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Climate Translators: The Impacts of Broadcast News on the Political Divide Over Climate Change in the United States

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The Impacts of Broadcast News on the Political Divide Over Climate Change in the United States

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Abstract

In many instances, television news is the primary outlet through which the public gains knowledge on climate change. Both the perceived threat of climate change and American news media have grown politically divided since the 1980s. I make the argument that American news media influences the partisan divide over climate change. In addition to the political landscape of news media, focus on political events and figures in climate coverage further contributes to a partisan divide. Supporting these claims are research displaying how climate change news is processed in a partisan manner and a selection of three case study periods in which climate change coverage spiked among MSNBC, CNN, and Fox News in the last nineteen years (2000-2019). I collected news footage from all three case studies using the online database archive.org. Using this footage, an accompanying documentary short was produced that focused on the Paris Climate Accord Withdrawal in 2017. Presented in the documentary and the three case study periods, Fox News held a consistently hands-off and dismissive tone towards climate change, while MSNBC and CNN implemented climate science into coverage while advocating for collective climate action. I report that media is selected and processed via partisanship among viewers; these case studies illustrate the ways in which news media drives the political divide on climate change. I conclude by offering some future ways climate coverage can be more unifying, such as more emphasis on the economic benefits of "a green economy" in news coverage.

Link to accompanying documentary short: https://vimeo.com/378397224

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Introduction

The Basis for this Project

Climate change moves slowly over decades. The main culprits of global climate change – greenhouse gasses – are invisible. In short, climate change is hard to see and understand for the majority of people living today. Due to the fast-paced world, climate change often is reduced to a news headline or coverage segment for people to clearly understand what it is and what they should collectively be doing about it. In an ideal world, the most vital and condensed science regarding humans' role in atmospheric climate change would be reported. Unfortunately, this is not the case.

Becoming a politicized topic in the 1980s, Republicans and Democrats grew divided over the implications of climate action. Democrats championed environmental regulation beginning in the 1960s, recognizing the need to maintain a clean environment (Dunlap & McCright, 2010). Republicans came to connect environmentalism with over-regulation and a threat to the free-market economy (Antonio & Brulle, 2016).

Two vastly different narratives are now attached to climate change. Since the repeal of communications legislation that mandated all news networks to report on both sides of a story in the 1980s (McCright, 201), news networks increasingly report on stories from singular, partisan perspectives (Stroud, 2011). An increasingly divided news media landscape fits with the politically divided issue of the environment. Certain networks, such as Fox News, now cover the environment with conservative sentiments of anti-regulation and pro-free-market, rigorously expressing a dismissive tone towards climate science. Other networks, such as CNN and MSNBC, cover our climate with the predominantly progressive sentiments of pro-regulation

based on acceptance of climate change science. Depending on news media consumption habits and political leanings, people living in the United States have varied perceptions of climate change.

I argue that news media contributes to and strengthens the political divide over climate change. Firstly, the politicization of climate change has been reinforced in recent decades due to the increased fragmentation of the news media landscape since the 1980s, in which news coverage of stories has become heterogeneous and news networks increasingly represent partisan American political ideologies. Secondly, environmental news stories are most commonly put in political contexts rather than based on scientific findings, empirical reports, or natural phenomena. Climate change events that have gotten the most coverage over the past twenty years come in the form of climate summits and other events surrounding political figures (Boykoff & Boykoff 2007; Mayer, 2012).

Mainstream media's tendency to frame climate change in the context of politics, combined with increased partisan leanings of different networks has strengthened a seemingly irreversible partisan gap over climate change. Primary focus on political dynamics in news media obscures climate change away from science. News media thus has the potential to instill a sense of urgency about climate change, as it is a necessary translator for the complexities of climate science, but is currently playing a counterproductive role by further politicizing the issues of climate change.

In order to analyze these dynamics, I have produced a documentary short that illustrates the politicized nature of climate change coverage in American broadcast media. The documentary centers on the United States' withdrawal from the Paris Climate Accord in June,

2017. A primary focus is how cable news networks CNN, MSNBC, and Fox News framed the

withdrawal consistent with partisan ideologies toward the environment. By illustrating the

rhetoric and framing towards the environment by politically-affiliated networks, this project

seeks to show how the news media can definitively impact the public's perception of climate

change.

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The Political and Scientific Context for this Project:
The Partisan Gap over Climate Change

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The role the news media plays in translating climate change cannot be understood

without properly contextualizing how the threat of climate change is drastically disagreed upon

in the United States. Heavily contested political issues such as gun laws, immigration, and tax

reform all have more partisan agreement compared to the threat of climate change. A 2017

Gallup national survey found that second only to universal healthcare, the perceived threat of

climate change had the largest partisan disagreement (See Fig. 1), with 89% of Democrats

believing human-induced climate change poses some level of threat and only 40% of

Republicans sharing the same beliefs (Newport & Dugan, 2018).
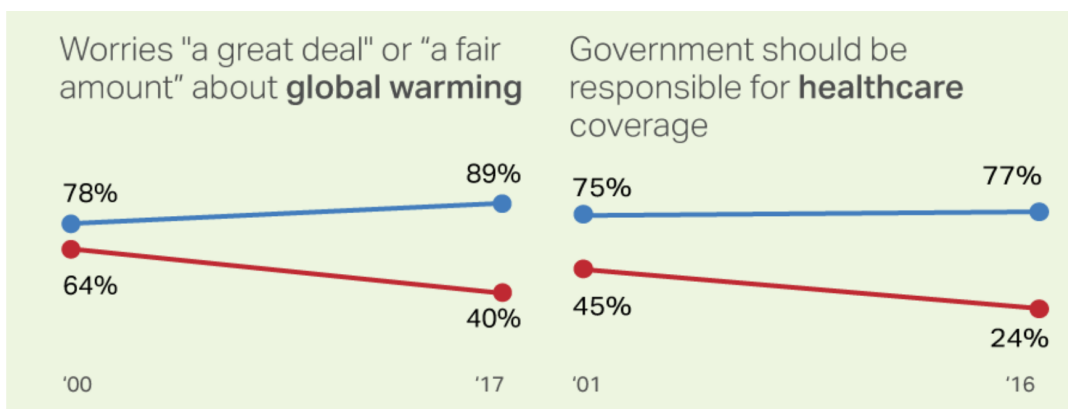
Figure 1: Nationally representative data comparing the percentage of progressives (blue lines) versus conservatives (red lines) that perceive climate change as a threat over a seventeen-year-period (2000-2017). The graph on the right shows that universal healthcare still has the largest partisan disagreement. While the perceived threat of climate change holds a 49 percentage point partisan gap, universal healthcare maintains a 53 percentage point partisan gap. Source: Newport, F., & Dugan, A. (2018, December 21). Partisan Differences Growing on a Number of Issues. *Gallup*.

One of the largest differences between climate change and other issues politically contested throughout the United States is that climate change has extensive scientific literature to back up its existence. Issues such as gun rights and tax reform may have statistical data to support different sides of the arguments, but the validity of these voting issues are ultimately rooted in political and cultural values. Scientific bodies at both the national and international level report that human activity beginning in the Industrial Revolution has resulted in much higher levels of greenhouse gasses in the atmosphere, effectively warming the Earth's climate (IPCC, 2014; USGCRP, 2018). An international survey found that 97 percent of publishing climate scientists agree that global climate change is taking place and that humans are the root cause of it (Cook et al., 2013; Oreskes, 2004).

While the consensus among the scientific community has steadily increased, the partisan gap on the threat of anthropogenic climate change has widened. In 1989, when climate change first began to appear on the public agenda, a partisan gap on the perceived threat of climate change was almost non-existent. At the time, almost 7 out of 10 Americans from both of the two primary political parties (67% of Democrats and 66% of Republicans) reported worrying about the future effects of climate change (Carmichael et al., 2017). While the consensus on climate change has been further solidified since the late 1980s, the share of Democrats perceiving climate change as a threat has increased by 22 percent (89% in 2017) and the share of Republicans with the same perception has decreased by 26 percent (40% in 2017) (Newport & Dugan, 2018).

Media's Role in the Climate Change Partisan Gap

A widening partisan gap on climate change, despite a near-complete consensus that humans are a primary cause, indicates that science alone is not how people gain information on climate change. About half of all Americans (51%) report regularly hearing about climate change through media sources, as opposed to 1 in 4 Americans (23%) that hear about climate change topics from people they know (Leiserowitz et al, 2019). Media, particularly the news, plays a constant role in people's lives that scientific reports summarizing the overwhelming consensus on anthropogenic climate change do not. Furthermore, the relationship between climate science and the public is not linear. If the news is an intermediary between science and the public, room is left for science to be re-framed, subjectified, and misrepresented. This stage in environmental communications is where political values have an opportunity to be injected into the climate change conversation.

Despite political undertones in coverage by CNN, MSNBC, and Fox News in the late 1990s, there were no distinctly partisan audiences turning to these outlets for political news. Regardless of viewership volume, these three news networks were watched relatively equally by people across the political spectrum (Rosentiel, 2013).

Since the 1990s, these news networks have established partisan reputations and audiences. Progressive audiences have somewhat diversified news sources, with CNN, MSNBC, NPR, and the New York Times collectively making up 50% of news sources for these viewers. In contrast, 47% of conservatives identify Fox New as their single, primary source of news (Mitchell et al., 2018). Less than one in four (23%) Democrats watch Fox News, while just 17 percent of Republicans report watching MSNBC (Wilson, 2019).

