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RESEARCH ARTICLE



Major Media Outlets and Climate Change Action: Comparing US Media Coverage of the Green New Deal

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ABSTRACT

This study analyzes the CNN and Fox News coverage of the US Green New Deal (GND) introduced in 2018 by Congresswoman Alexandria Ocasio-Cortez (AOC) and Senator Edward J. Markey and discerns how partisan ideologies are shaping media coverage. Our content analysis of 53 news videos identifies themes, actors, and tones that contextualize the landscape of the GND media representation and examines how these elements may indicate presence of political polarization. The greatest indications of polarization were seen in CNN's and Fox News's coverage of sub-themes, actors, and tones. The sub-themes under economics, politics, and climate received the most coverage. On both channels, AOC receives significantly more attention than any other actor. Fox News tends to portray the GND negatively, while CNN's coverage is more positive or neutral. The study highlights the value of studying additional indicators in detail (sub-themes, actors, and tones) to paint a broader picture of political polarization. Political polarization of media content means different audiences are presented with diverging coverage, which can influence their perception and opinions.

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Green New Deal; climate change communication; media content analysis; political communication; political polarization

The US Green New Deal and climate change in the media

Partisan divide over climate change in the United States (US) is wider now than ever before (Pew Research, 2020). Today, when beliefs over climate change almost act as indicators to determine political alignment in an increasingly polarized country, it is important to look at media coverage of climate change and resulting calls for collective action. This study investigates how online news media cover the US Green New Deal (GND) introduced in 2018 by Congresswoman Alexandria Ocasio-Cortez (AOC) and Senator Edward J. Markey. The study seeks to identify and understand the potential presence of political polarization in the coverage of climate action plans. We develop an understanding of how CNN and Fox News – two major media outlets – portray one of the most comprehensive and controversial climate action plans proposed in the US in recent years. In this introduction, we briefly introduce the US Green New Deal, review prior literature on political polarization and US climate change news coverage, and lay out our research questions. Since prior research on this topic varies

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broadly in its focus, we chose not to articulate concrete hypotheses, instead stating a series of expectations.

The US Green New Deal

The Green New Deal is a United States congressional resolution and a proposed ten-year plan that seeks to help the US economy transition to clean and renewable energy by 2030. It is a non-binding resolution that seeks to address the climate crisis through sustained social and economic reform. The GND marks a noteworthy departure from previous climate-related policies as it highlights the dynamic interaction between climate, social, and economic issues to call forth goals that support the overarching aim of achieving net-zero greenhouse gas emissions within ten years. The GND, as it stands today, does not outline specific programs needed to achieve the goals listed in the 14-page document (Seitz & Krutka, 2019). Instead, it intends to be a catalyst for policy actions that would simultaneously lead to net-zero emissions, create millions of high wage jobs, invest in infrastructure and clean manufacturing, secure clean air and water, and advance justice and equity by repairing and preventing oppression of frontline and vulnerable communities (H.R. Con. Res. 109, 2019).

In the last decade, there have been sporadic mentions of other versions of the GND (Barbier, 2009; Friedman, 2007). Momentum for the GND discussed here picked up in 2018 when a climate justice group called the Sunrise Movement worked alongside Congresswoman Alexandria Ocasio Cortez (AOC) and Senator Ed Markey, both part of the US Democratic Party, to draft this resolution (Friedman, 2019). Although it failed to pass in the Republican-majority US Senate in March 2019, a new Select Committee on the Climate Crisis was created in the US House of Representatives to further work on the GND and other climate action plans (Worland, 2019).

Political polarization and the audience

Individuals with different perceptions of climate change often inhabit separate media spheres defined by political boundaries (Roser-Renouf et al., 2014). Media outlets themselves tend to align with political orientations, a phenomenon known as political parallelism (Schmid-Petri et al., 2015). Schmid-Petri et al. (2015) argue that US TV news exhibit political parallelism, naming CNN and Fox News as sources that fall into the orientations of liberal and conservative, respectively. Therefore, it is important to look at media sources from both political poles to understand how their coverage of climate change diverges. Political partisanship in the media can be observed through differences between partisan messages and rhetoric, ideologically slanted content, and political leanings of the medium or actors given voice in the media coverage, while being obvious through different indicators, which can result in a politically polarized media landscape (Prior, 2013). This political divergence in media coverage may set different agendas for different groups of viewers, potentially intensifying the partisan divide on the issue of climate change and in turn influencing support for the policies presented to address it.

The effects of these polarized media sources play out in news coverage of the GND. Gustafson et al. (2019) found that with increased public awareness of the GND in the US between December 2018 and April 2019, a politically polarized split in attitudes towards the deal opened up. Before the GND entered the national spotlight, Gustafson et al. (2019) found low public awareness of the deal and support for the deal across party lines. Four months later, significantly more people were aware of the deal, and support for the deal had fallen into the ruts of political polarization – conservative versus liberal. Among Democrats, different levels of familiarity did not influence support and support remained high. Gustafson et al. (2019) referred to the “Fox News effect” among Republicans watching Fox News as a significant predictor of awareness of

the GND and opposition to it. Republicans most familiar with the deal demonstrated lowest support. Fox News also covered the GND considerably more than CNN and MSNBC (MacDonald, 2019a, 2019b).

Climate change in the media – a politically polarized issue

The increasing polarization of climate change in the US (Dunlap et al., 2016; Leiserowitz et al., 2019) might pose greater challenges to address this issue through policy proposals such as the GND. In evidence of the polarizing nature of this issue, Hart and Feldman (2014) found that US network television news often frame climate action as political conflict. US media coverage of climate change has become increasingly politically polarized since 1985, to the extent where Democratic and Republican discourses are noticeably different (Chinn et al., 2020). The two major political parties in the US to some extent “believe” in climate change, but each seem to oppose climate solutions proposed by each other. This aspect becomes one of the factors for partisanship that is further exacerbated by the news media coverage (Van Boven et al., 2018).

Furthermore, news organizations are often politically polarized in their focus on differing aspects of the climate crisis. A right-leaning US newspaper framed climate change actions as impacting the economy negatively (Feldman et al., 2015). Both left and right-leaning media focuses on disaster or catastrophe and scientific background in climate change coverage (Painter et al., 2016, 2018). However, they diverge in their areas of focus: right-leaning media focus strongly on economics and uncertainty, while left-leaning media focus on political negotiations, climate, and environment. *Based on Painter et al.’s and Feldman et al.’s results, we expect coverage of the GND to diverge similarly based on the news organization’s political leaning.*

Despite this polarized split in general climate change coverage, a critical discourse analysis of US newspaper showed that the GND specifically was portrayed by media on both sides of the political spectrum “as a dangerous policy proposed by a cohort of extremist Millennial ‘Others.’” (Morris, 2020, p. 133). Morris found this generational “othering” in the journalist’s discursive strategies to “demonize Green New Deal supporters” (p. 142) and elevate “more mature ‘moderates’” (p. 137). In both media the GND is depoliticized through journalists’ discursive strategies, hindering a dynamic coverage of the deal (Morris, 2020). Furthermore, this “othering” creates an alternative form of polarization, placing the “mature moderates” in opposition to the “extremist Millennials.” As Morris noted, this simplified binary is paired with moralized descriptions in the news coverage such as “good/bad, capitalist/communist, friendly/threatening” (2020, p. 141). Based on these results, *we investigate if the binary coverage Morris (2020) identified is visible in the form of political polarization of the GND coverage by CNN and Fox News.* In addition to theme focus, we investigate political polarization by the expression of skepticism, tone and the style of coverage, and presence of actors.

