Selling anger[*]

Diego García[†]   Ryan Lewis[‡]   Maximilian Rohrer[§]

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Abstract

We develop a new method to quantify media content based on people and their associated Wikipedia topics (e.g. political affiliation, gender, race, etc). We apply our method to the closed caption transcriptions of cable news to uncover a new pattern in media content and polarization: TV networks have been increasingly focusing their limited airtime on the opposing party, while simultaneously exacerbating rhetorical slant. These negative affective behaviors go beyond politicians and include topics such as African Americans and LGBTQ people, where Fox News has accelerated negative coverage relative to CNN and MSNBC. Our findings extend to Fox Business relative to CNBC and Bloomberg TV, the leading business news channels.

JEL classification: D83, L82.

Keywords: media, cable news, named entities.

1 Introduction

Existing work in economics has documented substantial political slant in US news media that parallels polarization in the electorate.[1] Media ideological segmentation has real and persistent consequences for political outcomes, firm and individual behavior and community formation.[2] Recently, polarization appears to be accompanied by increased cross-group aggression and intolerance, generally referred to as affective polarization.[3] While polarization can be achieved through positive reinforcement of in-group beliefs, affective polarization is primarily sparked through attack-based advertising or negative media coverage.[4]

We investigate these distinct sources of polarization through the lens of cable news television in the US between 2012–2024. Using a novel topics-based approach centered on the people being discussed, we decompose media bias into the extensive margin (what is covered) and the intensive margin (the tone of coverage). Our measure reveals that news sources have increasingly shifted their focus away from in-group positive coverage toward out-group negative coverage — a phenomenon we call "selling anger." In particular, we find that Fox News has increased its coverage of Democratic politicians, relative to CNN, using negative narratives when doing so. Similarly, MSNBC has increased its coverage of Republicans, using a negative slant towards them. The magnitudes we document are large, with Fox News (MSNBC) covering Biden (Trump) twice as much as their competitors at the end of our sample period.[5] While our study is purely observational, the trend we document on selling anger provides empirical support to the existing literature on the sources of affective polarization.

Our contributions begin with our methodology. Leveraging the idea that people form the core of most news stories, we propose a new approach for quantifying media content that follows three main steps. First, we identify the entities, in particular people, appearing in a corpus. Next, we establish a link to their Wikipedia descriptions, using the tagged topics to classify each person into different categories. Finally, once we have an idea of "what" is being discussed, we measure how these topics are presented by assessing the sentiment around each entity mentioned.

We employ a popular natural language processing (NLP) algorithm, spaCy to identify named entities in transcribed captions from national cable news channels from 2012–2024, focusing on people who are mentioned by the main three national news outlets: CNN, Fox News and MSNBC.[6] There are several reasons why national TV captions are a natural corpora for studying media bias using our named entity based method. First, it has a greater impact than print media, as its audience sizes are 3-4 times larger than major US dailies such as the New York Times or Wall Street Journal. Second, the live nature of

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[1]Iyengar and Hahn (2009), Larcinese, Puglisi, and Snyder Jr. (2011), Lott Jr. and Hassett (2014).

[2]Gentzkow, Shapiro, and Sinkinson (2011), Enikolopov, Petrova, and Zhuravskaya (2011), Chiang and Knight (2011), Gentzkow and Shapiro (2011).

[3]Sood and Iyengar (2016), Iyengar and Krupenkin (2018), and Iyengar et al. (2019).

[4]See Lau et al. (2017), Garrett et al. (2014), and Nai and Maier (2023).

[5]Our sample period ends right before Biden dropped out of the 2024 presidential election.

[6]Our data are sourced from TVarchive.org which provides closed captioning information on all national channels. To compliment our analysis, we also study the three major business networks, Bloomberg TV, Fox Business and CNBC. Fox News and Fox Business, and MSNBC and CNBC, both share the same parent company.

cable news features many unscripted comments, potentially making bias measurement more effective than in edited print media. Third, our people-centric content measure is well-suited for TV narratives, which often focus on individuals and their actions. Lastly, broadly quantifying the content on TV has yet to be attempted in the economics literature. Providing processed data on TV content will, hopefully, spur additional research around this form of media.[7]

After finding the people mentioned in the closed captions on the main cable news networks, we query Wikipedia's API to construct a detailed list of all the named entities appearing in each show, along with their associated metadata. Our approach can examine natural characteristics of individuals such as political orientation, profession, sex, race, religion, and sexual orientation, or any other metadata recorded in Wikipedia. Once we extract unique named entities and their associated metadata, we generate our main quantitative measures: topics and sentiment. Topics are the list of metadata categories that appear associated with an individual. Thus a network can be described as discussing a topic if it mentions an individual associated with that topic. For example, a mention of Barack Obama triggers numerous topics including "Democratic Politican" and "African-American." This constitutes an extensive margin appearance for each of those topics. To complete our measurement, we calculate the sentiment (intensive margin) for a given person using 150 words around the mention of that particular person.

Utilizing these measures of topics and sentiment, we investigate the tactics employed by news media and how they have evolved over the past decade. First, we document that politics is the main theme in cable TV news during our sample. The share of all people mentioned in a given day who are politicians is close to 60% across all networks, spiking above 75% during the 2016 election year. Both MSNBC and Fox News have slightly higher coverage of politicians than CNN. Perhaps surprisingly, networks focus coverage on the "opposite" party: MSNBC tilts its coverage towards Republicans, while Fox News spends more time talking about Democrats. For the business channels, the coverage of politicians is more muted, hovering around 30% of all mentions, with the exception of Fox Business, which is very close to the three main cable news channels (even exceeding the coverage in CNN in some years). These patterns are more pronounced when restricting attention to politicians who were presidential candidates during our sample.

Our second finding concerns slant. Across networks, we find a significant positive (negative) sentiment in MSNBC towards Democrats (Republicans), relative to CNN. Fox News exhibits an even stronger sentiment tilt in the other direction, using a more positive tone for Republicans and more negative towards Democrats. For the business channels, we find no differences between CNBC and Bloomberg, but Fox Business' sentiment towards politicians mimics that of Fox News, talking more positively (negatively) about Republicans (Democrats).

The pattern of focusing on the "opponent" party along the extensive margin with a negative tone — selling anger — is a nuanced finding in the space of partisanship that heretofore explores media slant across a single dimension. We further document that this is a new phenomena, since early in our sample (2012) we find much more balanced coverage of both parties across all networks relative to the end of our

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[7]Engelberg, Sasseville, and Williams (2012) and Martin and Yurukoglu (2017) are two notable exceptions.

sample (2024). These results complement and confirm those in the literature (Gentzkow, Shapiro, and Taddy, 2019), quantifying the different coverage by major networks of US politics using new "people-based" metrics.

The secular trend of selling anger exists even when focusing on named entities that are not people, i.e. organizations, institutions, geographical names. We find that Fox News (MSNBC) is more likely to cover, and disparage, Democratic (Republican) purple states as they swing left (right). Similarly, the coverage of the White House swings together with the party that holds it: more (less) coverage in MSNBC (Fox News) when Republicans win the presidential election, with the sentiment towards the institution mirroring our previous results. As with our results on politicians, these trends have been increasing over time.

A benefit of our method is its ability to quantify topics outside of politics. Any category populated in Wikipedia can be connected to the cable news corpora analyzed in a similar manner. As a proof of concept, we extend our analysis to four categories of people that have gathered significant attention in the media "culture wars": (1) females, a theme split along the "me-too" movement; (2) African-Americans, particularly controversial with the protest after George Floyd's death; (3) LGBTQ people, with the discussion's around Florida's "don't say gay" narratives; (4) member of the Supreme Court, associated with the change in federal laws in the US regarding abortion. While ad-hoc, these topics are of sufficient general interest as to test the validity of our empirical design.

First we examine the appearance and treatment of females when discussed in on cable news. Females are strikingly underrepresented in our sample tallying only 17% of all mentions.[8] Fox News covers females more than the other networks, but with a tilt towards politicians. CNN has 3% more female coverage than the other networks for non-politician females. The sentiment tilt of the three major networks only differs regarding the treatment of female politicians, with Fox News being more negative towards females, and MSNBC being more positive. While there are plenty of female politicians that get attention in cable news (Nancy Pelosi, Marjorie Taylor Green), the huge skew towards the first female presidential candidate (Hillary Clinton), and the first female vice-president (Kalama Harris), drive these results.

The coverage of African-American people in cable news is slightly above 11% of all daily mentions, more balanced relative to the overall population (12%) than for females. The sentiment in MSNBC towards African Americans is more positive, both toward politicians and non-politicians. In Fox News, we find significantly more negative sentiment scores towards African-Americans, particularly for non-politicians, a reflection of the recent political divide around the Black Lives Matter movement.

The LGBTQ community receives significantly less coverage, hovering below 2%. CNN covers them more extensively, with Fox News offering the smallest coverage among the three main TV cable networks. Regarding the tone around this coverage, CNN and MSNBC are relatively similar, with Fox News displaying a negative tone when talking about LGBTQ people, with magnitudes similar to those of its Republican/Democrat tilt. This sentiment bias in Fox News has become particularly strong in the

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[8]By contrast, females represent 27% of the 117th congress.

second half of our sample, which coincides with the "Don't say gay" movement in Florida.

Supreme Court justices receive significantly smaller coverage than the previous categories, as there are only a dozen of them in our sample period.[9] On a daily basis, they comprise 0.5% of all people mentioned. The time-series variation of their coverage is as expected, with spikes during new appointments, and major decisions from the Supreme Court (with abortion rights a major change during our sample). Interestingly, Fox News covers Republican-appointed Supreme Court justices significantly more than other networks, but they reduce their coverage almost completely after May 2021, when the Supreme Court officially agreed to take up "Boggs v. Jackson Women's Health Organization," which eventually resulted in overturning "Roe v. Wade."

Our paper contributes to a broad literature that attempts to quantify media information and study bias in news content. Early work (Mullainathan and Shleifer (2005), Gentzkow and Shapiro (2006), and Baron (2006)) provide a theoretical framework that describes the tradeoff of media firms in supplying information to consumers. Bias is not directly undone by reputation or competition and can persist in equilibrium.

A number of papers attempt to test these theories by first measuring bias, and then examining the behavior of news outlets. Groseclose and Milyo (2005) measures bias using overlapping citations between media and politicians while Gentzkow and Shapiro (2010) creates a dictionary of partisan phrases from congressional records. Our paper mirrors these analyses, but the method generates both an extensive and a bias angle, and can be applied to any loosely formatted text as long as named entities can be identified and disambiguated.

Media bias, polarization, and ideological segmentation has been further documented along many dimensions (Iyengar and Hahn (2009), Larcinese, Puglisi, and Snyder Jr. (2011), Lott Jr. and Hassett (2014)). Media ideological segmentation has real and persistent consequences for political outcomes (Gentzkow, Shapiro, and Sinkinson (2011), Enikolopov, Petrova, and Zhuravskaya (2011)) firm and individual behavior (Chiang and Knight (2011),) and community formation (Gentzkow and Shapiro (2011)). Moreover, this effect appears to be likely causal as in Martin and Yurukoglu (2017), which shows that channel order drives exposure to Fox News which tilts local political beliefs.

Natural language has also been used widely outside of media slant. A number of papers examine how qualitative firm news filters through to prices (including but not limited to Antweiler and Frank (2004), Tetlock (2007), Tetlock, Saar-Tsechansky, and Macskassy (2008), Tetlock (2010), Tetlock (2011), Engelberg and Parsons (2011)). Gentzkow, Kelly, and Taddy (2019) provide a broader review of the use of textual information as quantitative data across a variety of fields with a focus on economics. Jurafsky and Martin (2018) provide a methods-based summary of computational linguistics and natural language processing outside of the field of economics.

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[9]Our sample includes the following Supreme Court justices: John Roberts, Clarence Thomas, Samuel Alito, Sonia Sotomayor, and Elena Kagan. Additionally, Neil Gorsuch succeeded Antonin Scalia, Brett Kavanaugh succeeded Anthony Kennedy, Amy Coney Barrett succeeded Ruth Bader Ginsburg, and Ketanji Brown Jackson succeeded Stephen Breyer during the sample period.

2 TV news and empirical design

In this section, we first discuss the text corpus that we study in our paper, as well as different NLP techniques we implement to clean and organize our datasets.

2.1 Data sources

Our corpus comprises all shows included in the `TVarchive.org` dataset, that logs closed caption information from major networks, including CNN, Fox News, MSNBC, Bloomberg TV, FBC (Fox Business), and CNBC.[10] The coverage of the main news channels (CNN, Fox News, MSNBC) starts in 2012, whereas the business news channels start in late 2012 and 2013. We scrape the closed captions from `TVarchive.org` and save the metadata associated with the show name, time, and network, as well as the full closed caption text.

We note that as with all closed captions, the data is provided in capital letters, which makes our analysis slightly more challenging than standard written text, since it is not "true cased," using NLP jargon. Furthermore, we note that it is humans that type the closed captions, so there are typos and arbitrary choices (sometimes commercials are included in the closed captions, sometimes they are not).

We focus on the time period 2012–2024, for which we have a total of 359,529 shows.[11] CNN has the most shows in our data (91K), followed by Fox News (82K) and MSNBC (70K). The business news channels have significantly fewer shows, with CNBC and Fox Business in the 32–35K range, and Bloomberg TV at 49K. The nature of business news, modeled after CNBC started the genre back in 1989, is to offer news roughly around trading hours, from 5am to 6pm. Neither CNBC nor Fox Business has much original programming outside these hours or on weekends, where they put repeats and/or shows from their parent companies. Bloomberg TV is slightly different since it has a major international component, with 24-hour coverage of markets around the globe, with shows focused not just on North America, but with regular daily shows on European markets, Asian markets, Australia, etc.

Table 1 list the top shows in each network, for each of the three main news channels, where we include the top ten by frequency in our database. All the shows in Table 1 are household names for anyone who watches cable news. We note that we have a long time-series for most of these shows (virtually the full 2012–2024 period), with more than 1,000 observations per show.

CNN has multiple segments of "CNN Newsroom" throughout the day, with the star anchors taking the primetime slots: Anderson Cooper at 8pm, Wolf Blitzer at 5pm, Don Lemon at 10pm, Jake Tapper at 4pm. Fox News starts the day with Fox and Friends, then fills the rest of the day with regular news,

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[10]Interviews with the founders of `TVarchive.org` gave us a glimpse on how the database was gathered. The non-profit company behind `TVarchive.org` simply connects laptops to a cable outlet, and continuously saves both the image, its associated audio, and the closed captions that are required by US law to be provided by the TV networks. The data is open-source, and the original goal of the archive was precisely to allow researchers to be able to access a historical archive of TV news. There are several other cable channels available via `TVarchive.org`, i.e. Comedy Central, but our focus is on the main news outlets listed above.

[11]Our sample for the main cable news channels (CNN, Fox News, MSNBC) starts January 1st, 2021, and ends on June 28th, 2024. For the business channels, our sample starts on December 4th, 2013, ending on June 28th, 2024.

leaving the primetime slots for their star anchors: The Five at 5pm, O'Reilly/Tucker Carlson at 8pm, Hannity at 9pm. MSNBC follows a similar structure, with Rachel Maddow, Chris Hayes and Chris Matthews taking the primetime slots.