The Basis of Dismissive Climate Change Coverage by Fox News

The inverse relationship between an increasing scientific consensus on climate change and Republicans' decreased acceptance of its existence is largely due to climate change coverage by Fox News. When it comes to environmental topics, Fox News coverage echoes sentiments from the organized climate change denial movement of the political right (Antonio & Brulle, 2011).

Promotion of environmental skepticism by conservative think tanks began in the 1980s in response to the extensive environmental regulations passed in the 1970s and 1960s primarily by progressives (Lapham, 2004). Fossil fuel corporations, recognizing the threat environmental regulation poses to financial capital, became the primary funding source for many of the conservative think tanks involved in climate change denial (Dunlap & McCright, 2011). A leading strategy to manufacture doubt about the existence of climate change is the funding of economists and contrarian scientists who publicly challenge the legitimacy of climate science (Boykoff, 2009).

In many ways, Fox News has been the mainstream media platform for climate change denial. Rupert Murdoch – founder of the original Fox News parent company, News Corporation, and a self-proclaimed Republican – conceived of Fox News as being a conservative counterpart to what he saw as an increasingly opinionated and biased news landscape (Feldman, 2016; McKnight, 2010). He believed that there was a political bias in the news, especially when it came to climate change. Eric Breindel, a strategic planning advisor for Murdoch, is cited as saying that Murdoch felt strongly that "global warming is covered as fact not controversy,"

because the liberals running American news networks are governed by political biases (Hickey, 1998).

In this vein, Murdoch saw Fox News as a network that would provide balance in the news media landscape, despite increasing scientific evidence regarding human-induced climate change (Cook et al., 2013; Oreskes, 2004). Under the guise of balance and objectivity, Fox News has instilled a sense of uncertainty about climate change among conservative audiences (Hmielowski et al., 2013; Feldman et al., 2011) by platforming the messages of the conservative climate change denial movement.

The Basis of CNN/MSNBC's Progressive Identities

Fox News has been known for politically slanted coverage favoring the right since its first broadcast in 1996 (Rutenberg, 2000), but CNN and MSNBC have not always been known for politically biased coverage. CNN was launched in 1980, becoming the first 24-hour cable news channel, thriving on its constant flow of international current events especially during the First Gulf War. MSNBC, a joint venture between NBC and Microsoft, launched three months prior to Fox News in 1996 (Martin & Yurukoglu, 2017).

Both CNN and MSNBC had anchors and guests from a range of political backgrounds (Martin & Yurukoglu, 2017), indicating a strong adherence to traditional journalistic norms of balance and objectivity (Boykoff & Boykoff, 2004; Hiles & Hinnant, 2014; Grundmann & Krishnamurthy, 2010). But the advent of Fox News highlighted a changing dynamic in regards to journalistic norms: opinionated news sells. In 2002, Fox News passed CNN to become the most watched cable news network while MSNBC largely stagnated (Nielson & Pew, 2006).

MSNBC started to incorporate more overt, liberally-angled coverage of the Bush administration in 2007 which coincided with their prime-time shows momentarily surpassing Fox News in the ratings (Sanneh, 2013). Coverage of this sort was the precursor to MSNBC rebranding itself as the outright progressive counterpart to Fox News in the cable news landscape (Feldman, 2016). Partisan rebranding was evident in unconcealed support for Barack Obama in the 2008 Presidential election and the employment of liberal voices, such as Rachel Maddow, to fill primetime anchor posts (Wenger & Macmanus, 2009). By 2012, MSNBC had become the most politically opinionated of the three networks (Pew Research Center, 2013).

Of the three studied networks, CNN has been known to be the least partisan, although incrementally. While slower than MSNBC, CNN has steadily shown an increasing liberal bias in its coverage (Feldman, 2016). Content analysis from the 2012 Presidential election indicates that CNN experienced an uptick in stories that expressed negative sentiments toward Republicans (Pew Research Center, 2012). Future content analysis from the 2016 Presidential election indicates that the vast majority of CNN stories were negative towards Republican candidate Donald Trump (Pew Research Center, 2017). An outward political identity was embraced when CNN assigned past NBC executive and progressive pundit Jeff Zucker to become the network's president in 2012 (Sanneh, 2013).

By the time climate change or global warming was defined as a legitimate problem in the general public in the early 1990s, progressives had come to represent advocating for environmental regulation coinciding with the emergence of the conservative organized climate change denial movement (McCright & Dunlap, 2011). Coverage by CNN and MSNBC thus increasingly mirrors these progressive sentiments towards climate change, consistent with further

content analysis specific to the issue of climate change (Hmielowski et al., 2013; Feldman et al., 2014).

Treatments of Climate Science by Fox News, MSNBC, and CNN

With these intensified political identities of news networks and an intentional campaign of dismissiveness towards climate change by conservatives, a treatment of climate science as a political matter emerges which has serious ramifications for public understanding of climate change. In the United States, trust in science has remained stable at high levels since the 1970s, with the exception of one group: those who identify as conservative. Conservatives, regardless of levels of education, now have the lowest amount of trust in science among all demographics in the country (Gauchet, 2012). Content analysis reveals that the majority of Fox News segments referring to climate science (72%) are misleading in a way that is dismissive to the scientific consensus (Huertas, & Kriegsman, 2014). Empirical research shows that greater consumption of Fox News is associated with lower levels of trust in science and lower levels of certainty that climate change is happening (Hmielowski et al., 2013; Feldman et al., 2011). Figures of this sort show that the conservative denial movement has been largely successful in its doubt-casting campaign towards climate change, especially when Fox News acts as its voice.

With the doubt-inducing climate coverage by Fox News in mind, it is important to remember that CNN and MSNBC are not perfect vessels through which climate science is translated. Both left-leaning networks generally frame climate change in a manner consistent with the scientific consensus (Feldman et al., 2011). But content analysis shows that certain segments on CNN (30%) and MSNBC (9%), while much less frequent than Fox News, inaccurately portray the current climate science (Huertas, & Kriegsman, 2014). Inaccurate

portrayals of science by CNN and MSNBC primarily stem from the networks producing

segments that feature guests that do not agree with the consensus on anthropogenic climate

change. Consistent with the well documented journalistic norm of balance, progressive news

outlets at times still aim to cover both sides of the climate debate (Hiles & Hinnant, 2014). There

are also occurrences in which CNN and MSNBC inaccurately overstate the role of climate

change in extreme weather events (Huertas, & Kriegsman, 2014). While imperfect, these

mistranslations of science are far less harmful than the active dismissal of climate science by Fox

News when it comes to public awareness.

An underlying issue among all three networks is covering climate change in a

predominantly political context. Climate events receiving the most traction in the television news

cycle are not natural disasters associated with climate change or the publishing of new science,

but political events commonly in the form of environmental summits. Two of the most covered

climate events in the last twenty years are the 2009 Copenhagen Climate Summit and President

Trump's withdrawal from the Paris Climate Accord in June, 2017 (Boykoff et al., 2019). Political

moments such as these being the primary focus of climate coverage reinforce the topic of climate

change as a political issue in many viewers' minds (Boykoff, 2009). Space is left for networks on

both sides of the aisle to avoid extensive discussion of the science of climate change and rather

produce coverage bogged down in the political dynamics of these events.

Literature Review

News Media as a Necessary Translator of Environmental Issues

The Public's Relationship with Science & Media

The acceptance of scientific issues is a non-linear process, in which the release of scientific literature does not necessarily correspond with increasing public acceptance. As Shtulman & Valcarcel (2012) show, people have many "naive theories" about scientific concepts based on instinct. When these individuals are exposed to scientific findings that contradict their instincts -- e.g. the Earth revolves around the sun, not vice versa --their "naive theories" may be suppressed by scientific theory, but are never fully replaced (Shtulman & Valcarcel, 2012: p. 213). While this shows that the brain tends to hold onto ideas that make intuitive sense, despite contradictory scientific evidence, this alone is not enough to explain a lack of public acceptance of anthropogenic climate change.

Kahan et al. (2012) conducted a nationally-representative survey of the perceived risk of climate change, taking into account scientific literacy and cultural worldviews. Their findings indicate that world-views were a much stronger indicator of climate change acceptance than levels of scientific literacy. Those sharing a "hierarchical, individualistic world-view" are naturally opposed to government intervention and likely to question the risks of climate change, contrasting those holding "an egalitarian, communitarian world-view," who are naturally suspicious of industry and likely to be accepting of climate change (Kahan et al., 2012: p. 732). The fact that cultural world-views play a more influential role than scientific literacy in climate change acceptance is consistent with the "cultural cognition thesis" (Kahn et al., 2010). The cultural cognition thesis states that individuals are psychologically inclined to believe that

"behavior they (and their peers) find honorable is socially beneficial," (Kahn et al., 2010: p 148) thereby conforming their perceptions of climate change risk to fit their social surroundings.

In addition to "naive theories" and preconceived worldviews, the lack of public understanding about anthropogenic climate change (Mayer, 2012) can be attributed to the density of the extensive, existing scientific literature confirming its existence. Climate trends are so abstracted within this literature, that the general public has trouble making sense of it all without third-party interpretation (Feldman, 2016). Many scholars within the environmental and communications fields see mass-media as a necessary translator between dense scientific climate findings and the general public (Scheufele, 2014; Boykoff, 2009; Hansen, 2018). Even if people experience an exceptionally hot summer or a persistent drought, they seldom refer to the scientific literature to connect these occurrences to broader climate change trends. Instead, they frequent mainstream media sources for their understanding of basic climate change facts (Corbet et al, 2004).

