Determining support for the Green New Deal:

Partisan perceptions of renewable energy reform in the United States

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Nicole Bayne
4400 University Dr., Fairfax, VA 22030; 703-600-9971; nbayne2@gmu.edu

Lenore Pedicord
4400 University Dr., Fairfax, VA 22030; 334-303-0754; lpedicor@gmu.edu

Emily Vraga
4400 University Dr., MS 3D6, Fairfax, VA 22030; 703-993-1090; evraga@gmu.edu

Abstract

Alexandria Ocasio-Cortez's Green New Deal (GND) is a highly publicized proposal for national energy reformation. This research analyzes public perceptions of the GND using Climate Change in the American Mind survey data. Results from linear and logistic regressions indicate that individual political ideology does not impact awareness, but does affect support for the GND. Regardless of personal ideology, watching liberal-leaning news sources increases the likelihood for awareness of the GND. Elite cues from state senators have no impact on statewide awareness of or support for the GND, suggesting a shift from traditional top-down influence for generating public support for policy.

Keywords: The Green New Deal, the GND, environmental policy, green energy reform, partisanship

Introduction

One of the greatest impediments to national environmental policy is the public perception that prioritizing environmental conservation means sacrificing economic growth, given America's dependence on fossil fuel (Dunlap, Xiao, & McCright, 2001). By the 1990s, environmental policy was a polarizing partisan issue in which environmental policy support was almost exclusively Democratic while development and economic growth were a Republican priority (Dunlap, Xiao, & McCright, 2001). Recent information about the impacts a changing climate may have on humans and wildlife around the world has collided with public outrage about past treatment of the environment (McAdam, 2017), creating avenues for successful environmental activism across the country. The momentum gathering behind this 'climate activism' (Sovacool, 2009) has overflowed into a nationwide demand for green energy reformation, culminating in the most recent iteration of the Green New Deal (GND), formally introduced to Congress on 7 February 2019 by Rep. Alexandria Ocasio-Cortez, D-N.Y., and Sen. Ed Markey, D-Mass (Kurtzleben, 2019). We used a nationally representative survey to test the partisan appeal of the most current iteration of the GND and determine the impact of political orientation—demonstrated by personal ideology, media news choice, and the presence of elite cues—on both awareness of and support for this new policy.

There are several important contributions this paper could offer the current body of knowledge on public perceptions of green energy policy and partisan indicators for environmental policy awareness of support. Foremost, this iteration of the GND is new and relatively unique. The phrase "Green New Deal" has been used since the late 2000s to describe international efforts in alleviating carbon dependency, developing a sustainable economy, and improving treatment of the environment (Barbier, 2010), but none of these past proposals were given much media attention. Green New Deals of the past were always part of the Green party platform, a third party in American politics, but this most current iteration was proposed by the Democratic party (Kurtzleben, 2019). Necessary motivation for proposing such extensive or radical green energy policy is not typically demonstrated by the Democratic or Republican parties, the two central political parties in the United States. Taking advantage of such timely public perceptions data could offer important insight into the motivations behind this potential partisan shift in priorities.

Additionally, we have the opportunity to identify these motivations by examining both public awareness of and public support for the GND within three different levels of partisanship: 1) individual ideology, 2) media partisanship as influenced by individual choice in news source, and 3) statewide partisanship as influenced by elite cues from state senators. Political ideology almost always predicts the likelihood an individual will support or oppose a policy (Cohen, 2003), but it is unclear how public ideologies as a more general concept can be influenced. For example, though renewable energy options such as wind farms, hydroelectric plants, and geothermal facilities emit none of the harmful byproducts associated with fossil fuels, require less facility maintenance, and are less susceptible to cost inflation, fossil fuels generated close to 70% of American electricity just one decade ago (Sovacool, 2009). This reluctance to take advantage of beneficial energy resources has been attributed to insufficient communication strategies by the media and politicians, leading to public apathy about green energy (Sovacool, 2009). Finally, the ability to distinguish between awareness and support throughout this study could help further determine existing shifts in American green energy perceptions and, more specifically, the political groups within which these perception shifts are catalyzing.

Literature Review

In the past, the success of a variety of policies has been largely dependent on public support, and public apathy towards proposed policies have effectively defeated entire political proposals (Nisbet, 2009). The efforts of prior administrations to pass a variety of reformation policies—such as those within the health care, welfare, or immigration sectors—have included strategies for generating extensive public support for the policy (Nisbet, 2009), making public perceptions research of new and old policies highly valuable to a politician's success. Furthermore, environmental policy can be viewed as an umbrella term in the United States encompassing heavily contested climate change and global warming topics, both of which are linked to greenhouse gas emissions and fossil fuels (Leiserowitz et al., 2018). Efforts in alleviating impacts of climate change and global warming almost always consider renewable energy reformation, so national public perceptions regarding global warming, climate change, and renewable energy are often intertwined (Rainie et al., 2015). For example, most Americans

believe that adopting clean energy practices will improve global warming, at least to a moderate degree (Leiserowitz et al., 2018). Moreover, belief in climate change is a significant predictor of supporting environmental policies (Schwom, Bidwell, Dan & Dietz, 2010).

The GND, based on the economic tenants of the historical New Deal, has been sporadically discussed since 2007 (Friedman, 2007a, 2007b), and was part of Jill Stein's (Green Party) presidential election bid in 2012 and 2016 ("The Green New Deal," 2016). Touting groundbreaking and even seemingly impossible energy reformation policy, such as the promise of completely eradicating American dependence on fossil fuels by transforming the nation into one of 100% green energy usage by the year 2030, the GND garnered more prominent news coverage during Democrat Ocasio-Cortez's bid for Congress leading up to the 2018 midterm elections (Kurtzleben, 2019). Increased news coverage of the current Democratic version of the GND aligns with the priorities of American politics as dictated by the national two-party system on which the United States government is based (Schattschneider, 2004). Increased media interest in the policy, and the subsequent creation of public perceptions regarding it, might be attributed to the adoption of the GND by the Democratic party, as third-party platforms generally warrant less media attention (Panckiewicz, 2010). The increased news coverage, which has not been seen for past iterations of this policy, has likely generated awareness and shaped perceptions of the GND within the public sphere.