Skepticism as an expression of political polarization

Skepticism of climate change is another expression of polarization in media coverage of the GND and climate change in general. The “balance as bias” phenomenon uncovered by Boykoff and Boykoff (2004) – the tendency of media coverage to tell “both sides” of the issue on climate change, and thereby produce biased coverage – furthers skepticism and prevents action on climate change. However, this phenomenon appears to have lessened over the years (Brüggemann & Engesser, 2017; Schmid-Petri et al., 2015). Simultaneously, other studies have shown that other forms of skepticism are still present in climate change coverage. Skepticism has been discussed in several studies (Ding et al., 2011; Dunlap, 2013; Engels et al., 2013; McKnight, 2010), and the media inclusion or exclusion of this outlier position in their coverage can be seen as one sign of political polarization (Boykoff, 2013). Although climate change skeptics are still overrepresented in US media coverage of climate change, there has been a shift from portraying skepticism as a valid alternative viewpoint

to dismissing or disagreeing with skepticism (Brüggemann & Engesser, 2017). The skepticism present in media coverage has changed from skepticism of the science of anthropogenic climate change toward skepticism of policies and actions to mitigate its effects (Schmid-Petri et al., 2015). Given this observed shift, *we would expect that any skepticism in the news coverage from CNN and Fox News would be directed towards the GND, rather than toward climate change*. Based on the political orientations of each news source, *we also expect CNN to exhibit less skepticism towards both the GND and climate change, and expect Fox News to exhibit more skepticism*. This difference in skepticism in the news coverage could be interpreted as an indicator of political polarization.

Polarization through tone, style and actors

Political polarization can also become obvious through tone and style. Studies show that differently politically slanted media outlets present issues in different tones (Kristiansen, 2017a; Kristiansen & Bonfadelli, 2014). Research on the use of humor and satire to communicate about climate change show that tone and style of climate change coverage influence recipients' perceptions and engagement (Becker & Anderson, 2019; Kaltenbacher & Drews, 2020; Zhang & Pinto, 2021). *We expect that the tone and style elements used by CNN and Fox News will work alongside differing focus on themes to create diverging messages in coverage of the GND*.

Another indicator of political polarization is the journalistic selection of actors who are given a voice in the media coverage (Fisher et al., 2013; Park et al., 2010). Theo Van Leeuwen (2008), identified a framework of exclusion and inclusion to represent social actors in a discourse for the purpose of analysis. If the actors were included, the framework inquires if they are active or passive, participant, circumstantialist or possessivized, and whether they were personalized or impersonalized. Building on van Leeuwen's framework, depending on the context in which actors are given voice and which sound-bites journalists chose to include in their coverage, certain actors' presence and statements can contribute to political polarization in media coverage (Boykoff, 2007a, 2007b; Kristiansen, 2017a, 2017b). Actors given voice can promote and draw attention to their own view-points, and also try to discredit the opposition's view-points (Colvin et al., 2020; Sell & Prakash, 2004). Hence, this study includes an actor analysis to investigate if the giving voice to certain actors aligns with the political leaning of a news medium. Based on Rebich-Hespanha et al.'s (2015) results *we expect that the most visible actors in the coverage will be important political figures related to the GND*. *We also expect to see a stronger focus on Republican actors in Fox News and more Democrats in CNN's coverage*.

Research questions

This study examines and compares the representation and variation of the GND media coverage on CNN and Fox News. Additionally, it explores whether GND news coverage is polarized, as other studies have shown for climate change coverage in general. While scholarship has concerned itself with untangling the relationship between media coverage, climate representation, and public opinion, much is left to be explored in terms of specific climate action proposals, such as the GND. This study investigates political polarization by studying which themes, actors and tone media use in their representation of the GND. This study helps fill the gap and responds to Painter and Schäfer's (2018) call for more TV coverage analyses.

Given the state of the literature showing that US climate change coverage is heavily polarized (Chinn et al., 2020), and changes and influences public perception, our study offers insights into the conversation that is taking place around the GND in the US by answering the following research question: how are US media outlets CNN and Fox News representing the GND, and does coverage of this specific climate change action proposal show signs of political polarization?

RQ1. What are the dominant and subordinate themes, actors, tone, and stylistic elements that characterize media coverage of the GND?

RQ2. Which solutions and goals stated in the GND receive the most media coverage?

RQ3. How do partisan media converge and diverge in their representation of climate plans such as the GND?

Methods

This study employs a quantitative media content analysis. Content analysis is used to collect and analyze information about topics, actors, and biases from a variety of media (Krippendorff, 2004). Our research design includes coding of unstructured data, and analyzing through descriptive and inferential statistics. Our study focuses on the online CNN and Fox News coverage of the US GND introduced in 2018 by Congresswoman Alexandria Ocasio-Cortez and Senator Edward J. Markey. This study focuses on publicly available online video news coverage on media's webpages and YouTube, given that in 2019, 72% of US citizens got their news from online sources, including social media (Newman et al., 2019). YouTube is the second highest form of social media used as a news source, with 20% of the US population who can access the internet using YouTube to consume news. CNN (left-leaning) and Fox News (right-leaning) are among the top three online news sources in the US (Newman et al., 2019; Schmid-Petri et al., 2015).

The codebook uses various indicators to identify political polarization, some derived from previous literature and some deductively derived from close reading of media coverage of the GND (see also Table 2). Based on the literature that shows differences in thematic focus between partisan news sources in climate change reporting, dominant and subordinate themes were measured as possible indicators of polarization. Themes pertaining to the GND were identified, some deductively by close watching and reading about the GND in the media, and they included energy, technology, infrastructure, social, politics, policy, economics, health, environment, climate change, activism, and agriculture. These themes were further divided into sub-themes, e.g. the "energy" theme had sub-themes that included fossil fuels and renewable energy. In each video, these themes and sub-themes were recorded as not mentioned, minor focus, or major focus. The codebook also captured solutions and goals mentioned in the GND itself.

Variables identifying actors, and coverage style and perspectives such as tone, frequently recurring statements, and stylistic elements, and emotionality of the news coverage were developed through deductive methods, by close watching of media coverage of the GND to make out the major aspects the media focused on. Although these variables are not always included as indicators of polarization in the literature, we examine these variables to get a broader view of polarization in media coverage of the GND. For tone, videos were identified as positive, balanced/neutral, or negative based on the perspectives presented by the show hosts, the people interviewed, and other individuals quoted or shown in the video clips. The tone was identified based on explicit statements of support or opposition as well as implied meaning conveyed by devices such as sarcasm. The unit of analysis for tone was the entire newscast video. Recurring statements, the way they were presented, and the stylistic elements analyzed were coded at statement level.

Recurring statements deductively identified before and during research instrument development were short phrases or statements specific to the GND, such as claimed "infeasibility," "cost," and "save the planet." These statements were coded at statement level, which, depending on how they were presented, could contribute to the overall tone of the newscast. For example, "save the planet" could be used sincerely or sarcastically "as if the GND could help save the planet." For statements that could be used with different meaning, the context they were mentioned in or the way they were presented, with e.g. sarcasm, were identified by careful listening, watching (of e.g. facial expressions) and interpretation.

The stylistic elements analyzed in addition to tone and recurring statements were intended to capture rhetorical devices, manners of speech, or interpersonal interactions that might impact

the audience's perception of the information conveyed. These stylistic elements were coded at statement level and included exaggeration, ridicule, interruption of speakers, critical investigation, personal attacks, dismissal, and skepticism toward the GND and toward climate science. In addition, given Hahnel et al.'s (2020) findings on the importance of emotionality in public opinion towards climate change issues, we examined the level of emotion displayed in each video. Each video was rated on a scale of 1-5, with 1 = dispassionate and 5 = highly emotional (coding unit was the entire newscast). Speakers' facial expressions, volume and tone of voice, and other nonverbal cues were used to assign levels of emotion. To identify and understand the level of inclusion and visibility of actors in the coverage of the GND, all actors were identified and coded in two ways: whether they were a major or minor presence¹ in the video, and whether they spoke directly or were paraphrased.

Coder training and intercoder reliability

The intercoder reliability is a quality measurement of the data collection and a confirmation that the codebook is well defined. The intercoder reliability test was conducted by the same three coders (the first, second, and third authors of this paper) who collected the data. The coders were trained during several weeks of Fall 2019. During the training, coders practiced using the codebook on CNN and Fox News videos in several smaller pretests. The entire research team discussed the results of these pretest coding exercises and developed coder instructions as needed.

