

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF ADVERTISING/PUBLIC RELATIONS

Putting the Planet on the Ballot: Climate Change Framing in 2016 and 2018 Political Ads

KELSEY BELL
FALL 2020

A thesis
submitted in partial fulfillment
of the requirements
for baccalaureate degrees
in Advertising/Public Relations, History, and International Politics
with honors in Advertising/Public Relations

Reviewed and approved* by the following:

Fuyuan Shen
Head, Department of Advertising/Public Relations
Thesis Supervisor and Honors Advisor

Colleen Connolly-Ahern
Associate Professor, Department of Advertising/Public Relations
Faculty Reader

* Electronic approvals are on file.

ABSTRACT

Climate change has become a rising political issue as its impacts have become more and more evident throughout the world. General references or entire campaign ads addressing climate change or climate-related issues further shows how important this issue has become to influence American political candidates to begin addressing this issue in their campaign advertisements. This is because political candidates use their campaign ads to shape the voting public's perceptions about an issue or the candidate's platform to try and win their support. By examining how a candidate approaches an issue like climate change in his or her political ad, I can research how the candidate intends to influence the debate and the public's opinion of the political issue. Based on this rationale, I conducted a quantitative research study on political advertising in the U.S. by performing a content analysis on over eighty gubernatorial, congressional, or presidential political ads from the 2016 and 2018 election cycles. The findings show that more Democratic candidates address climate change in their 2016 and 2018 political ads. However, there wasn't a significant amount of intra-group variation when it came to climate change terminology or issue frames. For example, the *Attribution of Responsibility Frame* was the most frequently used issue frame in both major political parties' campaign ads. Instead, climate change attributes like terminology, as well as whether the ad looked at climate change from a problem or solution perspective, were associated with the candidate's political status.

TABLE OF CONTENTS

LIST OF FIGURES	iii
LIST OF TABLES	iv
ACKNOWLEDGEMENTS	v
Chapter 1 Introduction	1
Chapter 2 Literature Review	3
Political Advertising	3
Media Framing	7
Climate Change Communication Practices	8
Chapter 3 Research Questions	17
Research Question 1	17
Research Question 2	18
Research Question 3	18
Chapter 4 Methodology	19
Sample	19
Coding Procedures	19
Campaign Attributes	20
Messaging Attributes	21
Issue Framing Attributes	22
Chapter 5 Findings	23
Chapter 6 Conclusion	41
BIBLIOGRAPHY	46

LIST OF FIGURES

Figure 1. Political Affiliation29

Figure 2. Topic of Focus (based on Political Affiliation31

Figure 3. Postive v. Negative Ad (based on Political Affiliation)34

Figure 4. Climate Change Frame (based on Political Affiliation)35

Figure 5. Terminology (based on Political Status)37

Figure 6. Climate Change Frame (based on Political Status)39

LIST OF TABLES

Table 1. Campaign State	23
Table 2. Positive v. Negative Ad (based on Election Cycle)	25
Table 3. Type of Political Ad.....	25
Table 4. Type of Political Ad (based on Election Cycle)	26
Table 5. Climate Change-related Topic of Focus (based on Election Cycle)	27
Table 6. Climate Change Frame	28
Table 7. Climate Change Frame (based on Election Cycle)	28
Table 8. Terminology (based on Political Affiliation).....	30
Table 9. Problem v. Solution Frame (based on Political Affiliation)	36
Table 10. Topic of Focus (based on Political Status).....	38
Table 11. Problem v. Solution Frame (based on Political Status)	40

ACKNOWLEDGEMENTS

First, I'd like to thank my thesis supervisor/honors advisor Professor Fuyuan Shen and my thesis faculty reader Professor Colleen Connolly-Ahern. Their support throughout my thesis process has been amazing. I am very appreciative of the time they've given to help me accomplish this research project throughout these unconventional times. Secondly, I'd like to thank my family and friends, especially my parents, for their constant support throughout my entire college career. They've encouraged me to continue to learn and grow as a person, which is why I was able to complete a project to this magnitude. To everyone else who has contributed to my education and research skills, I thank you.

Chapter 1

Introduction

American voters have increasingly seen climate change as an important political issue throughout the twenty-first century. This is primarily due to the evolution of the public's risk assessment and perception of the issue in response to several recent events. When climate change was still popularly referred to as global warming, Americans had difficulty believing in its existence. For example, "in April 2008, 71% of Americans perceived solid evidence for global warming, relative to only 57% in October 2009" (Feldman et al., 2012, p.4). However, in recent years, more Americans have acknowledged its existence and importance for the future of the country. Surveys conducted by the Pew Research Center have shown that the share of American adults that view climate change to be a major domestic threat has increased by more than fifteen percentage points between 2009 and 2020 (Kennedy, 2020).

In addition to this, there has been an overall growth in the priority American voters give to the environment and climate change throughout this century. Only 44% of U.S. adults surveyed in 2002 named environmental protection to be a top policy priority while 38% of U.S. adults surveyed in 2017 considered climate change to be one (Pew Research Center, 2020). However, these percentages grew in 2020 when U.S. adults were surveyed about what issues should be a president's or congress member's top priority. More than half of the U.S. adults surveyed named environmental protection (64%) and climate change (52%) as top priorities (Pew Research Center, 2020). In fact, "nearly as many Americans say protecting the environment should be a top policy priority (64%) as say this about strengthening the economy (67%)" in 2020 for the first time in the history of the center's surveys (Pew Research Center,

2020). As climate change becomes a more pressing political issue, its appearance in political advertising continues to grow as well. Political advertising not only gives candidates the ability to control the political messages they share with voters but also the ability to shape the public's perception through issue frames. For example, one source argued that "increasing the visibility and agency of the indigenous presence in political advertising and assigning them more significant roles within the political discourse" could help to redefine the indigenous people's role in the Guatemalan political system by reshaping the public's beliefs about this group of people (Connolly-Ahern & Castells i Talens, 2010, p.329).

This level of influence has encouraged political candidates throughout the world to use campaign ads to present their key positions on topics they want to address if elected. They also tend to incorporate issues into their campaign ads that they feel are important to voters in a given election cycle because they want to get as many registered voters to vote for them. Therefore, the evidence suggesting climate change is becoming more important to voters suggests the likelihood of candidates approaching this topic in their campaign ads is greater now as well. That is why now, more than ever, it is important to understand how climate change and climate-related issues are framed in political ads. By examining how political campaign advertisements frame the issue, this study intends to understand how political candidates try to shape the public debate around climate change in the 2016 and 2018 election cycles. It also aims to study how American voters view the issue and how politicians plan on addressing it based on the frames that are deployed.

Chapter 2

Literature Review

Political Advertising

Originally taking the form of posters and other printed messages, political advertising has had a long history within American politics. Candidates for public office rely on political advertising to communicate with the constituencies they hope to serve, sharing specific positions their campaign platform supports and persuading their audiences they are the best candidate running for said office. In fact, “at almost every electoral level, from local school board elections...to the selection of the president, political advertising is the predominant form of communication between candidates and office seekers and citizens” (Kaid & Holtz-Bacha, 2006). This is because of its ability to reach large audiences and persuade citizens to vote for a specific political candidate.

Television and online media have made it easier for political candidates to control their communication with citizens as well as who their political messages actually reach. Around for seventy years, “television has occupied the preeminent role in U.S. political advertising” for much of the twentieth and twenty-first centuries (Kaid & Holtz-Bacha, 2006). The first televised campaign advertisement in American history was thought to of been aired in 1950. William Benton, a career ad executive, developed a campaign ad to support his political campaign for one of Connecticut’s two seats in the U.S. Senate (Fowler, 2016). By the 1952 presidential election cycle, Dwight Eisenhower’s campaign developed a series of ads promoting his bid for election. The campaign recognized this medium’s potential as a campaigning tool at a time when “about a third of American households had televisions” (Fowler, 2016, p.7). The Eisenhower campaign’s

use of televised political ads actually led it to become the first presidential campaign to do so in the United States (Fowler, 2016; Kaid & Holtz-Bacha, 2006).

Eisenhower's use of televised political advertising showed future candidates the value of television as a political campaign strategy. This forum was especially important to his campaign as the series of campaign ads allowed Eisenhower to reshape his public image. "While no elaborate studies validate the effectiveness of this first presidential spot campaign, many observers believe the spots were instrumental in creating a warm and caring image for Eisenhower" (Kaid & Johnston, 2001, p.4). They allowed his campaign to soften the reputation he developed during World War Two as a callous military leader the country needed to an amiable and experienced leader they wanted in the post-World War world (Johnston & Kaid, 2002; Kaid & Holtz-Bacha, 2006). Since his use of political ads, several candidates have incorporated political ads into their campaign strategies as a way of shaping their public images.

Research into political advertising also suggests political candidates use their campaign ads to highlight key political issues and influence the election's agenda. A study that looked into presidential campaign ads from the second half of the twentieth century highlighted this use (Johnston & Kaid, 2002). It found that "presidential candidates have taken advantage of the direct and intimate nature of television to come to the American public with their issue concerns, their policy preferences, and their specific proposals" as a way "to provide the American voter with some insight into their campaign" (Johnston & Kaid, 2002, p.296-297). They have used their campaign ads to directly discuss their positions on topical issues. According to studies on presidential discourse, political candidates and elected officials "make discursive decisions" like this "to hopefully convince the public to think about an issue in the way that is most beneficial to their agenda" and bid for election (Calderwell, 2019, p.237).

For example, the United States saw culture wars define the 1960s. “The sixties gave birth to a new America, a nation more open to new peoples, new ideas, new norms, and new, if conflicting, articulations of America itself” (Hartman, 2015, p.2). It was a time when counterculture ideals clashed with traditional perceptions of the country, leading to a chaotic 1968 election year. As such, the 1968 presidential election was dominated by issues concerning the Vietnam War opposition and civil unrest that was occurring throughout American cities (Hughes, 2019; McArdle, 2018). In response to the unrest, Richard Nixon built his campaign around a ‘law and order’ message that wished to return a sense of stability to the American public, using his campaign ads to deliver this message to a larger audience. In Nixon’s campaign ad titled “The First Civil Right”, images of violence and burning buildings coincided with eerie music and Nixon’s pledge to return order (Nixon, 1968). His campaign also “deployed ads with upsetting, dissonant music and images of protesters, ...people injecting drugs, and soldiers in combat in Vietnam” to explain to American voters what position his campaign took on key issues from that election cycle (Fowler, 2016, p.8).