A slight knowledge gap exists within the relationship between awareness of environmental policies and public support for the same policy. The most common communication techniques have been found to enhance public awareness of climate change (Roser-Renouf, Maibach, Leiserowitz & Zhao, 2014). However, a more complete understanding by the public of the issues posed by climate change, as well as understanding the potential solutions to these problems, is necessary to garner public support (Roser-Renouf et al., 2014). Public awareness of environmental issues may enhance the public's sense of obligation toward the environment (O'Connor, Bord & Fisher, 1999). This indicates that awareness is the catalyst for the formation of perceptions on an issue, though awareness of contentious political topics increases with individual experience (Lee, Markowitz, Howe, Ko &

Leiserowitz, 2015). Regardless, the role of political orientation in public attitudes of the GND will likely exist on three different tiers. First, individual ideology, while largely insignificant for general awareness, will determine initial support or opposition to the GND. Second, partisan media will perpetuate both policy awareness and beliefs motivated by party ideology. Lastly, elite cues likely influence group partisan divide, affecting support for the GND more than awareness.

Individual Political Ideology & Environmental Attitudes

Conflicting results of a few recent studies illustrate the irrelevance of many demographic variables in determining support for environmentally friendly policies, and the importance of individual political ideology on determining this support. For example, income has been identified as the greatest predictor for carbon tax support (Kotchen, Turk, & Leiserowitz, 2017). However, the relationship between income and belief in climate change was weak while controlling for party affiliation (Pearson, Ballew, Naiman, & Schuldt, 2017), which negatively impacts the ability to use income as a predictor of support for environmental policy. Controlling for political ideology also reduces the relationship between level of education and belief in climate change, which has traditionally been held as significant and positive, threatening the ability to use education level to predict support for environmental policy (van der Linden, Leiserowitz, & Maibach, 2018). In most cases, demographics such as education level (van der Linden, Leiserowitz, & Maibach, 2018) and even choice in media news outlet (Feldman, Maibach, Roser-Renouf & Leiserowitz, 2012) merely serve to strengthen pre-existing climate change ideals held by members of the public as a result of individual political affiliation, (van der Linden, Leiserowitz, & Maibach, 2018), reinforcing party belief rather than increasing individual belief in climate change (Pearson et al., 2017).

A divide still exists between conservative and liberal attitudes toward environmental issues and policies. Most liberals believe global warming is occurring and is a result of anthropogenic sources (Leiserowitz et al., 2018). Conservatives mostly believe in global warming, but staunch conservatives

do not believe the phenomenon to be caused by humans (Leiserowitz et al., 2018). However, belief in global warming and its anthropogenic causes is increasing in moderate conservatives (Leiserowitz et al., 2018). Furthermore, most individuals identifying with both parties support requiring utilities in their state to produce 100% of their electricity from clean, renewable sources by the year 2050 (Leiserowitz et al., 2018). This is very similar to a policy within the GND, which mandates energy providers switch to 100% clean energy by the year 2030 (Kurtzleben, 2019).

Additionally, the phrase "Green New Deal" itself frames the policy within the context of a society in need of "green" energy reformation and "new deal" style economic revitalization, which identifies the economy and energy sector as nationally problematic while suggesting remedies for perceived issues (Entman, 2003). A heightened appeal of the GND to conservatives may occur as a result of the highlighted "New Deal" aspects of this green energy policy, which focus on job creation and other economic benefits of green energy reformation (Friedman, 2007a, 2007b). Support for the GND may cross party lines, deviating from historically observed partisan support for environmental policies.

Media Partisanship and Public Choice in News Consumption

The phenomenon of ideological reinforcement has been heavily observed through recent research on the relationships between individual ideology and news media consumption patterns. Media has the potential to a) raise awareness about an environmental issue, and b) influence public support for a policy (Ford & King, 2015). Arguably, top news editors and journalists have even more sway over the spread of ideas among the public than powerful authority figures (Entman, 2003). The relationship between the content of the news story and how the story is framed (Champlin & Knoedler, 2002) is critical to effective communication of complex scientific ideas such as climate change (Ford & King, 2015).

The media practice of targeting consistent audiences creates echo-chambers by strategically reinforcing dissenting opinions, which polarizes the public against each other through the misunderstanding of contentious subjects such as climate science (Feldman, Myers, Hiemlowski & Leiserowitz, 2014). For example, due to more news outlets leaning to the left, liberals typically engage with a greater number of media sources than conservatives (Mitchell, Matsa, Gottfried & Kiley, 2014). However, liberals are typically steadfast in their overwhelmingly accepting views of climate change, regardless of media preference (Bolin & Hamilton, 2018), which is understandable, as most liberal-leaning news sources, such as CNN or MSNBC, discuss environmental policies favorably (Feldman et al., 2012). In contrast, Fox News was once found to have the greatest number of transcripts mentioning climate change, but these mentions were mostly dismissive of climate change issues and human contributions to them (Feldman et al., 2012), suggesting that Fox News consumption leads to awareness of environmental policies and opposition towards these ideals. As such, the often older and conservative viewers of Fox News have been found to hold traditionally conservative views of global warming (Bolin & Hamilton, 2018) and their denial of climate change can be strengthened by their selection of this media for consumption (Feldman et al., 2012).