Throughout history, people have manifested their interpretations of the "environment" — whether they be utilitarian or romanticized perspectives of the natural world — into media such as paintings, architecture, films and other digital media (Hansen, 2018). This recent half-century has seen the rise of mass-media as a crucial tool in, "bringing environmental issues and problems to public and political attention" (Hansen, 2018: 3). Some see the increased importance of media in educating the public about environmental issues as "science as mediated reality," in the sense that most citizens' relationships with scientific findings are indirect (Scheufele, 2014). Boykoff (2009) identifies this process of a "mediated reality" as news media outlets "speaking for the trees," giving voice to environmental issues on a scale that the release of scientific literature

alone cannot. Media interpretations of environmental change are not "the truth translated," but rather a complex relationship between the scientific, public, and political spheres that influence how environmental news stories are framed (Boykoff, 2009: p. 449).

Framing & Journalistic Norms

Boykoff (2007) describes media framing of any issue as, "the construction of meaning and discourse" (Boykoff, 2007: p. 478). News outlets have the power to communicate why an issue such as climate change may be problematic, who and what is to blame, and what the appropriate steps forward may be. As the landscape of network television continues to expand following the 1980s, the framing of the environment has become non-homogenous, so that emphasis can be placed on divergent viewpoints depending on the networks (Stroud, 2011). Nisbet (2009) identifies a frame as something that links two concepts. A link between the environment and the economy can be made with two vastly different partisan narratives attached to them. For example, a conservative portrayal of climate change mitigation strategies as something that will hurt the American economy, versus a progressive outlook of environmental policies as an opportunity to create new "green jobs," helping the economy, are divergent narratives (Nisbet, 2009). Price et al. (2005) state that "news media establish the terms of public debate," through this process of politicized framing.

Framing of news stories is largely based on a set of guiding principles in journalism, referred to in the literature as "journalistic norms," (Boykoff & Boykoff, 2004; Hiles & Hinnant, 2014; Grundmann & Krishnamurthy, 2010). Traditional practices among journalists are the norms of "objectivity" and "balance" in a way that presents, "both sides of the story," (Hiles & Hinnant, 2014, p. 429). In the case of climate change coverage, this means that scientific

uncertainty and controversy are highlighted along with the scientific consensus on the existence of anthropogenic climate change (Brüggemann & Engesser, 2014). Such "balance" creates an inaccurate representation of the existing scientific consensus, as if the "jury was still out on climate change," (Zehr, 2000). A content analysis of major American newspapers between 1988 and 2002 by Boykoff & Boykoff (2004) reveals that equal consideration and coverage were given to climate change skepticism narratives despite a dramatically increasing scientific consensus on climate change. Journalistic norms of dramatization and personalization (Bennet, 2008) — basing coverage on dramatic political or human-centered stories — is also observed in further content analyses concerning climate change coverage. News coverage of climate change spikes when it can be put in the context of climate conferences and hearings, or governmental initiatives and policy developments having to do with the environment (Boykoff & Boykoff 2007; Mayer, 2012).

Cause & Effects of News Media Framing Climate Change

With political contexts being the dominant focus of climate coverage, comes a greater opportunity for climate change to be politicized. There are "two Americas" (Nisbet, 2009) that have emerged in relation to climate change acceptance: a majority of Republicans who question or deny climate science validity and a majority of Democrats who accept climate science and show concern about the identified issues. Evidence suggests that the emergence of this political divide has been facilitated by increasingly partisan news coverage of climate change (Carmichael et al., 2016; Hmielowski et al., 2013; Feldman et al., 2011).

Expansion and fragmentation of news sources have surged since the 1980s (Feldman, 2016). Accompanying the news-network expansion was the complete repeal of the "fairness

doctrine" in 1987, a section of the 1949 Federal Communications Act, which made it an obligation of news networks with broadcast licenses to abstain from reporting on stories from a singular political perspective (McCright, 2010). Throughout the emergence of this new media landscape, networks increasingly pick up political agendas and frame divergent information on the same story (Stroud, 2011), creating what Feldman recognizes as "opinionated news" (Feldman, 2011).

Within the existing literature, the identified areas in which television news media has contributed to a political divide over the acceptance of climate change are as follows. Firstly, individuals seek out and process information in a partisan manner (Gvirsman, 2014; Carmichael et al., 2016; Hmielowski et al., 2013; Feldman et al., 2014). Secondly, the climate change denial movement perpetuated by conservative think tanks and the fossil fuel industry (Dunlap & McCright, 2011; Oreskes & Conway, 2010; Brulle, 2013; Zehr, 2000) has found a stable platform in conservative-leaning news outlets over the last twenty years (McKnight, 2010).

Partisan Processing of Climate Change Media Coverage

Repetitive consumption of conservative TV news outlets is associated with lower levels of certainty about the existence of climate change and lower levels of trust in scientists (Hmielowski et al., 2013). What explains these findings are not preconceived partisan biases while watching TV news coverage, but rather an identified "persuasion model." In the persuasion model, individuals can be accepting of information that challenges their outlook on a given subject and willing to integrate into their worldview (Gvirsman, 2014; Feldman, 2016; Meirick, 2012). However, due to a reinforcing cycle of selecting media outlets that confirm individuals' beliefs about climate change — "selective exposure" — viewers of partisan news

will rarely view or rely on outlets that overtly challenge their views on climate change. Viewers are more likely to return to the media that initially influenced their beliefs (Feldman, 2014; Slater, 2007).

Over time, repetitive exposure to selected media sources creates distinct polarization on an issue, as viewers' beliefs towards climate change are solidified by continual and isolated consumption of partisan coverage of the issue — i.e. "the echo chamber," (Farrell, 2014). The persuasion model is made more nuanced with empirical findings supporting a "boomerang effect," (Zhou, 2016, Cohen, 1962). In this model, Republican viewers are exposed to framing of climate change that confirms the science, and are *less* concerned about climate change than they were prior, thus reinforcing their partisan outlooks further (Carmichael et al., 2016).

Organized Climate Change Denial

Dunlap & McCright (2011) identify the 1980s as the major starting point for environmental regulation being contested by conservatives. This movement was in favor of freeing up the private sector after progressive environmental laws were enacted through the 1960s and 1970s," (Dunlap & McCright, 2011). A window of opportunity to roll back environmental regulations was seen by conservatives and pollutive industries with the entrance of the Reagan Administration (Lapham, 2004).

Central to the conservative opposition to environmental regulation are conservative think tanks (Brulle, 2013). Helping to frame environmental regulation as hurting the American economy is a principle to conservative think tank strategy (Nisbet, 2009). Think tanks such as The Marshall Institute began to produce reports disputing climate science in 1989, shortly after the creation of the IPCC and in response to an identified strategy of framing climate denial in

"science" for perceived credibility (Antonio & Brulle, 2011; Jacques et al., 2008; Dunlap & McCright, 2010). Conservative think tanks quickly gained traction and funding from the fossil fuel industry, creating a conservative complex with the goal of eliminating mandatory restrictions on carbon emissions (Brulle, 2013; Boykoff, 2009).

Integral to the conservative movement against environmental protection has been the funding of contrarian scientists. The views of these scientists narrowly focus on the uncertainties of climate science (McCright, 2010; McKnight, 2007). Shrinking uncertainties in climate science literature have been amplified by conservative think tanks and identified as a parallel to the Tobacco industry's strategy of focusing on the minimal gaps in evidence about the harmful effects of smoking (Oreskes & Conway, 2010; Michaels, 2008). Various scholars have highlighted that this focus on the uncertainties in climate science misrepresents the fact that uncertainty is a necessary part of the scientific process. Uncertainties inform the validity of existing climate models and expose areas where additional research must be conducted (Zehr, 2000; Brüggemann & Engesser, 2014).

Conservative narratives surrounding climate change involving economic consequences and scientific uncertainty have been platformed and incorporated into the regular coverage of conservative media outlets (Dunlap & McCright, 2011; McKnight, 2010; Jamieson & Cappella, 2008). An outlet such as Fox News frequently interviews contrarian scientists (Dunlap & McCright, 2011) and has many top-level executives with close ties to conservative think tanks (McKnight, 2010). Incorporated messaging about climate change into conservative media has been credited with moving the American public more to the right in recent decades, especially in

regards to the existence and threat posed by anthropogenic climate change (Jamieson & Cappella, 2008; Morris, 2005).

Methodology

After basing my analysis in evidence-based theory, it became necessary to organize the primary source data i.e. news coverage. Given time and capability constraints, a meta-analysis of all climate change news coverage was unrealistic. Analyzing case study periods of climate change coverage made far more sense. I used data from the University of Colorado's Center for Science and Technology Policy Research (Boykoff et al., 2019) which has tracked the number of news segments that feature climate change from every month over the last twenty years (2000-2019). Data is provided from the country's seven largest news networks: ABC, CBS, CNN, Fox News, MSNBC, NBC, and PBS.