Through their discourse and advertising strategies, political candidates also use their campaign ads to affect how an issue is debated by the public. Studies show that issues brought up in political campaign ads influence what and how issues are covered by the media throughout the election (Kim et al., 2016; Calderwell, 2019; Rabinowitz, 2010). In fact, research into how health policy was framed in 1998 and 1999 in terms of the Patient’s Bill of Rights debate revealed that campaign advertisements influence the media’s coverage of certain issues. The study found that “newspaper coverage was 17 percent less likely to be supportive of managed care reform in states subject to advertising campaigns designed to foment opposition to the Patient’s Bill of Rights” (Rabinowitz, 2010, p.771). Therefore, there is evidence political advertising is used to

influence what issues voters and the media pay attention to the most throughout an election cycle.

Throughout the twentieth and twenty-first centuries, there have been several developments that have impacted the strategies and context in which political advertising is carried out today. Technology has continuously evolved, leading to different ways political candidates can address voters. Now that televisions are in the homes of the majority of the American public, the country is constantly bombarded with political elections before an election. The rise of the Internet has also led political campaigns to create ads that are only intended for online spaces. In fact, digital media allows candidates to join in on the current conversations the public is having about recent events (Franz et al., 2020). In fact, a study by Kaid & Postelnicu (2005) found that the communication format can impact the effectiveness of the campaign ad. John Kerry's 2004 digital ads were more persuasive for college voters because they were also able to fact check his statements on the internet immediately after viewing the ad (Kaid & Postelnicu, 2005).

In addition to these technical advancements, the U.S. Supreme Court and Federal Election Commission have recently cleared many of the obstacles that stood in the way of interest groups sponsoring political advertisements. For example, the U.S. Congress passed the Bipartisan Campaign Reform Act in 2002 to add additional campaign financing regulations in the United States. "One of its provisions barred corporations and unions from contributing or spending general treasury funds for "electioneering communications," defined in the act as advertisements that refer to a specific candidate for federal office" (Bell, 2009). In brief, Congress limited who could fund political advertising within a certain number of days before an election. However, in the 2010 *Citizens United v. Federal Election Commission* case, the

constitutionality of the Bipartisan Campaign Reform Act was challenged by a conservative non-profit corporation. The U.S. Supreme Court ended up ruling “in 2010 that political spending is a form of free speech that’s protected under the First Amendment”, relaxing funding regulations on political advertising (History.com Editors, 2019). These technical and legal developments have allowed political campaigns “to experiment with content and develop new ad forms” while having “better ad targeting and distribution” mechanisms and more sponsorship opportunities than ever before (Fowler, 2016, p.6). This is why it is incredibly important to study the frames and messages shared in political campaign ads today.

Media Framing

Research in the field of political communication focuses on the ability of different media vehicles to persuade audiences and influence public debates on a variety of political issues. Political campaign advertisements attempt to do just that by influencing the way voters see a candidate and/or important issues. They deploy specific frames to get audiences to look at a specific issue in a way that benefits the candidate’s campaign platform. As such, framing can be a very beneficial framework for political advertising research.

Framing is concerned with the presentation of issues in the media in terms of what prominent attributes are associated with issues that are covered. This is because it’s “based on the concept of prospect theory,” which is “the assumption that subtle changes in the wording of the description of a situation might affect how audience members interpret this situation” (Scheufele, 2000, p.309). It realizes that different frames can influence the way information is interpreted by audiences (Scheufele, 2000; Scheufele & Tewksbury, 2007; Han et al., 2017).

Within political advertising, frames allow candidates or interest groups to present information about policy issues and stances in an accessible manner. Policy issues and strategies are often too complex or boring for the average voter who wants actual evidence that policy or candidate solving the problem. Frames come in to make complex issues easier to comprehend.

They “play an important role in deciding how people think and talk about public issues such as climate change” by appealing to existing patterns of thought (Han et al., 2017, p.2892). Therefore, studying the frames used in political advertising should draw light on why the issue being discussed is an important political issue, as well as the way a political candidate intends to solve it if elected. In fact, pre-existing research into issue frames suggests that they are “a window on electoral politics through which readers and viewers see candidates” directly engaging with political issues by “explaining why certain policy-related problems exist” to “debating the consequences of not solving problems” (D’Angelo et al., 2005, p.200-201).

Climate Change Communication Practices

The evolution of climate change as a political issue has led many researchers to begin investigating climate change communication practices. This is because “communication practices not only help create the conditions for political engagement, but they also comprise modes of such engagement” (Carvalho et al., 2017, p.122). Therefore, by studying the communication practices around climate change, we can gain a better understanding of how political candidates and citizens engage with climate change as a political issue. We are also able to gain an insight into the ways information about climate change is presented to the public.

According to Han et al. (2017), climate change has increasingly been incorporated into the political agenda of the American media. This has coincided with research indicating “that

media framing of climate change has shifted from a scientific perspective to a political one” (Han et al., 2017). Climate change has taken on this political frame in the media because it’s become one of the most recent examples of partisan politics in the United States. As of 2018, 91% of voters registered as Democrats thought global warming was actually happening while only 52% of voters who were registered Republican believed this (Mildenberger et al., 2020). This political divide over climate change has only deepened, causing much debate over its terminology, importance, and even its existence at times. The 2020 Pew Research Center survey broke this down by comparing party affiliation with climate change priority importance. According to the survey results, only 21% of Republicans and Republican-leaning independents surveyed placed dealing with climate change as a top priority for elected officials compared to 78% of Democrats and Democrat-leaning independents (Pew Research Center, 2020). This finding supports existing issue ownership research conducted by Calderwell (2019).

Frames identified in existing political communication research are extensive as well. Based on reoccurring frames for science-related political issues observed by Nisbet (2009), one of the frames that can be used to present information about climate change is the *Economic Frame*, giving attention to the economic consequences and opportunities of climate change. Science-related issues that adopt this frame generally frame the debate in terms of investment and economic benefits or risks of the policy (Nisbet, 2009). According to Semetko and Valkenburg (2000), an economics frame “reports an event, problem, or issue in terms of the consequences it will have economically on an individual, group, institution, region, or country.” In other words, the *Economic Frame* looks at climate change “as an economic investment; market benefit or risk; or a point of local, national, or global competitiveness” (Nisbet, 2009).

As such, issues like job losses or opportunities that are contributed to climate change are included in this frame.

Other media frames include the attribution of responsibility, morality, environmental, and human impacts frames (Han et al., 2017). The *Attribution of Responsibility Frame* specifically acknowledges “certain organizations or individuals (that) should be held accountable for causing or worsening the problem” of climate change (Han et al., 2016, p.2899). According to Nisbet (2009), this frame also defines the issue of climate change in terms of public accountability. Therefore, ads acknowledging a candidates’ positive efforts in the fight against climate change and ads emphasizing the candidates’ contributions to worsening the issue were both coded under the *Attribution of Responsibility Frame*.

An ad that utilizes the *Morality Frame* “puts the event, problem, or issue in the context of religious tenets or moral prescriptions (Semetko & Valkenburg, 2000). Nisbet (2009) specifically defines this climate change in terms of what is right or wrong. The *Environmental Impact Frame* largely emphasized the specific impact climate change is and will continue to have on the environment.

The final frame was the *Human Future/Impact Frame*. An ad that uses this frame is specifically focused on how climate change impacts human life or the quality of life (Han et al., 2016). Nisbet (2009) specifically calls this the “social progress” frame because it addresses climate change as “a means of improving quality of life” for the future generations. Therefore, if an ad emphasized a society’s future or the quality of life (i.e., health) in relation to climate change, it was coded under the *Human Future/Impact Frame*.

However, much of the existing research pays attention to the news media’s portrayal of the issue instead of how climate change is portrayed directly by political candidates. For

example, Feldman et al. (2012) specifically looked at climate change news coverage on leading American cable news channels. Dotson et al. (2012) studied how different conservative and liberal newspapers in Chile covered the topic. Zamith et al. (2012) compared newspaper coverage of climate change in the United States with the newspaper coverage of the issue received in Argentina, Brazil, and Colombia. Each of these studies observed perceptual differences in how climate change is framed. Feldman et al. (2012) and Dotson et al. (2012) especially note these differences are based on party lines. To fully comprehend the partisan divide around climate change in the United States, it's increasingly important to understand how the political candidates frame the political issue in their campaign advertisements.

Chapter 3

Research Questions

Based on the literature review, it is evident that political advertising is widely used in the United States today in both television and digital media formats. However, there is a lack of framing research into the way political campaign ads specifically present climate change as a political issue in the United States. This is necessary to study now as climate change and climate-related issues continue to grow in importance to American voters. In 2020, 72% of American adults are estimated to believe global warming is happening (Marlon, 2020). Over 50% of American adults surveyed by the Yale Program on Climate Communication also expressed their desire for global warming to be a high priority of the country's next President and members of Congress (Marlon, 2020). Therefore, the overarching goal of this paper is to learn how climate change is framed in U.S. political campaign ads to gain a better understanding of just how partisan this issue is during election cycles. My specific research questions are as follows:

Research Question 1: How was the issue of climate change framed in political ads in the 2016 and 2018 election cycles?

With the U.S. withdrawal from the Paris Climate Agreement during Trump's administration and Trump's statement that climate change is a hoax, I predict there was a bigger backlash over climate change in 2018 than in 2016. In other words, I predict more ads were attacking the candidates, leading there to be more ads using the *Attribution of Responsibility Frame* in 2018 than in 2016. This is because both attack ads and the *Attribution of Responsibility*

Frame give candidates the ability to criticize the Trump administration and the Republican party over their negative actions or inactions when it comes to addressing climate change

Research Question 2: Do Republican and Democratic candidates approach climate change or climate-related issues differently within their campaign ads?