Interestingly, conservatives who watch CNN or MSNBC have been observed as more willing to adjust their personal beliefs (Feldman et al., 2012). While it is unclear whether this is a result of media content or selection biases, acceptance or denial of environmental issues stem from the level of awareness exhibited by each audience and how the content is framed within certain media (Entman, 2003). The nuances displayed between the major news conglomerates Fox News, CNN, and MSNBC will likely lead to variance in public support for the GND driven by both individual and media partisanship.

Statewide Partisanship and the Influence of Elite Cues

Currently, most liberals and conservatives believe that renewable energy reformation will improve the economy (Leiserowitz et al., 2018). This is extremely important considering that past hesitation toward renewable energy reform has been attributed to perceptions that green energy adoption would weaken the American economy (Sovacool, 2009). These shifting perceptions are especially poignant among conservatives, suggesting that current techniques for communicating the benefits of green energy have improved over past methods (Roser-Renouf et al., 2014). Since the failure to communicate these benefits was attributed to policymakers (Roser-Renouf et al., 2014), authority figure influence, or elite cues, over public perceptions are likely still effective. This is an important field to research because a delicate balance exists between effective elite cue communication to gather public support for a cause and over-informing the public on important policy, which, paradoxically, can foster distrust (Owens & Driffell, 2008). This phenomenon could perpetuate group partisan alignment on green energy issues as influenced by elite cues, such as state senators (McAdam, 2017).

The national climate change movement has been developing within all levels of government since the 1990s (Caniglia, Brulle, & Szasz, 2015) and there are currently over 467 individual organizations aimed at influencing this movement from positions of authority (Brulle, 2014). Interestingly, correlations between statewide political opinion and party control over state legislature are weak (McAdam, 2017), initially suggesting that elite cues are irrelevant. Statewide public opinions may influence party ideology, but the responsiveness of political parties to statewide opinion is what determines electoral success (McAdam, 2017). This information establishes historic findings that state electoral politics are largely responsible for the correlation between state opinion and therefore state policy support (Erikson, Wright & McIver, 1989). For instance, a higher number of Democratic senator seats associated with state political representation positively affected the likelihood that a green energy policy would pass for that state (Delmas & Montes-Sancho, 2011).

The partisan divide on environmental policy between government officials is perpetuated by feedback cycles illustrated in content framing theory, suggesting that public response to elite cues does in fact influence elite figure ideologies (Entman, 2003). Considering that individual partisan ideology influences public response to authority (Entman, 2003), it can be expected that elite cue partisanship plays an important role in statewide support for the GND.

Research Questions and Hypotheses

The aim of this timely and politically relevant quantitative secondary data analysis is to explore the impacts of partisanship on current green energy awareness and support on these three different levels. Considering the gap in knowledge of how awareness of the GND may be impacting support for the GND across political lines, we pose the following research questions:

Research Question 1: Will liberals be more likely than conservatives to be aware of the GND?

Research Question 2: Will people who consume more liberal news be more likely to be aware of the GND?

Research Question 3: Will people who consume more conservative news be more likely to be aware of the GND?

Research Question 3: Will people in states with two Democratic Senators be more likely to be aware of the GND than those in states with fewer Democratic Senators?

Our analysis is unique in that we have the opportunity to examine American green energy support for a radical and newly implemented green energy policy, the GND, which has yet to be researched in this manner. Individual ideology has been pivotal in the past for driving support for numerous policies but analyzing how the public is interpreting the GND as dictated predominantly

by news media could provide insight into any newly developing relationships between partisanship and support for green energy policy. Generally, it is still unclear where this momentum is coming from, how the movement is being communicated and interpreted, and whether it carries enough stamina to accurately predict a shift in partisan green energy perceptions. Therefore, we expect the following to be true in our analysis of public support for the GND:

Hypothesis 1: Liberals will be more likely than conservatives to support the GND.

Hypothesis 2: Those who consume more liberal news will be more likely to support the GND.

Hypothesis 3: Those who consume more conservative news will be more likely to oppose the GND.

Hypothesis 4: People in states with two Democratic Senators will be more likely to support the GND than those in states with fewer Democratic Senators.

Overall, the GND is presenting the Democratic party with the fortuitous opportunity to gather support for current green energy policy from a more diverse audience than has been seen in the past. Our results will determine if the appeal of the GND extends across partisan lines individually, within the media, and statewide, as influenced by elite cues.

Methods

Sampling Procedure

To answer our research questions, we used the 21st wave of the CCAM dataset, n=1,114 ("Climate Change in the American Mind," 2016; "Climate Change in the American Mind Reports," 2016). Surveys were self-administered online by respondents, with attention and speed checks to ensure complete and accurate responses. Each survey took approximately 27 minutes to complete.

Respondents were selected from the Ipsos KnowledgePanel®, which is an online, nationally representative panel of U.S. adults (18+). The sample pool is created using probability sampling methods, where address-based sampling and random digit dialing are used to increase the likelihood of reaching any resident in the United States. If a potential respondent does not have access to a computer or the internet, both are provided for the completion of the survey. This increases the probability of an accurate representation of U.S. adults. After the survey concluded, U.S. Census Bureau norms were used to weight major demographic variables. For this sample, the average margin of error was +/-3% with a 95% confidence level.