To calculate intercoder reliability this study used the coefficient *Lotus* and the standardized *Lotus* (*S-Lotus*) and its SPSS package (Fretwurst, 2015). *Lotus* shows the percentage of agreement between coders and *S-Lotus* shows the standardized percentage of agreement showing a "ratio of coding that is in agreement with all possible agreements that are not expected to happen by coincidence" (Fretwurst, 2015, p. 7). Different metrics are used to calculate intercoder reliability and we chose to use Fretwurst's *Lotus* over, for example, the commonly used Krippendorff's Alpha. One benefit that the *Lotus* gave us was that it allows the use of a tolerance range to make comparisons of values. This was used when looking at the intercoder reliability of the emotional scale variable.

During the pretests, coder training and codebook development, *Lotus* and *S-Lotus* were used to give an overview of variables that needed more detailed definitions. Once the agreement between coders was around 80%, coders started coding the actual videos for this study. The intercoder reliability test was conducted when coders had coded half of their assigned material for the data collection. Given that the intercoder reliability test material was coded midway through the data collection, the intercoder reliability score is able to show any signs of intercoder disagreement that might have developed during data collection. This design gives more accurate intercoder reliability results than if the intercoder reliability score is calculated only once and before the actual data collection.

Six videos were coded to test the intercoder reliability. Given the extensive coder training and pretests preceding the data collection and the intercoder reliability test, we chose to code a bit more than 10% of the total n in the intercoder reliability test. In evaluating the intercoder reliability of the emotional scale variable, we allowed a tolerance of one. For example, if two different coders assigned emotional scale values of 1 and 2 to the same video, the intercoder reliability test treated the two values as the same. The intercoder reliability coefficients *Lotus* and *S-Lotus* for the entire codebook were 95% and 90%, respectively ($n = 6$). [Table 1](#) shows *Lotus* and *S-Lotus* of the most important sub-themes, solutions, and goals discussed in the result section.² ICR of only those themes and sub-themes that were mentioned in at least more than 60% of all the videos (see [Figure 1](#)) are mentioned in the table as those that had significance to the study. A limitation of the intercoder reliability test is that a few variables (e.g. sea level rise and greenhouse gas emissions) were not present in the test videos.

Table 1. Inter-coder reliability scores for variables evaluated ($n = 6$).

| Variable | Lotus | S-Lotus |
|----------------------------------------------------------|-------|---------|
| <i>Economic</i> | 0.89 | 0.78 |
| General Economy | 0.78 | 0.56 |
| Cost | 0.89 | 0.78 |
| Taxes | 0.83 | 0.67 |
| Creating new jobs | 0.83 | 0.67 |
| <i>Politics</i> | 1 | 1 |
| Work across the aisle | 0.89 | 0.78 |
| Presidential campaign and candidate | 0.83 | 0.67 |
| Party divide | 0.94 | 0.89 |
| Socialism | 1 | 1 |
| <i>Climate</i> | 0.94 | 0.89 |
| Climate Change | 0.78 | 0.56 |
| Global temperature | 0.83 | 0.67 |
| Sea level rise | 0.94 | 0.89 |
| Greenhouse gas emissions | 0.94 | 0.89 |
| Disasters | 0.94 | 0.89 |
| <i>Energy</i> | 1 | 1 |
| Transition to renewable energy | 0.83 | 0.67 |
| Clean and renewable energy | 0.89 | 0.78 |
| Fossil fuel energy | 0.83 | 0.67 |
| <i>Other themes</i> | | |
| Policy | 0.89 | 0.78 |
| Technology | 0.94 | 0.89 |
| Social | 0.94 | 0.89 |
| Infrastructure | 1 | 1 |
| Health | 0.94 | 0.89 |
| Activism | 0.94 | 0.89 |
| Environment | 1 | 1 |
| Agriculture | 1 | 1 |
| <i>Goals</i> | | |
| Net neutrality net zero emission | 0.94 | 0.89 |
| Jobs and economic security | 0.83 | 0.67 |
| <i>Solutions</i> | | |
| Meeting 100% power demand through clean energy | 0.78 | 0.56 |
| Creation and guarantee of union jobs that offer training | 0.83 | 0.67 |
| <i>Tone</i> | 0.94 | 0.89 |
| Emotional Scale | 0.89 | 0.86 |
| <i>Actors</i> | 0.79 | 0.69 |
| Participation | 0.72 | 0.72 |
| Presence | 0.73 | 0.72 |
| <i>Style</i> | | |
| Ridiculing | 0.94 | 0.89 |
| Exaggeration and sensationalization | 0.94 | 0.89 |
| Interrupting speaker | 0.83 | 0.67 |
| Critical investigation | 1 | 1 |
| Personal attack | 0.89 | 0.78 |
| Dismissal | 0.89 | 0.78 |
| Skeptical to the GND | 0.89 | 0.78 |
| <i>Recurring statements</i> | | |
| FAQ document | 1 | 1 |
| Save the planet | 0.78 | 0.56 |
| Fear Mongering | 0.89 | 0.78 |
| Using GND to control the economy | 1 | 1 |
| How will we pay for it | 0.89 | 0.78 |
| \$93 trillion cost | 0.94 | 0.89 |
| Infeasibility | 0.94 | 0.89 |
| Save life as we know It | 0.94 | 0.89 |
| End of Civilization | 0.89 | 0.78 |
| Moon shot – going to the moon | 1 | 1 |
| FDRs New Deal | 0.89 | 0.78 |

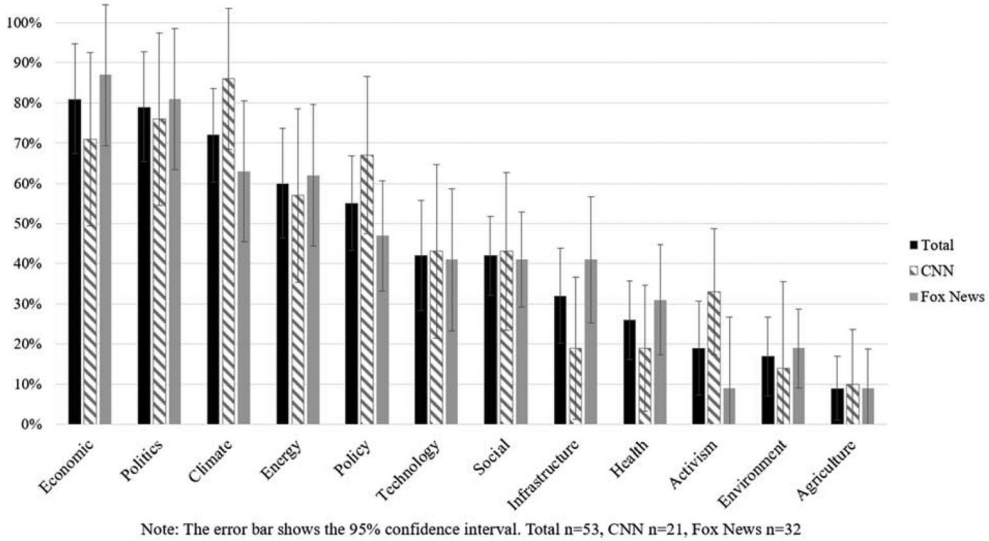


Figure 1. Prominent themes in Fox News and CNN's coverage of the Green New Deal.