Research into the issue ownership of climate change suggests there will be a divide along party lines in terms of how the campaign ads address climate change or climate-related issues. Since the Democratic party often possesses ownership of environmental issues, Democratic candidates may be more likely to explicitly address climate change or climate-related issues in their campaign ads. In addition to this, Republican candidates are expected to mainly use the economic frame when they address climate change because of the Republican party's concern for issues like government spending and taxes (Kaid & Holtz-Bacha, 2006). It will be interesting to see if candidates from the two major political parties actually approach the issue differently in their political ads.

Research Question 3: Does a candidate's political status impact how they frame climate change in their campaign ads?

This question seeks to understand if the political status contributes to a candidate's comfortability addressing climate change by asking if incumbents frame the issue of climate change differently than challengers or open race candidates. It is possible that incumbent candidates will be less likely to explicitly use the climate change terminology because they would be more cautious about losing their supporters.

Chapter 4

Methodology

Sample

Driven by the literature review, this study investigated how climate change and climate-related issues were framed in political advertisements from the 2016 and 2018 election cycles. I performed a content analysis of 88 political campaign advertisements in the United States by analyzing 44 ads from the 2016 election cycle and 44 ads from the 2018 election cycle. The sample specifically consisted of ads for or about gubernatorial, congressional, or presidential campaigns during these two election cycles.

Based on resources included in the Penn State University Libraries' political advertisement library guide, the ads included in this study were found through searches in the Project of the Internet Archive's Political TV Ad Archive, and New Republic's Political Ad Database. Keywords like "climate", "climate change", "environment", and "global warming" were used to locate the ads on these databases. Additionally, some political ads were located on individual candidates' Facebook and YouTube accounts.

Coding Procedures

Each ad, the unit of measurement, analyzed based on three different overarching categories: campaign attributes, messaging, and issue framing. The campaign attributes category recorded information about each individual ad in terms of the political campaign it was supporting or opposing. The messaging category looked at the general nature of the ads as pieces of advertising and media. Specific frames and strategies used to present information about

climate change or climate-related issues in the ads were included in the issue framing category.

The following information provides a closer look into the specific variables used in each of these three categories throughout the coding process.

Campaign Attributes

Each ad had to promote and/or attack a candidate that was running for a gubernatorial, congressional, or presidential political office in the United States to be included in the study. From this pool, the ads were separated by election cycle so a comparative analysis could be performed. Ads that aired or were published online between November 5, 2014, and November 8, 2016, were coded as the 2016 election cycle while ads airing or posted online between November 9, 2016, and November 6, 2018, were marked as the 2018 election cycle. This category also coded the ads based on the candidate's party affiliation, candidate's gender, primary vs. general election, the outcome of the campaign, and the sponsor of the ad.

With the immense size of the United States, regional differences have the potential to impact political campaigns and the issues covered by candidates running for political office. to impact regions in the United States. This is especially true with issues associated with the environment and climate change because regions of the United States are expected to experience different consequences of climate change. For example, “warmer and drier conditions have contributed to an increase in large forest fires in the western United States” while states on the West and East Coasts of the United States are expected to be greatly influenced by rising sea levels (Jay et al., 2018). To account for these regional and geographic differences, the region of the campaign was also recorded based on classifications made in the National Climate Assessment report. This report breaks states into regions based on the impacts of climate change

they will collectively experience, making it a reliable source for the topic of this study.

Influenced by this report, the ads in this study could fall into one of nine of the following campaign regions: Northeast, Northwest, Midwest, Southeast, Southwest, Northern Great Plains, Southern Great Plains, non-contiguous part of the U.S., or a national campaign.

Messaging Attributes

To understand the messaging strategies, each ad was coded based on topics like whether or not they were promoting or attacking the candidate in focus throughout the ad. For the purposes of this study, ads promoting the candidate were called positive ads while ads attacking a candidate were labeled as negative ads. If the ad both promoted one candidate and attacked another, it was labeled as a comparative ad. Information about the dominant speaker was also recorded, as was the number of voices in the ad, to account for the role the speaker has in the ad's message. Special attention was also given to the imagery used when environmental issues were brought up in the ad to account for the visual influence an ad might have over its audience.

In addition to these variables, information was also recorded about the type of ad each one included in the study fell into. Using classifications identified by Perloff (1998) and Vafeiadis et al. (2018), the ads in this study be one of four different types of ads. Voter stories ads had to have one or more voters as the primary speaker expressing his or her feelings about the candidate. A person was perceived to be a voter if he or she was a private individual or specifically mentions they are voting for the candidate. Talking head ads involved the candidate speaking directly to the viewer in his or her own words (Perloff, 1998, p. 355). Testimonial or endorsement ads had "credible or famous people speak for or against a candidate" (Perloff, 1998, p. 355). They also included ads that focused on which political organizations endorsed a specific

candidate. The final ad type was the documentary ad category, which contains “biographical spots or ads that showcase the candidate’s leadership accomplishments” or failures (Perloff, 1998, p.355). They differ from talking heads advertisements because the candidate is not directly speaking to the viewer of the ad. Instead, the ads either have no speaker, an anonymous background narrator discussing the qualities or actions of that candidate or clips from the candidate’s previous speeches or remarks on climate change.

Issue Framing Attributes

To observe the different ways climate change or climate-related topics are framed as political issues in individual ads, this category recorded information about specific terminology, topics of focus, and the way the climate change information was presented throughout the ad. Terminology was broken into whether the ad was identified as explicitly or implicitly discussing climate change or climate-related topics. To be coded as explicit, the ad had to directly state the words “climate change” or “climate”, regardless of whether it was in an audio or text format. Ads coded as implicit did not state these terms, opting to indirectly talk about the subject with references to the natural environment or climate-related topics like extreme weather or energy.

This category also investigated how the ad presented information about climate change or climate-related topics. Each ad was also coded based on whether it addressed climate change from a problem or solution perspective and whether it framed climate change as a local, national, or international issue. The specific frame used in the ad regarding climate change or the climate-related issue was coded as one of five following frames identified by studies previously discussed in the literature review section of this paper: economic, morality, attribution of responsibility, environmental impact, and human impact/activity.

Chapter 5

Findings

Out of the 88 total political ads included in this sample, a majority of the political ads came from congressional campaigns (68% of the sample). Presidential campaign ads made up 20% of the sample, followed by gubernatorial ads that represented 16%. In addition to campaign type, an overwhelming majority of the political ads focused on male candidates. 68% of the political ads focused on male candidates while only 32% of the ads focused on female candidates.

All of the regions listed in the National Climate Assessment report are represented in at least one political ad in my sample. This does not mean each region or state was evenly represented though. Despite finding the Northeast region to be the most represented in the sample, Florida was the most represented state when the sample is broken down based on the campaign state the political ad focuses on. Twenty-two different states were represented in this sample, but Florida was the most frequently represented as 14.77% of the political ads coded in this sample focused on this campaign state, as shown in Table 1.

Table 1. Campaign State

Campaign State	Frequency	Percentage (of total ads)
<i>California</i>	4	4.55%
<i>Colorado</i>	6	6.82%
<i>Florida</i>	13	14.77%
<i>Hawaii</i>	1	1.14%
<i>Illinois</i>	7	7.95%
<i>Iowa</i>	1	1.14%
<i>Kansas</i>	1	1.14%

<i>Maryland</i>	4	4.55%
<i>Massachusetts</i>	2	2.27%
<i>Minnesota</i>	2	2.27%
<i>Montana</i>	1	1.14%
<i>Nevada</i>	1	1.14%
<i>New Hampshire</i>	3	3.41%
<i>New Jersey</i>	1	1.14%
<i>New Mexico</i>	1	1.14%
<i>North Carolina</i>	2	2.27%
<i>Ohio</i>	1	1.14%
<i>Oregon</i>	6	6.82%
<i>Pennsylvania</i>	7	7.95%
<i>Rhode Island</i>	3	3.41%
<i>Vermont</i>	3	3.41%
<i>Wisconsin</i>	1	1.14%
<i>Other (i.e. national campaign)</i>	17	19.32%

After understanding the general characteristics of the ads included in my sample, it is important to discuss how the data I collected answers my original research questions.

RQ 1: How is the issue of climate change framed in the 2016 and 2018 election cycles?

Messaging Attributes

Both election cycles saw similar results when it came to their messaging attributes. For example, the majority of 2016 and 2018 political ads were coded as positive ads, symbolizing they focused on promoting the candidate. Despite this, there was an increase in the number of ads that were negative ads that attacked a candidate running for public office, as illustrated in Table 2. There was also an increase in the number of comparative ads that were both promoting one candidate and attacking another.

Table 2. Positive v. Negative Ad (based on Election Cycle)

2016 Election Cycle			2018 Election Cycle		
Type	Frequency	Percentage (of 2016 ads)	Type	Frequency	Percentage (of 2018 ads)
<i>Positive Ad: Promoting the Candidate</i>	29	65.91%	<i>Positive Ad: Promoting the Candidate</i>	21	47.73%
<i>Negative Ad: Attacking the candidate or opponent</i>	9	20.45%	<i>Negative Ad: Attacking the candidate or opponent</i>	16	36.36%
<i>Comparative Ad: Both promoting one candidate and attacking another</i>	6	13.64%	<i>Comparative Ad: Both promoting one candidate and attacking another</i>	7	15.91%

The type of political ads also impacted the messaging of the 2016 and 2018 political ads. Table 3 breaks this sample of political ads based on the specific category types outlined in the methodology section. I found that the majority of the ads were classified as documentary ads. This means that 43.18% of the ads that focused on climate change or climate-related issues in the 2016 and 2018 election cycles showcased the candidate's accomplishments or failures through biographical spots with either no speaker, an anonymous narrator in the background, or clips of the candidate speaking at a previous public event. Talking heads ads were the second most common with 28.41% of the political ads having the candidate speak directly to the viewer.

Table 3. Type of Political Ad

Type	Frequency	Percentage (of total ads)
<i>Talking Heads</i>	25	28.41%
<i>Documentary</i>	38	43.18%
<i>Testimonial or Endorsement</i>	13	14.77%
<i>Voter Stories</i>	12	13.64%

However, when I break the type of political ads down based on the election cycles, this trend doesn't hold as shown in Table 4. The most common type of ad in the 2016 election cycle

was the documentary category of political ads (36.36% of 2016 ads). The testimonial or endorsement category of political ads was the most common type of ad in the 2018 election cycle (54.55% of 2018 ads).