The shows from the business news channels are presented in Table A2 in the Appendix. The programming for business news is even more structured. Starting with the CNBC data, we see that their typical lineup included "Street Signs" at 4am, followed by "Worldwide Exchange" at 5am, then by "Squawk Box," the 6–9am show that starts the day in the East Coast. "Squawk on the Street" follows for two hours, then "Squawk Alley." Then "Fast Money Halftime Report" comes on followed by "Power Lunch" (two hours). The show "Closing Bell" is the typical 3pm show that lasts for two hours. After 5pm CNBC shows "Fast Money," "Mad Money" "The Kudlow Report," as well as reruns of "60 Minutes." Turning to the Fox Business data, we see similar patterns. The network starts at 5am with "FBN AM," to then switch to "Mornings With Maria Bartiromo" at 6am for three hours. "Varney & Company" takes another three hours, following the CNBC schedule. "Cavuto Coast to Coast" usually takes the lunch slot, followed by "The Intelligence Report With Trish Regan." The show "Countdown to the Closing Bell" takes the 3–4pm slot, then "After the Bell" from 4–5pm. The after-market shows in Fox Business include the "Willis Report," "Deidre Bolton," and most notably "Lou Dobbs." The programming on Bloomberg TV is richer since it airs 24h with original programming directed not just for American viewers, but also for European, Asian and Australian audiences.

The above summary is meant to give a sense of the median line-ups that the different networks sustained throughout our sample period. There were many changes, with shows being moved from different time slots and replayed at different times. Furthermore, some anchors moved/were fired during our sample period (salient examples include Bill O'Reilly, Chris Cuomo, Don Lemmon, Tucker Carlson, and Lou Dobbs).

2.2 Named entities selection

We propose using the people in the TV shows who are talking or being talked about, whose names are included in the closed captions, as a measure of content. One of the main advantages of using people's names is that they are unambiguous.[12] The previous literature has used dictionaries or topic models (LDA), which are good metrics of content/narratives, but are both subjective and subject to measurement error. If a show is talking about Vladimir Putin there is no ambiguity: the show producers decided to discuss something about what the Russian leader was doing/saying on a given day. Furthermore, each named entity comes with its own metadata: where they are from, their education, political affiliation, current/past jobs, sex, sexual orientation, race, etc. It is this concrete aspect of named entities that we try to exploit in our research.

In order to measure the named entities in the TV captions described in the previous section(s), we use spaCy, a leading open-source NLP tool, to tokenize and classify our documents. This is a standard NLP algorithm that classifies sentences, from tagging verbs and nouns to identifying *n*-grams that are named

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[12]We describe how to deal with the disambiguation of common names, i.e. Diego García or Ryan Lewis, below.

entities, from people to companies, organizations, and geographical names. This is particularly useful for our purposes, as we can identify when a show is talking about news regarding individual firms, versus macroeconomic events or politics. We focus our analysis on the named entities that are tagged as persons by spaCy.

In order to disambiguate the named entities, we start with all n-grams labelled as people by spaCy, for $n = 2, 3, 4.$[13] We apply some cleaning such as removing digits and punctuation, require that the n-gram has at least one token with three characters, and that it appear at least 25 times in the corpus. We note that in TV discourse, it is typical to introduce the person being spoken about/with using a bigram (Tim Cook), and then use unigrams (Mr. Cook, Tim) when referring back to the person.

Starting with this set of over 24K n-grams from spaCy, we then try to give content to each of such names. We use `Wikipedia`'s API to query each n-gram to find out who each of these n-grams refers to. `Wikipedia` is the leading online encyclopedia, with lots of open-source information on thousands of people/organizations/etc. We focus on the categories that `Wikipedia` has associated with a given n-gram.

For a total 16K n-grams, we identify at least one `Wikipedia` entry. Next, we eliminate those entries without a birth year or which do not include the category "Living people", limiting the sample to 14K n-grams; When there is a unique entry in `Wikipedia` the above algorithm finds the right person and its (rough) biography.[14] When there are multiple entries in `Wikipedia`, we pick the entry with the largest textual corpus (in terms of number of words). About 33% of the entries need such disambiguation, and our results are not sensitive to including/excluding them. The above algorithm captures 13.6K unique individuals. These matched n-grams form the core of our empirical analysis.

Our final step is to add salient individuals that our algorithm does not identify. First, we manually check the most frequent unigrams identified as people by spaCy. We add the following unambiguous unigrams: Barr, Bernie, Biden, Fauci, Flynn, Giuliani, Harris, Hillary, McConnell, Nancy, Obama, Putin, Romney, Trump, and Warren. Lastly, we add two individuals referred to by trigrams; Hillary Rodham Clinton and Amy Coney Barrett.[15]

Figure 1 includes a snapshot of the top and bottom of Donald Trump's Wikipedia page for illustrative purposes. The two main data sources we will use in our analysis are: (1) the "Personal details" in the top right box, which gives some high-level information regarding the person's profession, political affiliation, birthdate, etc; (2) the "Categories" listed at the bottom of each Wikipedia page.

The Wikipedia categories are quite rich. They include details on who are politicians, businesspeople, writers, billionaires, actors, Catholics, Jews, Fox News people, chief executives, Republican/Democrat/-

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[13]Out of the set of n-grams that spaCy classifies as the names of persons, about 60% are bigrams, with 13% unigrams, and the rest higher order n-grams.

[14]To account for miss-spellings of names in the closed captions, we use an approximate name matching algorithm called "Gestalt Matching".

[15]The middle name Rodham does not appear in the Wikipedia page associated with Hillary Clinton, and spaCy does not pick up the "Amy" as part of the named entity associated with Amy Coney Barrett.

house/senate, investors, chairmen, journalists, founders, economists, financiers, philanthropists, alumni, lawyers, etc. We focus on the following set of classifications of the *n*-grams to get at the "content" of the narratives around those people: (1) politicians (Republican/Democrat/other); (2) journalists (with their associated network); (3) business people (investors, CEOs, economists, lawyers); (4) sex and sexual orientation (females, gay); (5) race (Black, Asian, Hispanic). While far from comprehensive, this list gets at very precise topics that are part of the national narrative, from politics to economics to other social traits.

Table 2 lists the 60 most frequently mentioned people on three major TV news networks: CNN, Fox News, and MSNBC, along with the frequency of their mentions in the thousands. It also categorizes individuals by political affiliation or role, using the following codes: P for politicians, R for Republicans, and D for Democrats.

Unsurprisingly, Donald Trump leads the count significantly across all three networks, indicating he was a highly discussed individual during our sample period. Hillary Clinton also has a high mention count, though not as high as Trump, reflecting her prominence in political discussions. The list includes a mix of other politicians, from various roles and affiliations, such as senators, representatives, and other public figures.

There's a noticeable variance in the frequency of mentions among the networks. For example, Fox News tends to mention Democratic figures more often compared to CNN and MSNBC, i.e. in the case of Joe Biden Fox News mentions him 50% more often than MSNBC and CNN. The opposite seems to be the case for Republican characters, which have much higher frequencies in CNN and MSNBC relative to Fox News. For example, Fox News is the network with the smallest set of mentions of Donald Trump, Mitch McConnell or Rudy Giuliani, to pick some notable examples.

Additionally, many non-politicians are included indicating that these networks also focus on individuals who are central to significant news stories. These names are reminiscent of the events over the last decade, with a heavy tilt towards the scandals during the Trump presidency: Robert Mueller, Rudy Guiliani, James Comey, Steve Bannon, Michael Flynn, Paul Manafort, and John Bolton all make the top 30. The most salient economist is Janet Yellen, as expected, with the usual suspects on the business side (Mark Zuckerberg, Tim Cook, Warren Buffett, Michael Bloomberg). The presence of international figures like Vladimir Putin and Kim Jong Un suggests a focus on global affairs as well. Overall, the table reveals not only the focus of these networks' coverage but also the political and social figures who were most newsworthy during our sample period.

In Table 3 we present some statistics associated with the Wikipedia categories we study, see the Appendix for the exact methodology used to identify the categories. In Panel A we show the top categories by frequencies. Some of these categories are rather "plain," such as "Living people," or "1948 births." But it is noteworthy that politicians figure prominently, with presidential candidates comprising over 36% of all mentions.

In Panel B of Table 3 we present the main categories that we will study. Not surprisingly, the top cat-

egory is politicians, with a 59.5% share of the mentions. On average, there is slightly more discussion of Republican politicians than Democrats (33.8 versus 29.8). But note how there are significant differences across networks: 40.6% of all the mentions in MSNBC are about Republicans, versus 29.2% about Democracts; those numbers are 31.0% and 37.0% for Fox News. Unconditionally, we see these major TV networks discuss more the people that they are critizicing. These pattern is even more salient for presidential candidates, with Fox News coverage of Democratic candidates at 24% versus 16% for Republicans, with MSNBC having exactly the opposite tilt (16% versus 24% for Democrats/Republicans).

Regarding the other categories in Panel B of Table 3, we note the high frequencies of journalists, which is to be expected, and will motivate some of empirical designs below. Interestingly, only 17.7% of all mentions are females, well below the 50% representation in the general population. African-Americans comprise 9.4% of the mentions, slightly below the 12% US population share. LGBTQ characters are less than 2% of the total, also below its population share (around 7%).

Figure 2 presents a plot along the time series of the extensive coverage of politicians. In the top-panel, we see the share of mentions that are politicians for each network. The average for all politicians hovers just below 60%, with peaks in election years (2016, 2020). The networks with the most "political talk" are MSNBC and Fox News. Perhaps surprisingly, given its purported mission, Fox Business is much closer to the major networks than CNBC or Bloomberg, both of which have significantly less coverage of politicians. The bottom panel of Figure 2 shows that about two-thirds of the mentions in the top panel belong to presidential candidates, with similar time series and cross-sectional variation.

2.3 Empirical approach

For most of our analysis, we focus on two metrics of content using named entities: the extensive margin (who was on/talked about), and the intensive margin (what they said about them). The former is simple to measure given our algorithm: we know what *n*-grams are associated with people in each show. Figure 3 plots quarterly averages of the extensive margins for Donald Trump and Joe Biden, two of the top people from Table 2 (and the presidential candidates in 2020). As expected, Donald Trump was barely mentioned until the 2016 election, where he gets almost one-quarter of all people mentions across all major networks. It is interesting to note that after the 2016 election, CNN and MSNBC both talk significantly more about Donald Trump than Fox News. The case of Joe Biden is similar, with slightly more coverage than Donald Trump earlier in the sample, when he was serving as vice-president, and a spike prior to the 2020 election. Mirroring the evidence on Donald Trump, Fox News talks about Joe Biden significantly more than the other two networks.

For the intensive margin,[16] we use the 150 words around a given bigram mention and score the text using term-frequency weights and a given sentiment dictionary. For our analysis, we use the AFINN dictionary

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[16]We note that we are abusing notation/lingo a bit here. The more natural interpretation of "intensive" would be the number of times a given bigram is mentioned. While this is part of our dtm representation, we focus on unique names in most of our analyses, rather than the counts. We find the "intensive" margin related to sentiment a more meaningful metric of content in our setting.

provided with the R package `textdata`.[17]

There are two natural units of analysis: mentions of named entities at the show/mention level (i.e., what we can read about each person showing up in a given Hannity's closed caption), and at the daily level (i.e., who appeared in CNN's closed captions on a given day). The show-level analysis is particularly rich, as it allows us to differentiate between shows (primetime, early morning, etc). But the daily analysis also has some bite, as each network certainly discusses what to cover/when, and aggregating all shows in a given day gets at this network-level narrative. We settled on the latter for parsimonious reasons, noting that it is also statistically more conservative.[18]

Our main empirical specifications for studying the extensive margin is the regression

$$P_{gtn} = \alpha I_m + \beta I_n + \varepsilon_{gtn}; \tag{1}$$

where P_{gtn} the percentage of the person-named entities that belong to a given category g (i.e. Republicans), in each network n on a given day t. The variables I_m are year×month dummies, and I_n are network dummies. Standard errors are two-way clustered at the network×year and year×month level. The main coefficient of interest in (1) is β, which measures the differences in coverage of a given category g between the different networks.

Along the sentiment margin, we estimate the model

$$S_{itns} = \beta I_n I_g + \alpha I_{sy} + \delta I_m + \chi I_i + \varepsilon_{itn}; \tag{2}$$

where S_{itns} denotes the sentiment on a given piece of a show s on network n on date t about a person i. The dummies I_n capture network fixed effects, I_i are person fixed effects, I_{sy} capture show-year fixed effects, I_m are year×month dummies, and the indicator I_g capture the group to which person i belongs. We cluster standard errors three way, at the show, network×year and year×month level. The coefficient of interest in (2) is β, which measures the differences in the sentiment towards people that belong to a given category g between the different networks.

2.4 Proof of concept

In order to establish the validity of our approach, and get a sense of the magnitudes of estimates, we implement the approach using only journalists associated with the three major networks under consideration. The null of no differences along the extensive and intensive margins should be easily rejected, as the names of journalists should appear mostly on their associated networks, and most likely the sentiment associated with their appearances should be positive.

In Panel A of Table 4 we look at the extensive margin of CNN, Fox News, and MSNBC journalists. The omitted variable is CNN journalists, so from column one, we see that CNN has 12-13% more mentions

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[17]Our results are qualitatively and quantitatively similar using other dictionaries from the literature, i.e. the General Inquirer (Tetlock, 2007).

[18]Our results are qualitatively identical, and statistically stronger, if we construct the panel at the show level.

of CNN journalists than Fox News and MSNBC. The magnitudes are similar in columns 2 and 3, with Fox News mentioning about 10% more Fox News journalists than either CNN or MSNBC and MSNBC talk 8% more about their own journalists. Along the extensive margin, our algorithm seems to work quite well at picking up differences across networks.

In Panel B of Table 4 we study the intensive margin, i.e. the percentage of positive minus negative words around the occurrence of a given person's name. CNN journalists are discussed with the same sentiment in CNN than in Fox News, with MSNBC having a small, -5.35%, point estimate that is statistically significant at the 5% level. Fox News journalists, on the other hand, exhibit a much more positive sentiment score in Fox News coverage than in CNN, with 19% higher sentiment, with MSNBC again showing a marginally negative sentiment point estimate towards them. In column three we see that relative to CNN and Fox News, the MSNBC coverage is significantly more positive towards MSNBC journalists, with a point estimate of 22%. While estimates are fairly noisy, the evidence from Panel B of Table 4 on sentiment aligns with the natural alternative hypothesis of networks talking more positively about their own journalists.

3   Political Slants

As noted previously, the national TV news networks' coverage is heavily tilted toward political discourse. In this section, we demonstrate how our approach relates to a primary theme of research in finance and economics: political polarization in the cross-section and time series.

3.1   Cross-sectional evidence

Table 5 presents the results of regressions estimated using the models in Equations 1 (panel A) and 2 (panel B). The "Extensive margin" detailed in Panel A of the table illustrates a critical point: both Fox News and MSNBC display a tendency to engage in more partisan coverage compared to CNN. This is highlighted by the significantly higher coefficients for mentions of political figures, which suggests that these networks have a heightened focus on political discourse. Such a pattern is indicative of a media environment that is increasingly segmented along partisan lines.

