The Business of the Culture War*

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Abstract

We link the contemporary American "culture war" to changes in media technologies in the 1980s and to the cable news networks which responded to the new incentives of the era. We first show that cable news networks emphasize culture-war issues much more, and economic issues much less, than older broadcast news networks or politicians. Using household-by-second smart TV data, we trace cable news' emphasis on cultural over economic issues to a distinctive business strategy: culture attracts viewers who would otherwise not watch news ("mobilization"); economics attracts viewers who would otherwise watch competing news outlets ("poaching"); and the number mobilized by culture is greater than the number poached by economics, so culture increases viewership. We highlight the parallel to politicians — who also trade off "mobilizing" nonvoters against "poaching" competitors' voters — but show why mobilization-focused strategies are disadvantaged in politics: cable outlets maximize audience *size* and so value poaching and mobilization equally, but politicians maximize vote *share* and so value poaching twice as much as mobilization. Cable news' incentive to center mobilizing culture war content influences politics: constituencies more exposed to cable news assign greater importance to cultural issues, and politicians respond by supplying more cultural ads. Our estimates suggest that cable news can account for one-third of the time-series increase in cultural conflict since 2000.

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1 Introduction

A long history of popular commentary argues that news producers' incentive to capture attention generates a bias toward sensational, inflammatory, or otherwise engaging content, focusing political attention on the issues that are most entertaining rather than most important.[1] Over the past four decades, competition for attention has intensified. The "network era" of the 1950s to 1980s — dominated by three heavily regulated broadcast television outlets whose news divisions operated as loss leaders and competed for a relatively captive audience with few alternative entertainment and news options — was disrupted by the emergence of cable television, which introduced a huge variety of alternative entertainment programming and enabled the entry of 24-hour national networks with a business model focused entirely on news.[2] These same four decades have also seen a shift in public political attention: cleavages between Republican and Democratic voters on issues such as redistribution, social insurance, and labor have largely been eclipsed by cleavages over racial and gender issues, political correctness, immigration, religion, guns, and crime.[3] The causes of this "culture war" are the subject of a rich but inconclusive literature, which has often focused on changes in parties' platforms or on trends in inequality or the labor market.[4]

We present two novel facts favoring an alternative explanation tying the culture war to the aforementioned changes in competition for attention. First, classifying the content of politicians' campaign advertisements since 1960 and television news since 1968, we show that politicians and cable news emphasize very different topics (Figure 1). The vast majority of political advertising centers healthcare, taxes, jobs, and social insurance, with only a small fraction mentioning culture-war topics; in contrast, cable news outlets exhibit the opposite pattern, with far more emphasis on cultural conflict than on economic issues. The older broadcast news outlets have roughly balanced cultural and economic coverage. Second, linking our topic classifications with political surveys, we show that since 1996 — the year cable news outlets Fox News and MSNBC were founded — the issues disproportionately emphasized in cable news have seen the largest growth in the extent to which they divide Democratic and Republican voters and in the number of people naming them the "most important problem" facing the country. These issues have also grown to constitute a larger share of political ads than in any prior year in our data, though they remain a minority and this growth follows, rather than precedes, the voter-side changes.

Motivated by these facts, this paper investigates two questions: what explains cable news' disproportionate "culture war" emphasis relative to politicians and broadcast, and how has this emphasis affected voters' priorities, politicians' incentives, and the axes of political competition?

We structure our analysis with a simple framework highlighting the parallel problems facing news outlets and politicians. Each chooses content to attract viewers or voters. Each faces a tradeoff at the margin between the content best for *poaching* those who would otherwise choose a competitor

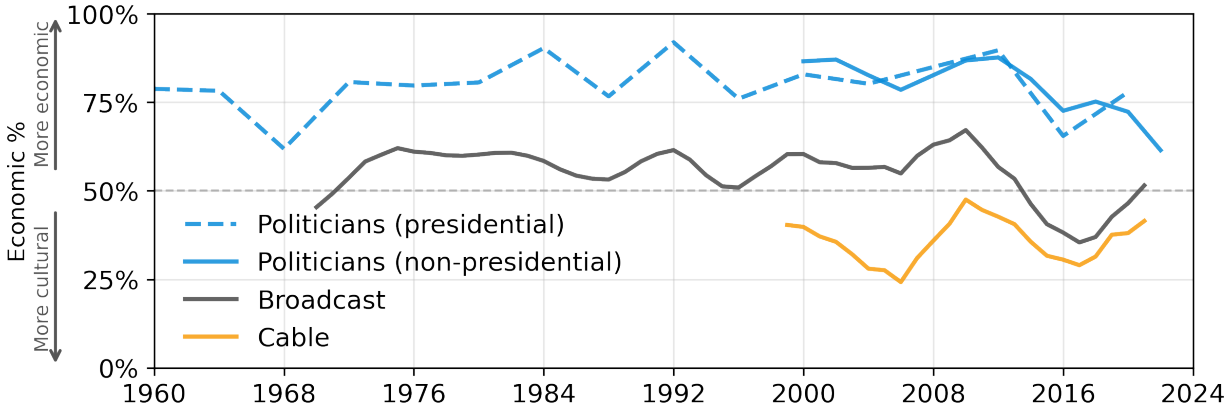
[1] See, e.g., Sinclair (1919); Lippmann (1922); Lumet (1976); Postman (1985), and more recently Klein (2025); Cartner-Morley (2024); Pindell (2024).

[2] See, e.g., Hamilton (2004); Prior (2007); Benkler et al. (2018); Bennett (2020); Hemmer (2022); Brownell (2023).

[3] See, e.g., Hacker and Pierson (2020); Gethin et al. (2022); Marble (2024).