Timeline

Responses for the 21st wave of the CCAM survey were collected from November 28 to December 11, 2018, shortly after the midterm elections on November 6, 2018. The 2018 midterm elections were important for energy policy, as several politicians, including Rep. Alexandria Ocasio-Cortez (D-N.Y.), Gov. Jared Polis (D-Co.), Gov. Janet Mills (D-Me.), and Gov. Gretchen Whitmer (D-Mi.), ran on a platform of investing in renewable energy, reducing coal and gas subsidies, and other policies motivated by climate change concerns. Our analysis was conducted between February 2019 and April 2019, shortly after H.R. 109 and S.R. 59, The Green New Deal, were introduced to Congress on February 7, 2019.

Sample

The CCAM dataset had 1,114 useable responses and almost 400 variables covering perceptions and positions regarding climate change, advocacy action, energy usage and energy costs, various policies and legislation, media exposure, and personal values. We used 16 variables across four categories to test our hypotheses. Our variables were divided into 1) questions indicating awareness of and position regarding the Green New Deal (abbrev. GND), 2) questions assessing which TV news media respondents engaged with and how frequently, 3) state of residence, and 4) demographics,

including age, education, ethnicity, sex, income level, and political ideology. Descriptive statistics for each variable can be seen in Tables 1 & 2. Some respondents refused to answer some survey questions and were excluded from the analyses. The total number of complete responses for each variable can be seen in Tables 1 & 2. The percentages given in the following measures were calculated after removing any refused responses from the total responses.

Measure 1: Identifying Awareness of and Position regarding the Green New Deal & Renewable Energy Policy

For this category, we used questions that asked whether the respondent had heard of the GND and whether they supported it. Respondents were given a short paragraph to read illustrating what the objectives of the GND are:

> Some members of Congress are proposing a "Green New Deal" for the U.S. They say that a Green New Deal will produce jobs and strengthen America's economy by accelerating the transition from fossil fuels to clean, renewable energy. The "Deal" would generate 100% of the nation's electricity from clean, renewable sources within the next 10 years, upgrade the nation's energy grid, buildings and transportation infrastructure, increase energy efficiency, invest in "green" technology research and development, and provide training for jobs in the new "green" economy.

Following this paragraph, respondents were asked to indicate how much they had heard of this policy: "A little," "A lot," or "Nothing at all." Most respondents indicated they had not heard about this policy (82.3%). Immediately following this question, respondents were asked how much they supported this policy on a 4-point Likert scale: "Strongly oppose," "Somewhat oppose," "Somewhat support," or "Strongly support." Most respondents indicated they somewhat or strongly support this policy (40.6% and 39.3%, respectively). To control for the nuances of this policy, we counterweighted these questions with a separate question in the survey which asked respondents, "How much do you support or oppose requiring electric utilities in your state to produce 100% of

their electricity from clean, renewable energy sources (such as wind and solar) by 2050?" (abbrev. renewable energy by 2050). Response to this question used the same 4-point Likert scale as support for the GND. Most respondents indicated they somewhat or strongly support this policy (46.1% and 38.1%, respectively). Descriptive statistics can be seen in Table 1.

Measure 2: Identifying TV News Media Engagement

For this category, we used questions that identified which news sources respondents engaged with and how frequently. Respondents were asked, "How often do you watch, listen to, or read content from…" followed by a list of seven news sources: "Local TV news," "The national nightly network news on CBS, ABC or NBC" (abbrev. national nightly news), "The Fox News CABLE channel" (abbrev. Fox News), "MSNBC," "CNN," "National Public Radio (NPR)," and "The Christian Broadcasting Network (CBN)." Engagement was measured on a 7-point Likert scale: "Never," "Every few weeks," "Once a week," "Every few days," "Almost every day," "Several times a day," or "Many times a day." We excluded two news sources used in the survey, the Christian Broadcasting Network, as 86% of our sample indicated they never engaged with it, and NPR, because we were focusing on television news sources.

Of the respondents that indicated they engaged with local TV news to some degree (83.6%), the majority engaged with it almost every day (29.4%). The majority of respondents indicated they engaged with the national nightly news with some frequency (70.7%), and most of these engaged with it almost every day (25.3%). Most respondents indicated they never engaged with Fox News, MSNBC, or CNN (44.0%, 43.2%, and 51.3%, respectively). Of those that engaged with Fox News, MSNBC, or CNN, the majority engaged with them every few weeks (16.6%, 18.9%, and 20.5%, respectively). Descriptive statistics can be seen in Table 1.

We then categorized each news source as liberal, conservative, or centered. To determine which political ideology to assign to each news source, we used the ideology of each news sources'

audience (Mitchell, Matsa, Gottfried, & Kiley, 2014). MSNBC and CNN were categorized as liberal media, Fox News was categorized as conservative, and national nightly news and local news were categorized as centered.

Measure 3: Identifying Elite Cues

To identify the influence of elite cues, we categorized respondents using their states of residence and the political party of their senators for the 116th Congress. As this survey took place after the midterm elections, and campaign messages, goals, and fallouts were still being discussed on television news outlets, we elected to use the incoming 116th Congress, as opposed to the outgoing 115th Congress. A new variable was created that sorted respondents based on Senator seats in the 116th Congress. Each state was categorized as having two Democrat, two Republican, or mixed (one of each) senators, using the results from the midterm election (Appendix I: Figure 1). Two states had Independent senators, and they were categorized according to which party they caucused with. Respondents living in U.S. territories were excluded from the survey due to a lack of measure for elite cues. Respondents in Washington, D.C., which has been heavily Democratic for the last 57 years, were categorized according to the mayor, who was up for reelection during the midterm elections, and was classified as Democratic. After categorization, most respondents lived in Democratic states (44.6%), followed by Republican states (30.5%), and Mixed states (24.9%). Descriptive statistics can be seen in Table 2.