Surprisingly, Fox News, often perceived as a conservative mouthpiece, does not exhibit an increased mention of Republican figures relative to CNN. Instead, it appears to concentrate more on discussing Democrats. The point estimate presented in column three is large, with Fox News talking about Democrats 11% more than CNN, and also significantly more than MSNBC. This finding runs counter to the prevailing narrative and suggests a more complex strategy, potentially aimed at critiquing opposition figures more than promoting ideologically aligned ones.

MSNBC presents a similar contrast. For the entire sample period, MSNBC is the most politically oriented network in terms of mentions. While the network mentions both Democrats and Republicans more than CNN, we see that MSNBC covers Republicans 7-8% more, relative to CNN/Fox News.

Panel B of Table 5 shows how sentiment about people varies across the political spectrum among the different networks. In column one we see that if we measure the sentiment across mentions of any politician, there are no differences among any of the networks. But once we condition on the party, our evidence lines up with the evidence in the prior literature. Relative to CNN, Fox News is 13% more positive, and MSNBC 8% more negative when it comes to Republican politicians. For Democratic politicians, Fox News is 12% more negative, and MSNBC is 8% more positive. While noisy, the statistical significance, and the economic magnitudes, are rather large (in line with the journalists' tilt from Section 2.4).[19]

In Table 6 we present a similar exercise, breaking politicians into the group that was a presidential candidate, and the rest. Recall from the discussion in Section 2.2 that presidential candidates comprise about two-thirds of all mentions of politicians. In column one of Panel A, we see that Fox News covers Republican presidential candidates 2% less frequently than CNN. Conversely, MSNBC covers Republican presidential candidates about 4 percent more than CNN, leadingd to 6% spread in coverage between Fox news and MSNBC. In column two we see the opposite pattern, with Fox News covering the Democratic presidential candidates 8.5% more often than CNN (with MSNBC virtually at the same coverage rate as CNN). The results for other political people, presented in columns three and four, present a much more muted picture. Both Fox News and MSNBC talk more about Democratic people than CNN, 2%-3%, but Fox News covers Republicans at about the same rate as CNN, with MSNBC having a 2.7% higher coverage rate.

In Panel B of Table 6 we find that the sentiment coefficients line up as in our previous tests, with Fox News (MSNBC) tilting Republican (Democrat) relative to CNN, for both presidential and other politicians. Relative to CNN, Fox News has a sentiment score that is 10 points higher for Republican presidential candidates, a 11 points lower for Democratic presidential candidates. For other politicians, the sentiment tilts is similar with point estimates of 11 (-6) basis points for Republicans (Democrats). MSNBC is more negative on Republican presidential candidates, but similar to CNN for other Republican politicians (point estimates of -8% and -2% respectively). MSNBC is slightly more positive towards Democratic candidates than CNN.

In summary, our results on sentiment confirm those in the literature regarding the sentiment tilt of Fox News and MSNBC versus CNN. But we offer new evidence regarding the extensive margin: Fox News covers Democratic politicians significantly more than CNN, with a negative spin; similarly, MSNBC covers Republicans more often, also with a negative spin.

3.2 Business news

In Table 7 we repeat the exercise from Table 5, focusing on the coverage of all political figures in our dataset, using the business channels instead of the major news channels. Figure A1 in the Appendix plots the frequency counts of different economic/business people, showing that indeed the three business

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[19]Table A3 in the Appendix breaks down the point estimates in Table 5 by the timing of the show (morning, mid-day, prime-time), showing that the tilt along both the extensive and sentiment margins is stronger in the prime-time slots, but pervasive throughout the day.

channels that we study have a distinct angle relative to the main cable news studied in the previous section.

In our specifications, Bloomberg is our omitted channel, to which we compare the coverage of CNBC and Fox Business. In Panel A we study the extensive margin, the relative coverage of politicians across these three business networks. We start by noting that business networks cover politicians less extensively, with an overall mean of 45% of all people being politicians (versus 59% in Table 5).

Turning to the differences in the actual coverage of politicians, we see in column one of Panel A of Table 7 that Fox Business has 13% more politicians in their shows than Bloomberg, and more than 23% more relative to CNBC. This is true of candidates from both parties (columns two and three), with a tilt towards higher coverage of Democratic candidates, as its parent company Fox News exhibited in Table 5. CNBC has the smallest extensive margin of politics coverage of the three networks.

In Panel B of Table 5 we study the sentiment across the 2.9m people named in the business channels, focusing on politicians. In column 1, we see no differences in the sentiment across all three networks when talking about politics. On the other hand, we find a similar tilt in favor (against) Republicans (Democrats) for Fox Business. The magnitudes of 13 basis points (-11 basis points) roughly mirror the point estimates on Fox News in Table 5. CNBC does not show any differences in sentiment towards either Democrats or Republicans.

In summary, the business news channels present a similar picture to the analysis of the main cable news channels, in particular as it relates to Fox Business, which has a substantial political tilt, relative to CNBC or Bloomberg TV.

3.3 Time-series variation

To the extent that affective polarization and selling anger are reinforcing phenomenon, selling anger should mirror the pattern of increased levels of affective polarization. In this section we investigate the time series dynamics of selling anger. Our sample period covers the last term of Barrack Obama as president, as well as the terms of Donald Trump and Joe Biden, providing coverage periods where both parties held the white house. Furthermore, it is worthwhile to recall the large changes in the consumption of news over these 12 years, in particular regarding the growth in social media, from Facebook to Twitter. – WHY?

We take a parsimonious approach to study the time-series variation along the extensive margin. For each day, we compute the fraction of all politicians that are Republican in a given channel, $\%\text{Republican}_{c,t}$, and subtract the average coverage of all Republican politicians across all networks, $\overline{\%\text{Republican}_t}$. This measures the variation of a given network relative to its peers, essentially equivalent to including a day-fixed effect. We then create a linear trend variable, which equals zero at the start of the sample and one at the end, and regress the extensive tilt $\%\text{Republican}_{c,t} - \overline{\%\text{Republican}_t}$ on this linear time trend, separately for each channel. The intercept of this regression measures the "Republican tilt" of a network as of 2012, and the slope how much it has changed over the last 12 years.

Panel A of Table 8 presents our results. CNN starts with a balanced (50/50) coverage of Democrats/Republicans at the start of our sample, but we see that by 2024 the coverage of Republicans has increased to 57%. MSNBC starts with a tilt towards covering Republicans (+6.8%) and increases such coverage by an extra 4% during our sample. Fox News exhibits the largest time-series change, since in 2012 it discusses Republicans by 1.4% more, but it decreases such coverage by more than 10% by 2024. In the last set of columns, we see that Bloomberg TV and Fox Business started with a balanced coverage of Republicans and Democrats, but moved towards covering more Democratic politicians by the end of the sample. Interestingly, CNBC starts with a heavy tilt towards Democrats, to end the sample having equal coverage of both parties.

Our analysis of the behavior of the time series with respect to the sentiment of the coverage is presented in panel B of Table 8. For each channel - day, we compute the difference in tone towards Republicans minus tone towards Democrats, $S_{c,t}^R - S_{c,t}^D$. We then subtract the average difference across channels for that day, $\overline{\left(S_{c,t}^R - S_{c,t}^D\right)}$, again accounting for daily average swings in sentiment.

Panel B of Table 8 presents our results. CNN starts basically neutral but moves by 11% towards Democrats during our sample period. MSNBC starts with a -6% tilt towards Republicans, which increases by -15% by 2024. Fox News starts with a $+7\%$ tilt towards Republicans, which increases to 15% by the end of the sample. Clearly, the partisanship of MSNBC and Fox News was already prevalent in 2012, but it has increased significantly over our sample period. Interestingly, regarding the business channels we find no time trend for Bloomberg TV or CNBC, but a very large increase in positive sentiment towards Republicans for Fox Business.

Figure 4 presents a graphical depiction of the results in Table 8. The top panel shows the movement along the extensive margin, whereas the bottom panel plots the annual estimates regarding the sentiment tilt of each network.

3.4 Interaction between coverage and sentiment

This far we have analyzed the extensive and sentiment margins separately. But clearly these two measures of content are related: a network may decide to talk more about a particular candidate if there are good (or bad) news on a given day.

In Table 9 we study the extensive margin coverage of Donald Trump and Joe Biden during our sample period, and its relationship with the average sentiment. The later is computed as the daily average across all networks. We include network fixed effects, as well as year-month fixed effects, to capture time-series variation such as an election month. CNN is the omitted network, so the point estimates are all deviations relative to CNN.

Regarding the coverage of Donald Trump, we find that Fox News talks more about him when the average sentiment is positive, whereas the opposite is true for MSNBC. For Joe Biden, we see that Fox News decreases its coverage when the average sentiment is positive, whereas we do not find any changes for MSNBC. This is another piece of evidence of the selective nature of political news, with networks focus-

ing on their own (opposing) candidate when the news are good (bad), particularly for Fox News.

We conclude this section looking at the relationship between coverage and sentiment for Trump and Biden over time. As we mentioned earlier, in the context of Figure 3, there was little debate about either of them during the Obama administration, despite Biden being vice-president. Trump became the main topic for all networks after being elected, and Biden saw a similar increase in coverage when he became the Democratic presidential candidate.

For each day, we compute the extensive margin of either Biden or Trump, and average across all networks. We then defined the residual extensive margin to be the difference between a given network's extensive margin coverage, and this daily average. We perform a similar calculation for the sentiment across all networks, also on a daily average. Figure 5 plots the monthly averages for Trump and Biden for three different periods (2012-2016, 2017-2020, 2021-2024). The red points correspond to CNN, the blue ones to MSNBC, and the green points to Fox News. We remove days for which there are less than ten mentions of Biden/Trump, or months for which there are less than five days with mentions of Biden/Trump.

In the top two graphs of Figure 5, we find that there is little variation in sentiment for Donald Trump in the 2012-2016 period, with relatively small differences in coverage between the networks (less coverage in Fox News relative to CNN). For Joe Biden, at the time the sitting vice-president, we find virtually no differences along the extensive margin, with the sentiment in Fox News being more negative than in MSNBC or CNN.

The middle two graphs of Figure 5 present our point estimates during the Trump presidency, 2017–2020. We see a clear divide in terms of the extensive margin, with MSNBC offering a significantly higher coverage of Donald Trump relative to Fox News, with CNN sitting in the middle. While there are differences in sentiment, they are rather muted in the case of Donald Trump. The corresponding figure for Joe Biden shows less differences along the extensive margin, but clear differences regarding sentiment between Fox News and CNN/MSNBC.

The bottom two graphs present the point estimates during the last four years in our sample, which correspond to Biden's presidency, with Trump being the leader of the Republican party. Matching our previous time-series results, we find a large change in coverage between the three networks, with the point estimates moving more than 10% points apart between MSNBC and Fox News. We also see the sentiment between MSNBC and Fox News to be different, with the former being more negative towards Trump, with more volatility than in the previous four years. The coverage of Joe Biden demonstrates a larger shift. Note how Fox News has 10% more coverage of Biden than MSNBC or CNN during his presidency, with a large and consistent sentiment gap.

Combining the extensive and intensive margin results highlights novel evidence on the strategic choices of networks over time — Fox in particular appears to be focusing more of its time on demonizing Democrats and has utilized less airspace to prop up Republicans. Along the extensive margin, MSNBC appears to be converging to the stance of CNN by relatively decreasing the frequency of both Democratic

and Republican mentions. The rhetoric around Republicans also appears to be less negative than in the early sample. Simultaneously, MSNBC appears to be increasingly positive around Democrats.

4   Selling Anger Across Topics

The largest advantage of our method is the ability to examine any topic that is presented in the universe of Wikipedia tags or any entity matched via the spaCy algorithm. Although the existing literature (i.e. Gentzkow, Shapiro, and Taddy (2019)) provides an innovative process to infer partisanship, it cannot tell us much about the slant of the media more broadly since, by design, the algorithms focus on the Democratic and Republican margins.

In this section, we use our technique to examine the media slant on four different topics that have shaped much of the public discourse over the last decade. First, we study the coverage of female individuals in the media. Topics such as the me-too movement, and sex equality more generally, have been central in social debates. We then move to study racial issues, studying the coverage of people of African-American descent, another salient social issue in the US, particularly after the George Floyd death in 2020. We conclude our analysis by studying the coverage of LGBTQ people and Supreme Court justices, associated with the gay rights movement and abortion, another two topics at the epicenter of "culture wars" in our society. We conclude our analysis extending our analysis to named entities that are not people, geographical names (states) and organizations (the White House), which we argue have their own political spin in cable news.

4.1   Culture wars

We note that our analysis in the following section is agnostic regarding what particular females/African-Americans/LGBTQ people do. We will separately analyze politicians, journalists and the rest of people, as our previous analysis shows the prominence of political figures and journalists in our corpora. We will leave other categorizations out of our analysis by design: we simply want to provide a picture of how the major TV networks cover people belonging to these different groups. We note that the previous literature, which has focused on the coverage of politics, has not addressed these other aspects of the slant of mainstream media, but our new methodology can be easily adapted to look at these other categories of groups. The empirical design is identical to our previous analysis, but instead of looking at Republicans/Democrats, we will look at females, African-Americans and LGBTQ people.

4.1.1   Females in cable news

In Panel A of Table 10 we present our analysis regarding the coverage of females in cable TV. The first striking fact we present is along the extensive margin, documented in Panel A: only about 18% of all people discussed in cable news are female, with a total coverage of 10.3% for female politicians. Among the political females in our sample, the most talked about are Hillary Clinton, Nancy Pelosi, Kamala Harris, Elizabeth Warren, Angela Merkel and Michelle Obama. The most frequently discussed females

that are not politicians are Janet Yellen, Andrea Mitchell, Maria Bartiromo, Kellyanne Conway, Dana Bash, Jen Psaki, Brooke Baldwin and Laura Ingraham. It is rather shocking that, with the exception of Janet Yellen, the top ten females are all either elected politicians or journalists. Table A1 in the Appendix gives a more comprehensive list of the people we study in this section, with their respective frequency counts. Given the prevalence of politicians and journalists, we will break down the coverage into three different groups: politicians, journalists, and the rest of the females that appear in TV.

Turning to the differential coverage among networks of females overall, column one shows that Fox News covers female politicians more extensively than CNN, by 5.2%, while the point estimate for MSNBC is 1.66%. On the other hand, CNN covers other females (journalists, and others) more broadly, by 0.7-1.1% percentage points.

Regarding tone differences, the last three columns of Panel A of Table 10 shows that Fox News is significantly more negative than CNN towards female politicians, with a point estimate of −4.1, while MSNBC is relatively more positive (point estimate of 4.27). These results echo our previous results on politicians, given that the female representation in US politics tilts towards Democrats.[20]

4.1.2 African-Americans in cable news

In Panel B of Table 10 we present our results regarding the coverage of African-American people in cable TV during our sample period. We start highlighting that the total coverage of such people in the TV networks as a percent of all people mentioned in a given day amounts to 11.2 %, close to the fraction of African-Americans in the total population of the US.[21] As expected, the coverage is centered on African-American politicians, which amount to 6.96% of the coverage, with journalists comprising 1.36%, and 2.28% for the coverage for other African-Americans.

The most talked about African-American politician is, as expected, Barrack Obama, followed by Kamala Harris, Ben Carson, Michelle Obama, and Susan Rice. On the non-political side, the most frequently mentioned African Americans are George Floyd, Trayvon Martin, Don Lemon, Al Sharpton, Craig Melvin, and Lebron James. Table A1 in the Appendix gives a more comprehensive list of the people we study in this section, with their respective frequency counts.