[4] See, e.g., Inglehart and Flanagan (1987); Kuziemko et al. (2023); Gennaioli and Tabellini (2024); Longuet-Marx (2024); Enke et al. (2025).

Figure 1: *Economic content as share of economic + cultural content in TV news and campaign ads*



Notes: In each year, Figure 1 plots the airtime of economic content as a percentage of the airtime of all economic and cultural content. We smooth broadcast and cable shares using a four-year rolling average. We define economic, cultural, and "other" topics, and provide details on the classification, in Appendix B: broadly, "economic" topics include economic policy and economic conditions, healthcare and government services, and education; "cultural" topics include race, gender, and social issues, crime and safety, and immigration; and "other" topics include government functioning and national security. Data sources in Section 2.1.

(a competing news outlet, or the opposing politician) and the content best for *mobilizing* those who would otherwise opt out entirely (by watching non-news entertainment or not watching TV, or by voting third-party or not voting). However, profit-maximizing news outlets and election-minded politicians differ in their relative weights on these flows. To a first approximation, a cable news outlet maximizes its audience *size* and thus values poached and mobilized viewers equally, whereas a politician maximizes their vote *share* and thus values poaching an opponent's voter twice as much as mobilizing a nonvoter.[5] Cable news outlets are therefore distinguished by their greater incentive to mobilize new attention, whereas politicians are distinguished by their greater incentive to adhere to the median of the most salient political cleavage, moving only when this cleavage changes as voter priorities shift.

We use this framework to structure our empirical investigation. First, we trace cable news outlets' focus on cultural over economic issues to a distinctive business strategy emphasizing mobilization, enabling outlets to compete more directly with non-news entertainment than with other news outlets. Linking high-frequency variation in news content with household-by-second viewership data and drawing on rich consumer survey data before and after the entry of Fox News and MSNBC in 1996, we show (1) cultural content is more effective than economic content at attracting viewers who would otherwise watch non-news entertainment (mobilization); (2) economic content is more effective at attracting viewers from competing news outlets (poaching); and (3) the number of viewers mobilized by culture is greater than the number poached by economics, so culture raises cable networks' net viewership. Second, we show that cable news' culturally-focused business strategy has political spillovers: voters quasi-exogenously more exposed to cable news assign greater importance to

[5]In some models, outlets weigh some viewers more than others or maximize subscription revenue in addition to advertising revenue, and in some models politicians also care about their own or their party's preferences. We show how our logic generalizes to cases of "impure" share- or size-maximization.

cultural issues relative to economic issues, and politicians in their constituencies respond with more cultural campaign advertisements.

We now turn to a more detailed summary of our results. Our analysis is built on videos or storyboards of nearly all campaign TV ads aired by congressional and gubernatorial candidates since 2000, videos of campaign TV ads aired by presidential candidates since 1960, recordings of nearly all content aired on the six major cable and broadcast news networks since 2014, and a large sample of transcripts or segment abstracts from these networks since 1968. We fine-tune a large language model to classify each political ad and each news segment using a common schema, identifying highly granular topics such as "illegal drugs" or "Medicare" and enabling us to perform analyses at the level of these granular topics.[6] To facilitate exposition, we assign "economic," "cultural," or "other" labels to the 88 topics in our schema, following foundational frameworks for classifying ideological cleavages (Lipset and Rokkan, 1967; Inglehart, 1977; Carmines and Stimson, 1986).[7] We classify issues such as taxes, jobs, healthcare, and education as economic, issues such as crime, race, religion, and gender as cultural, and issues such as national security or government functioning/partisan conflict as other. We present all results both using these high-level labels — simplifying exposition at the cost of introducing subjectivity in which labels topics are assigned to — and at the level of individual topics.[8] We also use our topic-level results to perform an *ex-post* data-driven validation of our high-level labels.

We begin by establishing differential issue *emphasis* across cable, broadcast, and politicians. Averaging over all years, we find that 80% of issue-based ad content falls in the "economic" bucket and around 15% in the "cultural" bucket. Conversely, 25% of issue-based cable news content is economic and 50% cultural.[9] Broadcast news emphasizes cultural and economic content roughly equally, with greater emphasis on economic content before 1996. The entry of Fox News and MSNBC in 1996 therefore constituted a sharp increase in TV coverage of cultural topics.

We next trace these differences in issue emphasis to differences in issue *performance*. Our analysis of issue performance on TV news exploits a household-by-second viewership panel (collected from smart TVs and set-top boxes), enabling us to track households as they switch on, off, and between channels and link viewing behavior to the content of the channel in that moment. We approximate the experiment of randomly assigning households to different types of content when they switch on a channel by estimating event studies that relate households' viewing persistence to variation in content across episodes of a given program, across programs at a given time, and even across different segments within the same episode. We find that economic topics underperform cultural topics on cable news: switching from an entirely cultural to entirely economic segment

[6]We allow news segments or ads to receive multiple topic classifications.

[7]Shafer and Spady (2014) distinguish an economic cluster concerning "the distribution of material goods" from a cultural cluster concerning "the reinforcement of behavioral norms".

[8]Since many topics fall into more than one of these three groups, a second advantage of conducting our analysis at the granular topic level is that we can distinguish economic and cultural subtopics (e.g., immigrants depressing wages vs. committing crimes).

[9]While our data for digital and social media advertising is less comprehensive, our analysis of candidate advertising on Facebook, YouTube, Meta, and Google Search, and candidate posts on Twitter, finds an emphasis on economic issues almost identical to that of TV ads.

reduces viewership by 2.2%, approximately one-sixth of the viewership penalty incurred by commercial advertising. Analyzing viewers' behavior immediately after they tune out, we decompose this average effect into a flow to competing news outlets and a flow to entertainment channels or switching off the TV. We find that economic topics *reduce* the former flow but substantially increase the latter: economic coverage is better at poaching viewers from competing news outlets but much worse at mobilizing viewers who would otherwise not watch news. Since the latter mobilization effect is stronger than the former poaching effect, cultural coverage increases audience size on net.