At the time of case study selection in September, 2019 the months that had the most amount of climate change coverage were December, 2009 (493 segments across all networks) and September, 2015 (400 segments) (Boykoff et al., 2019). While not the third, but the eighth month with the most climate change news segment, I selected June, 2017 (289 segments) as my third case study period (See figure 2 for relative coverage volume of case studies). In June, 2017, President Trump's announcement to withdraw from the Paris Climate Accord drove coverage. I selected this case study period as it had a visible spike in coverage compared to surrounding months. President Trump's announcement additionally feeds into the political lens through which the two other case study periods focus.

I then selected Fox News, CNN, and MSNBC as my case study news networks. Unofficially termed the "Big Three" of cable news, these outlets are consistently the most

viewed and profitable news networks provided through cable (Mitchell & Holcomb, 2016).

Cable's "Big Three" are among the networks to most consistently cover climate change over the

past twenty years (2000-2019) relative to all other cable and network television (Boykoff et al.,

2019). Lastly, these three networks are some of the most evident embodiments of partisan

sentiments toward climate change in their coverage (Public Citizen, 2019; Feldman, 2016). For

this project, MSNBC and CNN have been clumped together, as their coverage of climate change

is increasingly rooted in progressive values and proves to share far more similarities than

differences. Fox News is examined as the conservative media voice, consistent with its share of

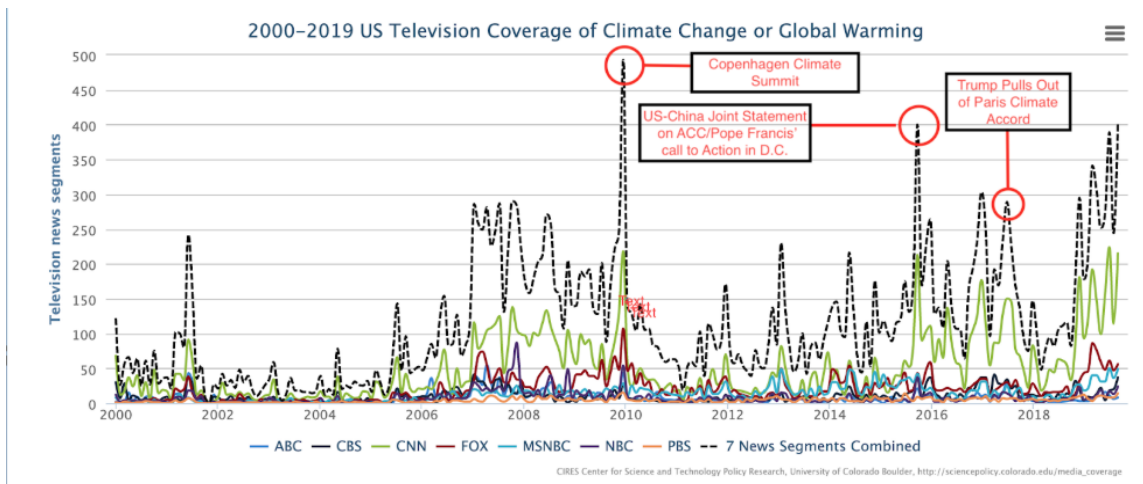the conservative viewership market (Mitchel et al., 2016).

Figure 2: Data showing cumulative (dotted black line) and individual news coverage segments in which the terms "climate change" or "global warming" were used by the United States' 7 largest news networks between the years 2000 - 2019. Source: Boykoff, M., Gifford, L., Nacu-Schmidt, A., and Osborne-Gowey, J. (2019). US Television Coverage of Climate Change or Global Warming, 2004-2019. *Media and Climate Change Observatory Data Sets. Center for Science and Technology Policy Research, Cooperative Institute for Research in Environmental Sciences, University of Colorado.* doi.org/10.25810/C862-0E81.

Finally, after selecting my case study periods and networks, I analyzed the primary

source data. I used the online television archive archive.org to watch and collect news footage.

Using the TV news caption search engine, I chronologically went through all three months, watching footage from the three networks in which the term "climate change" was mentioned. In some cases, an additional search term such as "climate accord" for June, 2017 was added to further refine the search. The three months culminated into six-and-a-half hours of footage. After collection and analysis of footage, I edited compilations of the primary themes in climate change coverage for each network. Below are brief descriptions of the selected case studies and the climate change events that drove news coverage.

December, 2009

In terms of aggregate coverage by all news networks, December, 2009 is by far the month with the most climate change coverage (Boykoff et al., 2019) (See Fig. 2). What can help explain this dramatic spike in coverage is the United Nations Climate Conference which lasted from December 7th - 18th. The conference itself failed to produce any *binding* agreement from the international community to limit carbon emissions in the future, and was gridlocked in negotiations for much of its duration (Dimitrov, 2010). A scandal (i.e. "Climategate) in which climate scientists emails were leaked leading up to the accord was a source of political controversy in the news media throughout the month.

The resulting deal from the international climate conference, The Copenhagen Accord, had vastly different partisan connotations attached to it across the three news networks and was a source of heightened coverage near the end of the month.

September, 2015

Coverage of climate change in September of 2015 was not centered around a single event. Rather three significant climate-related events unfolded throughout the month, making

climate change a relatively constant talking point in the news cycle. Firstly, President Obama made a trip to Alaska during the beginning of the month (August 31st - September 3rd) to highlight the first-hand-effects of climate change. For the month, climate change coverage spiked across the three networks during this four-day event. (See Appendix B for more on Obama's trip to Alaska). Secondly, Pope Francis's visit to the United States (September 22 - 27th) sparked discussion about his vocal requests for collective action on issues facing our environment. The trip prompted news media discussion about the connections between poverty, capitalism, and climate change. (See Appendix B(2) for more on the Pope's trip to the United States). Lastly, a joint statement was issued between the U.S. and China (September 25th) which received considerably less coverage, but still provided ample discussion points for networks on both sides of the aisle (See Appendix B(5) for more on the joint statement).

June, 2017

On June 1st, 2017 President Donald Trump gave a speech from the White House Rose Garden in which he declared that he intended to remove the United States from the Paris Climate Accord. The President's announcement is what drove climate change news coverage in June, 2017, spiking in the first week of the month and tapering off as the month went on. The accord signed by 197 countries, aims to keep global temperature increases below 2 °C, and have the Earth become carbon neutral by the year 2050 (Dimitrov, 2016). Like the other case studies, political narratives and interpretations were used to frame the event, resulting in conservatives viewing the withdrawal as a success and progressives expressing outrage (See Appendix C).

I initially intended to focus on all three of the case study periods in my [documentary](#).

Instead, I decided to focus on the Paris Climate Accord withdrawal announcement in 2017, due to the current relevance for audiences watching the [documentary](#).

In addition to the video component of this project, I have analyzed all three case study periods in terms of cross-period themes and partisan framing by each network. What is reported below are my observations for the most common ways the "Big Three" networks cover climate change throughout these three separate months.

Findings

How Climate Change Was Framed By the News in General

The political context of these three case study periods and their volume of viewership is consistent with findings from Boykoff & Boykoff (2007) and Bennett (2009). Human-angled stories and political events are put at the center of the climate change news cycle at the expense of larger social or scientific trends. Throughout the three identified case study periods, climate change coverage shared common themes, while also having period-specific emphases.

Coverage by CNN and MSNBC had less distinguished framing trends across the three time periods, but consistently affirmed climate science in coverage and emphasized the leading geopolitical role the U.S. must play in climate policy. Macro-level coverage of this sort emphasizes the increasing environmentalist identity of American progressives (Klein, 2011), as well as CNN and MSNBC's continued left-leaning rebranding in the age of opinionated news (Martin & Yurukoglu, 2017; Feldman 2011).

Coverage by Fox News had framing trends that were generally consistent throughout the three case study periods, echoing sentiments embodied by the climate change denial movement.

Broadly, Fox News framing consisted of, but was not limited to 1.) questioning the extent of human-induced climate change and 2.) emphasizing the alleged harm environmental policy would bring to the American job market and economy. Taking a stance against environmental regulation in the name of maintaining economic prosperity is consistent with broader, modern conservative values (Brulle, 2013). Regulations that potentially limit the production of any economic sector – such as the oil and gas industry – are thus portrayed by Fox News as an inherent villain to American success (Mayer, 2012).

Observational findings from this project are generally consistent with past empirical findings regarding the political identities of cable's "Big Three" networks and the common frames through which they cover the topic of climate change (Huertas, & Kriegsman, 2014; Dunlap & McCright, 2011;).

Chapter 1: Progressive Coverage (CNN/MSNBC)

Throughout the three case study periods, CNN and MSNBC maintained a consistent tone towards the existence and urgent need for collective action on climate change. Among the most common frames of coverage towards climate change were emphasizing the existence of climate change and maintaining a pro-regulation stance towards international climate policies. Through the echo-chamber effect (Farrell, 2014), progressive viewers are taught to trust in climate change science and to advocate for environmental policies

Climate Change: it is real!

There is always room for more empirical science and fewer opinions to fill segments of climate change coverage, but CNN and MSNBC regularly framed coverage in a manner that is consistent with the current scientific consensus on climate change. A viewer of CNN or MSNBC

residing in the progressive "echo-chamber" (Farrell, 2014) is likely to have very strong trust in scientists and in the notion that climate change is an urgent problem caused by humans.