Statistical significance through confidence intervals

Table 2 shows the analytical methods used for each variable. 95% confidence intervals were used to identify statistically significant differences in the results. An overlap to a certain degree of the confidence interval bars between two comparative variables indicates a statistically insignificant difference. However, a minor overlap can still show a statistically significant difference with a *p*-value of 0.05 (Field, 2013). For results of particular interest with overlapping confidence intervals we

Table 2. Analytical methods.

| Variable | Analytical method |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RQ1. What are the dominant and subordinate themes, actors, tone, and stylistic elements that characterize media coverage of the GND? And RQ3 how do partisan media converge and diverge in their representation? | |
| Themes and sub-themes | Themes: Percent and 95% confidence intervals to detect significant differences between the partisan media. Sub-themes: Percent and relative comparison between the media. |
| Actors | Actor occurrence: Percent and 95% confidence intervals to detect significant differences between the partisan media. Actor participation and presence: Percent and relative comparison between the media. |
| Style and perspectives: Tone | Percent and 95% confidence intervals. Additional t-tests where needed to detect statistically significant differences not clear by the 95% confidence intervals. |
| Style and perspectives: Recurring statements | Percent and 95% confidence intervals. |
| Style and perspectives: Stylistic elements | Percent and 95% confidence intervals. |
| Style and perspectives: Emotionality | Percent and 95% confidence intervals and mean comparison. |
| RQ2. Which solutions and goals stated in the GND receive the most media coverage? And RQ3 how do partisan media converge and diverge in their representation? | |
| Goals | Percent |
| Solutions | Percent |

use additional statistical procedures to produce the exact p -value, such as a t -test. Amrhein et al. (2019) and others (Kristiansen, 2017a; Prel et al., 2009; Taljaard & Hemming, 2020) encourage the use of 95% confidence intervals to measure statistical significance as they show the range of uncertainty and effect size.

Sample

The sample included videos published between December 2018 and September 2019. This timeframe was based upon the increased momentum surrounding the GND after early 2018 when the Sunrise Movement drafted the GND with Congresswoman AOC and Senator Ed Markey. Videos were included in the sample if they discussed the GND proposed in 2019. Videos were excluded from the analysis if they were about other GND proposals, did not mention the GND within the first three minutes, or required a paid subscription to Fox News. Videos were sampled from YouTube and from the CNN and Fox News websites. All searches were conducted in private browser windows. Six separate searches were conducted using the following search terms: 1. “Green New Deal,” 2. “GND,” 3. “Green New Deal CNN,” 4. “Green New Deal Fox,” 5. “GND CNN,” and 6. “GND Fox.” Not all coverage from CNN and Fox News is available on YouTube. To get a more complete picture of their coverage we collected freely available material from their websites as well. On both websites, the search term “green new deal” was used. On the CNN website, the results were filtered using the “Videos” tab and sorted by Relevance. On the Fox News website, the option was chosen to include only videos from “Fox News,” excluding videos from, for example, Fox Business. The results were narrowed further using the “Videos” tab and sorted by Relevance. All videos that matched our criteria were collected and added to the list.

These searches resulted in a total of 27 CNN videos and 147 Fox News videos. Of the 27 CNN videos, four were excluded because they did not match our criteria, which resulted in an n of 21 for CNN. To match this number, we aimed to sample 30 videos from Fox News. The list of 147 Fox News videos was organized chronologically, and every fifth video was selected for a sample size of 32 videos. When a Fox News video in the list did not match our criteria, we moved down the list for a video that matched our criteria. We ensured that there was at least one video from each month represented in the sample. The final sample consisted of 53 videos, 21 videos from CNN (11 from the CNN website, ten from the CNN YouTube page) and 32 videos from Fox News (26 from the Fox News website, six from the Fox News YouTube page).

Results and interpretation

The Green New Deal from an economic, political, climate, and energy perspective

To address RQ1 and get insights on CNN and Fox News coverage of the GND, we first look at the themes covered. In line with previous studies and our formulated expectations, we see a wide range of themes. As shown in [Figure 1](#), the four themes most covered were economics, politics, climate, and energy. Similarly, Fox News concentrated slightly more on economics than CNN, whereas CNN focused more on climate, but both these differences were not large enough to be statistically different with this study’s sample size. Against our expectations, CNN did not have a strong focus on the environment. The coverage of overarching themes does not clearly show a political polarization. This might indicate that a theme analysis alone is not a sufficient indicator of the presence of political polarization in GND media coverage.

Our analysis further broke down the overarching themes into sub-themes. [Figure 2\(a,b\)](#) show the top sub-themes covered by CNN and Fox News within the four major themes of energy, climate, politics, and economy. One striking result of the sub-theme analysis was that while CNN and Fox

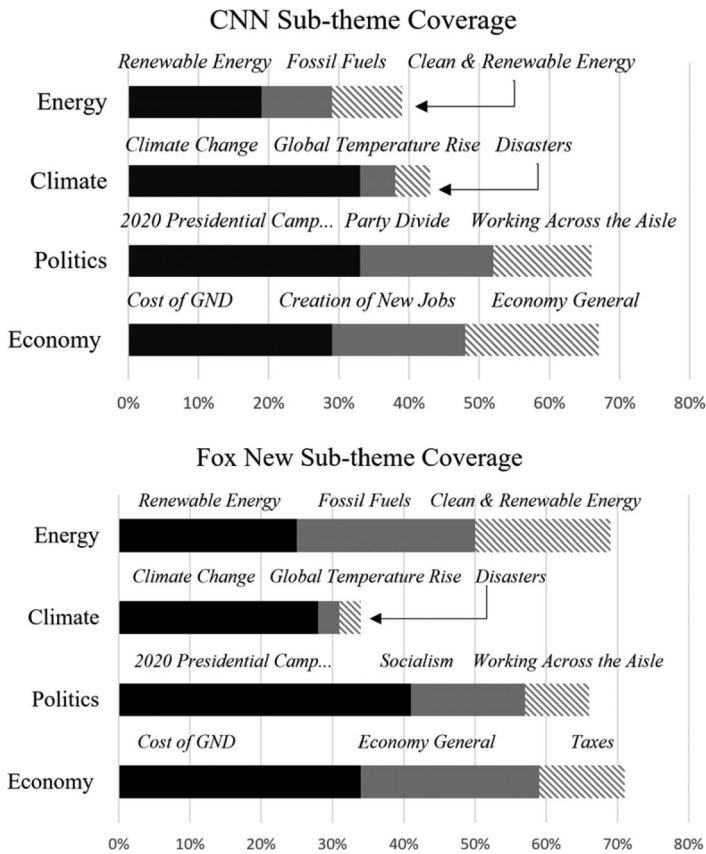


Figure 2. Shows the top sub-themes mentioned for each of the four major overarching themes covered by (a) CNN and (b) Fox News.

News covered the major themes to similar extents, there was sometimes variation in which elements of these themes were highlighted. Within the Politics theme, CNN highlighted Party Divide as one of the top sub-themes, while Fox News focused instead on Socialism. Furthermore, in the Economics theme, we observe that Fox News had a strong focus on the sub-theme Taxes. Fox News’s videos also questioned the cost of GND implementation, frequently quoted \$93 trillion as a figure for its cost (see Analysis of Recurring Statements), and criticized the jobs and paid leave aspects of the GND (Fox News, 2019e). In contrast, within the Economics theme, CNN focused on Creation of New Jobs. This finding is in line with Feldman et al.’s (2015) study. Hence, when certain overarching themes are further divided into most prominent sub-themes, we observe a pattern that shows signs of political polarization. In the themes Energy and Climate, however, Fox News and CNN highlighted similar sub themes.

Who are the actors that get a word in this debate?