In an analogous, though more suggestive, exercise, we examine whether candidates who emphasize more cultural topics are more electorally successful than those who emphasize more economic topics. If anything, we find the reverse: a one standard deviation increase in cultural relative to economic messaging is associated with a ten percentage point *lower* probability of winning a general election. This effect appears driven by poaching rather than mobilization: more economic campaigns are not associated with increases in turnout, but are associated with decreases in the number of votes received by a politician's opponent. Thus, for both cable news outlets and politicians, economics appears relatively better for poaching and culture for mobilization, but economics incurs a performance penalty for cable news and (appears to) generate a performance premium for politicians, consistent with the different weights implied by size vs. share maximization.

National news comprises only a small share of broadcast networks' content (typically one or two hours per day), so we are underpowered to investigate differences in the determinants of performance between broadcast and cable. Historically, the role of news as a loss leader for broadcast networks led to coverage largely driven by reputational and prestige concerns, supporting "hard" economic coverage over "soft" cultural coverage (Lotz, 2014; Koppel, 2010).[10] Consistent with recent well-documented economic pressures forcing broadcasters to focus more on their news divisions' bottom line (Prior, 2007; Bennett, 2020), we find that broadcast news has significantly increased its cultural coverage since 2010, shrinking the gap with cable.

We conclude that cable news' focus on the culture war reflects a distinctive business strategy focused on audience size maximization through mobilization, a strategy which is structurally disadvantaged for politicians and less aligned with broadcast news' historical objectives.

Our final set of exercises turn to the *consequences* of this business strategy for political outcomes: voter priorities and politician positioning. To identify the effect of cable news on these outcomes, we follow the strategy of Martin and Yurukoglu (2017), who show that media markets in which Fox News was quasi-randomly assigned a lower channel number exhibit greater Fox News viewership (and similarly for MSNBC). Using this instrument, we show that constituencies in which an exogenously higher share of people watch cable news also have a higher share of people reporting cultural issues as the "most important problem facing the country". Politicians respond to their

[10]Because broadcast outlets (unlike cable outlets) use public airwaves, the Federal Communications Commission requires them to "use the broadcast medium to serve the public interest". The threat of regulatory enforcement was an important driver of broadcaster investment in news programming prior to Reagan-era deregulation (Brownell, 2023; Napoli, 2001). "The Big Three broadcast television networks—ABC, CBS and NBC—all covered news, but none generally made money doing so... They presented news programming for the prestige it would bring to their network, to satisfy the public-service requirements of Congress and the Federal Communications Commission, and more broadly so that they would be seen as good corporate citizens." (Gunther, 1999)

constituents' changing preferences: in constituencies more exposed to cable news, politicians increase the cultural emphasis of their ads. These effects hold even conditional on local party vote shares. The results suggest that cable news consumption increases the weight viewers place on cultural topics, triggering a strategic adoption of cultural rhetoric by politicians.

Our six key sets of topic-level results — (i) differential issue emphasis in cable news vs. political ads, (ii) differential average issue performance on TV news, (iii) differential issue performance for mobilization vs. poaching on TV news, (iv) differential average issue performance for politicians, (v) effects of cable on voters' issue importance, and (vi) effects of cable on politicians' ad emphases — enable a purely data-driven validation of our "economic" vs. "cultural" topic labels. We find that the partition of the topics that captures the most cross-topic variation across these six estimates lines up almost exactly with our economic vs. cultural labels, with "other" topics dispersed between the two.

Overall, our results suggest that the distinctive economic incentives of size-maximizing cable news outlets — compared to share-maximizing politicians, and to historically constrained broadcast news outlets — played a significant role in the rise of the contemporary American culture war.

Related literature A vast literature has investigated how media slant influences voting, partisanship, and other political outcomes (reviewed in Strömberg 2015; Puglisi and Snyder Jr 2015; Gentzkow et al. 2015).[11] Papers specifically examining the effect of partisan cable news on political knowledge and behavior include DellaVigna and Kaplan (2007); Schroeder and Stone (2015); Ash et al. (2024a); Broockman and Kalla (2025). This project instead examines how media influences the relative *attention* paid to different political issues in a multi-dimensional space[12] — both by voters and politicians — and therefore how changes in media technologies, by changing outlets' incentives and their coverage decisions, can induce political realignment. Our key contribution to this literature is to quantitatively link the "agenda-setting" role of news (McCombs and Shaw, 1972; Iyengar and Kinder, 1987; Chong and Druckman, 2007) across the spectrum of political topics to the economic incentives shaping news outlets' coverage choices. In our focus on the role of the expansion of cable television variety in changing outlets' incentives and viewers' downstream beliefs, we build upon the arguments of Prior (2007); Arceneaux and Johnson (2022).[13]

In establishing the parallel between the problems facing news outlets and politicians — and the resulting poaching vs. mobilization tradeoff — we tie together the literatures on politician positioning (e.g., Glaeser et al. 2005; Callander and Carbajal 2022; Di Tella et al. 2025) and media positioning (e.g., Mullainathan and Shleifer 2005; Gentzkow and Shapiro 2010), which have

[11] See, for example, Chiang and Knight (2011); DellaVigna and La Ferrara (2015); Angelucci et al. (2024); Enikolopov et al. (2011); Prat (2018). A smaller literature largely outside economics documents other structural "biases" in news outlets' coverage choices, such as negativity (Robertson et al., 2023; Sacerdote et al., 2020), sensationalism (Gambaro et al., 2025), identity framings (Hopkins et al., 2024), entertainment (Qin et al., 2018; Durante et al., 2019; Kim and Patterson Jr, 2025), and opinionated commentary over factual reporting (Bursztyn et al., 2023).