Take the hacked email scandal (i.e. Climategate) in 2009 as an example. Leading up to the UN Conference in Copenhagen, over 1,000 emails were leaked from a Climate Research Facility in the United Kingdom. Taking the emails out of context, conservatives promptly made claims that this undermined the legitimacy of climate science. While follow-up reports deemed that these scientists did not take place in any scientific malpractice (EPA, 2011), MSNBC and CNN were the first significant platforms to defend these scientists and their process. In light of the emerging controversy over if global temperatures are increasing, the progressive outlets promptly produced segments days following the emails were released citing scientific reports of the current decade being the warmest on record (Mann, 2009), and that despite controversy over one scientific institution, the international scientific consensus on climate change remains strong (Black, 2009) (See Appendix A).

Another example of progressive news media affirming the scientific consensus on climate change is when President Obama visited Alaska in 2015. Mirroring Obama's goals for the trip, MSNBC and CNN took the opportunity to discuss the tangible effects of climate change seen in Alaska. Stories and imagery of high temperatures, melting glaciers, and a horrific wildfire season -- all documented effects of climate change (USGCRP, 2018) -- were incorporated into coverage to show how some Alaskans are becoming some of the world's first climate refugees (Moser, 2015; Acosta, 2015) (See Appendix B). Examples such as this highlight ways in which climate change coverage can be more productive in translating the complexities of climate change. As Mathew Nisbet points out, if people are given ambiguous situations to consider -- such as the

broad issues of climate change on a global level -- therein lies opportunities for the news media to frame the issues with a variety of different contexts (Nisbet, 2009). Attaching everyday struggles of people living today with the documented effects of climate change allows viewers to connect on a personal level to what climate change means, leaving less room for climate change to be politically construed.

Framing coverage as consistent with the scientific consensus on climate change by progressives also came in the form of villainizing conservatives that appeared to be dismissive towards climate change. The most blatant example of this dynamic throughout the case studies is when President Trump pulled the United States out of the Paris Climate Accord. MSNBC and CNN appeared to be on a conquest to get a definitive answer as to if President Trump truly believed climate change was a "hoax" (Cooper, 2017; Blitzer, 2017), before going on to frame conservatives as intentionally ruining the planet (See Appendix A(2)). Framing of this sort, in which progressive outlets vilify conservatives for their approach to climate change is consistent with past content analysis (Berry & Sobieraj, 2014; Feldman, 2016). Progressive partisanship is likely reinforced via selective exposure in a way that negatively generalizes conservatives (Feldman, 2014; Slater, 2007).

Progressive & Pro-Regulation

A second dominant frame of climate change coverage frequented by progressive outlets CNN and MSNBC was advocacy and celebration of climate change policy, regardless of the nuances of the given policy. In 2009, when the United Nations signed the Copenhagen Accord at the end of the Copenhagen Climate Conference, MSNBC and CNN summarized their sentiments towards the deal through the repeated line from President Obama's speech calling the Accord "an

unprecedented breakthrough" (Brown, 2009). Although, the accord was ambiguous and hard to enforce due to its non-legally binding nature and absence of global emission reductions standards (Dimitrov, 2010) (See Appendix B). To be fair, both networks had guests who were critical of the accord's vagueness and watered-down goals to combat climate change (Friedman, 2009; Chetr, 2009), signifying a remaining commitment to the American journalistic norms of objectivity and balance (Boykoff & Boykoff, 2004; Hiles & Hinnant, 2014). Regardless, there was certainly not a complete balance in progressive coverage, as the majority of segments by MSNBC and CNN celebrated the climate accord as a success.

The joint statement between the U.S. and China in 2015 in which China committed to implementing a cap-and-trade program was also celebrated by progressive outlets (See Appendix B(7)). MSNBC went as far as to say this was the "biggest news in climate policy maybe ever" (Maddow, 2015) due to China -- the world's largest carbon emitter -- saying it would take serious actions to reduce emissions. Progressive coverage negated the nuance of the story by ignoring the fact that China has a history of not abiding by international climate policies (Heggelund, 2007). Signified is a lack of objectivity in coverage by framing all climate policies as successes without significant room left for critique of climate deals such as this one (Boykoff & Boykoff, 2004; Hiles & Hinnant, 2014).

The previous two climate policy coverage events took place during a Democratic president, which left abundant room for MSNBC and CNN to positively frame the current administration's efforts towards climate policy. When President Trump removed the United States from the Paris Accord in 2017, the tone shifted to be outwardly critical of the current administration's environmental politics. Due to the removal from an accord that only Nicaragua

and Syria were not a part of (Hayes, 2017) CNN and MSNBC framed this move by President

Trump as something that would make the United States not be taken seriously on the world-stage

(Scarborough, 2017). While some coverage cited scientific reasoning for why this was an

unproductive move for the United States (Smerconish, 2017) the dominant frames were

discussions of how this was bad for the United States' role in global politics (See Appendix C).

This contrasts progressive coverage of Obama's trip to Alaska, as climate change is abstracted

away from everyday effects felt by American citizens to climate policy dynamics, leaving

abundant room for less productive partisan messaging to be infused into the framing of climate

change.

As these case studies show, progressive outlets CNN and MSNBC set the terms of public

debate (Price et al., 2005) by reaffirming the scientific consensus on climate change and

emphasizing the need for collective climate policy. Through a documented echo-chamber effect

(Farrell, 2014), consumption of these networks will cause liberal viewers to likely perceive that

there is a legitimate scientific consensus on climate change and that all environmental

regulations are effective. Furthermore, due to selective exposure (Feldman, 2014; Slater, 2007),

it is highly unlikely that viewers of these networks will significantly consume news coverage that

is dismissive towards climate change or environmental policy, effectively strengthening

progressive outlooks toward climate change.

Chapter 2: Conservative Coverage (Fox News)

For the broad stances progressive outlets (CNN/MSNBC) took towards climate change,

Fox News took the inverse positions. Frequent in Fox News coverage was questioning the

legitimacy of climate science as well as advocating for minimal international regulation, citing

the economic harm these policies will induce for the United States. Through the echo-chamber effect (Farrell, 2014) and selective exposure (Feldman, 2014; Slater, 2007), conservative viewers likely have dismissive notions towards climate change and fear of environmental policy hurting the American economy reinforced.

Climate Change: An Exaggeration

Consistent with strategies of the conservative, organized climate change denial movement, Fox News will take any opportunity to cast doubt about the legitimacy of anthropogenic climate change (Dunlap & McCright, 2011; Brulle, 2013). Using the hacked climate scientists' emails as a source of controversy in 2009, Fox News made claims that this undermined the legitimacy of climate science, largely overshadowing any actual progress that would be made at the UN Climate Conference. As quickly as MSNBC and CNN were to support the legitimacy of climate science following the email hack, Fox News hosts Sean Hannity to Brett Baier jumped to the conclusion that this proved climate science was illegitimate and "doctored" (Hannity, 2009; Doocy, 2009; Hannity, 2009). Fox News continued the dismissal of existing climate science when Obama visited Alaska in 2015 countering progressive sentiments by saying the trip was built upon a liberal goal to induce fear about climate change to further Obama's political legacy (Kissel, 2015; Bolling, 2015).

Dismissal of the urgency and scale of climate change was often accompanied by positive coverage of the fossil fuel industry. Frequented in Fox News coverage during September, 2017 were figures that showed U.S. greenhouse gas emissions dropping below 1990 levels which a handful of conservative voices credited to innovation in the fossil-fuel industry and the use of natural gas (Bila, 2017; Hegseth, 2017; Thiessen, 2017). Effectively, this framed the urgency of

climate change and the idea that fossil fuels are bad for the environment as exaggerations. And, even though the U.S. drop in emissions was largely insignificant (Hausfather, 2017), Fox News upheld two central pillars of the climate change denial movement: promotion of a fossil-fuel-dependent economy and casting doubt about the current existence of climate change (Antonio & Brulle, 2011; Dunlap & McCright, 2010). Similar framing trends were present during coverage of Pope Francis' trip to the United States (See Appendix B(3)) and the Copenhagen Accord in 2009 (See Appendix A(3)).

In regards to journalistic norms of balance and objectivity, Fox News daytime shows tended to have far less overt criticisms towards the legitimacy of climate change. Primetime shows that included hosts such as Tucker Carlson, Greg Gutfeld, and Sean Hannity consistently expressed critical opinions of liberals and climate change science, signifying a large lack of journalistic norms balance and objectivity (Boykoff & Boykoff, 2004; Hiles & Hinnant, 2014) in the shows that produce the highest ratings and viewership for the network (Mitchell & Holcomb, 2016).

Climate Policy: It Will Hurt Our Economy!

Closely tied to the outward dismissive tone towards the existence of climate change by Fox News emerges consistent advocacy for minimal environmental regulation. In some of the coverage surrounding climate policies, Fox News does make legitimate critiques of the policies such as highlighting the weakness of the Copenhagen Accord from 2009 (Camerota, 2009; Garrett, 2009) and examination of China's history with emission standards in light of the U.S. - China joint statement on climate change in 2015 (Schaefer, 2015). Although, coverage by Fox News remained far from balanced despite these critiques.

The general resistance to environmental policy embodied by Fox News had much to do with modern conservative values of nationalism and free-market capitalism. In an extreme example, during the 2009 Copenhagen Climate Summit, Fox News made an effort to connect any resulting accord with communism. In modern conservatives' minds, socialism and communism are largely associated with corruption and weak economies (Jacques et al., 2008). Citing the Summit as a meeting of the world's socialists intending to redistribute global wealth (Hannity, 2009; Carlson, 2009), Fox News used this instance to frame international climate action not as environmental protection but as an attempt from the far-left to destabilize American capitalism (See Appendix A(3)). Furthermore, residing in the conservative echo-chamber (Farrell, 2014) upheld by Fox News, many conservative viewers will likely come to think of environmental regulation as a far-left conspiracy, further delegitimizing the urgency of climate change in their minds.

