these eleven newspapers declined, and in most years between 2000 and 2017 references, politicians outnumbered scientists when discussing climate change.⁷³ The study also found that the polarization of climate change in these newspapers remained relatively constant up until 2011 when the dialogue on climate change became much polarized and partisan in its discourse.⁷⁴ The study discusses these results' implications, explaining how the increased polarization and partisanship among climate change came a few years after political actors became featured more than scientists. Therefore, the study found some relationship between the increase in political references on climate change and the partisanship of the climate change dialogue, which shows the relationship between the media and climate change politicization. By allowing politicians to control climate change media, the public is more likely to view politicians as the experts on climate change over the scientists. The public is also more likely to listen and trust politicians from their parties. With both parties casting many different narratives on the science and issues of climate change, democrat and republican voters

⁷² Sedona Chinn, P. Sol Hart, and Stuart Soroka, "Politicization and Polarization in Climate Change News Content, 1985-2017," *Science Communication* 42, no. 1 (2020): pp. 112-129, <https://doi.org/10.1177/1075547019900290>.

⁷³ Id.

⁷⁴ Id.

are getting a much different story of climate change. Also, allowing politicians to appear more when discussing climate change than scientists makes the issue appear to be political rather than scientific.

Chapter 3 – Future

The evidence of climate change is becoming harder to ignore regardless of political identification. More Americans are taking notice of unusual weather events and other effects from climate change. A 2019 study from Pew Research found that 62% of U.S. adults believe that climate change is in some ways affecting their communities.⁷⁵ The study also reported that 22% of the study participants said climate change was affecting their local community a “great deal,” 39% answered it was affecting their community “some” and 38% of participants answered that climate change affecting their community “not too much/not at all.”⁷⁶ The most common effect of climate change affecting participants communities was unusually hot weather, 79%, severe weather, 70%, and droughts/water shortages. 64%.⁷⁷ People living on the Pacific west coast and South Atlantic believed that climate change is affecting their communities much more than people living in the Mountain West and Midwest. As the effects of climate change intensify in the upcoming decades regions like the Midwest and Mountain West will begin to feel the effects to a much greater degree. But it remains to be seen whether changes in the physical climate will lead to changes in the attitudinal climate.

The 2020 presidential election brought about hope for the climate change movement, as President Joe Biden defeated incumbent Donald Trump. Throughout his

⁷⁵ Cary Funk and Meg Hefferon, “U.S. Public Views on Climate and Energy,” Pew Research Center Science & Society (Pew Research Center, October 2, 2020), https://www.pewresearch.org/science/2019/11/25/u-s-public-views-on-climate-and-energy/?utm_source=adaptivemailer&utm_medium=email&utm_campaign=19-11-25+climate&org=982&lvl=100&ite=5010&lea=1139465&ctr=0&par=1&trk=.

⁷⁶ Id.

⁷⁷ Id.

Presidential campaign, Biden made it clear he planned on putting climate change at center stage. Biden announced that on his first day in office, he would rejoin the Paris climate agreement and provide infrastructure investments to ensure that U.S. infrastructure remains resilient against the impending issues of climate change. Biden also said throughout his campaign that his administration would work hard to support U.S. renewable energy to revitalize the U.S. energy sector and mitigate the detrimental impact fossil fuels are having on our environment.

Under Trump, political polarization heightened, and bipartisanship floundered. Biden promised to work across the aisle. Compared with other 2020 Democratic Presidential candidates, including Senator Elizabeth Warren and Bernie Sanders, Biden appeared moderate. In the Lugar Center's Bipartisan Index, which assesses the bipartisanship of members of Congress, Biden scored above the baseline average in each of his sessions of Congress, and out of 250 Senators from 1993 to 2012, Biden ranked 47th for bipartisanship.⁷⁸ Warren ranked 195th and Sanders ranked 247th out of the 250 Senators between 1993 and 2012.⁷⁹ Moreover, some of Biden's climate change prerogatives have bipartisan support, such as green infrastructure updates, renewable energy, carbon sequestration, and aid for sustainable farming.

Environmental activists also support Biden's bipartisan climate change agenda as bipartisan agreement can lead to durable climate change legislation. Bob Inglis, a former Republican Representative for South Carolina, discusses the subject of partisan versus

⁷⁸ Dan Diller, "Biden and Sanders - Comparing Their Bipartisan Index Scores," The Lugar Center, March 16, 2020, <https://www.thelugarcenter.org/blog-biden-and-sanders-comparing-their-bipartisan-index>.