Climate Change Framing Attributes

The terms “climate” or “climate change” were explicitly discussed in 53.41% of the ads that were coded in this study, showing candidates are almost split in have over whether or not they specifically refer to climate change in their political campaign advertisements. When I took a closer look at terminology based on the election cycle, I found that majority of the 2016 political ads (61.36%) in this study explicitly used the terms “climate” or “climate change” while only 45.45% of the 2018 political ads fall within this category.

Table 4. Type of Political Ad (based on Election Cycle)

2016 Election Cycle			2018 Election Cycle		
Type	Frequency	Percentage (of 2016 ads)	Type	Frequency	Percentage (of 2018 ads)
<i>Talking Heads</i>	12	27.27%	<i>Talking Heads</i>	9	20.45%
<i>Documentary</i>	16	36.36%	<i>Documentary</i>	3	6.82%
<i>Testimonial or Endorsement</i>	8	18.18%	<i>Testimonial or Endorsement</i>	24	54.55%
<i>Voter Stories</i>	8	18.18%	<i>Voter Stories</i>	7	15.91%

This trend can also be seen by looking at which climate change-related issue the ad focused on, as shown in Table 5. 27.27% of the 2016 political ads presented general climate change statements compared to just 11.76% of the 2018 political ads. Rather than just make general climate change statements, the collection of 2018 political ads in this study recorded at

least one ad that focused on all of the seven climate change-related issues coded for in this study. However, both election cycles saw energy policy-related statements have the highest relative frequency values with 40% of the 2016 political ads and 31.37% of the 2018 political ads coded as having made a statement about energy that is related to the broader climate change topic.

Table 5. Climate Change-related Topic of Focus (based on Election Cycle) *

*Ads could have been coded as having focused on more than one issue

2016 Election Cycle			2018 Election Cycle		
Statement	Frequency	Percentage	Statement	Frequency	Percentage
<i>General Climate Change Statement</i>	15	27.27%	<i>General Climate Change Statement</i>	6	11.76%
<i>Energy Policy-Related Statement</i>	22	40.00%	<i>Energy Policy-Related Statement</i>	16	31.37%
<i>Pollution Statement</i>	9	16.36%	<i>Pollution Statement</i>	15	29.41%
<i>Extreme Weather Statement</i>	3	5.45%	<i>Extreme Weather Statement</i>	1	1.96%
<i>Protection or Conservation Statement</i>	6	10.91%	<i>Protection or Conservation Statement</i>	9	17.65%
<i>Wildlife/Endangered Species Statement</i>	0	0.00%	<i>Wildlife/Endangered Species Statement</i>	1	1.96%
<i>Rising Ocean Temperatures or Sea-levels</i>	0	0.00%	<i>Rising Ocean Temperatures or Sea-levels</i>	3	5.88%

When I looked at the specific frames the ads used when discussing climate change or climate-related issues, I found that the *Attribution of Responsibility Frame* was the most frequent frame to be used, appearing in 48.86% of the coded ads. The *Economic Frame* was the second most popular frame at 23.86%, followed by the *Human Future/Impact Frame* at 18.18%. Table 6 presents these findings.

Table 6. Climate Change Frame

Type	Frequency	Percent
<i>Economic Frame</i>	21	23.86%
<i>Morality Frame</i>	3	3.41%
<i>Attribution of Responsibility Frame</i>	43	48.86%
<i>Environmental Impact Frame</i>	5	5.68%
<i>Human Future/Impact Frame</i>	16	18.18%

Even when I break these framing categories down based on the election cycle, the trend continues. The most common frame is the *Attribution of Responsibility Frame*, followed by the *Economic Frame* and the *Human Future/Impact Frame* in both of the election cycles. However, the 2018 campaign cycle did have 5 more ads with the *Attribution of Responsibility Frame* than the 2016 campaign cycle. Inversely, the *Economic Frame* and the *Human Future/Impact Frame* both saw frequency declines between the 2016 and 2018 election cycles as shown in Table 7.

Table 7. Climate Change Frame (based on Election Cycle)

2016 Election Cycle			2018 Election Cycle		
Frame	Frequency	Percentage	Frame	Frequency	Percentage
<i>Economic Frame</i>	12	27.27%	<i>Economic Frame</i>	9	20.45%
<i>Morality Frame</i>	0	0%	<i>Morality Frame</i>	3	6.82%
<i>Attribution of Responsibility Frame</i>	19	43.18%	<i>Attribution of Responsibility Frame</i>	24	54.55%
<i>Environmental Impact Frame</i>	4	9.09%	<i>Environmental Impact Frame</i>	1	2.27%
<i>Human Future/Impact Frame</i>	9	20.45%	<i>Human Future/Impact Frame</i>	7	15.91%

RQ 2: Do Republican and Democratic candidates approach climate change or climate-related issues differently within their campaign ads?

The candidate's political affiliation proved to be an interesting factor in determining how political candidates addressed climate change or climate-related issues in their political campaigns. Within this study, 53 ads focused on a Democratic candidate, 34 ads focused on a Republican candidate, and one ad focused on an Independent/Third Party candidate. This finding is further illustrated in Figure 1 to show that Democratic candidates were more associated with climate change or climate-related campaign ads in both the 2016 and 2018 election cycles. Existing research suggests that the Democratic party often possesses ownership over environmental issues like climate change, which is supported by my findings when I simply look at which political party is mostly represented in my sample.

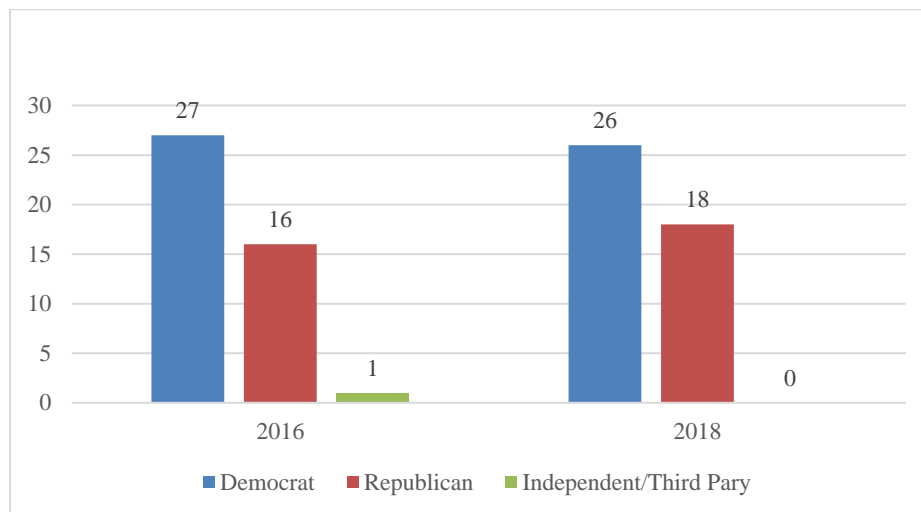


Figure 1: Political Affiliation

Climate Change Terminology based on Political Affiliation

The literature review research led me to predict that Democratic candidates would be more likely to explicitly address climate change or climate-related issues in their campaign ads

than Republicans. However, as shown in Table 8, there isn't much disparity between Democrats and Republicans in terms of whether they explicitly or implicitly address "climate" or "climate change" in their political ads. In fact, 52.83% of the 53 Democrat ads explicitly used the terminology and 52.94% of the 34 Republican ads explicitly used the terminology.

Table 8. Terminology (based on Political Affiliation)

<i>Political Affiliation</i>	<i>Explicitly used the terms "climate" or "climate change"</i>	<i>Implicitly used the terms "climate" or "climate change"</i>
Democrat	28 (52.83%)	25 (47.17%)
Republican	18 (52.94%)	16 (47.06%)
Independent/Third Party	1 (100%)	0 (0.00%)

To further investigate this trend, I ran a Chi-Square Test to see whether or not there was an association between the Climate Change Terminology variable and the Political Affiliation variable. The SPSS output showed that the Pearson Chi-Square value equaled 0.882 and the p-value equaled 0.643. Since the p-value is greater than my chosen significance level of 5% ($\alpha = 0.05$), I wasn't able to reject the null hypothesis. Based on this result, I have to conclude that there wasn't enough evidence in my sample to find an association between these two variables.

Topic of Focus based on Political Affiliation

When looking into how the different political parties approached climate change in their campaign ads, I also made an interesting observation when it came to the climate change-related issue the ads focused on. Political ads focused on Democratic candidates covered a much wider scope of topics when compared to the ads that focused on Republican candidates. At least one Democrat-focused political ad addressed all seven of the climate change-related topics I coded for. Republican-focused political ads only focused on five of the seven topics as illustrated in Figure 2.