Turning to the relative coverage across networks, we see that relative to CNN, both Fox News and MSNBC cover African-American politicians more extensively, with Fox News' point estimate for African-American politicians standing out at 4.25%. This mirror our previous analysis, as the only presidential candidate who is African-American in our sample is Barrack Obama (Democrat). Interestingly, Fox News covers other African-American people less, −0.42% relative to CNN for journalists, and −1.32% less for all other African-Americans.

In Panel B of 10, we also study the sentiment around mentions of African-American people. Column one

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[20]For example, the 118th Congress has 15 Democratic female senators, versus 9 Republican, while in the House of Representatives, there are 92 Democratic females, compared to 34 who are Republican.

[21]In 2021, 40.1 million people in the United States were non-Hispanic black, which amounts to 12.1 percent of the total population.

shows that Fox News is more negative than CNN when talking about African Americans in general, with the negativity present among all subgroups, most salient with regards to journalists, but also politicians and other African-Americans. On the other hand, MSNBC is more positive than CNN towards politicians and journalists of African-American descent.

4.1.3 Media coverage of LGBTQ

To document the attitude toward the LGBTQ community on major news networks, we employ an analogous procedure as above around entities with tags of "Gay", "Lesbian", or "LGBTQ." We then perform a cross-sectional and time-series analysis along the extensive and intensive margins for these topics, as in previous sections. The top members of the LGBTQ category who are politicians are George Santos, Pete Buttigieg, Mark Meredith, Andrew Gillum, Krysten Sinema and Tammy Baldwin. On the non-political side, we find Tim Cook, Don Lemon, Anderson Cooper, Pete Williams, Jeff Zeleny and Steve Kornacki. Table A1 in the Appendix gives a more comprehensive list of the people we study in this section, with their respective frequency counts.

In Panel C of Table 10, we first see that the frequency of LGBTQ characters is TV is less than 2%: 0.32% of all entries in our panel correspond to LGBTQ politicians, with 0.97% journalists, and 0.52% LGBTQ figures outside these two groups. Cross-sectionally speaking, all networks seem to have a similar overall extensive coverage of LGBTQ politicians, with Fox News and MSNBC covering journalists significantly less than CNN (-1.33 and -0.90 percent respectively).[22]

In Panel C of Table 10, we see in the first two columns that the sentiment in Fox News regarding LGBTQ politicians is rather negative, at -9.65 basis points relative to CNN, even more negative for LGBTQ journalists. This differential coverage is concentrated among politicians and journalists. We do not find any significant differences between the coverage of MSNBC and CNN along this margin.

4.2 Coverage of the Supreme Court

We next study the coverage of the members of the Supreme Court. As discussed in Section 2.2, in the context of Table 3, the share of all people discussed that are part of the Supreme Court is rather small, less than 1% of the total sample. Nonetheless, their decisions can shape many important aspects of life in the United States, as evidenced with their decision overturning Dobb versus Wade in May 2021.

Table 11 presents our main results, using the same empirical design as previously along the extensive margin, including indicator variables around the dates when "Dobbs vs. Jakcson Women's Health Organization" was decided, the case that eventually eliminated federal abortion rights in the United States. We construct three time-series variables that take on the value of one during these different periods: (1) the period between the date when SCOTUS agreed to petition to take up the case on May 17th, 2021, and the oral arguments that started on December 1st, 2021; (2) the period from the oral arguments until the decision was made public on June 24th, 2022; (3) the 150 days after the decision was made public.

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[22]It should be noted that two of the main hosts in CNN, Don Lemon and Anderson Cooper, are gay.

The omitted variable is the 150 days prior to May 17th, 2021.

In the first column, we see that CNN, the omitted channel, has only a 0.09% coverage of Supreme Court justices prior to May 17th, 2021. This rate increases significantly during our sample period, with coverage over 1% between the oral hearings and the final decision. MSNBC's coverage is similar to that in CNN, with slightly higher numbers after the oral arguments. Fox News' coverage of the Supreme starts at the highest rate of the three networks, at 0.66%, but then it drops by 39, 46 and 64 basis points during the three time periods we study. MSNBC's coverage of members of the Supreme Courts follows closely that of CNN.

Our evidence from Table 11 suggests a similar pattern by Fox News. They appear to suppress the discussion of contentious issues, the same way that they overall talk less about Republican candidates, particularly since Donald Trump became the Republican party leader.

4.3 Other named entities

In this section, we examine news coverage of named entities that are not people, such as organizations and geographical names. First, we study US states, focusing on how TV networks cover them as a function of their political leanings. We finish by studying the coverage of the White House, an entity that changed party twice during our sample.

In Table 12, we present our baseline specifications, where the state names are classified by the Republican vote margin in the three presidential elections in our sample (2012, 2016, 2020). We include year-month, state, and network fixed effects in our regressions. Along the extensive margin, presented in Panel A of Table 12 we see that Fox News coverage does not vary along the Republican vote share in 2012, but it starts to tilt significantly towards covering states that lean Democratic in 2016, and even more so in 2020 (three times as large coefficient compared to 2016). For MSNBC, we see a tilt towards covering Republican states, which is fairly constant throughout the three election years under consideration.

In Panel B of Table 12 presents the results with respect to the sentiment expressed toward these states. Not surprisingly, Fox News' sentiment toward Republican states is consistently positive, with the largest point estimate (49.4) in the 2020 election. Consistent with our prior results, we find the opposite point estimates for MSNBC, albeit less pronounced than Fox News, with particularly negative sentiment during the last presidential election in 2020.

Table A4 in the Appendix presents a time series analysis as in Table 8, focusing on California and Florida, complementing and highlighting the drivers of the resuls in Table 12. We find that Fox News (MSNBC) increase their coverage of California (Florida), also becoming more negative on their sentiment towards the state.

In Table 13 we study the coverage of the White House. We run our baseline specifications for three different periods: 2013–2016 (Obama as president), 2017–2020 (Trump) and 2021–2024 (Biden). In Panel A we find that Fox News dramatically cuts its discussions of the White House during the Trump

presidency relative to CNN and MSNBC. The results along the sentiment margin, presented in Panel B, are even more striking, with Fox News changing its narratives around the White House as a function of the party that controls it.

5 Conclusion

Our paper studies TV news, using people as a measure of the content offered by the different networks. We find a trend towards covering more the opposing group, Fox News focusing on Democrats, with MSNBC emphasizing Republicans relative to CNN. Increasingly negative sentiment accompanies this coverage, which we label as "selling anger." Our findings complement those in the literature showing increased polarization in media using cable news as the main corpora, and a new method using named entities. We offer new evidence that a trend toward affective polarization — vilification of the "other" group — correlates with the selling anger phenomenon.

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Donald Trump

235 languages ⌄

Article   Talk

Read   View source   View history   Tools ⌄

From Wikipedia, the free encyclopedia

For other uses, see Donald Trump (disambiguation).

Donald John Trump (born June 14, 1946) is an American politician, media personality, and businessman who served as the 45th president of the United States from 2017 to 2021.

Trump received a BS in economics from the University of Pennsylvania in 1968, and his father named him president of his real estate business in 1971. Trump renamed it the Trump Organization and expanded its operations to building and renovating skyscrapers, hotels, casinos, and golf courses. After a series of business reversals in the late twentieth century, he successfully launched various side ventures that required little capital, mostly by licensing the Trump name. From 2004 to 2015, he co-produced and hosted the reality television series *The Apprentice*. He and his businesses have been plaintiff or defendant in more than 4,000 state and federal legal actions, including six business bankruptcies.

Trump won the 2016 presidential election as the Republican nominee against Democratic nominee Hillary Clinton while losing the popular vote.[a] During the campaign, his political positions were described as populist, protectionist, isolationist, and nationalist. His election and policies sparked numerous protests. He was the first U.S. president with no prior military or government experience. The 2017–2019 special counsel investigation established that Russia had interfered in the 2016 election to favor Trump's campaign. Trump promoted conspiracy theories and made many false and misleading statements during his campaigns and presidency, to a degree unprecedented in American politics. Many of his comments and actions have been characterized as racially charged or racist and many as misogynistic.

As president, Trump ordered a travel ban on citizens from several Muslim-majority countries, diverted military funding toward building a wall on the U.S.-Mexico border, and implemented a policy of family separations for migrants detained at the U.S. border. He weakened environmental protections, rolling back more than 100 environmental policies and regulations. He signed the Tax Cuts and Jobs Act of 2017, which cut taxes for individuals and businesses and rescinded the individual health insurance mandate penalty of the Affordable Care Act. He appointed Neil Gorsuch, Brett Kavanaugh, and Amy Coney Barrett to the U.S. Supreme Court. He initiated a trade war with China and withdrew the U.S. from the proposed Trans-Pacific Partnership trade agreement, the Paris Agreement on climate change, and the Iran nuclear deal. He met with North Korean leader Kim Jong Un three times but made no progress on denuclearization. He reacted slowly to the COVID-19 pandemic, ignored or contradicted many recommendations from health officials, used political pressure to interfere with testing efforts, and spread misinformation about unproven treatments.

Trump lost the 2020 presidential election to Joe Biden. He refused to concede defeat, falsely claiming

Donald Trump	
	Official portrait, 2017
45th President of the United States	
In office	
January 20, 2017 – January 20, 2021	
Vice President	Mike Pence
Preceded by	Barack Obama
Succeeded by	Joe Biden
Personal details	
Born	Donald John Trump June 14, 1946 (age 77) Queens, New York City, U.S.
Political party	Republican (1987–1999, 2009–2011, 2012–present)
Other political affiliations	Reform (1999–2001) Democratic (2001–2009) Independent (2011–2012)

V·T·E	**Donald Trump**	[show]
V·T·E	**Presidents of the United States**	[show]
	Offices and distinctions	[show]
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Categories: Donald Trump | 1946 births | Living people | Trumpism | 20th-century American businesspeople | 21st-century American businesspeople | 21st-century presidents of the United States | American billionaires | American casino industry businesspeople | American chairpersons of corporations | American computer businesspeople | American conspiracy theorists | American critics of Islam | American hoteliers | American Internet company founders | American nationalists | American people of German descent | American people of Scottish descent | American real estate businesspeople | American reality television producers | American television hosts | Businesspeople from Queens, New York | Candidates in the 2000 United States presidential election | Candidates in the 2016 United States presidential election | Candidates in the 2020 United States presidential election | Candidates in the 2024 United States presidential election | COVID-19 conspiracy theorists | Florida Republicans | Impeached presidents of the United States | Illeists | New York Military Academy alumni | New York (state) Democrats | New York (state) Independents | New York (state) Republicans | People associated with Russian interference in the 2016 United States elections | People charged under the Espionage Act of 1917 | People charged with fraud | People charged with racketeering | People stripped of honorary degrees | Politicians from Queens, New York | Presidents of the United States | Reform Party of the United States of America politicians | Republican Party (United States) presidential nominees | Republican Party presidents of the United States | Right-wing populism in the United States | Right-wing populists | The State of Georgia v. Donald J. Trump, et al. defendants | Television producers from Queens, New York | Time Person of the Year | Trump family | The Trump Organization employees | United States Football League executives | Wharton School of the University of Pennsylvania alumni | WWE Hall of Fame inductees

This figure provides a screenshot of the top and bottom of Donald Trump's Wikipedia page highlighting the information we study.

Figure 1: Sample entry from Wikipedia
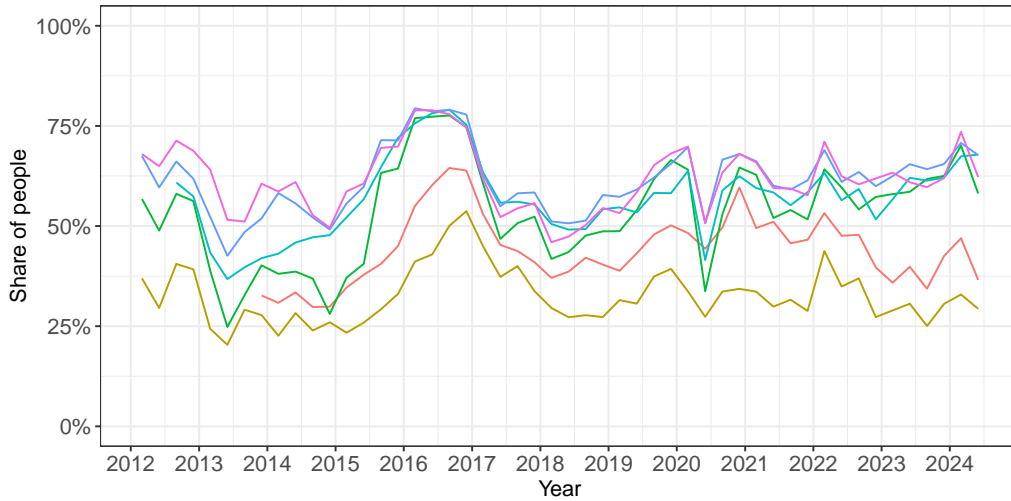
(a) Politicians
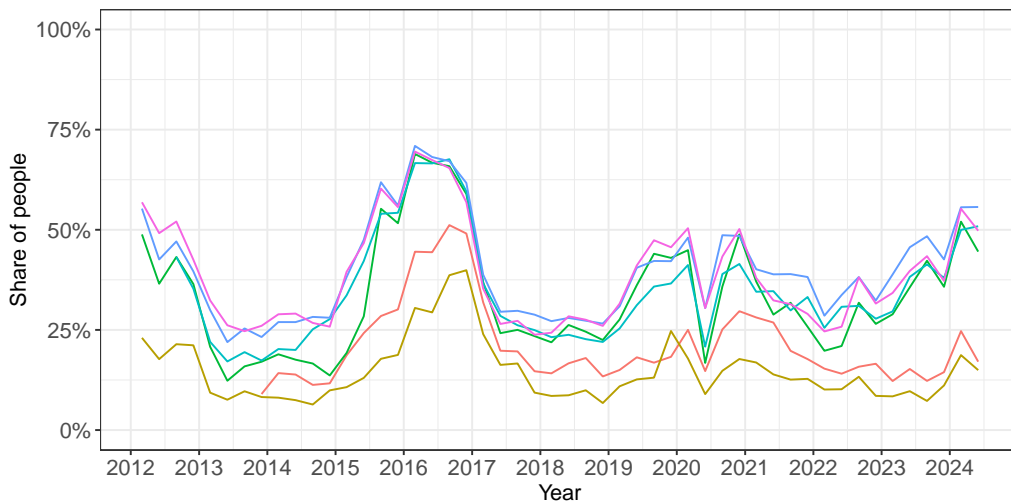
(b) Presidential candidates

For each day and channel, we compute the percentage of mentions, of politicians and presidential candidates. The figure reports quarterly averages for Bloomberg TV, CNBC, CNN, Fox Business, Fox News, and MSNBC.