[12] Another strand of literature has examined how media content affects voter attention and downstream politician behavior, often exploiting natural disasters or other determinants of "news pressure" (Eisensee and Strömberg, 2007; Durante and Zhuravskaya, 2018; Kaplan et al., 2025).

[13] Lelkes et al. (2017) show that the growth of broadband internet increased partisan affective polarization.

mostly proceeded independently. The data we construct represent the richest and most long-running account to date of how politicians position themselves on the campaign trail and what both cable and broadcast TV news outlets cover, enabling us to make two primary contributions to this literature.[14] First, we place these agents in a common content space, documenting significant differences in their issue emphases and interpreting these differences through a simple framework of vote *share* vs. audience *size* maximization.[15] Second, we quantify an important *interaction* between the media and political markets: cable outlets are incentivized to emphasize divisive cultural issues, leading viewer-voters to care more about these issues and politicians to respond by supplying more cultural rhetoric.

Our paper also relates to a literature on the causes and consequences of political realignment, by which voting patterns increasingly reflect cultural rather than economic cleavages (Gethin et al., 2022; Krasa and Polborn, 2014; Gennaioli and Tabellini, 2024). Some work has decomposed these changes into "supply-side" effects of parties' changing platforms (Longuet-Marx, 2024; Kuziemko et al., 2023) and "demand-side" effects of the growth in the importance of cultural issues to voters (Marble, 2024; Danieli et al., 2024; Desmet et al., 2025), with prior explanations for these demand-side changes including globalization shocks (Bonomi et al., 2021; Ash et al., 2024b; Choi et al., 2024), foreign events, particularly the collapse of the USSR (Bordalo et al., 2020), and secular trends in income, education, the labor market, or inequality (Inglehart and Flanagan, 1987; Enke et al., 2025; Grossmann and Hopkins, 2024; Hacker and Pierson, 2010). Our contribution is to identify the role of the news media — and particularly the changes in incentives facing news outlets and the resulting business strategy of the 24-hour cable news channels — in driving the demand-side importance of cultural issues and the supply-side response of politicians.[16] Our work therefore complements narrative histories of the growth of a partisan media ecosystem (Berry and Sobieraj, 2013; Hacker and Pierson, 2020; Hemmer, 2022). In Section 6, we discuss how our results relate to other international and domestic evidence.

2 Data and Classification

We draw upon seven primary types of data. This section describes the first four: (i) video files, transcripts, and summaries of news segments; (ii) video files and storyboards of political advertisements; (iii) data on household-level and aggregate news viewership; (iv) data on individuals' political preferences and media consumption, from a variety of political and consumer surveys. The

[14] Prior work characterizing the content of political advertising, and establishing that economic issues comprise the majority of ads, includes Kaplan et al. (2006); Fowler et al. (2021a); Breuer et al. (2025).

[15] Previous work has jointly modeled media and politicians (e.g., Bernhardt et al. 2008; Chan and Suen 2008; Duggan and Martinelli 2011) but has assigned fundamentally different roles to the two actors. Another conceptual antecedent to this paper is Garcia-Jimeno and Yildirim (2025), who model the strategic interaction between candidates choosing the partisan slant of campaign statements and media outlets choosing the partisan slant of their reporting as a matching-pennies game.

[16] Other work examining similar causal chains from media to voters' beliefs and behaviors to politicians' responses includes Snyder and Strömberg (2010); Olken (2011). Most directly related is Li and Martin (2025), who show that Fox News increased the electoral success of Tea Party candidates in 2010.

remaining three types of data are more standard: (v) electoral outcomes, from Dave Leip's Atlas of U.S. Elections and from the CQ Voting and Elections Collection; (vi) the channel position of the three major cable news networks in each county, from Nielsen; and (vii) county-level demographics from a variety of official sources.

2.1 Content of News and Political Ads

News Our primary data source for the content of television news is the TV News Archive,[17] a project of the nonprofit Internet Archive. The TV News Archive includes video recordings of the content of the three major cable news channels (CNN, MSNBC, and Fox News) and the San Francisco local affiliates of the three major broadcast news channels (ABC, CBS, and NBC) starting in 2012, with near-full coverage starting in 2014. Closed-caption transcripts of the audio are available for some episodes; for the remaining episodes, we generate transcripts using speech-to-text software. Our final sample includes 220,480 hours of content between January 1, 2012 and December 31, 2020. We extend our sample back to 1992 using the LexisNexis News Transcripts database, which has less universal coverage and which, unlike TVArchive, does not contain timestamps allowing us to calculate the exact second each sentence is spoken. We further extend our series to 1968 using data from the Vanderbilt Television News Archive, collected and processed by Armona et al. (2024). These data contain the title and abstract (rather than the full transcript) of individual segments aired by the three major broadcasters — ABC, CBS, and NBC — on evening news. The Archive subsequently added coverage of CNN (starting 1995) and Fox News (starting 2004).