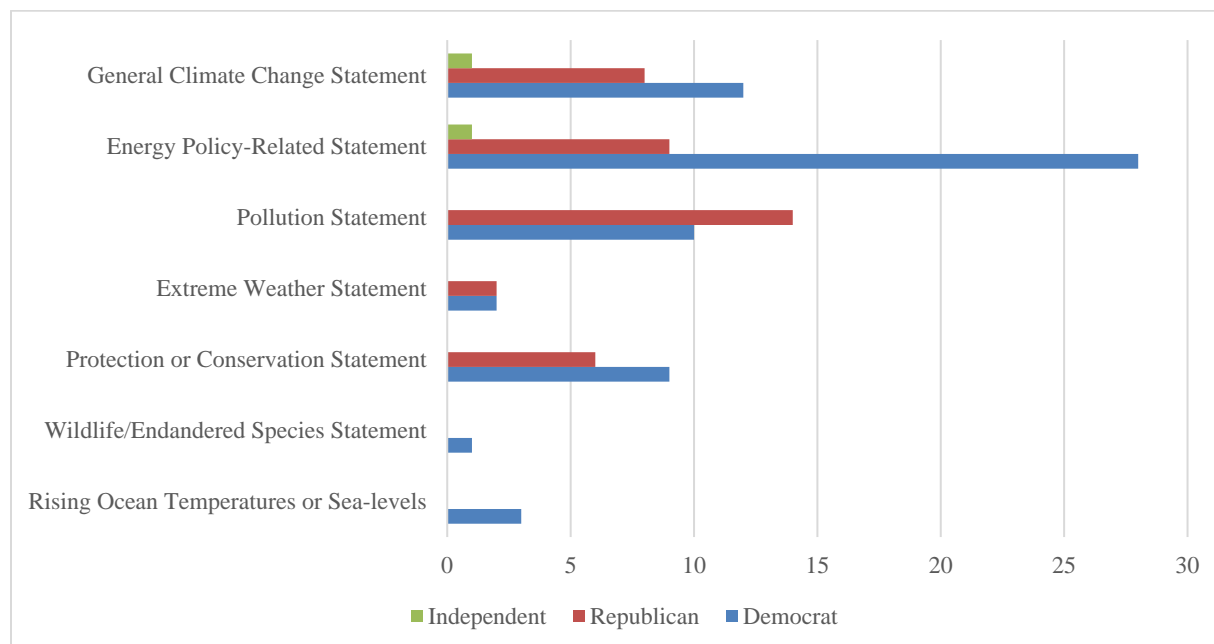


Figure 2: Topic of Focus (based on Political Affiliation)

Each ad could address one or more topics related to climate change, as was coded accordingly. Several of the Democrat and Republican-focused political ads addressed more than one climate change-related topic. Even the one political ad focused on an Independent/Third Party candidate addressed more than one topic that is related to climate change. This gave the political candidates the ability to appeal to climate change or climate-related issues without explicitly using the terminology. For example, Sean Casten, the 2018 Democratic candidate for Illinois' 6th congressional district, specifically approached the topic of clean energy in his campaign ad labeled "Creating Jobs, Protecting Our Environment". Despite never explicitly saying the words "climate" or "climate change" this ad, the viewer understands this is what Casten is referring to because he says he built his "business on the idea that reducing CO₂ emissions for companies could save energy costs and leave a safer planet to our children." It is common knowledge that carbon dioxide (CO₂) emissions impact climate change. As a type of greenhouse gas, CO₂ emissions "trap heat in the atmosphere" and warm the planet, causing the

climate to change (Albeck-Ripka, 2019). By reducing CO2 emissions, scientists argue that the world will be able to stabilize the planet's temperature and mitigate the impact of climate change.

Just as Casten's "Creating Jobs, Protecting Our Environment" political ad focused on energy policy, the most common climate change-related topic that Democrat-focused ads addressed was energy policy. This category included statements made about a transition to renewable energy or other cleaner energy practices because these are policies countries are being encouraged to follow as a means of reducing their carbon emissions that are currently contributing to climate change. In total, 43.08% of the Democrat-focused campaign ads concentrated on this topic.

The only climate change-related topic that Republican-focused ads addressed more than Democrat-focused ads was the topic of pollution. In fact, 35.9% of the ads focused on Republican candidates also focused on the issue of pollution. This is because all 14 of the Republican-focused ads addressing pollution are actually attacks on Republican candidates' actions that have contributed to pollution-related issues from water pollution to greenhouse gas emissions that are polluting the air. As previously discussed, greenhouse gas emissions pollute the air and contribute to climate change by heating the planet. But, water pollution can even impact climate change. According to Inyinbor et al. (2018), man-made toxic chemical additions to the water system or other forms of water pollution can actually "generate some toxic and greenhouse gases, which may subsequently contribute to global warming activities" and climate change (p.44). This is why a variety of forms of pollution are considered to be a topic associated with climate change within this study.

When I conducted a Chi-Square Test on each topic of focus and the Political Affiliation variable, the Energy Policy-related Statement variable was the only one to show evidence that it was dependent on the Political Affiliation variable at a 5% significance level. With a Pearson Chi-Square value of 7.197 and a p-value of 0.027, I was able to reject the null hypothesis of no association at a 5% significance level since the p-value was less than the significance level. Therefore, the Chi-Square Test between these two variables provided sufficient evidence to suggest there was an association between the Energy Policy-related Statement variable and the Political Affiliation variable.

However, had I chosen to use a 10% level of significance when running the Chi-Square Tests between each topic of focus statement variables and the Political Affiliation variable, I would have had evidence that there was also an association between the Pollution Statement variable and the Political Affiliation variable. With a Pearson Chi-Square value of 5.576 and a p-value of 0.062, I would have been able to reject the null hypothesis of no association at a 10% significance level because the p-value was less than the significance level. However, at a 5% significance level, there wasn't enough evidence to suggest a relationship between the Pollution Statement variable and the Political Affiliation variable since the p-value would have been greater than $\alpha = 0.05$.

Positive v. Negative Ad based on Political Affiliation

As Figure 3 shows, the majority of the ads attacking a candidate, opponent, or political party were focused on Republican candidates. In fact, 20 of the 25 attack ads in this sample were attacking a Republican candidate or the Republican party as a whole. Majority of the ads that promoted a candidate were focused on Democratic candidates (38 of the 50 "Positive" ads). Similarly, the majority of the ads that both promoted a candidate and attacked his or her

opponent were focused on promoting Democratic candidates and attacking Republican candidates.

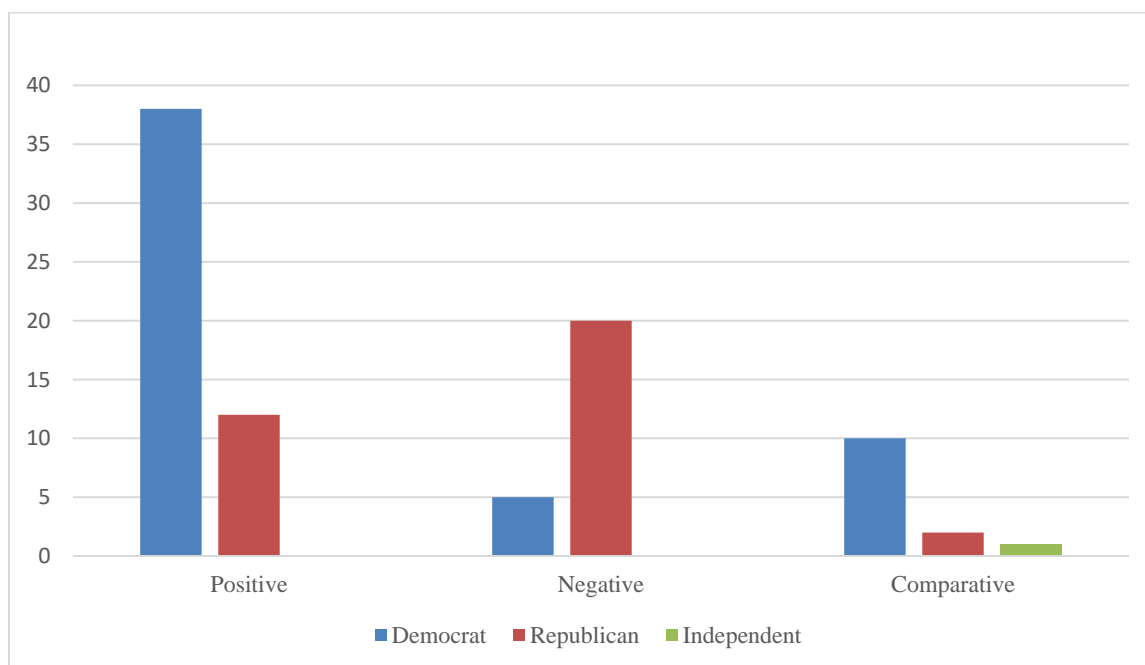


Figure 3: Positive v. Negative Ad (based on Political Affiliation)

After observing this trend, I ran a Chi-Square Test to assess whether the Political Affiliation variable and the Positive v. Negative Ad variable were associated with one another in my sample. With a Pearson Chi-Square value of 30.816 and a p-value of 0.000, I was able to reject the null hypothesis at a 5% significance level since the p-value is less than the significance level. Therefore, there's sufficient evidence to suggest there's an association between these two variables.

Frames of Climate Change based on Political Affiliation

Within the methodology section of this paper, I also predicted that Republican candidates would mainly use the *Economic Frame* when addressing climate change or climate-related issues

in their ads as a way of answering the second research question. This prediction was made the Republican party is frequently concern about economic issues like government spending and taxes. However, both Democrat-focused and Republican-focused ads in my sample employed the *Attribution of Responsibility Frame* most frequently. 41.51% of the ads focused on Democratic candidates (22 of the 53 Democrat-focused ads) and 61.76% of the ads focused on Republican candidates (21 of the 34 Republican-focused ads) used this frame. That being said, the *Economic Frame* was the second most frequently used frames for both political parties. Even the one Independent/Third Party-focused ad used the *Economic Frame*. However, a greater percentage of ads focused on Democratic candidates employed the *Economic Frame* than the Republican-focused ads.