A conscious framing of climate policy in political ideology continued when Pope Francis -- who outwardly speaks about the dangers of capitalism and climate change -- visited the United States in 2015. While Pope Francis linked world poverty and climate change to capitalism, Fox News vehemently refuted this idea by continually having segments which advocated for the use of fossil fuels -- deemed clean affordable energy -- and free-market capitalism to rid the planet of its poverty (Gasparino, 2015; Nicholson, 2015). Fox News also took this opportunity to platform segments that discussed how environmental regulation championed by Pope Francis and progressives will cause a redistribution of wealth, effectively making Americans poorer (Rubio, 2015). Again referencing Mathew Nisbet's research on news media framing, Fox News can

avoid the complexities of climate change by framing it as an issue that has to do with a battle between economic ideologies, not environmental science (Nisbet, 2009).

Reinforcement of the notion that environmental policy will induce global redistributions of wealth and labor by Fox News helps to contextualize the notion that climate change policy is bad for the American worker. When President Trump removed the United States from the Paris Climate Accord in 2017, Fox News framed the move as a significant success for the American economy, opposing the tone of MSNBC and CNN. Constantly repeated in Fox News coverage was that President Trump was "putting America first" (Bossie, 2017) as the accord was apparently unfairly benefitting China and India who would be free to pollute while the American economy crumbles trying to meet emission standards (Jones, 2017; Gutfeld, 2017). Likely pleasing fossil-fuel-funded conservative think tanks, Fox News framed this move by Trump as an opportunity for American jobs to increase, as "innovation" in the fossil fuel sectors would be free to continue with less environmental regulation to hamstring its progress (Thiessen, 2017; Hegseth; 2017). The near-complete omission of future environmental impacts of this policy decision in favor of celebrating the fossil fuel industry's revived potential was a blatant disregard of the journalistic norm of objectivity by Fox News (Boykoff & Boykoff, 2004.

As these case studies show, conservative outlet Fox News sets the terms of public debate on climate change (Price et al., 2005) by taking opportunities to frame the existence of climate change as exaggerated, and environmental policies as progressive over-reach that will hamstring the American economy. Through the echo-chamber effect (Farrell, 2014), consumption of Fox News will cause conservative viewers to likely perceive less of a scientific consensus on climate change than currently exists, in addition to perceptions that climate change policy is an

unnecessary measure and an enemy to allegedly prosperous free-market capitalism. A dynamic of this sort is consistent with past empirical research which found a negative correlation between consumption of Fox News and trust in climate science (Hmielowski et al., 2013). Furthermore, due to selective exposure (Feldman, 2014; Slater, 2007), it is unlikely that Fox News viewers will significantly consume news coverage that is accepting of climate change science or environmental policy, effectively strengthening conservatives' dismissive outlooks toward climate change the more Fox News is watched.

Conclusion

As shown from these three case study periods, coverage of climate-related events and topics by cable news channels MSNBC, CNN, and Fox News is politically divided. Throughout the three case studies, Fox News had distinguishable framing trends in its coverage that promote free-market capitalism, the fossil fuel industry, and limited international agreements over climate change. MSNBC and CNN had less clearly defined framing trends across case studies, but consistently took stances that advocated for international agreements on climate change, while supplementally incorporating climate science into coverage. Within the scope of this project, Fox News most supported climate decisions made by Republican Presidents (Trump) while sharply critiquing those of Democratic leaders (Obama). The inverse relationship existed for MSNBC and CNN.

Cable's "Big Three" provide contrasting coverage on the same climate topics. Watching news networks with single political affiliations over time -- selective exposure (Feldman, 2014; Slater, 2007) -- shows how climate change can come to be connotated with vastly different narratives depending on the audience. As can be seen from the case studies, key to reinforcing

political connotations in viewers' minds is Fox News repeatedly linking environmental regulations with a slowed American economy (Nisbet, 2009). Inversely, framing by MSNBC and CNN continually portrayed climate policy as important, using globalist sentiments and various translations of climate science to back up these claims validity. Opinionated news rooted in political values, such as this, creates distinct partisan viewers, leaving little room for bi-partisan consideration in coverage in what communication scholars call the "echo-chamber" (Farrell, 2014).

Going forward, moving away from an echo chamber model in the news landscape is important for environmental communications. Under a new framework, news networks -- at least those on the left -- should directly confront conservative claims that climate policy will hurt the economy in coverage. Similar to framing strategies by Al Gore, linking environmental regulation to a promising clean-energy economy will shift the conversation to include the economic concerns of conservatives as well.

Green economic prosperity is not the only productive future framing strategy. Showing the tangible, "every day" effects of climate change as done by MSNBC and CNN during President Obama's trip to Alaska in 2015 offer opportunities for climate change to be obscured less by partisan sentiments and language. But, putting the climate debate positively in economic terms is likely to do the most for partisan unification over the climate. In part, this is due to conservatives becoming less concerned about the environment after being exposed to climate science (Carmichael et al., 2016). Furthermore, if jobs are what conservative viewers are conditioned to prioritize over the environment, it is necessary to cater framing towards these audiences. News is a translator of climate change and only through inclusive, productive

coverage will the news media have a chance of becoming a bi-partisan unifier over climate

change.

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Appendix

Appendix A

"Climategate" (12/09)

Prior to the UN conference, more than 1,000 emails were leaked from climate scientists at the Climate Research Unit at the University of East Anglia. Unofficially termed "climategate", these hacked emails quickly became a source of controversy. The primary accusation against the scientists was that it appeared data having to do with rising global temperatures had been doctored to fit previously stated warming climate trends. Most commonly cited by climate skeptics is an email in which one scientist writes that he has used a "trick" to "hide the decline." Taken out of context, this email could likely signify that scientists are using statistical "tricks" to hide the fact that global temperatures are declining, not rising. The "trick" referred to combining two different sources of data to show temperature changes over longer time scales. The "decline" referred not to a decline in temperature, but a decline in the reliability of tree-rings as proxies for modern temperature records (Pearce, 2010).

Investigations of the emails by the U.S. Environmental Protection Agency (EPA, 2011), and the United Kingdom's government E found no scientific malpractice. Despite this, the climate change denial movement had a source of controversy with which to work. Fox News used this as ammunition to partly overshadow the UN Climate Conference during December

(Antonio & Brulle, 2016), casting doubt about the severity of climate change among its audience.

During the introduction of a Fox News segment on December 20th, Brett Baier introduces a "climategate" segment by saying, "Few of us have the time or expertise to truly understand the complicated [data and methods] that climatologists use to make the case that global warming is a serious problem" (Baier, 2009). These sentiments are consistent with the ideas of news media acting as "mediated reality," effectively translating complex science to the public (Scheufele, 2014; Boykoff, 2009). Baier embraces this and makes the case that the average person will be unable to make sense of the truth behind the hacked emails. The Fox host goes on to say that the scientists used mathematical tricks to hide data that contradicted their theories, effectively "hiding their scientific dirty laundry" (Baier, 2009).

The actual contents of the emails from East Anglia University were rarely scientifically evaluated in Fox News coverage. Rather, Fox News jumped to conclusions and emphasized that these emails "shed serious doubts on the science of global warming" (Hannity, 2009) proving that climate change data has been "doctored" (Doocy, 2009). Fox News coverage also emphasized that these emails could be grounds for the United States to not even be present at the UN Climate Conference, as the very science the conference is based around is illegitimate. American conservatives' trust in scientists declined following "climategate" (Leiserowitz et al., 2010), which can be partly attributed to coverage by Fox News.

As would be expected, CNN and MSNBC defended the scientists whose emails were leaked. CNN and MSNBC coverage emphasized that these emails had been taken out of context and were being used by climate change deniers to undermine any potential progress at the

Copenhagen Climate Summit. A guest on CNN's *The Situation Room* went as far to say that this was "an intentional smear campaign to distract the public" (Mann, 2009). Both networks made a point of reminding their audiences of the current evidence of climate change, such as it being the warmest decade on record (Mathews, 2009). Summarized by CNN's Phil Black "even if a question mark exists over this one institution, the rest of climate science as a global consensus [remains] sound" (Black, 2009). Despite the controversy, CNN and MSNBC framed the debate through the overwhelming evidence to support the existence of climate change.

Appendix A(1):

The Copenhagen Accord (12/09)

Following days of negotiations, the Copenhagen Accord was the final agreement that manifested at the end of the Climate Summit in December, 2009. The final accord was an agreement with the broad goal of limiting global temperature increases below 2°C. The Copenhagen Accord proved to be weak and hard to enforce. The accord is not legally binding i.e. there are no repercussions for countries not making an effort to curb emissions. The final draft was unclear as to which countries actually were subject to the accord's goals, and there are no global goals for emission reductions (Dimitrov, 2010).

Appendix A(2)

"Better than nothing" and Obama the Deal-Maker (MSNBC/CNN)

Coverage by CNN and MSNBC framed the accord as a relative success and emphasized the role the United States played in making the deal happen. Almost no voice from either of the two networks went as far as to praise the Copenhagen Accord as a great deal. Their feelings on the matter are well described by a CNN correspondent as an agreement that is "better than

nothing" for the broader goal of reducing global greenhouse emissions (Brown, 2009a). Anchors frequently reiterated a quote from President Obama who said that that accord was, "a meaningful and unprecedented breakthrough," (Brown, 2009b) as a way of positively framing the Climate Summit and the United States role in its inception.