Political ads We draw data on political television advertisements from the Wesleyan Media Project and its predecessor, the Wisconsin Advertising Project. These initiatives track broadcast television advertising by gubernatorial, congressional, and presidential candidates between 2000 and 2022 (Fowler et al., 2021b). These data record each airing of an ad in presidential, Congressional, or gubernatorial races, including both ads sponsored directly by the candidates and those sponsored by outside groups (which we pool with the ads directly aired by the candidate they support). The dataset covers all 210 media markets (Nielsen Designated Market Areas, or DMAs) in the US for years after 2008, with only the 75-100 largest DMAs covered between 2000 and 2008. The ad video files are available for 2006 and after 2010; in other years, only ad "storyboards" containing frames from the ad and a transcript of the accompanying audio are available. We extract transcripts from video files and storyboards using speech-to-text and optical character recognition software, respectively, resulting in 60,929 unique advertisements (204 hours of video). We extend our sample of presidential advertisements back to 1960 using a collection of approximately 9,000 videos collected by the Julian P. Kanter Political Commercial Archive at The University of Oklahoma and cleaned by Breuer et al. (2025).

[17] See `https://archive.org/details/tvarchive`.

Classifying topics Our unit of analysis for political ads is a single creative (typically a thirty-second ad); our unit of analysis for TV news is a five-minute segment. We develop a unified hierarchical schema in order to classify each unit, presented in full in Appendix B. The schema includes eight top-level "parent" classifications relevant to both political ads and news — economic policy and economic conditions; entitlements, healthcare, and government services; education; government functioning; crime and safety; social, gender, and minority issues; immigration; and military and national security — each of which include multiple lower-level categories ("children"), for a total of 88 categories. We also include a number of categories that are relevant exclusively or almost exclusively for one of the two domains: campaigns/candidates, commercial advertising, entertainment/pop culture, international news, science and technology, and natural or manmade disasters/extreme weather events.

We hired two former political staffers to hand-label a set of 1000 political ads, and we hired several workers from the Upwork platform to hand-label 8000 news segments. Based on these codings, we fine-tune a large language model-based classifier to classify the remainder of the political ads and news segments.[18] The model is trained to extract the lowest-level classifications in the hierarchical schema possible: some news segments or political ads are specific enough that we can assign low-level classifications, but many are vague (e.g., about "the economy") and thus we can assign only parent-level classifications. We provide further details on the construction of the training set and validation of the classifier's performance in Appendix B.

Our classifications are vectors, with each element corresponding to a topic in our schema and the value of each element roughly corresponding to the share of the video on that topic. To map our raw classification output to our final feature vectors, we begin by assigning a value of $1/N$ to each of the N raw topics identified by the classifier, then sequentially "rolling up" these weights to the parents of these raw topics. For example, a video that discusses both "equal pay" and "taxes" would start with values of 1/2 for the vector elements corresponding to each; we would then assign 1/2 to the elements corresponding to the parent of each ("women's rights" and "economic policy and economic conditions"); and the process would continue until we have propagated to all parent categories.[19] This weighting procedure enables us to compare the prevalence of topics at different levels of the hierarchical classification schema.

Economic and cultural groupings Our investigation comprises several distinct analyses. To facilitate interpretation, we typically present our analyses at the level of broad "economic", "cultural", and "other" groups. We assign topics to one or more groups following the distinction of Shafer and Spady (2014) — topics concerning "the distribution of material goods" as economic and topics concerning "the reinforcement of behavioral norms" as cultural, with a residual "other"

[18] We use OpenAI's `GPT-4o` for our TVArchive news data between 2015 and 2020, since this is the data we use for our granular event study estimation and thus precision is most important. Outside of this window, we use `GPT-4o-mini` to economize on token costs for our news classifications. We use `GPT-4o` for all advertisement classifications.

[19] In this example, "economic policy and economic conditions" is a top-level category, so no further propagation of "taxes" would be needed; but one further step would be needed for "equal pay": we would assign 1/2 weight to the parent of "women's rights" ("social, gender, and minority issues").

category[20] — and report our labels in Appendix Table B1.

Choosing which labels to assign to each topic is an inherently subjective task, particularly given that some topics clearly fall into more than one group. Although we also present all main reduced-form results separately for each classification in our schema, a natural question concerns the extent to which the high-level group labels we assign actually capture systematic variation between topics. A data-driven procedure to evaluate our hand-labels *ex post* is to examine whether the topics we label "economic" tend to look similar to one another — in the sense of having similar estimates across our core empirical exercises — and similarly for the topics we label "cultural". To do this, we form an $N \times 6$ matrix collecting the six sets of topic-level results described in this paper, where $N = 25$ is the number of unique topics for which we have valid estimates across all six exercises: differential topic *emphasis* in cable vs. ads, topic *performance* in cable, topic *performance* in ads, relative topic *performance* for poaching vs. mobilization (in cable), effects of cable on topic *importance* as measured by Most Important Problem responses, and effects of cable on topic *emphasis* in ads. We then calculate the loadings of each topic onto the first two principal components of this matrix, and plot these loadings in Appendix Figure A1.

The figure shows clear visual separation between the topics we label as "economic" (plotted in green) and those we label as "cultural" (plotted in red): that is, the first two principal components of our six sets of estimates "discover" these groupings in the data. As a more formal test, we also run k-means with two categories on the 25×6 matrix of topic-level results in order to find the partition of topics that explains the most variation; Appendix Figure A1 shows that these clusters line up almost perfectly with our original economics vs. cultural hand-labels.

2.2 News Viewership

We obtain a panel of household-level TV viewing behavior between January 1, 2015 and December 31, 2020 from FourthWall Media. FourthWall collects high-frequency "viewership events" (changing the channel, or turning on or off the TV) from each household via set-top boxes or smart TVs (Canen and Martin, 2023). In particular, we observe any viewership "spell" (continuous viewership of a single channel) lasting five seconds or longer. Together with our TVArchive data, this data enables us to reconstruct what program each household was watching at each second, by linking these events with our news segment classifications, what issues were being discussed. Our panel includes 15,000 households selected among those continuously active between January 1, 2015 and December 31, 2017.