To further address RQ1, we investigate the dominant actors in the media coverage. Both media outlets featured or mentioned a high number of actors; in total, we found over 442 mentioned or directly speaking actors. While some videos had more than 15 actors, others had fewer than five. To understand who the media selects and authorizes as the face of an issue, we identified six most recurring actors from each media outlet. In Fox News, these six actors accounted for about

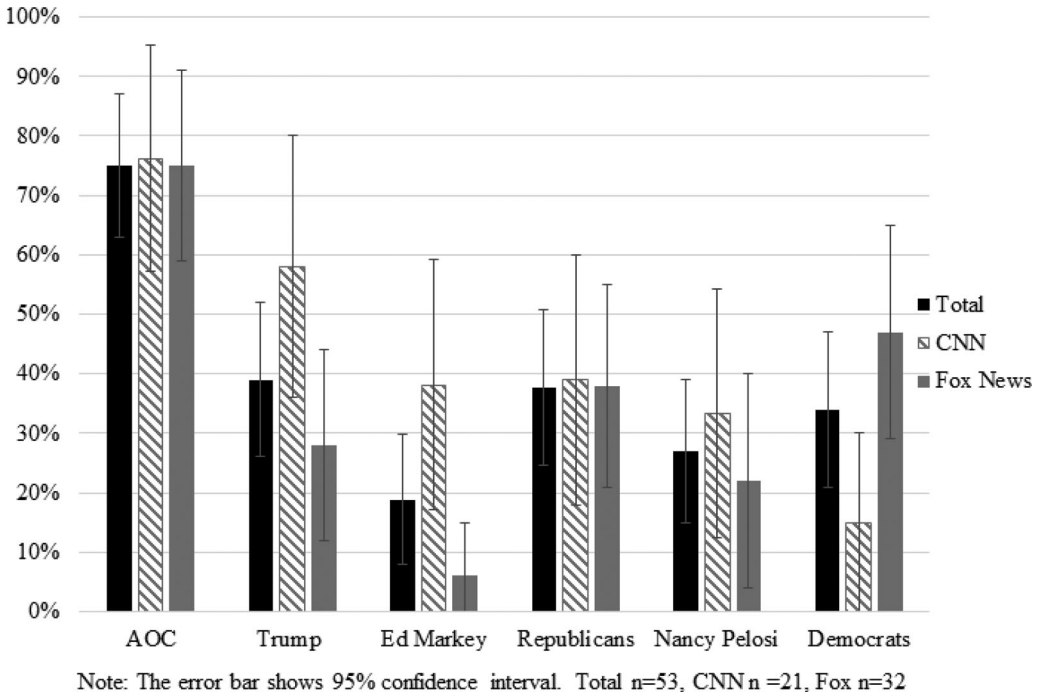


Figure 3. Important actors featured.

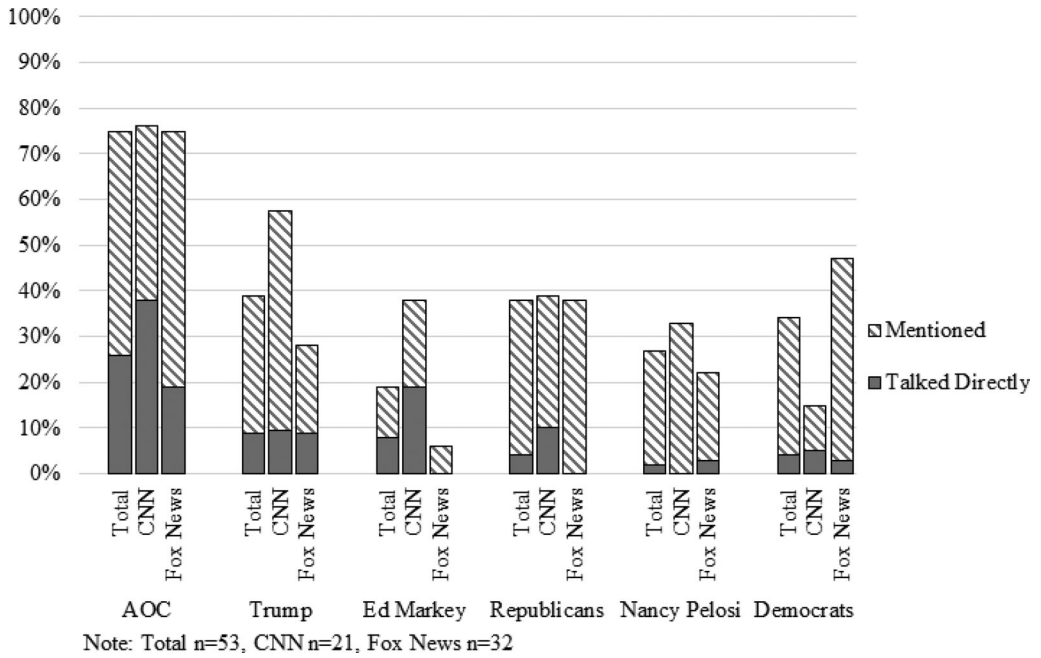


Figure 4. Participation of actors.

26% of all actor occurrences; in CNN, they covered about 33%. The most featured actors remained the same in both media: Congresswoman AOC, Democrats as a group, Republicans as a group, House Speaker Nancy Pelosi, and former US President Donald Trump. Figure 3 shows the

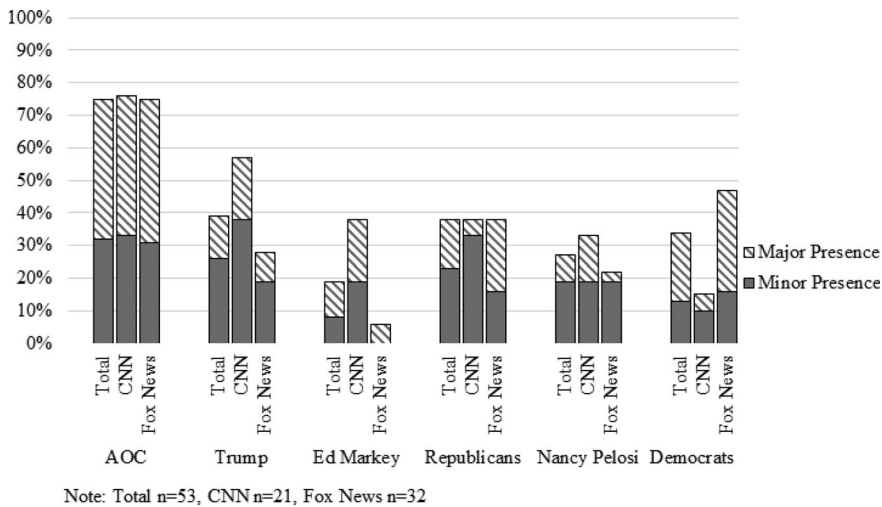


Figure 5. Overall presence of actors.

important actors featured in the videos sampled whereas Figures 4 and 5 show the participation of these actors and their overall presence.³

Although the main actors are the same in both, Fox News and CNN diverged in how these actors are presented. For example, Fox News featured or talked about Democrats more substantially than CNN (Figure 3), while, in contrast, Republicans as a group are featured equally on both media outlets. However, Republicans were major actors in only 5% of CNN videos, while 22% of Fox News videos covered them as major actors (Figure 4).

One of the major architects and outspoken supporters of the GND is Congresswoman AOC. She garnered significant attention from both sides of the media aisle and was mentioned in 75% of all videos. Fox News and CNN both featured AOC equally and despite being the other sponsor of the GND resolution, Senator Ed Markey was only covered in 19% of all videos, and statistically more significant in CNN compared to Fox News (Figure 3). Similarly, former President Trump, in connection with the GND, was featured relatively more on CNN than Fox News. Figure 3 shows that Congresswoman AOC was statistically significantly more featured on Fox News than former President Trump. This significant difference was not seen on CNN. These results are partially in line with our expectations based on Rebich-Hespanha et al.'s (2015) study that the main actors would be closely related to the GND.

Further analyses show that CNN included activists and youth-led movements, whereas Fox News did not. An important finding was the qualitative variation in how the media outlets selected, legitimized, and presented the actors. For example, Varshini Prakash, the executive director of Sunrise Movement – a group of young climate activists – was featured and spoke directly in three CNN videos. Fox News videos, on the other hand, featured fewer supporters of the GND. This way of presenting the actors is in line with our expectations that Fox News would give more room to politically right-leaning actors. What we had not expected was the strong focus, from both media, on actors from the other side of the political spectrum, e.g. the significantly stronger CNN focus on former President Trump than the Democrats, CNN's stronger focus on former President Trump than Fox News, and Fox News's significantly stronger focus on the Democrats compared to CNN. However, analysis of the stylistic elements reveals that inclusion of certain actors in the coverage did not mean they were featured in a favorable light, and this is important for qualitative actor analyzes in general, and political polarization studies in particular. The simple presence of a name of an actor does not mean that the opinion they represent is covered in an agreeing manner by the media source.