Coverage by CNN and MSNBC was not completely uniform. Both CNN and MSNBC produced segments that were critical of the final accord. A guest on MSNBC's *The Rachel Maddow Show* referenced Obama's statement through critical word play, calling the accord "an unprecedented breakdown" (Friedman, 2009). CNN anchor Kiran Chetr, among others, repeated statements from developing countries who said that the accord was "not robust enough" in its goals to reduce global emissions (Chetr, 2009). Weighing both sides of the policy debate over the Copenhagen Accord in coverage is an example of journalistic norms of balance and objectivity. Maintaining segments for critique over the final accord demonstrates that MSNBC and CNN take into account traditional journalistic norms of objectivity and balance on certain angle of climate coverage (Boykoff & Boykoff, 2004; Hiles & Hinnant, 2014; Grundmann & Krishnamurthy, 2010). Regardless, primary framing of the Copenhagen Accord among CNN and MSNBC was as a relative success.

MSNBC and CNN's repetition of Obama's quote saying the agreement was "a meaningful and unprecedented breakthrough" (Friedman, 2009) helped to set up the other dominant frame through which the accord was covered by these two networks. Much of this coverage consisted of talks of President Obama's political legacy and credited the President with being the necessary leader for brokering a deal. A guest on CNN's *The Situation Room* stated that "the world leaders -- with President Obama there -- have averted a disaster" (Gergen, 2009).

Implied in this statement is that without President Obama's American leadership in deal-making, the Copenhagen Conference would have devolved into chaos. Obama's prestige in making deals is also highlighted in stories about the American President bursting into a room with representatives from China and India, both highly polluted countries, and "through [Obama's] sheer force of will they were able to seal the deal" (Brown, 2009c).

While not spending much time with the contents of the Copenhagen Accord, CNN and MSNBC repeated in their coverage what the accord meant for Obama's legacy. CNN correspondent Dan Lothian summarized this point calling it a "big weekend for the administration," (Lothian, 2009). A guest on CNN's *American Morning* called the Copenhagen Accord "a significant investment of [Obama's] legacy" (Avalon, 2009). Heroic deal-making framing of President Obama and the political legacy focus towards the Copenhagen Accord highlights the progressive leanings through which CNN and MSNBC framed the conference.

Appendix A(3)

A Bad Deal, Jobs, and Communism (Fox News)

Fox News coverage of the Copenhagen Accord starkly contrasted that of CNN and MSNBC. Prior to any deal being reached, Fox emphasized the negotiation gridlock of the conference with headlines such as "More frustration in Copenhagen," (Smith, 2009) and "As the conference crumbles" (Gutfeld, 2009). In addition to framing the entire conference as a failure, Fox News heavily focused on the weaknesses of the Copenhagen Accord. Continually cited was the non-binding nature of the accord, and the lack of global goals for cutting greenhouse gas emissions (Camerota, 2009). Fox's sentiments towards the accord's weakness can be summarized in one line from a Fox News Special Report, "It is much easier to describe what this

deal isn't than what it is,"(Garrett, 2009) in reference to the accord's broad goals and vague strategies for achieving them.

In addition to justifiable critiques of the Copenhagen Accord by Fox News, there were other frames in their coverage that were based in broader conservative sentiments toward climate policy. One sub-thread of coverage was a discussion of the alleged danger a substantive climate accord posed for the American economy. Fox News host Sean Hannity called the conference a result of global warming "alarmism" and that a climate accord with any sort of binding emission standards would cause the United States to "lose millions of jobs" and "outsource manufacturing jobs" (Hannity, 2009). Reference to loss of American jobs and a lack of commitment from China and India is a constant frame through which Fox News covers climate change. *Fox and Friends'* Gretchen Carlson referenced the "double digit unemployment here at home" before suggesting President Obama's trip to Coppenhagen was useless (Carlson, 2009).

Coverage of this sort often references connecting the environmentalist movement with communism. Hannity again called the conference a meeting of "the world globalists and socialists" to redistribute wealth (Hannity, 2009b), referencing richer countries potentially helping to fund poorer, pollutive countries transition to green economies. Many have recognized that the fall of communism in the late 1980s paved the way for environmentalism to become the movement conservatives ideologically fought against (Dunlap & McCright, 2010). Much of what comprehensive climate policy requires is international agreement and regulation. Policy of this sort firmly runs counter to Reagan-era conservative wishes for the spread of global capitalism via free market economies and the privatization of resources (Jacques et al., 2008).

In modern conservatives' minds, socialism and communism are largely associated with corruption and weak economies. To frame environmentalism through the lens of communism is a way of limiting desire for global cooperation and highlighting the alleged economy-crippling components of climate agreements. Framing of environmentalism in this fashion has been referenced as transitioning the "red scare" into a "green scare" (Jacques et al., 2008). Fox News host Gret Gutfeld said after the closing of the Copenhagen Accord that when communism fell "those drawn to that ideology had to go somewhere else. The Communist Manifesto became an Inconvenient Truth," (Gutfeld, 2009(1)). Gutfeld, among many other Fox hosts, frames international climate action not as environmental protection, but an attempt from the far-left to destabilize American capitalism. While Fox News had some substantive critiques of the Copenhagen Accord, much of their coverage was positioned to instill fear of American job loss and to illustrate a substantial, binding climate accord as unnecessary and economically dangerous.

Appendix B

Obama in Alaska (9/15): Highlighting Climate Change and his Legacy (MSNBC/CNN)

During and following President Obama's four-day trip to Alaska (August 31st - September 3rd) coverage by MSNBC and CNN used it as an opportunity to discuss the modern manifestations of climate change. CNN's Jim Acosta said President Obama's trip would bring attention to what Alaskans were already experiencing: "melting glaciers, record high temperatures, and one of the worst wildfire seasons in years" (Acosta, 2015). In this vein, one of the most recycled clips among MSNBC and CNN is of Obama hiking the Exit Glacier, which has been receding in recent years (Moser, 2016). One MSNBC segment noted that during Obama's

"historic trip in Alaska, he drove home the impacts of climate change," by visiting the Exit Glacier and highlighting how climate change has caused it to recede (Roberts, 2015). Use of Obama's Alaska trip to further project the current effects of climate change by MSNBC and CNN is an example of productive framing by these networks as translators of complex climate issues (Scheufele, 2014; Boykoff, 2009; Hansen, 2018). Aside from MSNBC's slight obsession with Obama becoming the first president to visit the Arctic Circle (Maddow, 2015), coverage stayed away from themes of political legacies seen in the other two case study periods. Rather, the primary focus was on the everyday effects of climate change and the need for action illustrated through Obama's various stops in Alaska.

Appendix B(1)

Obama in Alaska (9/15):Why is Obama in Alaska? (Fox News)

Coverage by Fox News was not nearly as receptive to President Obama in Alaska, providing a critical voice of the trip for a number of reasons. A Fox News panelist claimed Obama's trip was intended to "whip up fears about climate change" (Kissel, 2015) while Fox anchor Bret Baeir called the trip an attempt by Obama to "cement his environmental legacy by sounding a passionate alarm bell" (Baeir, 2015). An unnecessary trip based on pursuing a climate agenda for political gain was one of the leading narratives attached to the President's visit to the nation's most northern state.

Fox News also framed Obama's trip as something that misrepresented the threats facing the country. Following on the heels of the "Blue Lives Matter" movement, Fox News attempted to frame Obama as unsympathetic towards the police. Speaking indirectly to the President, Fox anchor Eric Bolling said during an episode of *Cashin Out* that the most urgent issue facing the

country, "isn't a degree warmer over the next one or two hundred years, [but] the killing of our law enforcement" (Bolling, 2015). Other Fox News voices said it was "Russian influence in the arctic" (Baier, 2015(2)) and Chinese ships patrolling off the coast of Alaska (Kissel, 2015(2)) that Obama should give precedent to, not climate change. Fear mongering over Russia and China relates back to Fox News connecting the environmentalist movement to communism, inflating the perceived threats of these countries with socialists backgrounds to overshadow that of climate change. Fox News did little to combat the claims that Alaska is a primary example of the effects of climate change, but dominated its coverage with villainized interpretations of President Obama, for ignoring other alleged critical issues facing the country.

Appendix B(2):

Pope Francis Comes to the United States (9/15)

The leader of the catholic church visiting the U.S. would not usually coincide with increased discussions of climate change. But Pope Francis became an unlikely advocate for climate change action. Pope Francis released an encyclical in June, 2015 which called for collective action from the global community to combat the worsening effects of climate change (Maibach, 2015). Such an outward stance taken by a religious leader on a partisan issue set the stage for divergent treatment of the trip and the Pope's stance by the news media.

All three networks (MSNBC, CNN, and Fox News) agreed that the Pope's stance on climate change is consistent with American progressive values. A Fox News guest said that the Pope's climate change outlook "warms the hearts of liberals," while an MSNBC anchor said Francis was moving the catholic church into a more "liberal, tolerant, and compassionate direction" (Mathews, 2015). Aside from this, general trends in framing indicate that Fox News

was more critical of the Pope's visit, while MSNBC/CNN supported the Pope's sentiments toward climate change.