2.3 Political and Consumer Surveys

We use data from a variety of individual-level surveys, the most important of which are the Gallup Poll Social Series (GPSS), the Cooperative Election Survey (CES), the American National Election Studies (ANES), and the MRI Survey of the American Consumer.

[20] This definition is similar to those described in foundational work on political cleavages, such as Lipset and Rokkan (1967), Inglehart (1977), and Carmines and Stimson (1986).

The GPSS is a repeated cross-sectional survey of approximately 2,000 Americans per month; we access all waves between 2000 and 2020. While many of the questions rotate, the "Most Important Problem" (MIP) question is asked consistently: "What do you think is the most important problem facing the country today?" Respondents answer in open-ended form and the survey enumerator codes each response into one of approximately eighty categories. We match categories to the corresponding topic in our schema (see Appendix B). For each respondent, we also observe demographics, ZIP code, and political affiliation. We extend our descriptive statistics on this question back to 1960 using the MIPD dataset compiled by Yildirim and Williams (2024) from dozens of individual surveys; this dataset lacks detailed demographics and geographic identifiers.

The CES is a large-scale repeated cross-sectional survey with approximately 50,000 respondents per election year between 2006 and 2020. In each year, the CES includes respondents' demographics, self-reported turnout, vote choice, partisan and ideological leanings, and interest in politics. Each respondent is then linked to administrative voter file data (Cantoni and Pons, 2022), which allows the researcher to observe whether or not the respondent voted.[21]

The ANES is a repeated cross-sectional survey conducted every four years since 1948, with 1,000-2,000 respondents per election year (American National Election Studies, 2022). The survey asks about respondents' political affiliation and voting behavior and their positions on a variety of political issues.

The MRI Survey of the American Consumer is a repeated cross-sectional consumer survey conducted every year since 1979. We access data from 1994–2004, which includes approximately 20,000 consumers in each year. We primarily draw upon the television viewership segment of the Media modules, which include respondents' self-reported viewership of dozens or hundreds of different television shows or networks (which vary by year).

3 Issue Emphasis of Cable News, Broadcast News, and Political Advertising

This section describes cross-sectional differences in issue coverage between political TV advertisements and TV news, and in time-series changes in the importance of these issues to voters and their coverage in ads and news. We establish two broad facts. Cross-sectionally, there is significant heterogeneity in topic representation: the vast majority of topics are more than twice as represented in one domain as the other, with political ads disproportionately emphasizing bread-and-butter economic issues and TV (particularly cable) news disproportionately emphasizing the non-economic issues often associated with the culture war. In the time series, the issues overrepresented in cable news relative to political ads are those which have grown in their relative importance in politics since the entry of cable news in 1996.

[21] This validation is important given widespread overreporting of turnout in survey data; turnout estimates derived from surveys are 15-20 percentage points higher than actual turnout, with significant heterogeneity in the extent of overreporting by demographic groups (Enamorado and Imai, 2019).

3.1 Cross-sectional differences in issue coverage

For each topic in our schema, Panel A of Figure 2 plots (on a log scale) the ratio of the share of that topic in cable news to its share in political campaign advertisements. Topics to the right of the vertical dashed line appear more commonly in cable news, while topics to the left appear more commonly in campaign advertisements. The panel shows that cultural issues (colored in red) tend to appear much more commonly in cable news: immigration, racial and gender issues, crime and terrorism, political correctness, and LGBT issues appear between twice and ten times as often in cable news as they do in political ads. Conversely, economic issues (colored in green) tend to appear more commonly in political ads: Medicare, Social Security, jobs, taxes, inequality, budget deficits, healthcare, and trade policy appear several times as often in campaign advertisements as they do in cable news.