Figure 2: Extensive margin of politicians over time
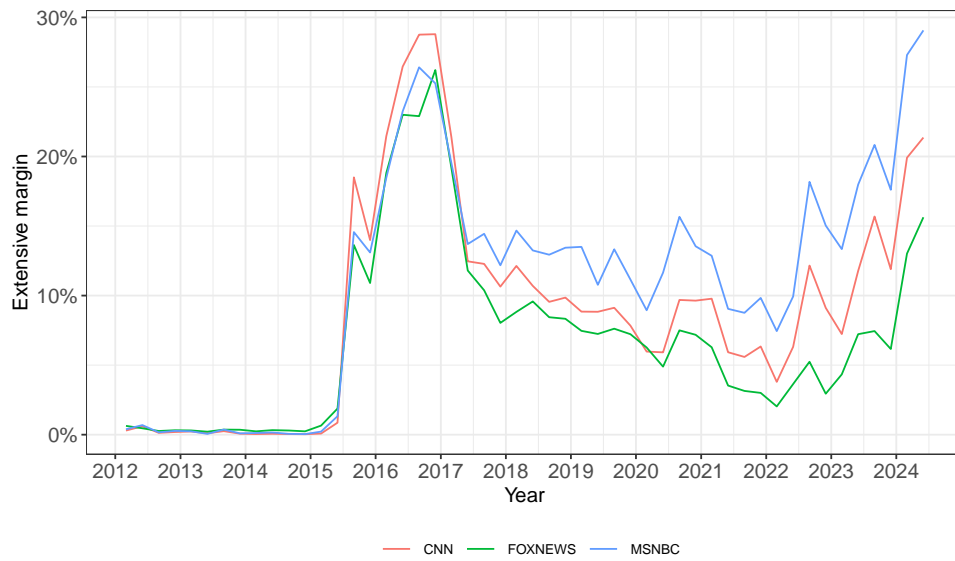
(a) Donald Trump
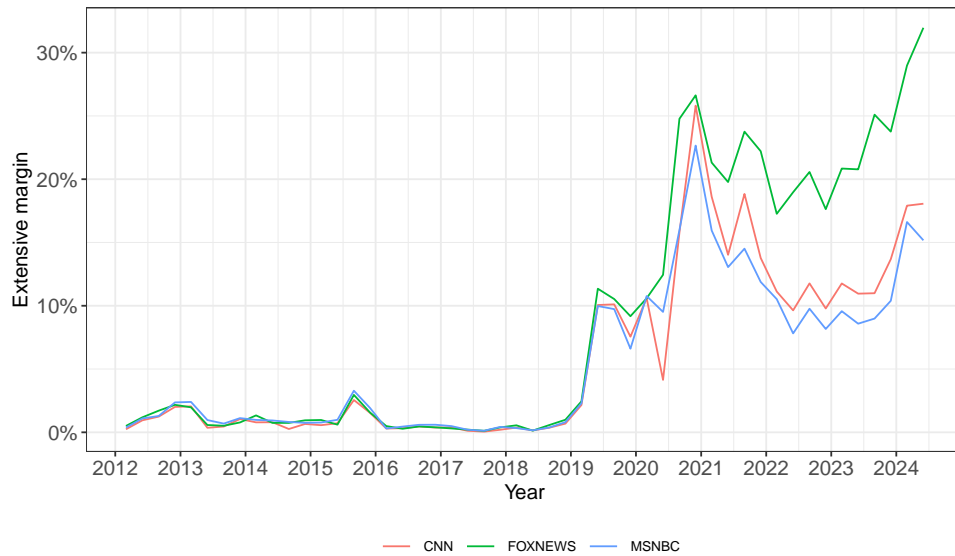
(b) Joe Biden

For each day and channel, we compute the percentage of mentions, $p_{i,c,t}$, of Donald Trump and Joe Biden. The figure reports quarterly averages for CNN, Fox News and MSNBC.

Figure 3: Extensive margin of Donald Trump and Joe Biden over time
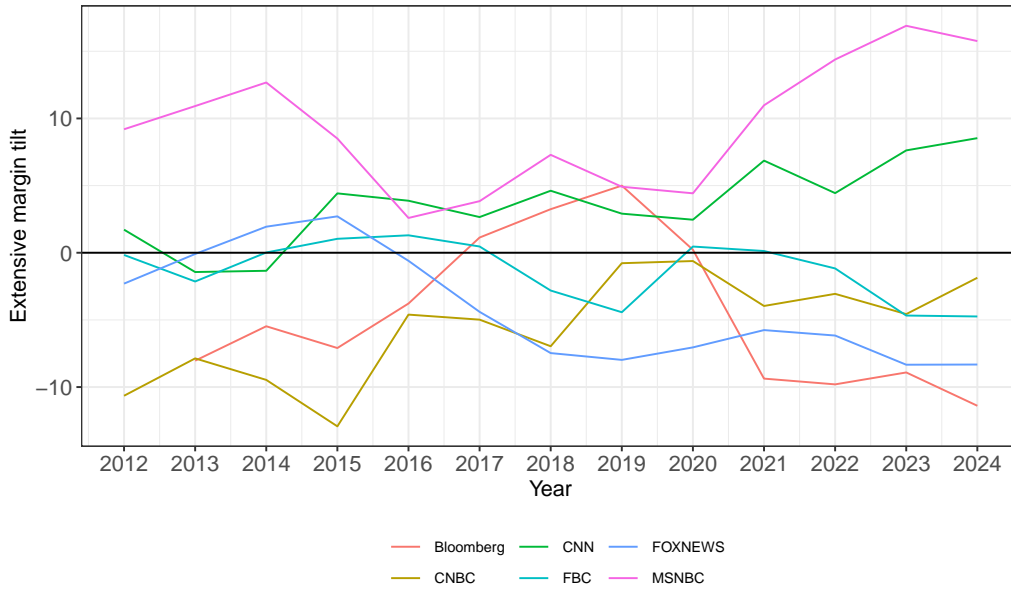
(a) Extensive margin tilt
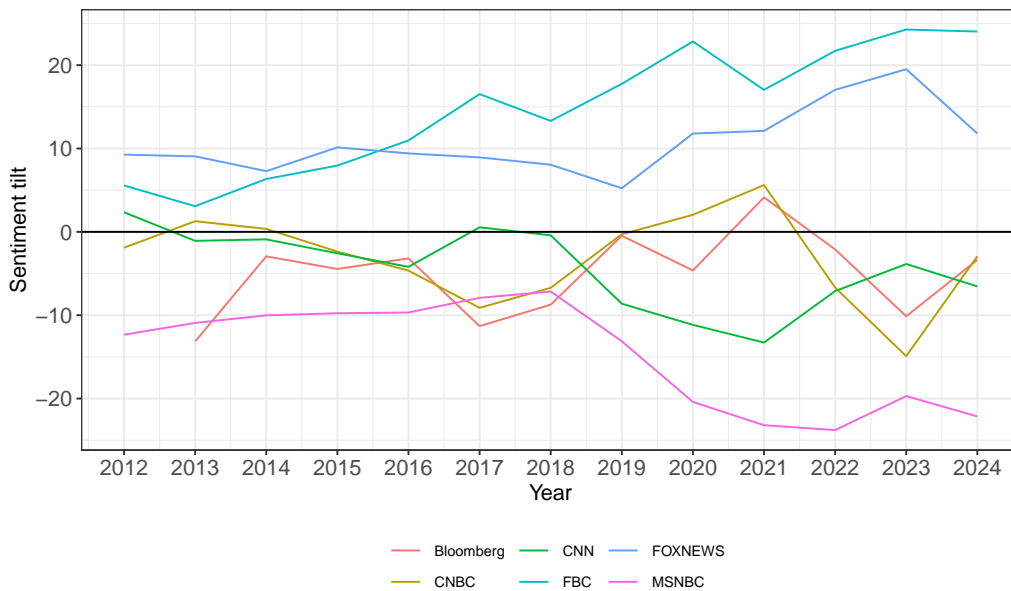
(b) Sentiment tilt

For each day and channel, we compute the extensive margin tilt, defined as the difference in the percentage of Republicans minus the percentage of Democrats in a given channel, relative to the average across all networks. The annual averages are plotted in the top graph. The bottom figure displays the political tilt in sentiment, defined as the average sentiment towards Republican people minus the sentiment towards Democratic people, relative to the average across all networks. The figure reports yearly averages of the political tilt.

Figure 4: Political tilt over time
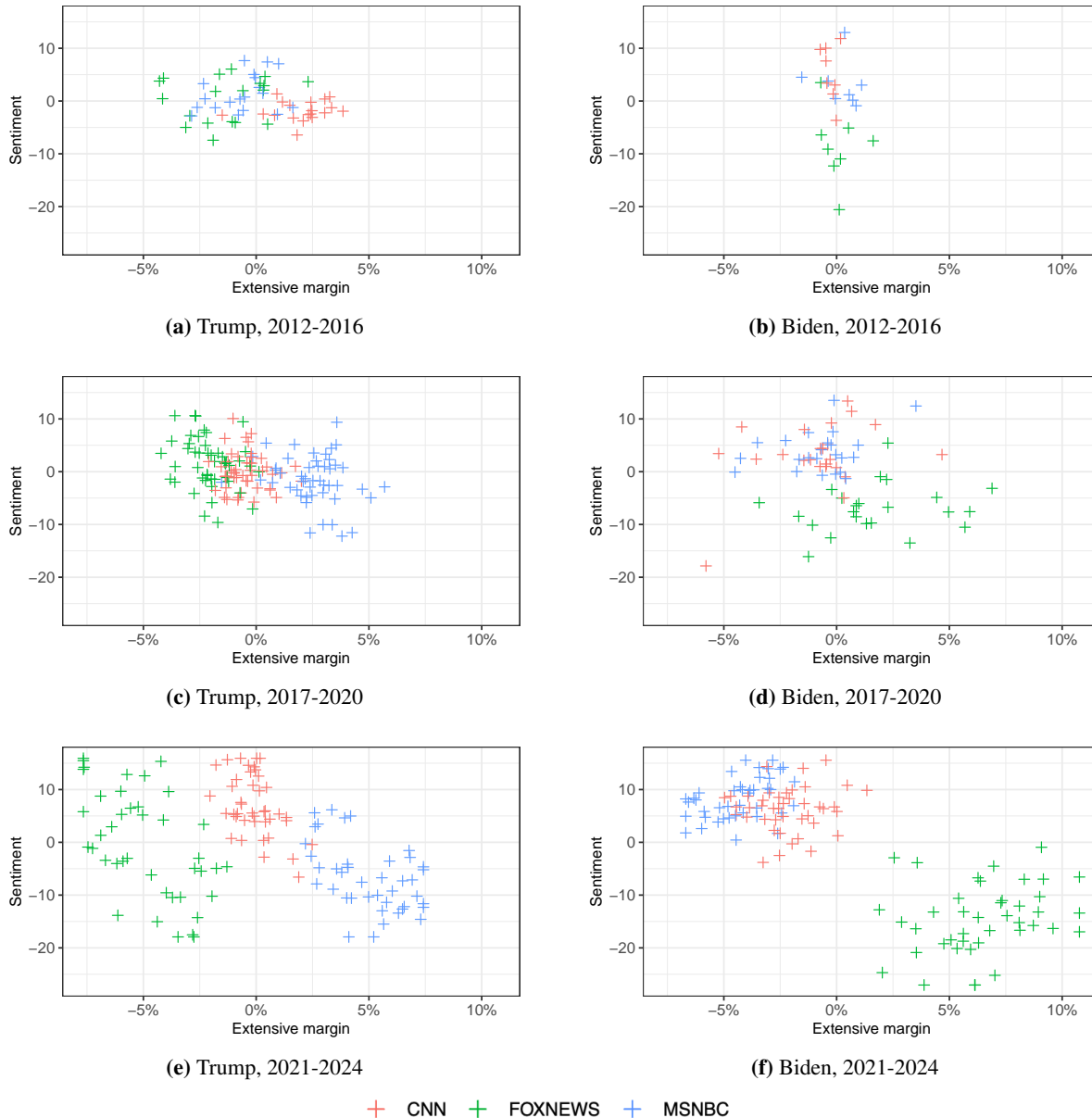
(a) Trump, 2012-2016

(b) Biden, 2012-2016

(c) Trump, 2017-2020

(d) Biden, 2017-2020

(e) Trump, 2021-2024

(f) Biden, 2021-2024

CNN   FOXNEWS   MSNBC

For each day, we compute the extensive margin of either Biden or Trump, and average across all networks. We then defined the residual extensive margin to be the difference between a given network's extensive margin coverage, and this daily average. We perform a similar calculation for the sentiment across all networks, also on a daily average. The figure plots the monthly averages for Trump and Biden for three different periods (2012-2016, 2017-2020, 2021-2024). We remove days for which there are less than ten mentions of Biden/Trump, or months for which there are less than five days with mentions of Biden/Trump.

Figure 5: Extensive versus sentiment margins across networks

Table 1: Shows in different networks

This table reports the main shows, by frequency, for each of the three networks under study. The column "Start time" gives the median start time for the show, whereas "First/Last date" gives the first/last time the show appears in our dataset. Show length is the median show length in minutes.

Show name	Observations	Start time	First date	Last date	Show length
CNN					
CNN Newsroom	26,675	13	2012-01-01	2024-06-27	60 mins
New Day	7,930	7	2013-06-17	2022-10-31	61 mins
Anderson Cooper 360	6,663	20	2012-01-02	2024-06-27	60 mins
CNN Tonight	4,749	22	2014-04-14	2023-10-09	60 mins
Early Start	4,325	5	2012-01-02	2024-02-23	61 mins
The Situation Room With Wolf Blitzer	4,163	18	2012-01-02	2024-06-26	60 mins
Erin Burnett OutFront	3,705	19	2012-01-02	2024-06-27	60 mins
The Lead With Jake Tapper	3,594	16	2013-03-18	2024-06-26	60 mins
At This Hour	2,047	11	2014-03-19	2023-03-31	60 mins
CNN This Morning	1,912	7	2012-01-01	2024-06-28	60 mins
Fox News					
FOX and Friends	11,119	6	2012-01-01	2024-06-28	60 mins
Hannity	5,190	21	2012-01-02	2024-06-28	60 mins
The Five	4,191	17	2012-01-01	2024-06-27	60 mins
America's Newsroom	3,750	9	2012-01-02	2024-06-28	120 mins
Special Report With Bret Baier	3,596	18	2012-01-02	2024-06-27	60 mins
America's News HQ	3,467	14	2012-01-01	2021-02-28	61 mins
Outnumbered	3,415	12	2014-04-28	2024-06-27	60 mins
The Ingraham Angle	3,085	22	2017-10-30	2024-06-27	60 mins
FOX News	2,997	14	2012-01-01	2024-06-23	60 mins
Your World With Neil Cavuto	2,970	16	2012-01-02	2024-06-27	60 mins
MSNBC					
MSNBC Live	10,988	13	2012-01-02	2022-05-31	60 mins
The Last Word	3,672	22	2012-01-02	2024-06-27	60 mins
Morning Joe	3,309	6	2012-01-02	2024-06-27	180 mins
The Rachel Maddow Show	3,168	21	2012-01-02	2024-06-25	60 mins
All In With Chris Hayes	3,042	20	2013-04-02	2024-06-26	60 mins
Andrea Mitchell Reports	2,743	12	2012-01-02	2024-06-27	60 mins
The 11th Hour	2,632	23	2016-09-07	2024-06-27	60 mins
Dateline	2,213	3	2017-04-15	2024-06-24	60 mins
Hardball	2,155	19	2012-01-01	2020-03-05	60 mins
Deadline: White House	1,783	16	2017-05-10	2024-06-27	120 mins

Table 2: Most frequent people on TV

This table reports the 60 most frequently mentioned people in our data. The column CNN, Fox News, and MSNBC report the number of times (1000s) a given person is mentioned in the respective channel. The column wiki has the following entries: P for politicians, R for republicans, and D for Democrats.