Appendix B(3)

Fossil Fuels, Poverty, and the Pope (Fox News)

Fox News creatively used some of Pope Francis's own rhetoric to frame global climate action as a danger. One of the Pope's central messages in his encyclical was the harm climate change would induce for the world's poorest populations (Maibach, 2015). The message by Fox News was clear once the Pope arrived: climate policy*,* not climate *change,* will be what hurts the poor. During an interview on *The Kelly File*, Marco Rubio expresses a concern that environmental regulation will make people poorer (Rubio, 2015). In response to Francis's ideas toward the climate and the poor, a Fox News guest said that the best way to help the poor is by getting them out of poverty with the help of cheap electricity in which "fossil fuel is the hope" (Nicholson, 2015).

Pope Francis also outwardly connected the world's poverty and climate issues to capitalism, of which a Fox commentator replied "capitalism has created more wealth and done more good [than] the Catholic church," (Gasparino, 2015). In this coverage, the issue of climate change is obscured through a discussion of poverty and its relationship to capitalism, in which Fox News voices promote the use of fossil fuels and free-market capitalism consistent with framing strategies from the modern conservative climate change denial movement (Nisbet, 2009; Dunlap & McCright, 2010; Oreskes & Conway 2012). Fox goes one step further, by saying the Pope's "radical climate change beliefs" (Gutfeld, 2015) are illegitimate because the Pope is a

"religious leader, not a political figure" (Bush, 2015). Fox News frames Pope Francis as an illegitimate voice on climate change that will hurt those living in poverty.

Appendix B(4)

Pope Francis as the Voice of Climate Change Reason (CNN/MSNBC)

In contrast, MSNBC and CNN framed Pope Francis as an important, unifying voice on climate change. The Pope's call to action on climate change was credited with having the ability of, "moving the debate and changing minds" (Kapur, 2015) with his encyclical making people "rethink their actions"(Figueres, 2015). An MSNBC guest even credited Pope Francis's remarks on climate change as "uplifting" (Roberts, 2015) contrasting the divisive rhetoric usually at the heart of the climate debate. CNN and MSNBC framing of the Pope runs counter to the sentiment of Fox News that religious leaders should stay away from "political" issues, and places emphasis on the role the Pope can play in bringing broader audiences into the environmental movement.

MSNBC and CNN also used language that politicized the Pope, possibly further politically polarizing the issue of climate change. Speaking on MSNBC, Mayor Michael Bloomberg called the Pope, "the leading progressive voice in the world today" (Bloomberg, 2015) and an MSNBC anchor firmly suggested that if the Pope was a politician, he would be a Democrat due to his stances on climate change (Witt, 2015). Framing of this sort undermines past coverage that shows the Pope can be a unifying voice on climate change. By focusing on progressive values expressed by the Pope over the environment, MSNBC and CNN assist in reinforcing climate change as a partisan issue to its audiences.

Appendix B(5)

U.S.-China Joint Statement on Climate Change (9/15)

On September 25th, 2015 Chinese President Xi Jinping visited Washington D.C. and with President Obama made a statement to the world that the two countries were committed to the implementation of domestic climate policy and sustainable development in the future (The White House, 2015). The joint statement was a reaffirmation of a commitment to fight climate change from 2014, but still represented a significant intended effort to curb emissions by two of the globe's largest polluters. While getting far less coverage than the two previous climate-related events this month, partisan ideological framing was still present among cable's "Big Three."

Appendix B(6)

"China Will Never Abide By This" (Fox News)

Fox News repeated past notions of China as a country uncommitted to curbing emissions, effectively taking advantage of the United States. In reference to the Obama administration working with China to reduce emissions a Fox commentator said that "the White House's priorities are misguided" (Chang, 2015). In the more limited coverage this event received, Fox News reinforced the idea of China as untrustworthy. According to Fox, the Chinese will continue to expand emissions, and President Obama has no "leverage" when it comes to the Asian superpower (Schaefer, 2015). Furthermore, outright denials of climate change are not continuously presented in this coverage, but climate policy is framed as useless because China will not abide.

Appendix B(7)

A Big Step for Climate Policy (CNN/MSNBC)

Despite the decreased coverage of the joint statement on climate change between two of the world's largest superpowers, MSNBC and CNN still emphasized the importance of the event. A guiding framing point by MSNBC and CNN was how China had announced it would begin a cap-and-trade program beginning in 2017 (Mohsin, 2015), which makes polluters pay a price for the amount of carbon they emit. Contrasting Fox News, coverage by MSNBC and CNN highlighted that a commitment from China was a significant step in combating global climate change. MSNBC's Rachel Madow went as far to say that the commitment by China was "the biggest news in climate policy maybe ever" (Maddow, 2015). Regardless of Fox's critiques of China's lacking emission reductions, MSNBC and CNN framed the joint-statement as a success for the fight against environmental and atmospheric degradation.

Appendix C

U.S. Withdraws from the Paris Accord: Leaving the World Behind and Trump the Climate Denier (CNN/MSNBC)

Following Trump's announcement, CNN and MSNBC both emphasized the move as a mistake. Repetitively used in this context were world maps that showed the only three countries in the world not apart of the accord: Nicargua, Syria, and now the United States (Hayes, 2017). Framing of this sort was used as a way to highlight how much of an outlier the United States has become on climate change action. Syria, in the midst of civil war, and Nicaragua, who did not believe the accord went far enough to reduce emissions both had legitimate excuses to be absent from the Paris Climate Accord. As one of the world's largest polluters and largest economy, the

United States did not have an excuse according to CNN and MSNBC. Coverage cited President

Trump's withdrawal as the United States "turning its back on the world" (Van Susteren, 2017)

and becoming an "environmental pariah" (Kerry, 2017).

Progressive network framing emphasized the lack of scientific consideration by President

Trump in this withdrawal (Smerconish, 2017), but it appeared that the primary frames the

withdrawal was covered through were that of geopolitics. Emphasis on an abdication of

American climate change leadership (Markey, 2017) and how the world is now "laughing" at the

United States (Scarborough, 2017) were central in coverage by CNN and MSNBC. While there

is validity in these sentiments, anchors and guests more frequently repeated the political, not

environmental fallout that would result from this withdrawal.

A second frame of coverage by CNN and MSNBC was repetitively questioning whether

or not President Trump believed in climate change. Framing Trump in climate controversy was

constant among these two networks following the withdrawal. Whether it be an anchor pressing

a Trump advisor with the blatant question, "Does [Trump] believe global warming is a hoax?"

(Blitzer, 2017) or the CNN headline "dancing around the climate question" (Cooper, 2017). An

identified strategy was likely to connect Trump to the climate change denial movement to

delegitimize his decision-making abilities on issues concerning the environment. An unintended

consequence of this framing is deeper entrenchment of climate change as a topic into divisive

partisan narratives against one another.

U.S. Withdraws from the Paris Accord: America First, Natural Gas, and China (Fox News)

During President Trump's Rose Garden announcement, he claimed that the Paris Accord would "undermine our economy, hamstring our workers, weaken our sovereignty" (Trump, 2017). Claims of this sort toward climate agreements resemble conservative claims about the Copenhagen Accord in 2009 and U.S. - China Joint Statement in 2015. Consistent with past framing and messaging towards climate agreements, Fox News strongly echoed these sentiments. Throughout repeated claims that Trump was putting "America first" (Bossie, 2017) and "helping out workers" (Jones, 2017) someone watching Fox News is not likely to think of the Paris Accord as an important agreement among world leaders to reduce climate change, but a deal that hurts America. Summarized by Greg Gutfeld, the Paris Accord was framed by Fox as a way of "punishing America for being so successful" (Gutfeld, 2017).

The ways in which the Paris Accord went about "punishing America" according to Fox News resembles many past frames through which climate agreements have been criticized by the network. Similar to both of the past case study periods, voices from Fox News cited the accord as unfairly benefitting China and India who would be free to pollute while the American economy crumbles trying to meet emission standards. Despite every country setting their own emission standards under the Paris Accord, Fox News host Tucker Carlson heavily emphasized that India and China are expected to reduce emissions less than the U.S., before stating that both countries are our "chief economic rivals" (Carlson, 2017). Conservative framing such as this is fairly common. In effect, Carlson is seeking to get viewers to believe that by trying to curb

American emissions, the economy will slow, while China and India fill the void becoming richer and more pollutive.

Framing China and India as uncooperative threats to the American economy commonly led into discussions about the energy sector. A *Fox and Friends* host described China and India as "moving backwards" in terms of energy production due to levels of visible smog in both countries, before saying the United States has cleaned up its environment through the use of natural gas (Bila, 2017). Frequently cited by members of Fox News and then EPA administrator Scott Pruit is U.S. emissions being below 1990s levels. Emissions have technically been reduced since the 1990s, but incrementally, and nowhere near the scale to avoid a greater than 2 °C increase in global temperatures (Hausfather, 2017). A *Fox and Friends* segment points to this reduction in emissions as reasoning for why the United States does not need to be a part of the Paris Accord. Cited is American "innovation and technology" in the form of fossil fuels that have allowed the United States to profitably lead the world in energy production while reducing greenhouse gas emissions (Hegseth, 2017). Another Fox News anchor took it a step further attributing the incremental drop in U.S. emissions to "the free market economy, hydraulic fracking, and clean coal technologies" (Thiessen, 2017).