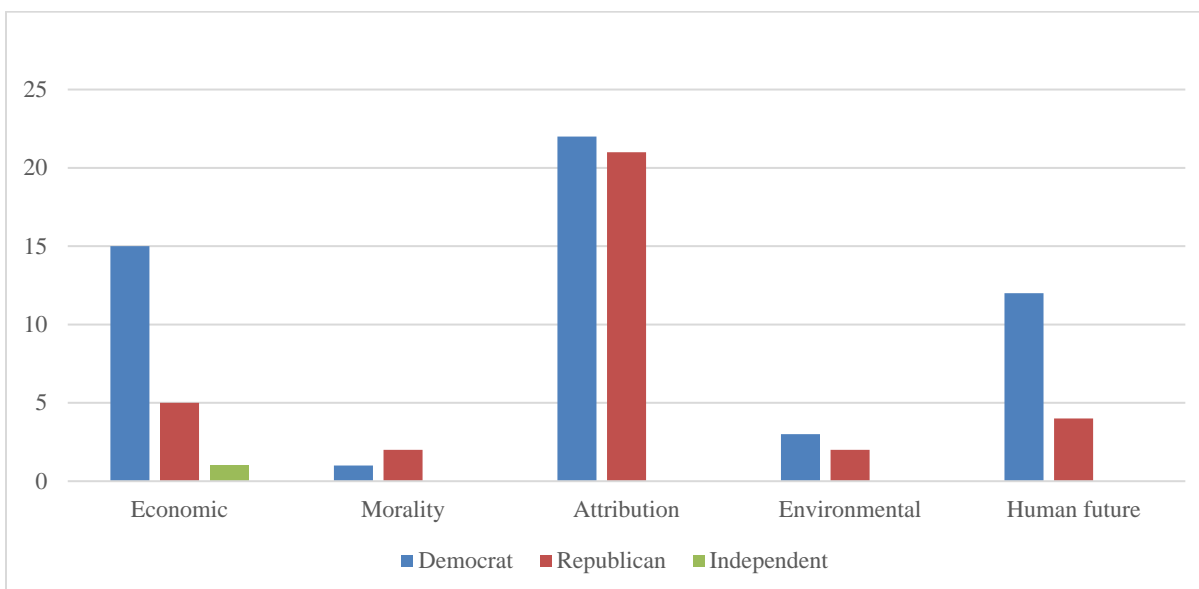


Figure 4: Climate Change Frame (based on Political Affiliation)

When it came to framing climate change with a problem or solution focus, Table 9 clearly shows that the ads focused on Democratic candidates largely addressed climate change from a solution frame. In other words, a majority of Democrat-focused ads offered solutions or policy proposals intended to ‘solve’ the climate change issue. However, Republican-focused ads

mainly addressed climate change from a problem frame. This meant that the ads that focused on Republican candidates mainly discussed the problems or reasons behind climate change. One of the reasons behind climate change and the worsening of this issue has been that human activity continues to increase greenhouse gas emissions that continue to warm the planet at an alarming rate. Therefore, it would make sense for the Republican-focused ads to be taking on a problem frame because the majority of them were negative ads focused on attacking the candidate for their actions or inactions when it came to addressing climate change.

Table 9. Problem v. Solution Frame (based on Political Affiliation)

Frame	Democrat	Republican	Independent
<i>Problem focus</i>	6	18	0
<i>Solution focus</i>	28	9	0
<i>Both</i>	17	6	1
<i>Neither/Unclear</i>	2	1	0

Additionally, when I ran a Chi-Square Test on the Problem v. Solution Frame and the Political Affiliation variables, I did find evidence that there is an association between these two variables. With a p-value of 0.002, I was able to reject the null hypothesis that the two variables were independent of each other at a 5% significance level. In other words, the Problem v. Solution Frame variable and the Political Affiliation variable are associated with each other.

RQ 3: Does a candidate's political status impact how they frame climate change in their campaign ads?

Climate Change Terminology based on Political Status

Figure 5 illustrates how the political status of the candidate impacted whether or not the campaign ad explicitly used the terms “climate” or “climate change”. What is interesting about

this graph is that the only type of candidate that explicitly used the terminology more times than not was a candidate running in an open race. Both the incumbent and challenger candidates tended to implicitly refer to change rather than explicitly use climate change terminology. That being said, challenger candidates' implicit and explicit use of climate change terminology only differed by one political ad. This difference was much larger in the political ads with incumbent ads as 8 additional ads decided to implicitly refer to the topic of climate change rather than explicitly employ the terminology. This suggests that incumbent candidates are much more cautious about their use of climate change terminology when compared to the challenger and open race candidates.

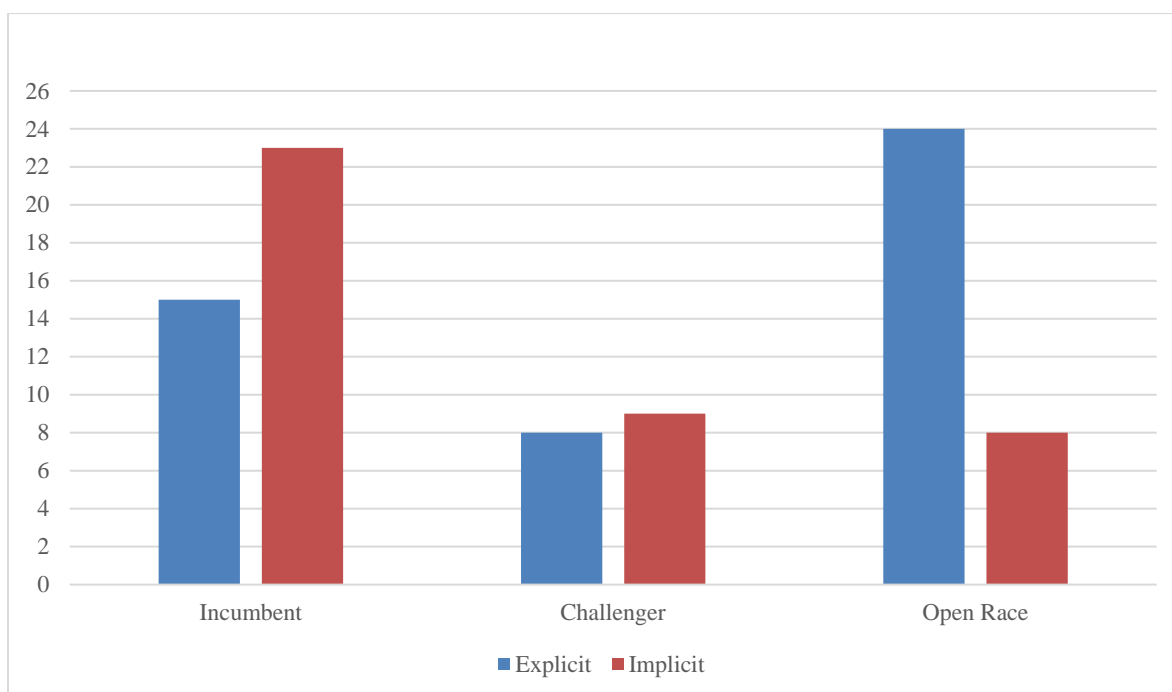


Figure 5: Terminology (based on Political Status)

After running a Chi-Square Test on the Climate Change Terminology variable and the Candidate's Political Status variable, it was clear these two variables are related to one another as well. With a Pearson Chi-Square Value of 9.772 and a p-value of 0.008, I rejected the null

hypothesis, which stated there was no association between the two variables, at a 5% significance level. In other words, the results of this Chi-Square test provided sufficient evidence to suggest there's an association between Climate Change Terminology and a candidate's Political Status.

Topic of Focus based on Political Status

Despite relying more on implicitly talking about climate change, the incumbent candidates had at least one ad in each of the seven climate change-related topic categories. Challenger candidates only addressed four of the topic categories while candidates running in an open race addressed five of the topic categories as shown in Table 10. The most frequent climate change-related topic of focus for both the challenger and open race candidates was the energy policy category. However, the topic with the most incumbents was the pollution category.

Table 10. Topic of Focus (based on Political Status)*

*Ads could have been coded as having focused on more than one issue

Topic of Focus	Incumbent	Challenger	Open Race
<i>General Climate Change Statement</i>	5	3	13
<i>Energy Policy-related Statement</i>	9	9	20
<i>Pollution Statement</i>	13	5	5
<i>Extreme Weather Statement</i>	1	0	3
<i>Protection or Conservation Statement</i>	11	2	1
<i>Wildlife/Endangered Species Statement</i>	1	0	0
<i>Rising Ocean Temperatures or Sea-levels Statement</i>	3	0	0

When I ran a Chi-Square Test on Topic of Focus and Political Status, I found that the only statements that seem to have a relationship with the candidate's political status at a 5% significance level are the General Climate Change Statement and the Energy Policy-related

Statement. With a p-value of 0.019 and 0.003 respectively, it is clear each of these two topics of focus statements is associated with the candidate's Political Status variable at a 5% significance level.

Frames of Climate Change based on Political Status

By looking at how the climate change frames were used based on political status, it is clear that the majority of each political status used the *Attribution of Responsibility Frame* within their campaign ads. Figure 6 illustrates this point by breaking down each political status category based on the number of climate change frames that were present. When it came to the *Economic Frame*, candidates running in an open race used this frame, as well as the *Human Future/Impact Frame*, more than the other two political statuses.

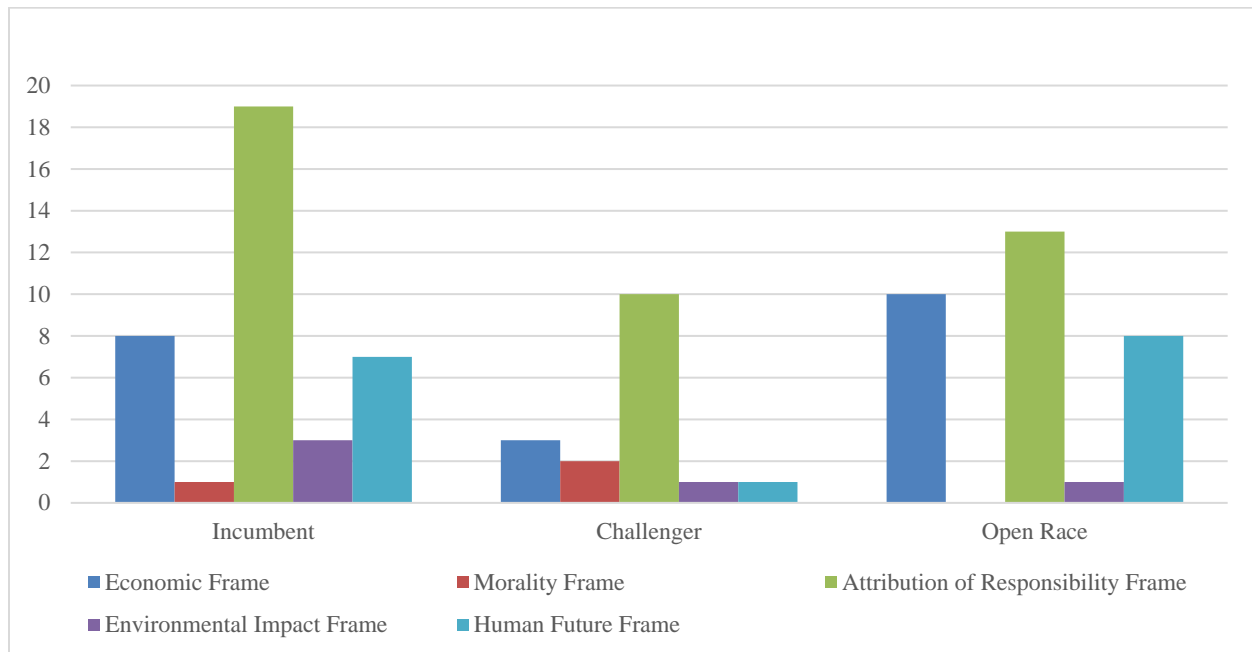


Figure 6: Climate Change Frame (based on Political Status)

The analysis of the Problem v. Solution Frame shows that ads focused on incumbent candidates were mainly split between addressing climate change from a problem and solution frame of focus. As shown in Table 11, the majority of ads focused on challenger candidates

discussed both the problems and solutions associated with the issue. However, the majority of candidates running in an open race used a solution frame that focused on solutions or policy proposals that could help ‘solve’ the climate change issue.