Measure 4: Demographics

For this measure, we used standard demographics—age, gender, race/ethnicity, education, and income—as well as urbanicity and political ideology. Respondents' age was broken into 7 categories: 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75+. Gender was limited to Male or Female. Respondents were asked to indicate their race/ethnicity as either "White, Non-Hispanic," "Black, Non-Hispanic," "Other, Non-Hispanic," "Hispanic," or "2+ Races, Non-Hispanic." Education was

classified as "Less than high school," "High school," "Some college," or "Bachelor's degree or higher." Income used a 21-point scale beginning with "Less than $5,000" and increasing in $2,499 increments until reaching "$15,000 to $19,999" where it began increasing in $4,999 increments. When the scale reached "$40,000 to $49,999," it once again jumped in increments to $9,999 until reaching "$60,000 to $74,999" where the scale moved to $14,999 increments. The last incremental increase occurred when it reached "$100,000 to $124,999," where it jumped to $24,999 increments. When the scale reached $200,000, the last two response options were "$200,000 to $249,999" and "$250,000 or more."

Most respondents were 35 years of age or older (76.9%), female (52.4%), and white (72.8 %). Most respondents had a bachelor's degree or higher (46.5%) and earned $60,000 or more annually (63.4%). Respondents were asked to indicate whether they lived in urban, suburban, or rural regions (24.5%, 51.9%, and 23.6%, respectively). Descriptive statistics can be seen in Tables 1 & 2.

We measured political ideology, rather than party affiliation. The two questions that dealt with party affiliation either had a very low response rate (<50%) or offered categories that could not be measured in the context of this study (e.g. "Other (Please specify)" and "No party/not interested in politics"). To identify political ideology, we used a question that asked respondents, "In general, do you think of yourself as…" followed by a 5-point Likert scale: "Very liberal," "Somewhat liberal," "Moderate, middle of the road," "Somewhat conservative," or "Very conservative." Responses were almost perfectly distributed along a bell curve. The majority indicated they were moderate/middle of the road (38.4%), with approximately one-fifth being somewhat liberal or somewhat conservative (22.6% and 20.5%, respectively), and almost one-tenth being very liberal or very conservative (10% and 8.3%, respectively). Descriptive statistics can be seen in Table 1.

A second political ideology measure was created to measure the influence of ideological extremism. This category was created by folding the political ideology question along the

moderate/middle of the road axis. Those who identified as middle of the road were ranked as "middle of the road (0)" on the new scale (37.7%). Respondents who identified as somewhat liberal or somewhat conservative were ranked as "moderates (1)" (42.3%), and those who identified as very liberal or very conservative were ranked as "Extremes (2)" (18.1%). Descriptive statistics can be seen in Table 1.

Statistical Analyses

For our analysis, we excluded all respondents that refused or declined to answer any questions associated with our variables, with the sample sizes for each test indicated in the Results. A logistic regression was used to analyze the relationships between awareness of the GND and our independent variables. Awareness of the GND was recoded into a yes/no categorical variable (yes, they had heard of the GND or no, they had not heard of the GND). This required us to dummy code two of our variables, urbanicity and states by Senators. For urbanicity, we used urban regions as our control and compared respondents in suburban and rural regions to respondents in urban regions. We chose urban regions as our control because residents in urban regions tend to be consistently Democratic and have a wider gap between Democratic and Republican residents (Parker et al., 2018). For states by Senators, we used Democratic states as our control because the reviewed literature suggested that Democrats are stalwart in their decision-making and opinions regarding the environment, despite being exposed to the contrary (Feldman, 2012). Respondents knew the outcome of the midterm elections at the time of the survey and we were interested in determining if this knowledge, and the top-down effects of campaigning, had an impact on state residents' awareness of and position regarding the GND. Due to weighted difference between ethnicities, we re-coded ethnicity to be white and minorities. We performed two linear regressions to analyze the relationships between our independent variables and position regarding the GND and position regarding renewable energy by 2050.

Results

We analyzed the data collected from respondents to the CCAM survey to determine whether media consumption (local TV news, national nightly news, Fox News, MSNBC, and CNN), elite cues (organized by 116th Congress senators by state: Democrat, Republican, and Mixed), and demographics (age, gender, race/ethnicity, education, income, urbanicity, political ideology, and ideological extremes) could predict awareness of the GND, position regarding the GND, or position regarding a similar energy policy to the GND.

Awareness of the Green New Deal

A binary logistic regression was performed to determine whether media consumption, elite cues, or demographics could predict whether a person had heard of the GND, n = 1,015. The logistic regression model was statistically significant, χ^2 (16) = 76.18, p = 0.00. This model explained 12% (Nagelkerke R^2) of the variance in awareness of the GND and correctly classified 84% of the cases (Table 3). Respondents who engaged with CNN were 1.17 times more likely to be aware of the GND (Wald = 5.21, p = 0.02). Older respondents were 0.78 times less likely to be aware of the GND (Wald = 16.58, p = 0.00). Females were 0.66 times less likely to be aware of the GND (Wald = 5.36, p = 0.02). People who lived in suburban regions were 0.57 times less likely to have heard of the GND (Wald = 7.36, p = 0.01) than those living in urban regions. Ideologically extremist respondents were 1.36 times more likely to be aware of the GND (Wald = 6.00, p = 0.01). Engaging with local TV news, national nightly news, Fox News, or MSNBC, having Republican or Mixed senators, race/ethnicity, education, income, living in rural regions, and political ideology were not significant predictors for awareness of the GND. Logistic regression outputs can be seen in Table 3.