⁷⁹Id.

bipartisan climate legislation, saying, “There’s a tendency to want to run it down the left-hand side of the field [...] And then when the pendulum swings, it can be undone. A divided government situation may give rise to the best opportunity for a durable climate solution.”⁸⁰ The Biden administration has the opportunity to create durable bipartisan climate change legislation. But there will be many challenges as Trump has loaded the Supreme Court with conservative judges. As well, many far-right, climate change denying conservative legislators remain in office, who certainly threaten any advancements in climate change legislation. The Center for American Progress, a liberal advocacy group, recently conducted an analysis to determine the number of elected officials who were climate deniers based on recent statements casting doubt on the scientific consensus of climate science. The analysis found that there has been a decline in climate deniers in Congress from 150 in the 116th Congress to 139 in the 117th Congress.⁸¹

In the past year, there has also been a bipartisan push in Congress to address climate change. A growing number of conservatives are beginning to notice the threats of climate change and are advocating for legislation. Sen. Mike Braun (R-IN) and Sen. Debbie Stabenow (D-MI) introduced S.3894 – *Growing Climate Solutions Act of 2020*, which works to compensate farmers and forest owners for their carbon

⁸⁰ Marianne Lavelle, “A Bipartisan Climate Policy? It Could Happen Under a Biden Administration, Washington Veterans Say,” Inside Climate News, November 30, 2020, <https://insideclimatenews.org/news/06112020/election-2020-biden-mcconnell-senate-climate-change-policy/>.

⁸¹ Ari Drennen and Sally Hardin, “Climate Deniers in the 117th Congress,” Center for American Progress, March 29, 2021, <https://www.americanprogress.org/issues/green/news/2021/03/30/497685/climate-deniers-117th-congress/>.

sequestering practices.⁸² This bill has received support from Mike Braun and other Republican legislators, like Senator Lindsey Graham (R-SC), likely due its support of American farmers, a key constituency of the Republican Party. S.3894 provides a glimmer of hope and advice for future climate legislation; structure legislation that supports a powerful constituency. When climate legislation supports a broad and powerful constituency, conservative lawmakers are pressured to support the legislation to please their voters. As well, on April 15th, 2021, during the Senate Budget Committee hearing on climate change, Senator Lindsey Graham came to admit that climate change is occurring, saying, “I’ve come to conclude that climate change is real, that human emissions create greenhouse gas effect that traps heat.”⁸³ Other Conservative members of Congress have also introduced and advocated for climate legislation. Representative David McKinley (R-WV), who along with Representative Kurt Schrader (D-OR), discussed a 10-year public and private partnership that will invest in infrastructure and clean energy in an op-ed in the USA today.⁸⁴ Even House Minority leader Kevin McCarthy (R-CA), partnering with Representative Dan Crenshaw (R-Texas), introduced HR.5864 – *New Energy Frontiers Through Carbon Innovation Act of 2020*, which aims to develop carbon-capture technologies.⁸⁵ This climate legislation accelerates the

⁸² Growing Climate Solutions Act of 2020. Bill (2020).

⁸³ “Lindsey Graham: ‘Climate Change Is Real’ But Dems Should Also Pay Attention to Threat of Terror,” YouTube (YouTube, April 15th, 2021), <https://www.youtube.com/watch?v=TT0IpuYoMKg>.

⁸⁴ Representative Kurt Schrader and Representative David B. McKinley, “Innovation and Regulation Can Curb Climate Change. We Need Bipartisan Support for Both.,” USA Today (Gannett Satellite Information Network, January 31st, 2020), <https://www.usatoday.com/story/opinion/2020/01/30/how-fight-climate-change-congress-needs-fuel-innovation-column/4601332002/>.

⁸⁵ New Energy Frontiers Through Carbon Innovation Act of 2020. Bill (2020).

development of carbon capture technologies for natural gas power systems. The natural gas industry is an ally of the Republican party, which explains the bill's support from conservative legislators. Although this bill may not go as far as many climate activists would like, it is a promising start to more bipartisan climate legislation.