Different style and perspectives of the Green New Deal

Tone

Part of RQ1 sought to examine the tone of the coverage. Overall, there was significantly more total negative coverage than positive or balanced/neutral coverage, as shown by the non-overlapping 95% confidence intervals in [Figure 6](#). Fox News had significantly more negative coverage of the GND than CNN. Within the Fox News videos, there was no positive coverage. CNN's negative coverage was slightly lower than its positive coverage; however, the difference was not significant. The pattern shows a clearly negative tone in Fox News's coverage and a positive/balanced tone in CNN's coverage.

Many videos conveyed tone through straightforward statements of support or opposition, or through adjectives such as “elegant” (CNN, 2019a) or “unrealistic” (Fox News, 2019e, *Ocasio-Cortez*). However, some videos revealed more complex use of tone, such as CNN's clip of President Trump speaking to the American Conservative Union. In this video, the President's first words appear to convey support for the GND: “I encourage it, I think it's really something that they should promote ...” However, the sarcasm employed in these statements and the jeering response from the crowd clearly conveyed a negative tone toward the GND. President Trump's next statements confirm the negative tone: “... but I'll take the other side of that argument ... no planes, no energy ...” (CNN, 2019b). In this case, as well as in several other videos in our study, the visual and auditory format provided essential clues to interpreting tone that would not have been captured through text-based media or quantitative study alone.

Recurring statements

As part of the overall tone analysis, this study also looked at the most frequently recurring statements used in GND coverage ([Figure 6](#)⁴). Fox News mentioned the infeasibility of the GND significantly more than CNN, and significantly more than any other recurring statement made by either medium. Fox News spoke of the GND's infeasibility through statements describing it as “idyllic,” “pie-in-the-sky” (Fox News, 2019a), and “not achievable” (Fox News, 2019b). In addition to infeasibility, Fox News used three other recurring statements significantly more than CNN: provoke fear, control the economy, and \$93 trillion. The statement “provoke fear” referred to statements that implied the GND and climate change were tools intended to provoke fear. The statements “provoke fear” and “using the GND to control the economy” were most often used together ($r(51) = 0.671, p < .01$). By using these statements together, Fox News conveyed that the authors of the GND used climate change as a tool to push a socialist agenda (Fox News, 2019b, 2019d). This interpretation is also supported by Fox News's comparatively strong focus on the subtheme “socialism” within the politics theme. In addition, Fox News questioned how the GND would be paid for in slightly more videos than CNN, although this difference was not significant.

The remaining recurring statements did not show significant differences between the two media ([Figure 7](#))⁵. However, the ways in which these statements were used sometimes differed. For example, Fox News anchor Tucker Carlson frequently noted that the GND was created with the intent to “save the planet” (Fox News, 2019f). In these videos, the tone and larger context of the statement made it clear that it was meant sarcastically. In one instance, the goal of “saving the planet” was set in competition with more immediate, personal concerns, such as “putting your kids through school” and “fighting cancer” (Fox News, 2019f). In contrast, CNN's use of the “save the planet” statement was intended to be taken literally (CNN, 2019a). The differing ways in which the statements were used in the videos would have vastly different meanings for the viewers.

Stylistic elements

As part of answering RQ1, additional stylistic elements were analyzed. In both media, skepticism of the GND was significantly higher than skepticism of climate science ([Figure 8](#)). Skepticism toward climate change was shown through statements such as Republican Senator Mike Lee's:

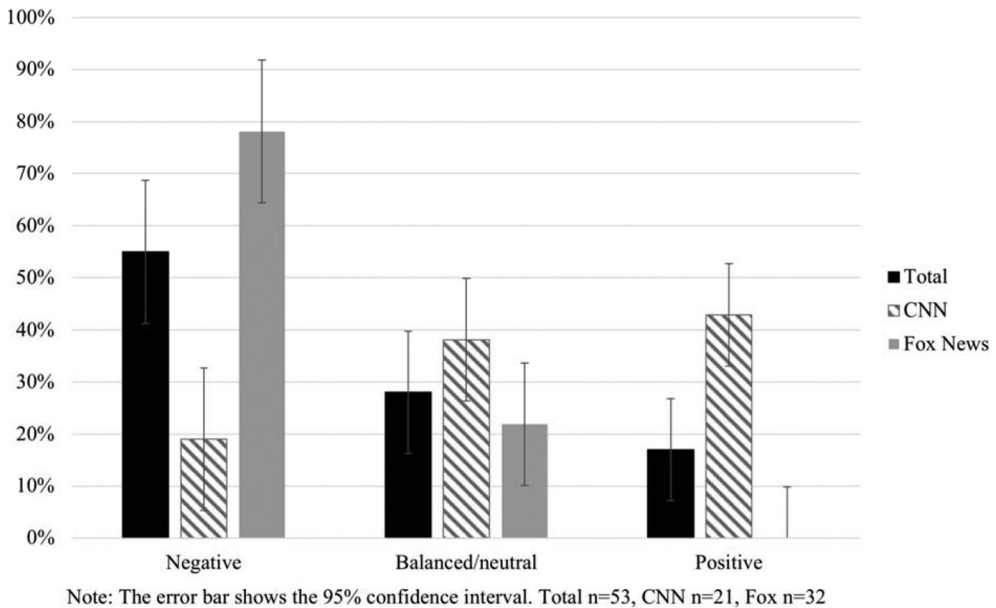


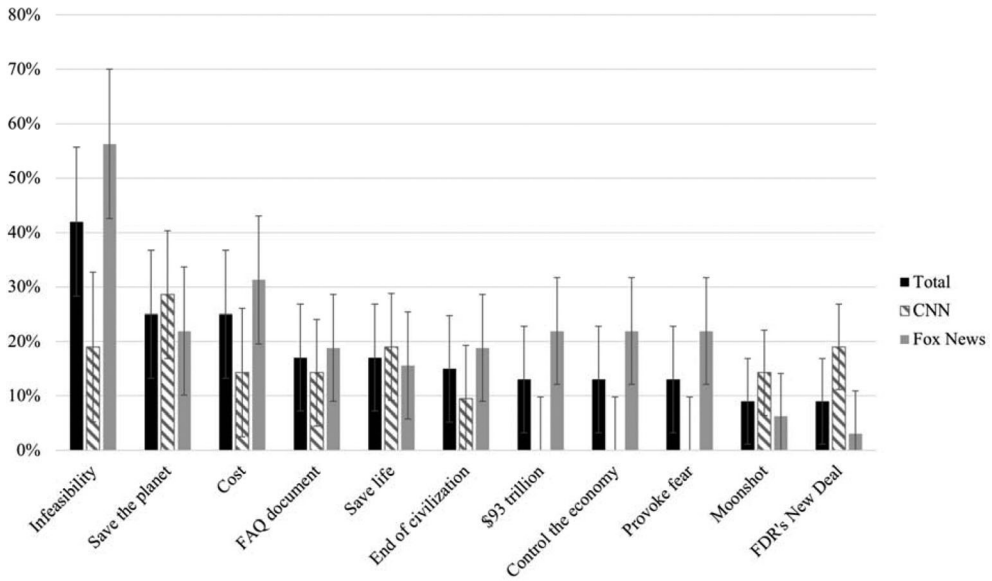
Figure 6. Media coverage tone.

“I’m not immediately afraid of what carbon emissions, unaddressed, might do to our environment” (CNN, 2019c). Meanwhile, skepticism toward the GND was revealed through statements that, for example, criticized the GND’s feasibility (CNN, 2019e) or its authors’ true aims (Fox News, 2019b). Statements that showed skepticism toward the GND did not necessarily imply skepticism toward climate science; in fact, some actors who questioned the GND chose not to take a position on climate science. This could be seen in Fox News’s interview with former CKE Restaurants CEO Andy Puzder, who made the following statement on climate science: “I don’t want to debate that here, there’s people that are more expert on that than me” (Fox News, 2019b).

Fox News showed significantly higher use of stylistic elements such as GND skepticism and exaggeration (Figure 7). Some uses of exaggeration built events into a sensational storyline (Fox News, 2019d, 2019g). In addition, Fox News showed significantly higher use of ridiculing and dismissal. Fox News also showed slightly, but not significantly, higher use of personal attack, interrupting speakers, and climate change skepticism.