Research question 1 asked whether liberals would be more likely than conservatives to be aware of the GND. These results indicated that liberals were no more likely than conservatives to be aware of the GND. Research question 2 asked whether people who consume more liberal news would be more likely to be aware of the GND. These results indicated that people who consumed

more liberal news media were more likely to be aware of the GND. Research question 3 asked whether people who consume more conservative news would be more likely to be aware of the GND. These results indicated that people who consumed more conservative news media were no more likely to be aware of the GND. Research question 4 asked whether people in states with two Democratic Senators would be more likely to be aware of the GND than those in states with fewer Democratic Senators. These results indicated that people who resided in states with two Democratic Senators were no more or less likely to be aware of the GND than those who resided in states with fewer Democratic Senators.

Position regarding the Green New Deal

A linear regression analysis was performed using the same variables to determine if they could predict a person's position regarding the GND, n = 1,007. The regression indicated that 28% of the variance in a person's position (support or oppose) regarding the GND could be predicted by variance in the 16 predictor variables, F (16, 990) = 25.24, p = 0.00 (Table 3). Respondents who engaged with the national nightly news were more likely to support the GND [β = 0.11, t = 2.73, p = 0.01], as well as respondents who engaged with CNN [β = 0.10, t = 2.91, p = 0.00], while people who watched Fox news were less likely to support the GND [β = -0.18, t = -5.78, p = 0.00]. Older respondents were less likely to support the GND [β = -0.09, t = -3.11, p = 0.00]. Females were more likely to support the GND [β = 0.08, t = 2.76, p = 0.01]. Conservative respondents were less likely to support the GND [β = -0.33, t = -10.29, p = 0.00]. Engaging with local TV news or MSNBC, having Republican or Mixed senators, race/ethnicity, education, income, living in suburban or rural regions, and ideological extremes were not significant predictors for support or opposition to the GND. Linear regression outputs can be seen in Table 3.

Hypothesis 1 predicted that liberals would be more likely than conservatives to support the GND. These results indicate that liberals were more likely than conservatives to be support the

GND. Hypothesis 2 predicted that people who consume more liberal news media would be more likely to support the GND. These results indicated that people who consumed more liberal news media were more likely to support the GND. Hypothesis 3 predicted that people who consume more conservative news would be more likely to oppose the GND. These results indicated that people who consumed more conservative news media were more likely to oppose the GND. Hypothesis 4 predicted that people in states with two Democratic Senators would be more likely to support the GND than those in states with fewer Democratic Senators. These results indicate that people who resided in states with two Democratic Senators were no more or less likely to support the GND than those who resided in states with fewer Democratic Senators.

Position regarding a similar Energy Policy for 2050

A linear regression was performed to see if these variables could predict a person's position (support or oppose) regarding statewide renewable energy by 2050, n = 1,013. The regression analysis indicated that 25% of the variance in a person's position (support or oppose) regarding statewide renewable energy by 2050 could be predicted by variance in the 16 predictor variables, F (16, 996) = 22.23, p = 0.00 (Table 3).

Respondents who engaged with the national nightly news were more likely to support statewide renewable energy by 2050 [β = 0.08, t = 2.05, p = 0.04], as well as respondents who engaged with MSNBC [β = 0.08, t = 2.09, p = 0.04] and CNN [β = 0.09, t = 2.59, p = 0.01], while people who watched Fox news were less likely to support statewide renewable energy by 2050 [β = -0.17, t = -5.39, p = 0.00]. Older respondents were less likely to support statewide renewable energy by 2050 [β = -0.10, t = -3.33, p = 0.01]. Females were more likely to support statewide renewable energy by 2050 [β = 0.11, t = 3.89, p = 0.00]. Conservative respondents were less likely to support statewide renewable energy by 2050 [β = -0.30, t = -9.12, p = 0.00]. Engaging with local TV news, having Republican or Mixed senators, race/ethnicity, education, income, living in suburban or rural regions, and ideological

extremes were not significant predictors for support or opposition to statewide renewable energy by 2050. Linear regression outputs can be seen in Table 3.

We used the same four hypotheses as Position regarding the GND, however regarding statewide renewable energy by 2050. Hypothesis 1 predicted that liberals would be more likely than conservatives to support statewide renewable energy by 2050. These results indicate that liberals were more likely than conservatives to be support statewide renewable energy by 2050. Hypothesis 2 predicted that people who consume more liberal news media would be more likely to support statewide renewable energy by 2050. These results indicated that people who consumed more liberal news media were more likely to support statewide renewable energy by 2050. Hypothesis 3 predicted that people who consume more conservative news would be more likely to oppose statewide renewable energy by 2050. These results indicated that people who consumed more conservative news media were more likely to oppose statewide renewable energy by 2050. Hypothesis 4 predicted that people in states with two Democratic Senators would be more likely to support statewide renewable energy by 2050 than those in states with fewer Democratic Senators. These results indicate that people who resided in states with two Democratic Senators were no more or less likely to support statewide renewable energy by 2050 than those who resided in states with fewer Democratic Senators.

Discussion

The purpose of this study was to examine public perceptions of the most recent Green New Deal, which is a decidedly unique enough policy to have grabbed the attention of the Democratic party who adopted this proposal into their party platform for the first time. We had the opportunity to examine these motivations by analyzing public awareness of the GND and public support or opposition to the policy through individual ideology, media partisanship, and statewide partisanship as influenced by the elite cues of state senators.

Limitations

Our study focused on partisanship at three different levels: individual, media, and elite. However, we did not specifically analyze individual partisanship, rather we ran our analysis comparing media and elite cue partisanship against individual ideology. The concepts of ideology and partisanship are very similar, and differ only in individuals more familiar with politics and controversial issues, who are generally more passionate and focused on the issues they espouse (Sharp & Lodge, 1985). As this was a secondary data analysis we were not presented with an appropriate measure for individual partisanship. Therefore, we chose to continue the analysis with our measure for political ideology, and we feel the results we uncovered are still relevant, considering the conceptual differences between measures for ideology and partisanship are minimal.