Many other notable and prominent conservative figures are beginning to take pro-climate change stances and are speaking out on the importance of combatting climate change. Republican Susan Molinari, a former U.S. Representative who served Staten Island for three terms from 1990-1997, has begun to speak out regarding climate change. In an interview with former Ohio Governor, John Kasich, Molinari discusses the Republican party's controversial history with climate change : "It is clear to anybody who isn't afraid of science that we are going through a crisis with regard to our environment."⁸⁶ Molinari talks about how the Republican party has recently taken an anti-science position, "Somewhere along the line John we became the anti-science party, and we weren't always that way [...] we do have a tendency to ignore the data."⁸⁷ John Kasich, former Governor and Representative for Ohio, has been quite vocal in his support for climate change legislation and advocates for a shift in the Republican party to embrace climate science and legislation. In office, Kasich supported many efforts on renewable energy infrastructure improvements and supported legislation that reduced Ohio's carbon emission by nearly 30%. In the 2016 election, Kasich was more

⁸⁶ World War Zero, "World War Zero: A Conversation on Republicans and Climate with John Kasich and Susan Molinari," YouTube (YouTube, September 3, 2020), <https://www.youtube.com/watch?v=N-J8XIojMUQ>.

⁸⁷ Id.

sympathetic to climate change than many of his competitors. But he still questioned human's role in climate change, saying, "we don't want to destroy people's jobs, based on some theory that is not proven."⁸⁸ However, over the past five years, he has dramatically shifted his stance. Kasich is now urging the GOP to change its stance on climate change and support policies to combat the crisis. Kasich has supported a free-market approach to address climate change, such as a cap-and-trade program, similar to the one introduced by late Senator John McCain in 2003. Although Kasich and Molinari are both GOP members, they have little influence on the party since their recent endorsement of Biden for President. Still, their support for climate legislation is a promising sign of a shift in the conservative viewpoint.

In 2016, during the 114th Congress, the bipartisan Climate Solutions Caucus was founded in the House by Ted Deutch (D-FL) and Francis Rooney (R-FL) to help address climate change through bipartisan legislation. By 2018, The Climate Solutions Caucus had 36 Democrat and 36 Republican members.⁸⁹ However, Representative Deutch has not updated the House Climate Solutions Caucus membership page since 2018, probably meaning there has been little to no change in membership, not a great sign. The Senate Climate Solutions Caucus is led by Democrat Senator Chris Coons and Republican Senator Mike Braun, with a membership of six Democrats, one Independent, and seven Republicans. A majority of the conservatives in the caucus either represented districts

⁸⁸ Amy Harder, "Former Ohio Governor John Kasich to Fellow GOPers: Stop Denying Climate Change," Axios, February 26, 2019, <https://www.axios.com/kasich-asks-republicans-to-stop-denying-climate-change-875bc4b0-a665-45ea-9a33-1cb0a1fd52fb.html>.

⁸⁹ David Karol, "Party Polarization on Environmental Issues: Toward Prospects for Change" (Niskanen Center, 2018), pp. 1-21.

Hillary Clinton won in 2016 or were freshmen.⁹⁰ However, the many freshmen Republican Representatives advocating climate change legislation may show a sign of change among the newer Republican party. One discouraging sign from the Climate Solutions Caucus came in 2017 when 28 out of the 36 GOP members voted for the 2017 tax bill that opened up the Arctic National Wildlife Refuge, in Alaska, for oil drilling. This vote raised questions regarding their true intentions. Nevertheless, there is some hope that the severe partisanship on climate change may be slowly coming to a close.

In the past few years, there has also been a proliferation of bipartisan organizations looking to depoliticize climate change. In 2019, John Kerry launched World War Zero, an American coalition focused on bringing people across political ideologies to fight climate change. John Kasich is a member of World War Zero along with other former and current conservative legislators. World War Zero's mission is to unite "scientists and entrepreneurs, four-star generals and youth activists, popular artists and global leaders, Democrats and Republicans and millions of people to not only build back – but to build back forward into a clear-skied future."⁹¹ Another group, the Far Middle, was created from the grassroots advocacy group Citizen's Climate Lobby. The Far Middle's primary objective is to support and advance the Energy Innovation and Carbon Dividend Act through "radical collaboration."⁹² The Energy Innovation and Carbon Dividend Act was introduced in 2019 by Rep. Ted Deutch; it advocates an

⁹⁰ Id.

⁹¹ "Our Mission," World War Zero, accessed April 19, 2021, <https://worldwarzero.com/mission/>.

⁹² "About," Far Middle (Citizen's Climate Lobby), accessed April 19, 2021, <https://www.farmiddle.com/about>.

emission tax/carbon fee that would be distributed to American taxpayers to compensate for increased energy costs.⁹³ The Far Middle organization is attempting to build bipartisan support for this legislation and raise awareness among the public.