Table 11. Problem v. Solution Frame (based on Political Status)

Frame	Incumbent	Challenger	Open Race
<i>Problem focus</i>	15	5	4
<i>Solution focus</i>	15	4	18
<i>Both</i>	9	8	7
<i>Neither/Unclear</i>	0	0	3

When I ran a Chi-Square Test on the Climate Change Frame and Political Status variables, there isn’t sufficient evidence suggesting that these two variables are associated with each other. With a Pearson Chi-Square value of 9.561 and a p-value of 0.297, I could not reject the null hypothesis. Therefore, there wasn’t enough evidence in my sample to suggest an association between these two variables. However, I did find sufficient evidence of an association between the Problem v. Solution Frame and Political Status variables. With a Pearson Chi-Square value of 15.704 and a p-value of 0.015, I rejected the null hypothesis of no association. In other words, there was sufficient evidence in my sample data to suggest there was an association between these two variables.

Chapter 6

Conclusion

Climate change is a serious problem the world has to confront now to limit the impact it will have on the environment and our ways of life. However, despite having more than 50% of American adults estimated to believe in the issue, the partisan nature of climate change has proved to be a major limitation to the United States' response. Debates persist among the general population, even though 97% of active scientists believe the climate is rapidly warming because of human activity (NASA, n.d.). As such, the United States and the rest of the world are moving slowly in their responses to climate change because they are also debating other aspects of this issue, including which policy approach should be utilized. Many scientists call for the transition to renewable energy while many business executives feel the market will be able to address the problem on its own by promoting innovation.

The general aim of this study was to learn how American political candidates address climate change in their campaign ads. This is important to study because campaign ads help us gain an understanding of the discourse used in the debate around any political issue. They essentially act like little snapshots of the candidate's larger platform and plans if they are elected by the American public. Therefore, the rhetoric and communication strategies a candidate applies to their political ads provide insight into how the individual candidate and their political party currently approach the issue of climate change.

The first research question I asked in my study concerned how climate change was framed between the 2016 and 2018 election cycles. As predicted, more ads were attacking a candidate in the 2018 election cycle than in the 2016 election cycle. Additionally, more ads used the *Attribution of Responsibility Frame* in the 2018 election cycle than in the 2016 election cycle.

This trend could be associated with the backlash the Trump administration has received regarding its record with the environment since taking office in 2016. However, it could also be influenced by the fact that there were more negative ads attacking a candidate in the collection of 2018 political ads than there were in the collection of 2016 political ads. These negative attacking ads try to hold political candidates accountable for their actions or inactions that contribute to climate change. Based on my analysis of the 2016 political ads, 29 ads promoted the candidate in focus, 9 attacked the candidate in focus, and 6 ads promoted the candidate while also attacking his or her opponent. In the 2018 political ads, 21 ads promoted the candidate in focus, 16 attacked the candidate in focus, and 7 ads promoted the candidate while also attacking his or her opponent.

Another interesting observation I made in response to this research question concerns the terminology that is deployed in the ad. The terms “climate” or “climate change” were explicitly discussed in 53.41% of the ads that were coded in this study, showing candidates are almost completely split in half over how they refer to climate change in their campaign advertisements. However, more 2016 political ads included in this study explicitly used the climate change terminology than 2018 political ads did. This suggests that more 2018 political ads approached the climate change subject by addressing climate change-related issues rather than explicitly using climate change terminology.

In regards to the second research question, I explored whether or not Republican and Democratic candidates address climate change through different campaign strategies. The idea that the Democratic party possesses ownership of environmental issues like climate change is reaffirmed by my findings. Significantly more ads in my sample focused on Democratic

candidates. In addition to this, most of the ads coded as promoting a candidate focused on Democratic candidates while the majority of the attack ads focused on Republican candidates.

However, this general issue ownership feature doesn't mean the two major political parties differed much on their climate change advertising strategies. There wasn't much intra-group variation between these two political parties when it came to how they used climate change terminology. More Democratic candidates explicitly used the climate change terminology than the Republican candidates did because there were more Democratic candidates in the sample. However, almost 53% of each individual political party explicitly used the words "climate" or "climate change" in their ads while roughly 47% of each party did not. The fact that candidates could appeal to climate change through related topics like clean energy and carbon pollution without explicitly using the terminology led to this finding.

I had also previously predicted that Republican candidates would mainly use the *Economic Frame* because of their party's attachment to economic concerns like taxes. However, both Democrats and Republicans employed the *Attribution of Responsibility Frame* within their campaign ads. They used this frame to share how they contributed to the fight for climate change, while attack ads that focused on Republican candidates also employed this frame to blame the candidate for worsening climate change.

That being said, this finding doesn't mean the *Economic Frame* was rarely used. The *Economic Frame* was the second most frequent frame within each of the two political parties. However, there were actually more Democratic candidates using the *Economic Frame* than the Republican candidates. This could be contributed to Democratic candidates' efforts to gain the support of Republican-leaning voters. By relating climate change to economic risks or opportunities, the Democratic candidates are theoretically able to appeal to the values of voters

who generally lean towards the Republican party. We can further see this trend as Democrat-focused campaign ads addressed energy policy more than the Republican-focused campaign ads. Much of climate change-related energy policy tries to address the problem by advocating for a transition to renewable energy. This transition would carry job opportunities and more strategies to make the American economy more sustainability-friendly if it occurred. Therefore, by making energy policy-related statements, Democratic candidates are able to simultaneously address climate change and appeal to Republican-leaning voters.

Finally, my third research question looked at whether or not a candidate's political status impacts the climate change framing strategies they deploy in their campaign ads. By looking at climate change terminology in relation to political status, I found that incumbent candidates are more likely to implicitly refer to climate change as I predicted. This suggests that incumbents are generally more cautious in their use of climate change terminology because they do not want to lose the public support that previously got them elected. On the other hand, candidates running in an open race were more likely than the other two political statuses to explicitly use the terms "climate" or "climate change" in their campaign ads.

Similar to the political affiliation findings, most of the ads in each of the individual political status categories used the *Attribution of Responsibility Frame* in their campaign ads. Candidates running in an open race used the *Economic Frame* and the *Human Future/Impact Frame* more times than the other two status categories did. Also, open race and challenger candidates mainly made energy policy-related statements in reference to climate change while incumbents were more associated with pollution statements.

In conclusion, it is important to look at how different climate change messages are employed by American political candidates based on their political attributes. Democrats largely

assert ownership over this issue in their ads, but my study doesn't provide enough evidence to suggest that there is an association between political affiliation and climate change terminology. The variables that did show evidence of an association with political affiliation were the Problem v. Solution Frame and Positive v. Negative Ad variables. Unlike the political affiliation tests, evidence gathered from various Chi-Square Tests that were run based on the Political Status variable suggests that a candidate's political status is associated with each of the following variables: Climate Change Terminology; Positive v. Negative Ad; and Problem v. Solution Frame. Different election cycles also had slightly different climate change messages because the 2018 election cycle candidates had the chance to praise or criticize the candidates who were just elected in 2016.

Despite the above findings, this study is not without its limitations. This thesis aims to start the conversation on the general nature of American political ads related to the climate change topic in the recent 2016 and 2018 election cycles. Therefore, the findings of this paper do not consider all the possible factors that could influence the way climate change is framed in political ads in the United States. More research should also be carried out in the future to find what other factors influence climate change frames that are used in the campaign ads of American political candidates. Additionally, my sample might not be complete. Future research should take more political ads into account, including more ads that focus on independent candidates to further contribute to the discussion on the role of political affiliation in the framing of climate change. There should also be more election cycles included in the next study to see how consistently these factors influence frames and to learn how the political nature of climate change is evolving within the United States.

BIBLIOGRAPHY

- Albeck-Ripka, L. (2019). How to reduce your carbon footprint. *The New York Times*.
<https://www.nytimes.com/guides/year-of-living-better/how-to-reduce-your-carbon-footprint>
- Bell, M. C. (2009). *The First Amendment encyclopedia: Electioneering*. Middle Tennessee State University. <https://mtsu.edu/first-amendment/article/1107/electioneering>
- Calderwood, K. J. (2019). Discourse in the balance: American presidential discourse about climate change. *Communication Studies*, 70(2), 235–252.
- Carvalho, A., van Wessel, M., & Maesele, P. (2017). Communication practices and political engagement with climate change: A research agenda. *Environmental Communication*, 11(1), 122-135.
- Connolly-Ahern, C., & Castells i Talens, A. (2010). The role of indigenous peoples in Guatemalan political advertisements: An ethnographic content analysis. *Communication, Culture & Critique*, 3(3), 310-333. doi:10.1111/j.1753-9137.2010.01073.x
- D'angelo, P., Calderone, M., & Territola, A. (2005). Strategy and issue framing: An exploratory analysis of topics and frames in Campaign 2004 print news. *Atlantic Journal of Communication*, 13(4), 199–219.
- Dotson, D. M., Jacobson, S. K., Kaid, L. L., & Carlton, J. S. (2012). Media coverage of climate change in Chile: A content analysis of conservative and liberal newspapers. *Environmental Communication*, 6(1), 64-81.
- Franz, M. M., Fowler, E. F., Ridout, T., & Wang, M. Y. (2020). The issue focus of online and television advertising in the 2016 presidential campaign. *American Politics Research*, 48(1), 175-196.