Emotional scale

Another part of answering RQ1 was the strength of emotion conveyed in the video. CNN and Fox News had almost equal mean emotional scale ratings (CNN mean = 3.33, SE = 0.187; Fox News mean = 3.34, SE = 0.177). The mean emotional scale ratings for both sources fell in the middle of the scale, leaning slightly toward Highly Emotional (Figure 9). The video “The young climate activist taking on Washington” exemplified an emotional scale rating of 3 or 4. In this video, the primary actor, Sunrise Movement co-founder Varshini Prakash, conveyed emotion through a passionate tone of voice and vivid descriptions of tragedies that occurred as a result of climate change, such as the wildfires in Paradise, California (CNN, 2019d). However, these emotional elements were balanced by the moderate, even volume of her voice. In videos rated Strongly Emotional, actors frequently used a passionate tone of voice in combination with a loud volume and strong facial expressions, such as in Tucker Carlson’s videos (Fox News, 2019c, 2019f). Very few videos in each medium were rated at the extreme ends of the scale. Only 2% of Fox News videos

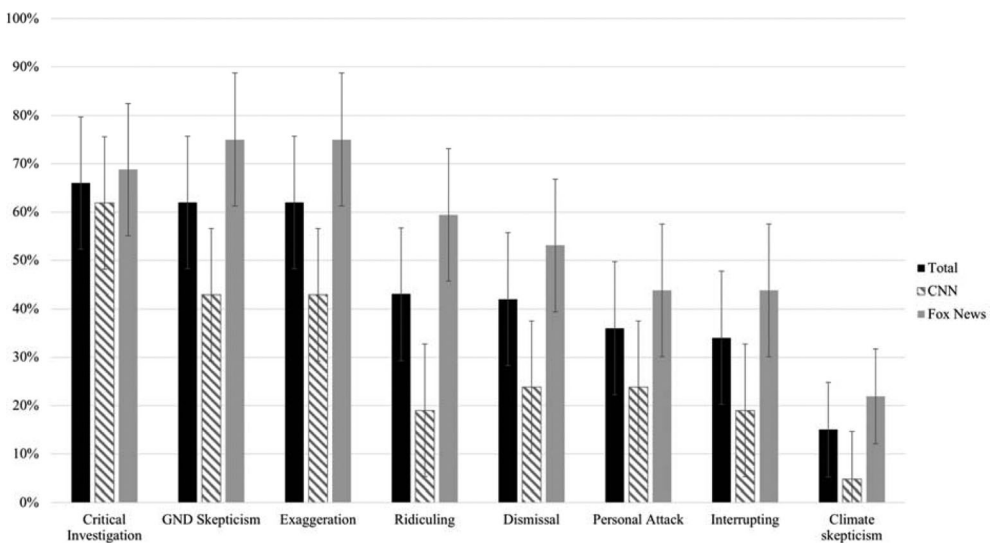


Note: The error bar shows the 95% confidence interval. Total n=53, CNN n=21, Fox n=32

Figure 7. Recurring Statements.

were rated as Dispassionate, while CNN had no videos rated Dispassionate. At the opposite end of the scale, 13% of Fox News videos were rated Highly Emotional, while 5% of CNN videos were rated Highly Emotional.

The results of the tone, recurring statements, and stylistic elements analyses are in line with our expectations and previous studies (Gustafson et al., 2019; Van Boven et al., 2018) that Fox News would have a stronger negative tone towards the GND than CNN. Overall, the results indicate that these elements create diverging narratives on the GND between these two media outlets, indicating presence of politically polarized coverage.



Note: The error bar shows the 95% confidence interval. Total n=53, CNN n=21, Fox n=32

Figure 8. Stylistic elements.

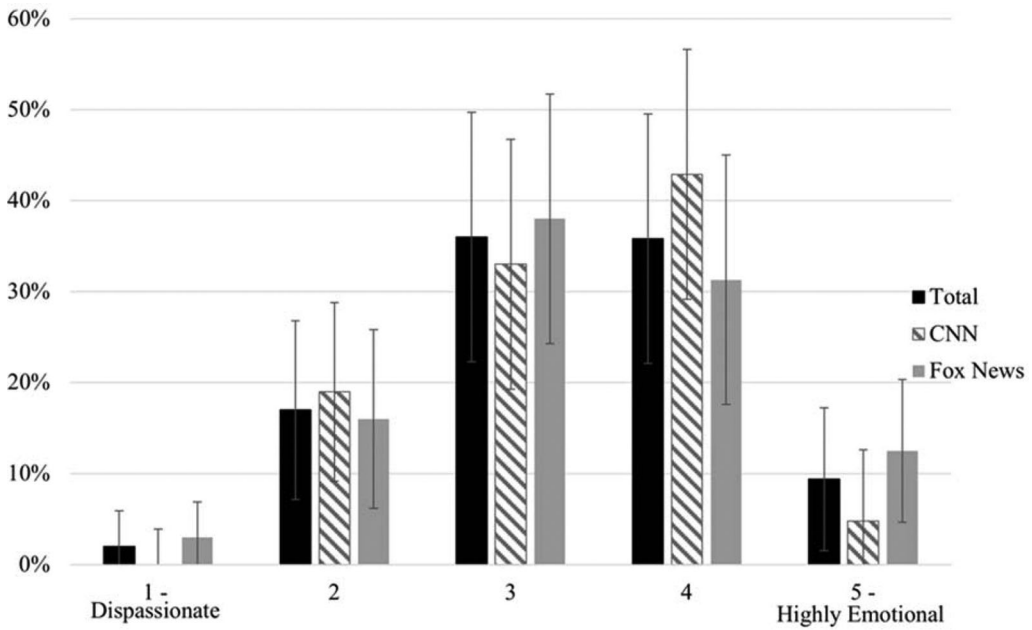


Figure 9. Emotional scale.

Goals of net zero emissions and jobs

RQ2 asked which solutions and goals stated in the GND were selected and covered by the media. Out of the nine goals mentioned in the GND, net zero emissions (49%) and jobs/economic security (47%) were the two most mentioned goals overall. Net zero emissions was mentioned in 53% of Fox News videos and 43% of CNN. Jobs/economic security was mentioned in 48% of CNN videos and 47% of Fox News videos. This is in line with the dominance of economic themes discussed earlier. The remaining goals were discussed relatively less, which shows that these two media presented an incomplete picture of the goals that the GND aimed to achieve.

Clean energy and jobs creation are the solutions

The GND proposes 47 solutions to achieve the goals mentioned in the previous section and RQ2 asked which of those received the most media attention. Firstly, out of all the solutions that the GND proposes, both Fox News and CNN focused on a limited number of those. Meeting 100% of power demand through clean energy (43%), and the creation and guarantee of union jobs that offer training, wage parity, advancement options, and benefits (34%) were the most mentioned solutions. Fox News mentioned meeting 100% power demand through clean energy in 47% of their videos, while CNN mentioned it in 38% of their videos. Creation and guarantee of union jobs that offer training, wage parity, advancement options, and benefits was mentioned in 38% of all Fox News videos and 29% of all CNN videos. The solutions related to energy and economics were again one of the major focuses for all of the videos. Fox News mentioned the energy solutions mostly as a criticism for transitioning to renewables and switching from fossil fuels (Fox News, 2019e). With regards to the mention of job security, CNN and Fox News were almost equal.

Discussion and conclusion

This study responds to Painter and Schäfer's (2018) call for more studies on (online) TV news, as it is a main information source for many regarding climate change. One limitation of this study is that it includes only two media sources and a small sample of videos. Another limitation of this study is the low level of the S-Lotus (intercoder reliability) for a few variables that may add to errors in the coding of variables. Studies including a greater number of media sources and longitudinal analyses with larger samples would not only give them stronger statistical power, but also a wider perspective on political polarization of similar climate policy issues. Despite these limitations, the findings here add to the body of knowledge on partisan TV news media coverage of a major climate policy proposal and gives a broad perspective of "tools" the media uses to place their coverage on the political spectrum, some of which may indicate the presence of political polarization.