Industries that have contributed to climate change are beginning to their business to become more climate-friendly. The freight-railroad industry is a long-time opponent of climate policy and regulation in the U.S. The U.S.'s four largest freight-railroad companies, BSNF Railway, Union Pacific, Norfolk Southern, and CSX, have funded climate denialists and were all members of America's Power. This major coal lobbying group has downplayed and attacked climate science. In February of 2021, both Union Pacific and BSNF Railway both left America's power, and the American Association of Railroads, the trade group which represents American freight rails, have rebranded themselves as climate advocates. The shift in the freight-railroad industry from climate change deniers to advocates can partly be explained by Biden's proposed infrastructure bill, in which the freight-railroad industry would love to be included. As it becomes more financially disadvantageous for industries to take an anti-climate change stance, these industries will have to rebrand themselves and alter their business practices, or they will likely fade into oblivion.

The oil and gas industry is beginning to face the consequences of its climate change impact. Financial institutions are starting to support renewable energy projects over oil and gas exploration. In 2021, Goldman Sachs predicts that renewables will be their biggest investment receiver in the energy industry. The six largest banks in the U.S.,

⁹³ Energy Innovation and Carbon Dividend Act of 2019. Bill (2019).

Goldman Sachs, Morgan Stanley, JP Morgan Chase, Wells Fargo, Citi Bank, and Bank of America, have all stated that they will not back oil and gas exploration in the arctic.⁹⁴

Worldwide, 66 insurance companies and financial institutions have either eliminated or reduced their financial support for oil and gas exploration.⁹⁵

Historically, insurance companies have contributed significantly more to Republican candidates; however, this disparity in party contributions has weakened over time. In 2020, Joe Biden received more industry contributions than Trump, with \$8,477,702 and \$6,872,864, respectively.⁹⁶ This shift in party contributions from the insurance industry can be partially explained by the increasing short-term and long-term risks posed by climate change. For example, from 1964 to 1990, American insurance companies paid around \$100 million annually due to wildfires. Whereas, from 2011 to 2018, they paid roughly \$4 billion annually.⁹⁷ The insurance industry's concerns stretch beyond wildfires, as climate change is leading to more frequent and strong hurricanes and rising sea levels, destroying homes and coastal businesses. The Republican party's disregard for the dangers of climate change has led the insurance industry to shift their contributions and alliance to Democrats. Some insurance companies are beginning to take

⁹⁴ Karin Kirk, "Investors Flee Big Oil as Portfolios Get Drilled "Yale Climate Connections," Yale Climate Connections, January 19, 2021, <https://yaleclimateconnections.org/2021/01/investors-flee-big-oil-as-portfolios-get-drilled/>.

⁹⁵ Id.

⁹⁶ "Insurance: Long-Term Contribution Trends," OpenSecrets.org (Center for Responsive Politics, March 22, 2021), <https://www.opensecrets.org/industries/totals.php?cycle=2020&ind=f09>.

⁹⁷ Leslie Kaufman and Eric Roston, "Bloomberg.com," Bloomberg.com (Bloomberg, November 10, 2020), <https://www.bloomberg.com/news/features/2020-11-10/wildfires-are-torching-california-s-insurance-industry-amid-climate-change#:~:text=From%201964%20to%201990%2C%20the,almost%20%244%20billion%20a%20year.>

action against climate change, such as rethinking their investment portfolios to invest in new sectors such as renewables, measuring and attempting to actively reduce internal emissions, and offering transparency regarding climate change risk.

The decline in financial resources available to the oil and gas industry has caused companies to rebrand as environmentally friendly, increase their natural gas portfolio, and branch out into the renewable energy sector. The oil and gas industry has spent billions of dollars on ad campaigns painting their companies as the solution to climate change rather than as contributors. However, the public and influential investors are beginning to see through the oil and gas company's deception and demand real change and accountability from the industry. For example, influential investors for Shell have pressured the company to reduce their emissions if they want continued financial support. Other oil and gas companies have made emission reduction pledges, such as BP, which has pledged to be net-zero greenhouse gas emissions by 2050.⁹⁸ Shell, BP, and Total have also all left the American Fuel & Petrochemical Manufacturers lobbying group due to the lobbying group's insufficient support for the Paris Climate Agreement. The oil and gas industry's environmental rebranding and decline in financial resources will make it harder for the industry to fund climate denialism and continue to politicize climate change.