- Feldman, L., Maibach, E. W., Roser-Renouf, C., & Leiserowitz, A. (2012). Climate on Cable: The nature and impact of global warming coverage on Fox News, CNN, and MSNBC. *The International Journal of Press/Politics*, 17(1), 3–31.
- Fowler, E. F. (2016). *Political advertising in the United States*. Routledge.
- Han, J. J., Sun, S., & Lu, Y. (2017). Framing climate change: A content analysis of Chinese mainstream newspapers from 2005 to 2015. *International Journal of Communication*, 11, 2889–2911.
- Hartman, A. (2015). *A war for the soul of America: A history of the culture wars*. The University of Chicago Press.
- History.com Editors. (2019). *Citizens United vs. FEC*. <https://www.history.com/topics/united-states-constitution/citizens-united>
- Hughes, K. (2019). *Richard Nixon: Campaigns and elections*. University of Virginia's Miller Center. <https://millercenter.org/president/nixon/campaigns-and-elections>
- Inyinbor, A. A., Adebisin, B. O., Oluyori, A. P., Adelani-Akande, T. A., Dada, A. O., & Oreofe, T. A. (2018). Water pollution: Effects, prevention, and climatic impact. In M. Glavan (Ed.), *Water Challenges of an Urbanizing World* (pp. 33-53). IntechOpen.
- Jay, A., Reidmiller, D.R., Avery, C.W., Barrie, D., DeAngelo, B.J., Dave, A., Dzaugis, M., Kolian, M., Lewis, K. L. M., Reeves, K., & Winner, D. (2018). Chapter 1: Overview. In *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment* (Vol. 2, pp. 33-71). U.S. Global Change Research Program.
- Johnston, A. & Kaid, L. L. (2002). Image ads and issue ads in U.S. presidential advertising: Using videostyle to explore stylistic differences in televised political ads from 1952 to 2000. *Journal of Communication*, 52(2), 281-300.

- Kaid, L. L. & Holtz-Bacha, C. (2006). *The SAGE handbook of political advertising*. SAGE Publications, Inc.
- Kaid, L. L. & Johnston, A. (2001). Presidential campaign advertising on television. In *Videostyle in presidential campaigns: Style and content of televised political advertising*. Praeger Publishers.
- Kaid, L. L. & Postelnicu, M. (2004). Political advertising in the 2004 election. *American Behavioral Scientist*, 49(2), 265-278.
- Kennedy, B. (2020). *U.S. concern about climate change is rising, but mainly among Democrats*. Pew Research Center. <https://www.pewresearch.org/fact-tank/2020/04/16/u-s-concern-about-climate-change-is-rising-but-mainly-among-democrats/>
- Kim, Y., Gonzenbach, W. J., Vargo, C. J., Kim, Y. (2016). First and second levels of intermedia agenda setting: Political advertising, newspapers, and Twitter during the 2012 U.S. presidential election. *International Journal of Communication*, 10, 4550-4569.
- Marlon, J., Howe, P., Mildenerger, M., Leiserowitz, A., & Wang, X. (2020). *Yale climate opinion maps 2020*. Yale Program on Climate Change Communication. <https://climatecommunication.yale.edu/visualizations-data/ycom-us/>
- McArdle, T. (2018). The 'law and order' campaign that won Richard Nixon the White House 50 years ago. *The Washington Post*. <https://www.washingtonpost.com/history/2018/11/05/law-order-campaign-that-won-richard-nixon-white-house-years-ago/>
- Mildenerger, M., Marlon, J., Howe, P., Rajaoberison, A., & Leiserowitz, A. (2020). *Democratic and Republican views of climate change*. Yale Program on Climate Change Communication. <https://climatecommunication.yale.edu/visualizations-data/partisan-maps-2018/?est=happening&group=dem&type=value&geo=cd>

- NASA (n.d.) *Scientific consensus: Earth's climate is warming*. Global Climate Change: Vital Signs of the Planet. <https://climate.nasa.gov/scientific-consensus/>
- Nisbet, M. C. (2009). Framing science: A new paradigm in public engagement. In L. A. Kahlor & P. Stout (Eds.), *Communicating Science: New Agendas in Communication* (1st ed., pp. 40–67). Routledge.
- Nixon, R. (1968). *The first civil right* [Advertisement]. Retrieved from <http://www.livingroomcandidate.org/commercials/1968/the-first-civil-right#4026>
- Perloff, R. M. (1998). *Political communication: Politics, press, and public in America*. Mahwah, N.J.: Lawrence Erlbaum Associates.
- Pew Research Center. (2020). *As economic concerns recede, environmental protection rises on the public's policy agenda*. <https://www.pewresearch.org/politics/2020/02/13/as-economic-concerns-recede-environmental-protection-rises-on-the-publics-policy-agenda/>
- Rabinowitz, A. (2010). Media framing and political advertising in the Patients' Bill of Rights debate. *Journal of Health Politics, Policy and Law*, 35(5), 771–795.
- Scheufele, D. A. (2000). Agenda-setting, priming, and framing revisited: Another look at cognitive effects of political communication. *Mass Communication & Society*, 3(2&3), 297-316.
- Scheufele, D. A. & Tewksbury, D. (2007). Framing, agenda setting, and priming: The evolution of three media effects models. *Journal of Communication*, 57, 9-20.
- Semetko, H. & Valkenburg, P. (2000). Framing European politics: A content analysis of press and television news. *Journal of Communication*, 50(2), 93-110.
- Vafeiadis, M., Li, R., & Shen, F. (2018). Narratives in political advertising: An analysis of the political advertisements in the 2014 midterm elections. *Journal of Broadcasting &*

Electronic Media, 62(2), 354–370.

Zamith, R., Pinto, J., & Villar, M. E. (2012). Constructing climate change in the Americas: An analysis of news coverage in U.S. and South American newspapers. *Science Communication*, 35(3), 334–357.

ACADEMIC VITA

Kelsey Bell

Education

The Pennsylvania State University, University Park, PA December 2020

Master of International Affairs, Concentration in Environmental Resources & International Conflict

- Enrolled in an integrated undergraduate-graduate program, completed degrees concurrently

The Pennsylvania State University, University Park, PA December 2020

B.A. in Advertising/Public Relations, B.A. in History, and B.A. in International Politics

- Honors Thesis: Putting the Planet on the Ballot: Climate Change Framing in 2016 and 2018 Political Ads”
- Minor in Latin American Studies
- Schreyer Honors College Scholar and Paterno Fellow

Research/Teaching Experience

Research Assistant **University Park, PA**

Children, Media and Conflict Zones Lab, Rock Ethics Institute August – December 2020

- Conducted directed research on the displacement of Sahrawi refugees in Northern Africa
- Supported the planning and promotion of a forthcoming book about the role media plays in the lives of children living in conflict zones

Teaching/Learning Assistant **University Park, PA**

Bellisario College of Communications, Pennsylvania State University August – December 2020

- Assisted Dean Marie Hardin with the planning and instruction of an undergraduate communications seminar called “Build Your Own Media Brand” that has over 100 enrolled students

Teaching Assistant **University Park, PA**

School of International Affairs, Pennsylvania State University July – December 2020

- Assisted the professor with the planning, instruction, and grading of a graduate-level statistics course that covers topics like probability, hypothesis testing, and regression
- Developed and graded homework assignments and exams for over 60 enrolled students

Data Management & Media Intern **Remote**

International Rescue Committee April – December 2020

- Conducted literature reviews on digital literacy projects in humanitarian settings
- Compiled and cleaned gender-based violence (GBV) data from country programs in Excel for analysis
- Created a social media best practices guide and edited podcast episodes in Adobe Audition

Undergraduate Research Assistant **University Park, PA**

Department of Geography, Pennsylvania State University June – December 2019

- Conducted literature reviews and qualitative data collection on two participatory natural resource management and sustainability education research projects

Communications Experience

Project Associate

School of International Affairs, Pennsylvania State University

University Park, PA/Remote

January – June 2020

- Proofread and edited journal articles and a book manuscript about the property success difference that exist between black West Indian migrants and African Americans in the U.S.

Digital Outreach & Research Assistant

Center for Global Business Studies, Pennsylvania State University

University Park, PA/Remote

June 2019 – August 2020

- Managed the center's website, created engaging social media content, and scheduled posts across the director's social media accounts
- Conducted background research on the impact of globalization on U.S. business relations by looking at a variety of topics from trade wars to immigration

Social Media Intern

White Good MARCOM Agency

Lancaster, PA/Remote

August – December 2019

- Wrote engaging content for clients' social media accounts, scheduled posts in Sprout Social, and recorded social media analytics for quarterly progress reports

History Intern

Dickinson College Archives & Special Collections

Carlisle, PA

June – August 2019

- Used archived materials and oral histories to research and curate content for a digital exhibit on the military experiences of LGBTQ+ servicemembers in Central Pennsylvania

Social Media & Public Relations Intern

Smithsonian Associates

Washington, D.C.

August – November 2018

- Promoted events, lectures, and educational programs across various social media accounts by implementing the organization's digital outreach strategies

Photo Services Intern

U.S. National Archives and Records Administration

Washington, D.C.

August – November 2018

- Edited, catalogued, and organized photographs and other digital images in Adobe Lightroom
- Photographed lectures and special events for the National Archives News blog and other public relations efforts

Public Relations Intern

White Good MARCOM Agency

Lancaster, PA

May – August 2018

- Identified media outlets for editorial placements, prepared pitches, and monitored media coverage of clients
- Wrote press releases, blog posts, & social media content for clients while assisting with event planning logistics

Social Media Intern

Penn State Athletics

University Park, PA

August 2017 – May 2018

- Assisted with the management of three sports teams' social media accounts by creating and scheduling content
- Gained experience with basic social media analytics and live tweeting event coverage

Communications/Social Media Intern

Habitat for Humanity of Greater Center County

University Park, PA/Remote

January – May 2017

- Worked with staff to develop a social media content and a content calendar for the organization's accounts