Name	Count 1000s				Name	Count 1000s			
	CNN	Fox News	MSNBC	Wiki		CNN	Fox News	MSNBC	Wiki
Donald Trump	408.5	279.7	463.0	PR	Chris Christie	12.4	9.7	16.8	PR
Joe Biden	231.8	350.7	238.4	PD	Anthony Fauci	15.3	12.0	10.7	
Hillary Clinton	168.0	189.8	135.2	PD	John Kerry	11.3	15.5	10.3	PD
Vladimir Putin	153.1	101.4	127.4	P	Nikki Haley	14.6	10.4	11.8	PR
Barack Obama	88.6	120.0	86.4	PD	Mike Pence	13.3	9.1	12.9	PR
Mitt Romney	77.4	69.6	113.2	PR	Rand Paul	8.0	14.5	12.4	PR
Bernie Sanders	55.5	62.3	55.1	P	John Bolton	10.2	10.5	11.1	PR
Kamala Harris	23.7	107.5	28.2	PD	Jack Smith	9.0	3.1	19.5	
Nancy Pelosi	31.6	62.8	35.8	PD	John Boehner	8.6	8.4	14.1	PR
Rudy Giuliani	49.8	17.1	49.8	PR	Rick Santorum	10.2	8.7	11.7	PR
Michael Cohen	44.2	13.2	42.3	RD	George Zimmerman	14.9	7.2	8.0	
Mitch McConnell	31.5	24.7	42.3	PR	Ben Carson	9.7	10.4	8.3	PR
Elizabeth Warren	26.6	30.1	34.7	PD	Trayvon Martin	13.0	6.6	8.6	
Bill Clinton	26.3	30.7	27.7	PD	Joe Manchin	7.7	8.7	11.3	PD
Michael Flynn	31.6	21.4	24.8	RD	Lindsey Graham	7.8	10.7	8.6	PR
Kevin McCarthy	22.9	16.2	28.5	PR	John Kasich	9.7	7.9	8.8	PR
Marco Rubio	21.4	21.2	22.6	PR	John Roberts	3.0	18.7	3.4	
John McCain	23.4	16.0	23.9	PR	Andrea Mitchell	0.1	0.5	24.5	
Robert Mueller	25.7	14.9	22.5	R	Harry Reid	5.1	11.6	7.9	PD
Jeb Bush	18.8	15.6	22.1	PR	Jim Jordan	6.0	9.9	8.4	PR
Paul Ryan	16.6	15.5	20.8	PR	Benjamin Netanyahu	9.9	7.2	6.1	P
William Barr	16.9	12.6	21.9	R	John Kelly	9.2	4.2	8.8	
Ron DeSantis	15.1	17.5	18.5	PR	Jared Kushner	9.5	2.7	9.3	R
James Comey	17.3	20.2	10.6		Paul Manafort	8.6	3.8	8.6	R
George W. Bush	14.5	15.1	18.5	PR	Michael Brown	10.3	5.2	5.1	
Kim Jong Un	25.8	10.4	10.9		Kellyanne Conway	7.0	7.1	4.9	R
George Floyd	16.6	11.4	18.7		Michelle Obama	7.3	5.7	5.9	PD
Chuck Schumer	11.1	21.1	14.4	PD	Roy Moore	7.7	3.6	7.4	PR
Steve Bannon	15.8	5.9	18.2	R	Osama bin Laden	5.9	8.9	3.8	
Ronald Reagan	10.8	15.6	12.6	PR	Andrew Cuomo	4.3	9.6	4.4	PD

Table 3: Categories

This table provides an overview on categories associated with people on TV. Panel A provides information on raw categories as provided by Wikipedia while Panel B reports the constructed categories used in the paper. We reports the share of unique individuals and signals associated with a category. We sort based on the cross-channel average share of signals associated with a category.

Panel A: Wikipedia categories

Category	Individuals (in pct.)	Signals (in pct.)						
		CNN	Fox News	MSNBC	FBC	CNBC	Bloomberg	Average
(num) births	91.47	96.70	97.62	97.78	95.88	96.46	96.73	96.86
Living people	76.33	90.40	91.48	91.10	86.94	86.92	91.13	89.66
Candidates in the (num) United States presidential election	1.86	40.46	45.36	44.39	27.68	18.39	41.85	36.35
(num)-century American politicians	5.79	29.13	38.27	32.69	19.61	16.00	34.59	28.38
Time Person of the Year	0.34	28.23	29.93	29.56	22.71	14.84	27.01	25.38
American people of English descent	3.13	22.88	28.50	24.30	15.38	13.36	26.16	21.77
(num)-century American lawyers	3.28	23.88	28.73	24.41	15.74	10.91	26.66	21.72
American people of Scottish descent	1.59	24.15	21.98	25.80	17.71	10.44	21.90	20.33
(num)-century presidents of the United States	0.34	22.29	24.14	24.49	15.65	9.05	23.06	19.78
Presidents of the United States	0.34	22.29	24.14	24.49	15.65	9.05	23.06	19.78
American people of German descent	2.75	21.84	19.03	24.85	15.65	12.27	18.21	18.64
(num)-century American businesspeople	4.20	18.35	14.48	20.81	19.43	19.80	16.30	18.19
American political writers	2.70	19.00	21.75	21.48	12.32	9.35	20.67	17.43
New York (state) Democrats	1.24	19.25	16.65	20.71	17.27	10.40	18.79	17.18
American people of Irish descent	4.30	18.58	23.86	19.15	10.64	9.99	19.94	17.03

Panel B: Constructed categories

Category	Individuals (in pct.)	Signals (in pct.)						
		CNN	Fox News	MSNBC	FBC	CNBC	Bloomberg	Average
Politician	15.91	57.90	63.76	64.10	60.83	34.73	48.35	59.53
Republican	10.71	35.19	31.03	40.60	31.92	21.05	24.64	33.82
Democrat	10.06	26.29	36.96	29.22	33.41	19.29	21.68	29.84
Republican Presidential candidate	0.47	20.44	16.20	23.94	15.13	7.20	13.30	18.62
Democratic Presidential candidate	0.38	16.13	24.48	16.26	21.58	9.28	11.69	18.20
Republican non Presidential candidate	10.24	14.76	14.83	16.66	16.79	13.85	11.34	15.20
Democratic non Presidential candidate	9.68	10.16	12.48	12.97	11.82	10.01	9.99	11.64
Journalists	5.17	13.57	12.39	10.15	10.11	16.17	5.86	11.64
Female	15.20	17.20	20.08	15.70	20.01	16.00	16.44	17.70
African-American	6.65	9.25	12.13	9.64	7.84	5.03	4.15	9.41
LGBTQ	2.73	2.19	1.13	1.56	1.21	2.52	1.67	1.64
Supreme court justice	0.05	0.29	0.79	0.37	0.26	0.09	0.12	0.42

Table 4: Cross-sectional differences in coverage across networks – journalists

In Panel A we report estimates from the regression model (1), which estimates the extensive margin differences across networks. The regression model has year-month fixed effects. Standard errors are two way clustered at the network $\times$ year and year $\times$ month level and presented in parenthesis. CNN is the omitted network, so the point estimates on Fox News and MSNBC represent deviations from the CNN coverage. In the last two rows, we report mean and standard deviation of the respective dependent variables. In Panel B we report estimates from the regression model (2), which estimates the differential sentiment across networks, with CNN being again the omitted variable. Sentiment is computed with the AFINN dictionary and is normalized to zero mean and unit standard deviation. The panel presents the point estimates in percent (and standard errors) associated with β. All specifications in Panel B include year-month, show-year, and individual fixed effects. Standard errors, in parenthesis, are three way clustered at the show, network $\times$ year, and year $\times$ month level.

Panel A: Extensive margin

Dependent Variables:	CNN journalist	Fox News journalist	MSNBC journalist
Model:	(1)	(2)	(3)
Variables			
Fox News	-11.98***	9.99***	0.45***
	(0.84)	(0.49)	(0.15)
MSNBC	-12.69***	0.09	7.63***
	(0.83)	(0.28)	(0.19)
Fit statistics			
Observations	13,688	13,688	13,688
Adjusted R^2	0.69	0.80	0.73
Outcome mean	6.35	4.45	3.67
Outcome std dev	7.42	5.64	4.21

Panel B: Sentiment

Individual group:	CNN journalist	Fox News journalist	MSNBC journalist
Model:	(1)	(2)	(3)
Variables			
Fox News	0.78	19.34***	1.02
	(2.14)	(4.23)	(4.23)
MSNBC	-5.35**	-8.12***	22.41***
	(2.48)	(2.02)	(2.42)
Fit statistics			
Observations	10,656,705	10,656,705	10,656,705
Adjusted R^2	0.10	0.10	0.10

Table 5: Cross-sectional differences in coverage across networks – politicians

In Panel A we report estimates from the regression model (1), which estimates the extensive margin differences across networks. The regression model has year-month fixed effects. Standard errors are two way clustered at the network × year and year × month level and presented in parenthesis. CNN is the omitted network, so the point estimates on Fox News and MSNBC represent deviations from the CNN coverage. In the last two rows, we report mean and standard deviation of the respective dependent variables. In Panel B we report estimates from the regression model (2), which estimates the differential sentiment across networks, with CNN being again the omitted variable. Sentiment is computed with the AFINN dictionary and is normalized to zero mean and unit standard deviation. The panel presents the point estimates in percent (and standard errors) associated with β. All specifications in Panel B include year-month, show-year, and individual fixed effects. Standard errors, in parenthesis, are three way clustered at the show, network × year, and year × month level.

Panel A: Extensive margin

Dependent Variables:	Politician	Republican	Democrat
Model:	(1)	(2)	(3)
Variables			
Fox News	8.12***	-1.35	11.25***
	(1.19)	(1.32)	(0.98)
MSNBC	8.34***	7.03***	4.44***
	(1.48)	(1.14)	(0.95)
Fit statistics			
Observations	13,688	13,688	13,688
Adjusted R^2	0.54	0.56	0.49
Outcome mean	58.96	33.09	29.88
Outcome std dev	14.85	14.88	11.83

Panel B: Sentiment

Individual group:	Politician	Republican	Democrat
Model:	(1)	(2)	(3)
Variables			
Fox News	0.68	13.05***	-11.51***
	(1.98)	(2.83)	(2.30)
MSNBC	-0.71	-8.13***	7.71***
	(1.73)	(2.53)	(1.97)
Fit statistics			
Observations	10,656,705	10,656,705	10,656,705
Adjusted R^2	0.10	0.10	0.10

Table 6: Cross-sectional differences in coverage across networks – presidential candidates/others

In Panel A we report estimates from the regression model (1), which estimates the extensive margin differences across networks. The regression model has year-month fixed effects. Standard errors are two way clustered at the network × year and year × month level and presented in parenthesis. CNN is the omitted network, so the point estimates on Fox News and MSNBC represent deviations from the CNN coverage. In the last two rows, we report mean and standard deviation of the respective dependent variables. In Panel B we report estimates from the regression model (2), which estimates the differential sentiment across networks, with CNN being again the omitted variable. Sentiment is computed with the AFINN dictionary and is normalized to zero mean and unit standard deviation. The panel presents the point estimates in percent (and standard errors) associated with β. All specifications in Panel B include year-month, show-year, and individual fixed effects. Standard errors, in parenthesis, are three way clustered at the show, network × year, and year × month level.

Panel A: Extensive margin

Dependent Variables:	Presidential candidates		Others	
	Republican	Democrat	Republican	Democrat
Model:	(1)	(2)	(3)	(4)
Variables				
Fox News	-2.28***	8.54***	0.93	2.72***
	(0.77)	(0.90)	(0.75)	(0.44)
MSNBC	4.30***	1.02	2.73***	3.42***
	(0.67)	(0.73)	(0.65)	(0.45)
Fit statistics				
Observations	13,688	13,688	13,688	13,688
Adjusted R^2	0.66	0.56	0.54	0.39
Outcome mean	17.94	18.03	11.94	15.06
Outcome std dev	10.52	12.30	7.08	10.13

Panel B: Sentiment

Dependent Variables:	Presidential candidates		Others	
	Republican	Democrat	Republican	Democrat
Model:	(1)	(2)	(3)	(4)
Variables				
Fox News	10.09***	-10.64***	10.84***	-5.92***
	(2.71)	(2.84)	(2.43)	(1.45)
MSNBC	-8.09***	6.31**	-2.59	6.32***
	(2.25)	(2.40)	(1.77)	(1.63)
Fit statistics				
Observations	10,656,705	10,656,705	10,656,705	10,656,705
Adjusted R^2	0.10	0.10	0.10	0.10

Table 7: Cross-sectional differences in coverage across networks – politicians, business news

In Panel A we report estimates from the regression model (1), which estimates the extensive margin differences across networks. The regression model has year-month fixed effects. Standard errors are two way clustered at the network $\times$ year and year $\times$ month level and presented in parenthesis. Bloomberg is the omitted network, so the point estimates on FBC and CNBC represent deviations from the Bloomberg coverage. In the last two rows, we report mean and standard deviation of the respective dependent variables. In Panel B we report estimates from the regression model (2), which estimates the differential sentiment across networks, with Bloomberg being again the omitted variable. Sentiment is computed with the AFINN dictionary and is normalized to zero mean and unit standard deviation. The panel presents the point estimates in percent (and standard errors) associated with β. All specifications in Panel B include year-month, show-year, and individual fixed effects. Standard errors, in parenthesis, are three way clustered at the show, network $\times$ year, and year $\times$ month level.

Panel A: Extensive margin

Dependent Variables:	Politician	Republican	Democrat
Model:	(1)	(2)	(3)
Variables			
FBC	13.65***	9.74***	11.60***
	(1.29)	(0.79)	(1.16)
CNBC	-10.94***	-1.89**	-3.42***
	(1.17)	(0.75)	(1.23)
Fit statistics			
Observations	11,799	11,799	11,799
Adjusted R^2	0.45	0.46	0.36
Outcome mean	45.11	23.09	24.01
Outcome std dev	19.56	14.08	13.70

Panel B: Sentiment

Individual group:	Politician	Republican	Democrat
Model:	(1)	(2)	(3)
Variables			
FBC	0.95	13.34***	-10.77***
	(2.11)	(2.16)	(1.67)
CNBC	0.90	3.42	-1.37
	(1.80)	(2.28)	(0.98)
Fit statistics			
Observations	2,886,654	2,886,654	2,886,654
Adjusted R^2	0.11	0.11	0.11

Table 8: Extensive margin and sentiment tilt over time

We report estimates from regressing extensive margin and sentiment tilt on a linear time trend for each network. For each day and channel, we compute tilt, both for extensive margin and sentiment. Extensive margin tilt is defined as the share of Republican among politicians mentioned on a given day minus the average across all channels on that day: $\%\text{Republican}_{c,t} - \overline{\%\text{Republican}_t}$. Sentiment tilt is defined as the difference between sentiment towards Republicans minus sentiment towards Democrats, minus the average sentiment tilt across channels on that day $\left(S_{c,t}^R - S_{c,t}^D\right) - \overline{\left(S_{c,t}^R - S_{c,t}^D\right)}$. The linear time trend takes a value of 0 on the first day of the sample and 1 on the last day. The panel presents the point estimates in percent. Standard errors, in parenthesis, are clustered at the monthly level.