Evangelicals, an unlikely group of climate advocates, have also taken action to combat the climate crisis and protect the Earth. Since 2012, roughly three million pro-life

⁹⁸ Nicholas Kusnetz, "What Does Net Zero Emissions Mean for Big Oil? Not What You'd Think," Inside Climate News, November 30, 2020, <https://insideclimatenews.org/news/16072020/oil-gas-climate-pledges-bp-shell-exxon/#:~:text=Together%20with%20other%20exclusions%2C%20BP's,according%20to%20the%20TPI%20report>

evangelicals have called for 100% clean electricity no later than 2030.⁹⁹ This is quite an impressive call to action as it advocates 100% clean electricity five years earlier than President Biden's target. Evangelical groups call for Christians to follow the bible and care for God's creation, the Earth. One such group is the Evangelical Environmental Network (EEN), a ministry that promotes left-of-center climate change and environmental policy to a base of predominantly conservative Christians. EEN looks to broaden the base of climate change policy support through educational tools, including billboards, radio, and TV advertisements, to mobilize Evangelical support for climate change. Evangelical support of climate legislation and measures shows a dramatic shift, as they were once leading funders of climate change denialism.

Young GOP members also serve as a sign of hope for bipartisanship on climate change. Overall, a 2019 pew research poll found that 39% of Republicans/Republican-leaning participants believed that the federal government wasn't doing enough the mitigate the effects of global climate change.¹⁰⁰ Among young Republicans (age 18-38), however, 52% thought the U.S. was not doing enough to combat climate change.¹⁰¹ On the other hand, only 41% of Generation X and 31% of the Baby Boomers reported that the government was not doing enough. This study illustrates the growing divide between

⁹⁹Kyle Meyaard-Schaap and Kierra O'Brie, "Here's What Young Conservatives Think about Climate Change," TheHill (The Hill, March 16, 2021), <https://thehill.com/opinion/energy-environment/543403-heres-what-young-conservatives-think-about-climate-change>.

¹⁰⁰ Cary Funk and Meg Hefferon, "U.S. Public Views on Climate and Energy," Pew Research Center Science & Society (Pew Research Center, October 2, 2020), https://www.pewresearch.org/science/2019/11/25/u-s-public-views-on-climate-and-energy/?utm_source=adaptivemailer&utm_medium=email&utm_campaign=19-11-25+climate&org=982&lvl=100&ite=5010&lea=1139465&ctr=0&par=1&trk=.

¹⁰¹ Id.

older and younger members of the GOP. The younger generation is also more accepting of renewable energy, with another Pew Research study finding that 78% of Republicans ages 18 to 38 believe the U.S. should prioritize alternative energy.¹⁰² The younger generation realizes that they have to deal with issues caused by climate change and are therefore much more accepting of government regulation to curb climate change.

In the past few years, there has been an explosion of young bipartisan and conservative coalitions looking to address climate change. One such group, Young Conservatives for Carbon Dividends (YCCD), focuses on mobilizing young constituents to support an economy-wide carbon dividend plan created by Republican Secretaries of State George Shultz and James Baker. Another significant group is the American Conservation Coalition (ACC), founded in 2017 by 21-year-old Republican Benji Backer. ACC is a right-leaning environmental advocacy nonprofit aimed at combatting climate change with a free-market, limited-government approach. A third young bipartisan initiative is the Young Evangelicals for Climate Action (YECA). This coalition, different than the other groups listed, is based in religion, specifically evangelism, where they promote fighting the climate crisis as part of their Christian discipleship.

Conservatives are beginning to worry that the GOP's stance on climate change will hinder their ability to recruit the next generation. A poll of roughly 1,000 conservative voters found that approximately three-quarters of them believed the

¹⁰² Kyle Meyaard-Schaap and Kiera O'Brien, "Here's What Young Conservatives Think about Climate Change," *The Hill* (The Hill, March 16, 2021), <https://thehill.com/opinion/energy-environment/543403-heres-what-young-conservatives-think-about-climate-change>.

Republican party is losing young voters due to the party's stance on climate change.¹⁰³ Republican politicians may need to shift their stance on climate legislation if they want to appeal to the next generation. Young GOP members, bolstered by a new administration, increasing public awareness and concern, an environmentally conscious financial sector, and a more responsible energy industry, will aid in reaching bipartisan agreement on climate change legislation and help usher in a new era of climate change activism, one that knows no political-ideological boundaries.

¹⁰³ Tiffany Stecker, "GOP Pollster to Congress: Young Republicans Care About Climate," Bloomberg Law, June 12, 2019, <https://news.bloomberglaw.com/environment-and-energy/gop-pollster-to-congress-young-republicans-care-about-climate>.

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