Both CNN and Fox News focused selectively on certain themes, goals, and solutions associated with the GND, resulting in an incomplete picture of this policy proposal from both sources. As for themes covered in the GND itself, this study supports previous studies and our expectation that news coverage by CNN and Fox News would touch on a variety of themes such as political negotiations, disaster and catastrophes, scientific background, greenhouse gases, energy generation, and global warming (Boykoff, 2012; Painter et al., 2016, 2018; Rebich-Hespanha et al., 2015). However, the strong trends that the two media would focus strongly on different themes were not visible in our sample. This could be a sample size issue, or a sign that there is more to political polarization, including tone, style, and actors in focus. However, the two media focused on different aspects of each theme, as shown by the subtheme analysis. Two findings from this analysis showed Fox News's comparatively greater focus on Taxes within the Economy theme, and Socialism within the Politics theme. We interpret the reference to socialism and taxes by Fox News as a strategy to create a climate of fear around the GND.

Findings from the stylistic sections of this study provide a wider context for the overall portrayal of the GND. Tone, recurring statements, and stylistic elements give a richer meaning to the GND coverage by altering or emphasizing the news content that is delivered. Paired with their focus on the economic theme, Fox News's comparatively greater emphasis on taxes and socialism, frequent references to the GND as infeasible, and strongly negative tone conveyed a negative portrayal. This is in sharp contrast to CNN's overall positive or balanced/neutral tone toward the GND. These factors support Gustafson et al.'s (2019) and Van Boven et al.'s (2018) interpretation that Fox News viewing is correlated with increased opposition to the GND and a negative perspective towards it. This "Fox News effect," as termed by Gustafson et al. (2019), is further supported by discrepancies in the amount of coverage. With the GND being a US Democratic Party action plan, it is interesting to observe that Fox News, on the right side of the political spectrum, gave this topic significantly more attention than CNN, aligning with a similar trend observed by Gustafson et al. (2019) and MacDonald (2020). Given that CNN and Fox News focus on different aspects of the GND and portray the deal in the way expected from their political leanings, viewers would receive different perspectives of the GND based on which channel they watch, and likely the coverage they expect from the chosen media channel. In this way, the stylistic and tone-related elements of GND coverage further contribute to political polarization on the part of these two media outlets.

Our analysis of stylistic elements also provides insight into the use of skepticism in GND coverage. The fact that skepticism of the GND is one of the most frequently employed stylistic elements by both CNN and Fox News indicates that skepticism is prevalent in US media discourse on climate change. In addition, the significantly higher use of skepticism toward the GND by Fox News indicates that it is still a possible indicator of polarization in the news coverage. However, in both CNN and Fox News, skepticism toward the GND was more frequently seen than skepticism toward climate change. This indicates a continuation of the phenomenon identified by Schmid-Petri et al. (2015), in which skepticism of climate science has been mostly replaced by skepticism of policies

addressing climate change. As argued by Painter and Schäfer (2018), this could suggest a larger shift in conversation away from debating climate science and toward a discussion of climate policies.

While it is no surprise that some actors seem to be covered more than others, it is interesting to see how the coverage differs, as the exclusion or inclusion of certain actors could possibly indicate political polarization. We see that both media outlets have included actors, often the same, as figure-heads to authoritatively speak about the plan, a result similar to findings by Van Leeuwen (2008). Since Congresswoman AOC is a well-known political figure in the US, the media coverage of her involvement in relation to the GND is especially illustrative of the fact that climate issues are covered, understood, and perceived with reference to parallel social and political happenings (Painter et al., 2016). Morris (2020) also found that the congresswoman was often “placed front and center” in media coverage of the GND (p. 139). The prominence of political figures in GND coverage aligns with our expectation based on previous studies (Colvin et al., 2020; Fisher et al., 2013; Park et al., 2010; Rebich-Hespanha et al., 2015; Sell & Prakash, 2004). Similarly, the then upcoming 2020 presidential elections also feature as an important element in the media treatment of GND. Chinn et al. (2020) found that as media coverage of climate change became increasingly polarized in the last few decades, political actors were featured more than scientific actors. In this study, the lack of mention or representation of scientific actors in the videos examined further points to the decline of scientific discourse in media coverage of climate change. However, our expectation that each news source would cover actors who aligned with their political affiliation was not supported by our findings. In fact, our results sometimes showed the opposite: left-leaning CNN referenced Republican President Trump more frequently than Fox News, while the conservative Fox News referenced Democrats as a group more frequently than CNN. This might indicate that the mere presence of an actor from the left or right does not have to mean that the media coverage is politically polarized. The context in which they are presented, and what comments news journalists make in relation to actor sound-bites are likely to give important hints regarding political polarization. Therefore, we think that future studies may look at the tone and stylistic elements of the coverage of actors that were included in the discourse around a policy issue.

The significant amount of attention the GND received from the right-leaning Fox News may have directed Republican viewers’ attention towards climate change. However, this interpretation needs to take into account that Fox News covered the GND with a strong negative tone and skepticism towards the deal, often pointing out that it is costly and infeasible. This negative portrayal of a climate change-related issue further expands the gap between left and right and contributes to strengthening political polarization within society at large (Roser-Renouf et al., 2016) and in the media. For media audiences, this means that although Fox News covers a lot more about the GND than CNN, the news outlets continue to exist in their respective silos, providing differently slanted information to their viewership. Therefore, different parts of the US population get varying information and perspectives on the same issue. If audiences jump between media spheres, this might result in a biased, but balanced, media diet. However, there is little evidence that media audiences would do so, as trends show echo chamber like behavior (Roser-Renouf et al., 2014). This feeds the political parallelism that Schmid-Petri et al. (2015) describe. Then, it would imply that audiences must go out of their way to gain different perspectives on the GND, and it does not seem that either one of the popular CNN or Fox News (Newman et al., 2019) delivers a neutral or objective picture of the GND.

Observing the media coverage and the political discussion, it seems that the GND was the conversation starter its sponsors intended it to be, and that it might have helped put climate change on the US media agenda, where it had been given declining attention in recent years (Weathers & Kendall, 2015). To fully conclude if the observed “climate silence” (Park, 2017, p. 203) was broken would need a broader analysis, but at least temporarily climate was on the media agenda. Our findings showed noticeable differences in the sub-themes, actors, and tone that indicated politically polarized discourse. In addition, this study of the GND identifies future indicators under climate policy media coverage that may be studied to understand politically polarized media coverage.

However, examining some variables alone, e.g. themes or actors, might produce false positives or negatives on the presence of political polarization. This study shows the value of including indicators such as detailed study of themes, actors, tone and stylistic elements in combination when studying political polarization.

Notes

1. Minor presence if the actor is only mentioned briefly in the video, major presence if the video paid extensive attention to the actor in the video.
2. The codebook contained more variables than reported here. The Lotus and S-Lotus for the variables economic, politics, climate, and energy (themes) are calculated including all variables present in the codebook related to e.g. economic themes.
3. The minor difference in total percentage points between Figures 3–5 is due to rounding off to the closest number.
4. In Figure 6, “Save the planet” refers to the idea that the GND will save the planet or that climate change threatens the safety of the planet; “cost” refers to the question of how the GND will be paid for; “FAQ document” refers to a fact sheet about the GND mistakenly released by Rep. Ocasio-Cortez’s office, which received widespread media attention (Golshan & Nilsen, 2019); “save life” refers to the idea that the GND will “save life as we know it;” “\$93 trillion” refers to a study estimating the cost of the GND at \$93 trillion.
5. For the recurring statement FDR’s New Deal, an independent t-test was conducted to confirm whether the 95% confidence intervals overlapped to an extent that two values would be statistically significantly different from each other or not, and it showed that CNN did not mention the New Deal in connection with the GND significantly more than Fox News (CNN 19% ($M = 0.19$, $SE = 0.088$), Fox News 3% ($M = 0.03$, $SE = 0.031$), $t(25.127) = 1.708$, $p = 0.100$).

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