Panel A: Extensive tilt

Dependent Variables:	$\%\text{Republican}_{c,t} - \overline{\%\text{Republican}_t}$					
Channel:	CNN	MSNBC	Fox News	Bloomberg TV	CNBC	Fox Business
Variables						
Intercept	-0.40	6.49***	1.40**	0.32	-10.43***	0.65
	(0.66)	(0.81)	(0.56)	(1.33)	(0.70)	(0.69)
Linear time trend	7.69***	5.32***	-10.73***	-7.16***	9.41***	-3.49***
	(1.32)	(1.54)	(0.88)	(2.11)	(1.31)	(1.30)
Fit statistics						
Observations	4,563	4,562	4,562	3,724	3,569	4,236
Adjusted R^2	0.05	0.02	0.13	0.01	0.03	0.01

Panel B: Sentiment tilt

Dependent Variables:	$\left(S_{c,t}^R - S_{c,t}^D\right) - \overline{\left(S_{c,t}^R - S_{c,t}^D\right)}$					
Channel:	CNN	MSNBC	Fox News	Bloomberg TV	CNBC	Fox Business
Variables						
Intercept	1.28	-6.65***	6.46***	-5.67**	-0.29	1.97
	(0.95)	(0.91)	(0.84)	(2.25)	(1.49)	(1.48)
Linear time trend	-11.13***	-15.34***	8.48***	2.10	-5.42*	24.46***
	(1.85)	(1.62)	(1.55)	(3.78)	(2.86)	(2.50)
Fit statistics						
Observations	4,562	4,561	4,560	3,507	3,239	4,187
Adjusted R^2	0.02	0.04	0.01	0.00	0.00	0.05

Table 9: Extensive margin and average news sentiment

We report estimates from regressing extensive margin per network and day, on daily cross-network averages of sentiment. Model 1 and 2 focuses on coverage of Donald Trump and Joe Biden. The regression model has year-month and network fixed effects. The panel presents the point estimates in percent. Standard errors, in parentheses, are clustered at the network and monthly level. CNN is the omitted network, so the point estimates on Fox News and MSNBC represent deviations from the CNN coverage.

Dependent Variables:	Trump	Biden
Variables		
Average sentiment $\times$ Fox News	1.08**	-1.91***
	(0.41)	(0.66)
Average sentiment $\times$ MSNBC	-2.11***	0.53
	(0.59)	(0.44)
Fit statistics		
Observations	12,596	12,932
Adjusted R^2	0.83	0.83

Table 10: Cross-sectional differences in coverage across networks – Different categories

In column 1 to 3 we report estimates from the regression model (1), which estimates the extensive margin differences across networks. In column 4 to 6 we report estimates from the regression model (2), which estimates the differential sentiment across networks. Panel A, B, and C consider the categories Female, African-Americans, and LGTBQ. Otherwise, the specification is identical to the ones in Table 4.

Panel A: Females

| Subset: | Extensive margin | | | Sentiment | | |
| | Politicians | Journalists | Other | Politicians | Journalists | Other |
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Fox News	5.22***	-1.41***	-1.09***	-4.10**	-4.68	0.43
	(0.40)	(0.38)	(0.20)	(1.91)	(3.57)	(1.86)
MSNBC	1.66***	-1.62***	-0.71***	4.27**	2.56	1.05
	(0.39)	(0.41)	(0.18)	(1.63)	(3.48)	(1.90)
Observations	13,688	13,688	13,688	10,656,705	10,656,705	10,656,705
Adjusted R^2	0.58	0.26	0.19	0.10	0.10	0.10
Outcome mean	10.30	4.38	3.20			
Outcome std dev	7.73	2.63	3.07			
Counts				1,474,315	521,209	435,888

Panel B: African-Americans

| Subset: | Extensive margin | | | Sentiment | | |
| | Politicians | Journalists | Other | Politicians | Journalists | Other |
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Fox News	4.25***	-0.42***	-1.32***	-4.50*	-19.79***	-3.77**
	(0.27)	(0.07)	(0.27)	(2.32)	(2.90)	(1.64)
MSNBC	1.24***	0.19**	-0.64***	8.31***	23.53***	0.26
	(0.22)	(0.08)	(0.23)	(2.67)	(3.65)	(0.69)
Observations	13,688	13,688	13,688	10,656,705	10,656,705	10,656,705
Adjusted R^2	0.50	0.18	0.34	0.10	0.10	0.10
Outcome mean	6.96	1.36	3.04			
Outcome std dev	5.26	1.30	4.81			
Counts				808,065	142,107	336,183

Panel C: LGBTQ

| Subset: | Extensive margin | | | Sentiment | | |
| | Politicians | Journalists | Other | Politicians | Journalists | Other |
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Fox News	0.02	-1.33***	-0.08	-9.65**	-21.28***	0.57
	(0.06)	(0.13)	(0.08)	(4.60)	(5.04)	(3.74)
MSNBC	0.07**	-0.90***	-0.02	6.79	7.10	3.18
	(0.03)	(0.10)	(0.06)	(4.19)	(8.12)	(3.85)
Observations	13,688	13,688	13,688	10,656,705	10,656,705	10,656,705
Adjusted R^2	0.26	0.22	0.09	0.10	0.10	0.10
Outcome mean	0.32	0.97	0.52			
Outcome std dev	0.95	1.32	1.07			
Counts				38,026	99,327	85,223

Table 11: Cross-sectional differences in coverage across networks – Supreme Court justices

This table report estimates from regressing the extensive margin of Supreme Court justices per day and network on network fixed effects interacted with time period fixed effects. Three periods are considered: the period between taking up the case and oral hearings, the period between the start of oral hearings and the decision, and the time after the decision. The exact dates are: SCOTUS agreed to take up the case on 17th of May, 2021. Oral arguments started on 1st of December, 2021. The decision by the SCOTUS was made public on 24th of June, 2022. The sample starts 150 days before the Supreme Court (SCOTUS) agreed to take up the case of Dobbs v. Jackson Women's Health Organization to 150 days after the decision. Standard errors presented in parenthesis are two way clustered at the network $\times$ year and year $\times$ month level and presented in parenthesis. CNN is the omitted network, so the point estimates on Fox News and MSNBC represent deviations from the CNN coverage. In the last two rows, we report mean and standard deviation of the respective dependent variables.

Dependent Variables:	Any Justice	Republican appointed	Democratic appointed
Model:	(1)	(2)	(3)
Variables			
Intercept	0.09***	0.08***	0.01
	(0.01)	(0.01)	(0.01)
I: between take-up and oral hearings	0.25***	0.19***	0.07***
	(0.06)	(0.04)	(0.01)
I: between oral hearings and decision	1.03***	0.56***	0.47***
	(0.15)	(0.12)	(0.14)
I: after decision	0.74**	0.59**	0.15**
	(0.23)	(0.18)	(0.05)
Fox News	0.66***	0.60***	0.06**
	(0.05)	(0.04)	(0.02)
Fox News $\times$ I: between take-up and oral hearings	-0.47***	-0.38***	-0.08***
	(0.07)	(0.07)	(0.01)
Fox News $\times$ I: between oral hearings and decision	-0.75***	-0.47***	-0.28***
	(0.10)	(0.06)	(0.02)
Fox News $\times$ I: after decision	-0.80***	-0.64***	-0.16***
	(0.02)	(0.02)	(0.02)
MSNBC	0.03	0.00	0.02***
	(0.02)	(0.03)	(0.01)
MSNBC $\times$ I: between take-up and oral hearings	0.03	0.05	-0.02**
	(0.04)	(0.04)	(0.01)
MSNBC $\times$ I: between oral hearings and decision	0.49***	0.27***	0.22***
	(0.08)	(0.03)	(0.07)
MSNBC $\times$ I: after decision	0.34***	0.26***	0.08**
	(0.08)	(0.06)	(0.03)
Fit statistics			
Observations	2,112	2,112	2,112
Adjusted R^2	0.08	0.06	0.05
Outcome mean	0.75	0.54	0.21
Outcome std dev	1.56	1.08	0.90

Table 12: Cross-sectional differences in coverage of individual U.S. states

This table investigates the coverage of states around presidential primaries, the years 2012, 2016, and 2020. In Panel A we report estimates from regression extensive margin of an individual U.S. state on a day during 2012, 2016, or 2020 on the Republican vote margin of the presidential election. The Republican vote margin is defined as the share of votes obtained by the Republican candidate divided by the votes obtained by either the Republican or the Democratic candidate. A value of > 0.5 indicates that the Republican candidate won the presidential election. The regression model has year-month, state, and network fixed effects. Standard errors are clustered at the network and presented in parenthesis. CNN is the omitted network, so the point estimates on Fox News and MSNBC represent deviations from the CNN coverage. In the last two rows, we report mean and standard deviation of the respective dependent variables. In Panel B we report estimates from a regression model which estimates the differential sentiment across networks, with CNN being again the omitted variable. Sentiment is computed with the AFINN dictionary and is normalized to zero mean and unit standard deviation. The panel presents the point estimates in percent (and standard errors) associated with β. All specifications in Panel B include year-month, state, and network fixed effects. Standard errors, in parenthesis, are two way clustered at the network and year $\times$ month level.

Panel A: Extensive margin

Group:	U.S. state		
Sample:	2012	2016	2020
Model:	(1)	(2)	(3)
Variables			
Republican vote margin $\times$ Fox News	-0.17	-0.55^{**}	-1.86^{***}
	(0.08)	(0.07)	(0.06)
Republican vote margin $\times$ MSNBC	1.17^{***}	0.83^{***}	1.30^{***}
	(0.09)	(0.04)	(0.02)
Fit statistics			
Observations	39,343	34,556	39,037
Adjusted R^2	0.31	0.24	0.37
Outcome mean	2.79	3.18	2.81
Outcome std dev	4.77	5.93	5.28

Panel B: Sentiment

Group:	U.S. state		
Sample:	2012	2016	2020
Model:	(1)	(2)	(3)
Variables			
Republican vote margin $\times$ Fox News	29.83^{***}	12.07^{**}	49.37^{***}
	(0.00)	(1.35)	(0.00)
Republican vote margin $\times$ MSNBC	5.42^{***}	-9.68	-30.13^{***}
	(0.00)	(6.61)	(0.00)
Fit statistics			
Observations	600,210	596,613	772,388
Adjusted R^2	0.05	0.06	0.07

Table 13: Cross-sectional differences in coverage across networks – White House

In Panel A we report estimates from the regression model (1), which estimates the extensive margin differences across networks. The extensive margin is defined as number of times the White House is mentioned per day. The sample used in column 1 to 3 allign with the presidency of Barack Obama, Donald Trump, and Joe Biden. The regression model has year-month fixed effects. Standard errors are two way clustered at the network $\times$ year and year $\times$ month level and presented in parenthesis. CNN is the omitted network, so the point estimates on Fox News and MSNBC represent deviations from the CNN coverage. In the last two rows, we report mean and standard deviation of the respective dependent variables.

In Panel B we report estimates from a regression that estimates the differential sentiment across networks, with CNN being again the omitted variable. Sentiment is computed with the AFINN dictionary and is normalized to zero mean and unit standard deviation. The panel presents the point estimates in percent (and standard errors) associated with β. All specifications in Panel B include year-month effects. Standard errors, in parenthesis, are three way clustered at the show, network $\times$ year, and year $\times$ month level.

Panel A: Extensive margin

Sample:	2013–2016	2017–2020	2021–2024
Model:	(1)	(2)	(3)
Variables			
Fox News	18.97***	-78.54***	2.71
	(4.09)	(8.95)	(4.09)
MSNBC	12.61**	7.59	8.24**
	(4.76)	(5.03)	(3.28)
Fit statistics			
Observations	5,480	4,383	3,825
Adjusted R^2	0.22	0.40	0.24
Outcome mean	64.82	162.53	79.62
Outcome std dev	45.80	113.67	43.56

Panel B: Sentiment

Sample:	2013–2016	2017–2020	2021–2024
Model:	(1)	(2)	(3)
Variables			
Fox News	-10.10***	10.97***	-10.60***
	(2.55)	(1.67)	(2.20)
MSNBC	9.07***	1.12	3.14*
	(2.38)	(1.32)	(1.52)
Fit statistics			
Observations	261,450	571,869	300,034
Adjusted R^2	0.02	0.01	0.01

Appendix

Definitions of different groups of people

In order to assign people to groups, we match keywords to information from Wikipedia, either the categories at the bottom of the wikipedia page or the infobox to the upper right. Below, we list the combination of regular expressions used.

- Politician: ``politician'' in categories and ``preceded by'' or ``succeeded by'' as item in infobox.

- Democrat/Republican: ``democrat''/``republican'' in an item called ``Political party'' in infobox.

- Presidential candidate: ``candidates in the 2\\{d} United States presidential election'' in categories

- Democrat/Republican Presidential candidate is an interactions of the previous two groups.

- Journalists: we identifying people associated with individual networks with following regular expressions, ``Bloomberg L.P. people'', ``CNBC people'', ``CNN people'', ``MSNBC people'', ``FOX NEWS people'', and ``FOX BUSINESS people'' in categories.

- Female: ``wom(e|a)n'' in categories.

- LGBTQ: any of the following regular expressions ´´lgbt.*?people'', ´´\\bgay\\b'', ´´lesbian'', ´´queer'', ´´transgender'', or ´´bisexual'' in categories. People associated with categories that include any of the following regex are excluded: ´´activist'', ´´history'', ´´violence'', ´´feminism'', ´´directors'', ´´discrimination'', and ´´conservatism''.

- African-American: ``^african-american'' in categories.

- Chair of the Federal reserve: ``^chairs of the federal reserve$'' in categories.

- Treasury: ``^United States Secretaries of the Treasury$'' in categories.

- Business people: ``business.{0,2}people'' in categories

- Investor: ``investor'' in categories.

- CEO: ``chief executive'' in categories.

- Economist: ``economist'' in categories.

Table A1: Summary statistics — individuals per category

This table reports the 10 most frequently mentioned people per category in our data. In addition to reporting the number of times a person is mentioned, we report average extensive margin and sentiment per network. The extensive margin is computed within each category. Panel A, B, and C focuses on females, African-American, and LGBTQ. For each Panel, we display people separately for politicians, journalists and other.