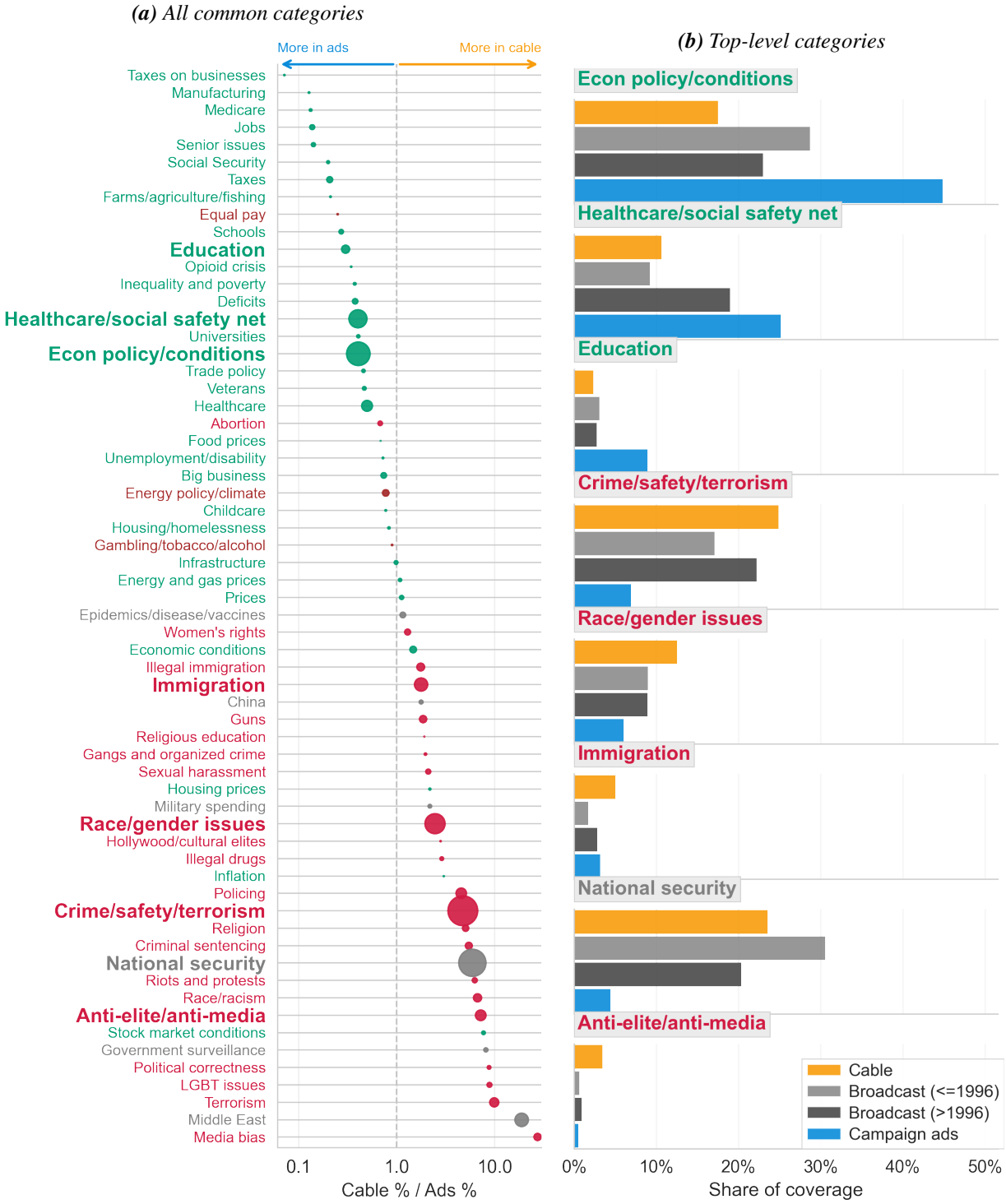
Panel B of Figure 2 aggregates to our high-level parent classifications, presenting the share of cable and broadcast news minutes and the share of political ads classified into each of our high-level issue-based categories.[22] Political ads are dominated by discussion of economic issues which jointly comprise over three-fourths of issue-based political messaging (excluding the substantial share of non-issue messaging on personal competence, background, etc.). Crime and safety, race and gender issues, and immigration, in contrast, jointly comprise less than a fifth of issue-based messaging. There are some differences by party (Appendix Figure A3): Republicans message significantly more on economic policy/economic conditions, immigration, and crime and safety, whereas Democrats message significantly more on healthcare, the social safety net, education, and racial and gender issues — but for both parties, economic topics comprise the majority of messaging. This is true even in 2022, the final year of our data.

TV advertisement expenditure dominates digital advertising expenditure throughout the vast majority of the period we study. Even in 2024, federal candidates' total expenditure on TV ads was approximately double expenditure on digital advertising. Nonetheless, in Appendix D, we characterize the content of candidates' digital advertising and social media activity, and we show that the issue emphasis of candidates' posts on Twitter, their ads on Facebook/Instagram, and their ads on Google/Youtube is similar to the issue emphasis of candidates' television advertising. In particular, candidates do not talk significantly more about cultural issues or significantly less about economic issues on social media relative to television advertising.

This pattern is reversed for cable news outlets, which talk significantly more about crime and safety, immigration, and racial and gender issues than about economic topics. Of cable news content that is either economic or cultural, approximately 70% is cultural. Broadcast news, both before and after the entry of Fox News and MSNBC in 1996, falls between cable news and politicians in its issue emphasis, though it shifts closer to cable news and further from politicians after 1996.

[22] The categories that are not displayed, and which are omitted from the denominator of the calculation of shares, are "candidates and campaigns" (which mechanically applies to all ads, and which applies to 15% of news segments), "commercial/non-political advertising" (0% of ads, 18% of news segments), "entertainment/popular culture/sports" (0% of ads, 5% of news segments), "natural/manmade disasters" (0% of ads, 4% of news segments), "international events" (0% of ads, 2% of news segments), and "science and technology" (0% of ads, $< 1\%$ of news segments). We normalize so that the remaining categories sum to 100%.

Figure 2: *Share of topics in news vs. political ads*



Notes: Panel A presents, for each of the topics in our schema relevant in both domains, the ratio of the share of cable news segments mentioning the topic to the share of political ads mentioning the topic, restricting to years after 2000. Ads are weighted by total airings; news segments are weighted by duration. The dashed line indicates equal representation in campaign ads and cable TV news. Points are sized based on the sum of their share in cable news and their share in political ads. Panel B plots the top-level classifications relevant to both domains, with the same weighting as in Panel A and similarly restricting to years after 2000 for all categories except Broadcast (pre-cable).

3.2 Time-series changes in issue emphasis and issue importance

3.2.1 Changes in news content

The growth of cable technology in the 1970s and 1980s dramatically increased the variety of channels available to viewers and allowed new entrants to specialize in appealing to narrower audiences. Cable news outlets — motivated in part by the need to produce 24 hours of news content per day — introduced a variety of programming innovations focused on maximizing viewership, incorporating entertainment and tapping into partisan outrage (Berry and Sobieraj, 2013; Benkler et al., 2018; Hemmer, 2022).[23] Led by Fox News, cable news outlets also began using increasingly sophisticated ratings analytics to inform coverage decisions (Hayes, 2025; Smith, 2019; Confessore, 2022).