Public support for new policies in the past has been impacted by public perceptions of the economy and how new policies will affect or increase economic stability (Pearson et al., 2017). As such, more research into how current cost perceptions associated with the GND and the economic impacts are being communicated--particularly regarding conservative members of the public--would help further compare historical green energy perceptions with current perceptions, which would reduce the possible catalysts of this observed shift in conservative perceptions.

Awareness versus Support for the GND

The fundamental importance of this paper is our ability to differentiate between public awareness and public support within each level of partisanship throughout our analysis. Our results further concurred that differences between these concepts, and demographic motivators of both, are especially important when considering partisanship for individuals and among media news sources. Regardless of personal ideology, watching liberal-leaning news sources increases the likelihood for awareness of the GND. We might expect this result would increase the likelihood for liberals to be aware of the GND, but this was not the case. Individual political ideology does not impact awareness of the the GND, this factor only impacts support for the GND (liberals are likely to support the GND

while conservatives are likely to oppose the policy). Understanding this discontinuity among influencers of awareness requires additional research focusing on the relationship between the media consumption habits and the green energy perceptions of conservatives. Conservatives have fewer news outlets which align with their ideologies and as such are more likely to migrate between liberal and conservative news sources. Conservatives may have more opportunities for exposure to information regarding environmental policies and the GND than other individuals of varying political affiliations and are also more open than before to discussing dissenting political ideals (Feldman et al., 2012).

In addition, we did not initially examine any of our research questions or hypotheses while accounting for political extremism. When we first ran our analyses, conservatives were shown as more likely to be aware of the GND, and consuming Fox News was shown to increase the likelihood for awareness. After accounting for ideological extremism, conservative views and consumption of the primary conservative media outlet, Fox News, were no longer predictors for increased awareness of the GND among this demographic group. Furthermore, accounting for political extremism had virtually no effect on the positions of liberal ideology or liberal-leaning news sources to impact awareness of or support for the GND. One explanation for these differences is the possibility that the staunchest conservatives watch Fox News, while the more moderate conservatives engage in a variety of media. As most media news sources are liberal-leaning at least slightly (Mitchell et al., 2014), this could also explain why ideological extremism had no impact on the positions of liberal ideology or liberal news in predicting awareness or support for the GND. This comparison may be illustrating that the GND is appealing to moderate conservatives while further isolating stalwart conservatives, which is not especially helpful considering individuals on the extreme ends of the political spectrum have a greater impact on the political process than those in the middle, despite only comprising about 20% of the population (Rainie et al., 2015). More research is needed regarding the effects of ideological

extremism on public perceptions and policy support, as this relationship could help predict the success or failure of the GND as a policy in the future.

Decreased Influence of Elite Cues

Our results showed that residents in states with Mixed senator seats or those with two Republican senators are not significantly more likely to be aware of or support the GND, nor were they significantly more likely to support requiring states to switch to 100% renewable energy by the year 2050, than residents of states with Democratic senators. This is an indication that elite cues from state senators have no impact on statewide awareness of or support for the GND, suggesting a shift from traditional top-down influence for generating public support for policy (Erikson, Wright & McIver, 1989). These findings also suggest that top-down effects from elite cues, at least regarding state senator seats, are not as powerful as individual ideology or choice in media news source for perceptions surrounding the GND.

These results further perpetuate evidence that the individual partisan alignment, specifically by political extremists on both sides of the political spectrum, are more influential than figures of authority. Furthermore, considering the tendency for political figures to shift back toward the center of the political spectrum once elected (McAdam, 2017), awareness and support for the GND is likely not state-specific, but rather influenced almost entirely by partisanship and exposure to media which enhances individual ideology. Additional research comparing regional perceptions of green energy policy as compared to the political affiliation of State Representatives would provide more context, as State Representatives saw the most turn-over after the midterm elections of 2018.

Conclusion

Interestingly, more people supported statewide green energy mandates for 100% renewable energy by year 2050 than they did the GND, suggesting that the American public majority is more in favor of revolutionary green energy policy than the "New Deal" aspects involving the economy. This

potentially indicates a failure by the Democratic party to adequately capitalize on these unique facets of the GND, which incorporate economic value, unlike other green energy policies, and gather support from both parties. Considering the observed shifting perceptions of moderate conservatives, the national and unified prioritization of acting to protect the future of our environment through green energy reformation is on the cusp of realization. More research may be necessary to properly attract conservative members of the public and perpetuate nationwide awareness of and support for the GND and renewable energy.

These research findings concur with previously documented shifting green energy perceptions of moderate conservatives and suggests a shift is occurring in political influence from top-down (momentum dictated by authority) to bottom-up (momentum rooted in public activism). Furthermore, given that people who watch national nightly news outlets, such as ABC or CBC, are likely to support renewable energy policy, messaging strategies regarding climate change and renewable energy policy should prioritize dissemination through these outlets, as not only do more people watch these outlets, but they watch them more frequently than liberal or conservative outlets. Overall, further study on the relationships between ideological extremism and the success or failures of partisan policies, such as the Green New Deal, may help create a greater understanding of partisan divide and public awareness of and support for national green energy reformation.

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Tables

Table 1. Descriptive statistics for ordinal variables; n = 1,114. Scale for Awareness of Green New Deal was 0=no, 1=yes. The same scale was used for position on Green New Deal and position on statewide renewable energy by 2050 (1=strongly oppose to 4=strongly support). Rankings for News Media Consumption used the same scale (1=never to 7=many times a day). Demographics were age (1=18-24 to 7=75+), income (1=less than $5,000 to 21=$250,000+), ideology (1=very liberal to 5=very conservative) and ideological extremes (1=middle of the road to 3=extremes).