Panel A: Female

Category	Count 1000s	Extensive CNN	Extensive Fox News	Extensive MSNBC	Sentiment CNN	Sentiment Fox News	Sentiment MSNBC
Politicians							
Hillary Clinton	492.9	58.5	44.5	49.7	9.9	-5.3	13.6
Kamala Harris	159.4	8.3	25.2	10.4	6.6	-10.2	15.3
Nancy Pelosi	130.2	11.0	14.7	13.2	-8.1	-11.9	-8.0
Elizabeth Warren	91.4	9.3	7.0	12.8	22.5	9.4	29.1
Nikki Haley	36.8	5.1	2.4	4.4	28.6	39.3	20.6
Michelle Obama	18.8	2.5	1.3	2.2	36.4	14.8	40.8
Sarah Palin	16.7	1.7	1.2	2.4	29.5	14.9	23.0
Susan Rice	15.4	1.1	1.9	1.5	-26.5	-41.3	-17.4
Susan Collins	13.9	1.7	0.9	1.9	0.7	-4.2	0.6
Stacey Abrams	10.3	0.8	0.9	1.7	21.8	-3.0	32.6
Journalists							
Andrea Mitchell	25.1	0.2	1.5	54.8	-5.9	-31.3	22.1
Dana Bash	17.3	29.7	0.7	0.3	10.1	-28.0	-14.8
Sarah Palin	16.7	8.5	15.3	14.8	29.5	14.9	23.0
Jen Psaki	12.9	3.3	23.4	6.8	-4.1	-36.4	12.9
Brooke Baldwin	12.2	21.3	0.1	0.0	-4.4	-38.7	122.5
Laura Ingraham	12.2	1.2	30.5	2.4	-47.5	17.6	-38.7
Barbara Starr	11.3	19.7	0.0	0.0	-39.6	-41.2	26.3
Martha MacCallum	9.8	0.0	28.5	0.0	1.3	33.9	-28.0
Chris Jansing	9.4	0.0	0.0	20.9	12.6	-59.0	23.0
Pamela Brown	9.2	16.1	0.1	0.0	-26.7	-51.8	-112.1
Other							
Kellyanne Conway	19.0	22.2	35.5	22.0	-4.4	13.3	-7.9
Fani Willis	8.1	8.8	8.5	16.2	-23.5	-26.7	-34.1
Amy Coney Barrett	7.3	5.9	15.6	10.2	28.6	32.7	23.0
Breonna Taylor	6.5	6.9	6.0	14.0	-51.6	-71.7	-62.9
Whitney Houston	6.2	12.0	7.2	4.3	19.4	7.3	27.7
Janet Yellen	5.8	6.5	10.6	7.2	-16.6	-18.6	-12.5
Sidney Powell	5.7	7.0	3.1	13.0	-49.2	-38.7	-53.8
Elizabeth Cohen	5.3	16.9	0.0	0.0	-5.2	-32.9	-120.9
Monica Lewinsky	5.2	7.1	9.2	5.0	-33.7	-37.2	-34.2
Erica Garner	4.8	6.7	4.4	8.0	-69.5	-93.8	-73.1

Panel B: African-American

Category	Count 1000s	Extensive CNN	Extensive Fox News	Extensive MSNBC	Sentiment CNN	Sentiment Fox News	Sentiment MSNBC
Politicians							
Barack Obama	295.0	60.0	43.9	52.3	-4.2	-17.3	6.4
Kamala Harris	159.4	16.1	39.3	17.1	6.6	-10.2	15.3
Ben Carson	28.4	6.6	3.8	5.0	12.6	22.0	14.9
Michelle Obama	18.8	4.9	2.1	3.6	36.4	14.8	40.8
Tim Scott	17.1	3.1	2.9	2.8	24.6	31.8	13.0
John Lewis	17.0	3.3	0.9	5.8	8.2	3.6	14.5
Susan Rice	15.4	2.2	3.0	2.4	-26.5	-41.3	-17.4
Eric Holder	14.7	2.1	2.8	2.3	-42.6	-47.2	-17.3
Stacey Abrams	10.3	1.5	1.3	2.7	21.8	-3.0	32.6
Michael Steele	10.0	0.1	0.0	5.9	4.4	-30.5	20.3
Journalists							
Don Lemon	16.3	48.2	8.2	0.5	-0.1	-29.3	-8.8
Al Sharpton	15.6	3.3	26.0	26.3	-18.8	-45.2	22.4
Craig Melvin	10.9	0.0	0.2	31.8	-60.2	-46.0	-2.9
Michael Steele	10.0	0.4	0.6	28.5	4.4	-30.5	20.3
Harris Faulkner	6.8	0.0	31.5	0.0	-40.2	-17.0	-102.7
Juan Williams	6.6	0.1	30.0	0.3	-42.9	-2.6	2.8
Victor Blackwell	6.2	20.7	0.0	0.0	-1.4	-29.9	103.6
Van Jones	5.4	15.4	3.2	0.5	18.8	-9.2	39.6
Jonathan Capehart	4.2	0.1	0.2	12.1	17.4	-29.6	25.1
Fredricka Whitfield	3.5	11.8	0.0	0.0	4.8	200.8	
Other							
George Floyd	46.7	28.7	29.3	38.7	-65.1	-86.4	-61.0
Trayvon Martin	28.3	22.4	17.1	17.9	-62.9	-73.4	-56.5
George Bush	17.8	9.0	17.8	11.9	-1.0	-10.6	-2.7
Clarence Thomas	8.6	3.9	4.7	9.2	26.7	5.5	19.3
LeBron James	8.4	6.8	6.1	4.4	45.2	4.0	36.3
Fani Willis	8.1	4.8	4.4	7.5	-23.5	-26.7	-34.1
Bill Cosby	7.4	6.8	4.0	4.0	-41.1	-57.0	-44.4
Michael Jackson	6.9	7.3	4.6	1.8	-26.2	-19.3	-7.9
Colin Kaepernick	6.7	3.8	8.3	2.7	-8.3	-7.4	-8.0
Whitney Houston	6.2	6.5	3.7	2.0	19.4	7.3	27.7

Category	Count 1000s	CNN	Extensive Fox News	MSNBC	CNN	Sentiment Fox News	MSNBC
Politicians							
George Santos	9.3	44.8	9.0	46.6	-30.7	-29.0	-35.1
Pete Buttigieg	6.7	27.3	26.7	21.1	27.1	-4.6	26.5
Mark Meredith	3.9	0.0	45.8	0.0	51.0	-4.5	-96.7
Andrew Gillum	2.1	10.2	6.6	6.5	15.6	20.6	29.4
Kyrsten Sinema	1.8	7.3	5.2	7.5	30.5	-16.0	17.6
Tammy Baldwin	1.1	3.1	1.9	6.3	12.6	17.4	47.5
Katie Hill	0.7	3.1	2.7	2.2	-13.7	-34.1	20.0
Barney Frank	0.6	1.4	1.3	3.3	-11.2	-18.0	33.7
Robert Garcia (California politician)	0.5	0.7	0.2	4.0	23.4	-34.1	17.0
David Cicilline	0.5	2.1	0.6	2.5	17.3	-18.0	24.4
Journalists							
Anderson Cooper	16.6	30.3	14.5	1.7	14.4	-17.6	-17.0
Don Lemon	16.3	29.2	19.3	0.7	-0.1	-29.3	-8.8
Steve Kornacki	11.4	0.0	0.0	46.6	36.9	79.4	46.0
Jeff Zeleny	10.3	20.8	0.2	0.1	6.9	-41.6	36.7
Pete Williams	8.3	0.0	0.3	33.8	8.1	-38.5	-11.6
Victor Blackwell	6.2	12.6	0.0	0.0	-1.4	-29.9	103.6
Jonathan Capehart	4.2	0.0	0.4	17.0	17.4	-29.6	25.1
David Chalian	3.4	7.0	0.1	0.0	29.7	6.5	33.5
Tammy Bruce	3.2	0.0	35.0	0.0	188.6	15.6	
Bryan Llenas	2.8	0.0	30.3	0.0		-43.3	0.5
Other							
Tim Cook	2.6	13.0	16.2	18.0	17.7	-7.8	15.8
Charles Manson	2.1	14.3	8.5	18.1	-93.4	-84.5	-115.2
Jussie Smollett	1.8	8.0	17.6	2.9	-91.4	-108.8	-96.3
Angelina Jolie	1.7	13.7	8.7	7.8	3.3	19.6	12.3
Rosie O'Donnell	1.6	7.7	13.0	7.1	-5.2	-8.9	-8.9
Jay Johnson	1.5	6.3	10.9	11.4	-40.2	-53.2	-19.4
Elton John	1.5	9.6	7.5	10.5	56.5	65.8	54.7
Glenn Greenwald	1.5	5.4	14.4	4.9	-23.2	-9.0	-12.1
Michael Sam	1.3	9.9	2.1	13.7	54.5	24.4	37.5
Jim Jones	1.1	12.1	1.2	5.7	-97.0	-28.1	-57.2

Table A2: Shows in business networks

This table reports the main shows, by frequency, for each of the three networks under study. The column "Start time" gives the median start time for the show, whereas "First/Last date" gives the first/last time the show appears in our dataset. Show length is the median show length in minutes.

Show name	Observations	Start time	First date	Last date	Show length
CNBC					
Squawk Box	7,962	9	2012-01-27	2024-06-27	121 mins
Fast Money	5,306	17	2012-01-27	2024-06-27	60 mins
Closing Bell	3,507	15	2012-01-27	2024-06-27	120 mins
Worldwide Exchange	3,241	5	2012-01-27	2024-06-28	60 mins
Power Lunch	3,002	13	2012-01-27	2024-06-27	60 mins
Mad Money	2,955	18	2012-01-26	2024-06-27	60 mins
Street Signs	2,197	4	2012-01-27	2024-06-28	60 mins
The News With Shepard Smith	1,032	19	2020-09-30	2022-11-04	60 mins
Options Action	754	6	2012-01-27	2023-09-23	30 mins
The Exchange	725	13	2021-07-30	2024-06-27	60 mins
Fox Business					
Maria Bartiromo	4,077	6	2015-06-04	2024-06-28	60 mins
Varney and Company	3,836	9	2012-08-21	2024-06-28	121 mins
Lou Dobbs Tonight	3,672	19	2012-08-20	2021-02-06	61 mins
Cavuto	3,527	12	2012-08-20	2024-06-27	120 mins
Making Money With Charles Payne	2,370	14	2014-06-02	2024-06-27	60 mins
After the Bell	2,086	16	2012-08-20	2021-02-15	61 mins
The Evening Edit	1,886	18	2018-04-30	2024-06-27	60 mins
Kennedy	1,673	20	2015-01-26	2023-06-01	60 mins
Countdown to the Closing Bell	1,618	15	2012-08-20	2019-07-12	61 mins
The Claman Countdown	1,267	15	2019-07-15	2024-06-27	60 mins
Bloomberg TV					
Bloomberg Surveillance	4,283	6	2013-12-05	2024-06-27	61 mins
Bloomberg Markets: Americas	3,243	10	2016-10-10	2024-01-19	60 mins
Bloomberg Technology	3,066	17	2016-10-07	2024-06-27	60 mins
Bloomberg Markets	2,739	13	2015-05-11	2024-06-27	61 mins
Charlie Rose	2,385	20	2013-12-04	2017-12-02	61 mins
Bloomberg West	2,233	18	2013-12-04	2016-11-11	61 mins
Bloomberg Markets: European Close	1,988	11	2016-01-04	2024-01-19	60 mins
Bloomberg Daybreak: Europe	1,969	1	2016-10-11	2024-06-28	60 mins
Bloomberg Markets: Asia	1,961	22	2016-10-10	2024-06-27	120 mins
Bloomberg Daybreak: Asia	1,887	19	2016-10-16	2024-05-30	120 mins

Table A3: Cross-sectional differences in coverage across networks – political partisanship in prime-time shows

This table presents the estimates of regressions identical to the ones presented in Table 5 individually for different times of the day. We consider three time windows: Morning from 6am to 9am, Day-time from 10am to 5pm, and Prime-time from 6pm to 10pm.

Panel A: Extensive margin

Dependent Variables:		Republican			Democrat	
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Variables						
Fox News	-0.41	-3.16**	-1.96	6.77***	11.52***	13.45***
	(1.18)	(1.42)	(1.59)	(0.81)	(0.84)	(1.51)
MSNBC	6.24***	4.78***	9.14***	2.91***	3.39***	5.62***
	(1.10)	(1.15)	(1.32)	(0.93)	(0.88)	(1.23)
Time during the day						
	Morning	Day-time	Prime-time	Morning	Day-time	Prime-time
Fit statistics						
Observations	13,548	13,549	13,388	13,548	13,549	13,388
Adjusted R^2	0.45	0.50	0.41	0.32	0.44	0.35
Outcome mean	33.28	32.09	33.97	29.11	30.61	30.01
Outcome std dev	15.95	16.06	18.10	12.84	13.35	14.68

Panel B: Sentiment

Individual group:		Republican			Democrat	
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Variables						
Fox News	12.98***	9.92***	15.90***	-12.22***	-9.38***	-12.79***
	(3.11)	(2.55)	(2.96)	(2.31)	(1.95)	(2.86)
MSNBC	-7.86***	-5.71**	-12.95***	6.93***	5.79***	12.58***
	(2.41)	(2.29)	(2.67)	(1.80)	(1.75)	(2.20)
Time during the day						
	Morning	Day-time	Prime-time	Morning	Day-time	Prime-time
Fit statistics						
Observations	2,268,515	3,879,804	2,361,128	2,268,515	3,879,804	2,361,128
Adjusted R^2	0.10	0.09	0.11	0.10	0.09	0.11

Table A4: Extensive margin and sentiment tilt over time, individual states

We report estimates from regressing extensive margin and sentiment tilt on a linear time trend for each network. For each day and channel, we compute tilt, both for extensive margin and sentiment. Extensive margin tilt is defined as the share of a given U.S. state among states mentioned on a given day minus the average across all channels on that day: $\%\text{state}_{c,t} - \overline{\%\text{state}_t}$. Sentiment tilt is defined as the difference between sentiment towards a given U.S. state minus sentiment towards other states, minus the average sentiment tilt across channels on that day $\left(S^{state}_{c,t} - S^{!state}_{c,t}\right) - \overline{\left(S^{state}_{c,t} - S^{!state}_{c,t}\right)}$. The linear time trend takes a value of 0 on the first day of the sample and 1 on the last day. The panel presents the point estimates in percent. Standard errors, in parenthesis, are clustered at the monthly level.

Panel A: California

Dependent Variables:		Extensive tilt			Sentiment tilt	
Channel:	CNN	MSNBC	Fox News	CNN	MSNBC	Fox News
Variables						
Intercept	0.42**	-0.87***	0.45***	9.11***	-10.24***	1.11
	(0.19)	(0.19)	(0.17)	(1.80)	(1.86)	(1.34)
Linear time trend	-0.94***	-0.90***	1.84***	-7.56***	21.30***	-13.66***
	(0.30)	(0.27)	(0.30)	(2.86)	(2.46)	(2.39)
Fit statistics						
Observations	4,563	4,563	4,562	4,523	4,526	4,547
Adjusted R^2	0.01	0.01	0.03	0.00	0.03	0.01

Panel B: Florida

Dependent Variables:		Extensive tilt			Sentiment tilt	
Channel:	CNN	MSNBC	Fox News	CNN	MSNBC	Fox News
Variables						
Intercept	0.44**	-0.63***	0.19	1.10	-0.18	-0.95
	(0.21)	(0.17)	(0.18)	(1.25)	(1.09)	(1.13)
Linear time trend	-0.44	0.93***	-0.49	-4.88**	-8.31***	13.15***
	(0.38)	(0.32)	(0.40)	(2.15)	(1.71)	(2.14)
Fit statistics						
Observations	4,563	4,563	4,562	4,457	4,497	4,535
Adjusted R^2	0.00	0.01	0.00	0.00	0.01	0.01

(a) Chair Federal Reserve

(b) Treasury

(c) Economist

(d) CEO

(e) Business (wo)man

(f) Investor

For each channel and quarter, we compute the share of people that belong to a certain category. We exclude presidential candidates from the sample.

Figure A1: Extensive margin of business relevant categories