		Mean	Median	Std. Dev.	Min.	Max.	N
Green New Deal & Renewable Energy by 2050	Position on Green New Deal	3.13	3.00	0.91	1.00	4.00	1097
	Position on Renewable Energy Policy	3.16	3.00	0.86	1.00	4.00	1103
News Media Consumption	Local TV News	3.81	4.00	1.80	1.00	7.00	1101
	National Nightly News	3.13	3.00	1.81	1.00	7.00	1104
	Fox News	2.19	1.00	1.75	1.00	7.00	1102
	MSNBC	2.08	1.00	1.65	1.00	7.00	1094
	CNN	2.25	1.00	1.62	1.00	7.00	1084
Demo-graphics	Age	4.27	4.00	1.67	1.00	7.00	1114
	Income	13.31	14.00	4.50	1.00	21.00	1114
	Ideology	2.95	3.00	1.08	1.00	5.00	1093
	Ideological Extremes	0.79	1.00	0.72	1.00	3.00	1093

Table 2. Descriptive statistics for categorical variables. Categorical rankings for Elite Cues were Senators by state (1=Democrat, 2=Mixed, 3=Republican). Categorical rankings for Demographics were gender (0=male, 1=female), ethnicity (0=minority, 1=white), education (1=less than high school, 2=high school, 3=some college, 4=bachelor's degree or higher), and urbanicity (1=urban, 2=suburban, 3=rural).

			Frequency	Percent	N
Green New Deal & Renewable Energy by 2050	Aware of Green New Deal	No	917	82.8	1107
		Yes	190	17.2	1107
Elite Cues	Senators by State	Democratic	497	44.6	1114
		Mixed	277	24.9	1114
		Republican	340	30.5	1114
Demographics	Gender	Male	530	47.6	1114
		Female	584	52.4	1114
	Ethnicity	White	811	72.8	1114
		Minority	303	27.2	1114
	Education	Bachelor's degree or higher	518	46.5	1114
		Some college	354	31.8	1114
		High school	197	17.7	1114
		Less than high school	45	4.0	1114
	Urbanicity	Urban	270	24.5	1104
		Suburban	573	51.9	1104
		Rural	261	23.6	1104

Table 3. Regression analyses for each dependent variable. For Aware of Green New Deal, a logistic regression analysis was performed. Dummy coded variables are Suburban, Rural, Senators by State (M), and Senators by State (R). For Position on Green New Deal and Position on Energy Policy, a multiple regression analysis was performed. Shaded cells indicated significant to 0.05. Bold and shaded cells indicate significance to 0.01.

		Aware of Green New Deal					**Position on Green New Deal**				**Position on Energy Policy**			
		β Coeff.	Stand. Error	Wald	Odds Ratio	Sig.	Stand. Coeff. β	Stand. Error	*t*-value	Sig.	Stand. Coeff. β	Stand. Error	*t*-value	Sig.
Demographics	Age	**-0.25**	**0.06**	**16.58**	**0.78**	**0.00**	**-0.09**	**0.02**	**-3.11**	**0.00**	**-0.10**	**0.02**	**-3.33**	**0.00**
	Gender	-0.42	0.18	5.36	0.66	0.02	**0.08**	**0.05**	**2.76**	**0.01**	**0.11**	**0.05**	**3.89**	**0.00**
	Race	-0.23	0.20	1.37	0.79	0.24	0.03	0.06	1.07	0.29	-0.02	0.06	-0.69	0.49
	Education	0.22	0.20	1.28	1.25	0.26	0.03	0.06	0.84	0.40	-0.02	0.05	-0.67	0.50
	Income	0.01	0.02	0.27	1.01	0.60	-0.02	0.01	-0.64	0.52	-0.05	0.01	-1.70	0.09
	Suburban	**-0.57**	**0.21**	**7.36**	**0.57**	**0.01**	0.06	0.06	1.77	0.08	0.03	0.06	0.91	0.36
	Rural	-0.25	0.25	0.94	0.78	0.33	0.01	0.08	0.22	0.83	0.02	0.07	0.50	0.61
	Ideology	-0.13	0.10	2.00	0.88	0.16	**-0.33**	**0.03**	**-10.29**	**0.00**	**-0.30**	**0.03**	**-9.12**	**0.00**
	Ideological Extremes	**0.31**	**0.13**	**6.00**	**1.36**	**0.01**	0.00	0.04	-0.04	0.97	-0.02	0.03	-0.71	0.48
News Media Consumption	Local TV news	-0.01	0.07	0.03	0.99	0.86	0.02	0.02	0.56	0.57	-0.04	0.02	-0.92	0.36
	National Nightly News	-0.07	0.07	0.99	0.93	0.32	**0.11**	**0.02**	**2.73**	**0.01**	0.08	0.02	2.05	0.04
	Fox News	0.10	0.06	2.50	1.10	0.11	**-0.18**	**0.02**	**-5.78**	**0.00**	**-0.17**	**0.02**	**-5.39**	**0.00**
	MSNBC	0.11	0.07	2.58	1.11	0.11	0.05	0.02	1.30	0.19	0.08	0.02	2.09	0.04
	CNN	0.16	0.07	5.21	1.17	0.02	**0.10**	**0.02**	**2.91**	**0.00**	**0.09**	**0.02**	**2.59**	**0.01**
Elite Cues	Senators by State (M)	0.02	0.22	0.01	1.02	0.95	0.04	0.06	1.31	0.19	0.00	0.06	-0.09	0.93
	Senators by State (R)	-0.01	0.21	0.00	0.99	0.95	0.01	0.06	0.32	0.75	-0.01	0.06	-0.35	0.73

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