Appendix Figure A2 plots the coverage share of each of the top-level topics plotted in Panel B of Figure 2, smoothing with four-year rolling means. The three major broadcasters (ABC, CBS, NBC) are virtually indistinguishable both before and immediately after the entry of cable networks, emphasizing economic topics slightly more than cultural topics. While we lack reliable transcript coverage from Fox News and MSNBC until 1999 (three years after these networks began broadcasting), it is clear that their entry constituted a significant change in the content available on television news: Fox News and MSNBC placed much greater emphasis on crime and safety, race and gender, immigration, and general anti-elite messaging, and less emphasis on economic conditions, economic policy, and healthcare and government services. CNN, building upon its acclaimed coverage of the Gulf War (Wiener, 2002), initially emphasized national security topics, but converged to Fox News and MSNBC's coverage levels in the mid-2000s. Starting around 2010, the three broadcast channels begin decreasing their economic emphasis and increasing their cultural emphasis, converging (and for some topics, surpassing) cable news' cultural coverage shares.

3.2.2 Changes in issue importance

We connect the topics in our schema with changes since 1996 in three different measures of issue importance: these issues' perceived importance to voters, their predictiveness for voting behavior, and the share of political advertising they comprise. We define these measures as follows:

1. **Perceived importance**: Many of the topics in our schema can be linked to answer choices in Gallup's "Most Important Problem Facing the Country" question.[24] We calculate the fraction m_{xt}^{imp} citing topic x as a "most important problem" in each year t.

2. **Predictiveness**: Few questions eliciting respondents' positions on different political issues are consistently included in the American National Election Studies since 1996. We identify those questions asked relatively consistently during this period and link them to the corresponding

[23] Prominent examples include aggressive partisan debates on CNN's *Crossfire*, dramatization of the Iraq War on Fox News (Auletta, 2003), and cross-partisan mockery on MSNBC's *Countdown* (Carter, 2006).

[24] See Appendix Table B2 for this mapping.

topics in our schema.[25] We estimate the following regression for each issue x in each year t:

$$Dem_{it} = \alpha_x + m_{xt}^{pred} p_{ixt} + \epsilon_{ixt},$$

where p_{ixt} is respondent i's (z-scored) position on issue x in year t, Dem_{it} is an indicator for whether the respondent reported voting Democrat in that year's presidential election, and the coefficient m_{xt}^{pred} captures the extent to which voters are differentiated along this issue x.

3. **Representation in political ads**: We calculate the (airings-weighted) share m_{xt}^{ads} of issue x within political ads in year t.

To estimate changes over time, we estimate, separately for each measure, the regression $\log m_{xt} = \alpha_x + \delta_x t + \epsilon_{xt}$, where t indexes years since 1996 and the log transform enables us to interpret δ_x as an average percent increase or decrease per year. For each issue x, we then calculate a measure of the extent to which cable and broadcast news outlets differentially emphasize x: $g_x = \log\big(\text{share of } x \text{ in cable news}\big) - \log\big(\text{share of } x \text{ in broadcast news}\big)$. This difference summarizes the direct effect of cable news' entry on news coverage of each issue.

Figure 3 plots the estimated δ_x coefficients, capturing trends in importance, against corresponding coverage gaps g_x. We plot the perceived importance measure in Panel A, the predictiveness measure in Panel B, and the political ads measure in Panel C. There is a positive relationship between the coverage gap and the growth in each of the three measures. In each case, the (mostly culture-war) issues most overrepresented in cable news have seen the largest increases in political importance.

4 Issue Performance on Television News and in Politics

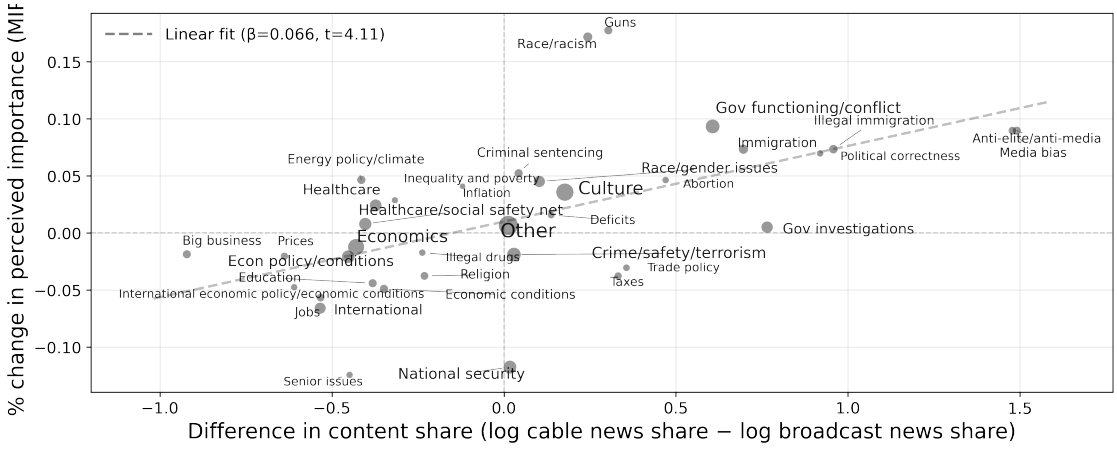
In this section, we investigate whether the differences in topic *emphasis* between cable news and politicians documented in Section 3 reflect differences in topic *performance*. We present a simple framework formalizing our measure of topic performance and highlighting the challenge to identification. We address this identification challenge by isolating quasi-exogenous variation in news content (and, more suggestively, in political campaign emphasis), and we then estimate the relative performance of different types of content for both sets of actors by linking our content classifications with data on viewership and voting.

The framework also highlights the key difference between politicians and news media: *share*-maximizing politicians place twice as much weight on "poaching" a voter from their opponents as "mobilizing" a voter who would not otherwise vote, whereas *size*-maximizing media outlets weight these two flows equally. Guided by this framework, we decompose our estimated performance effects into "poaching" and "mobilization" flows.

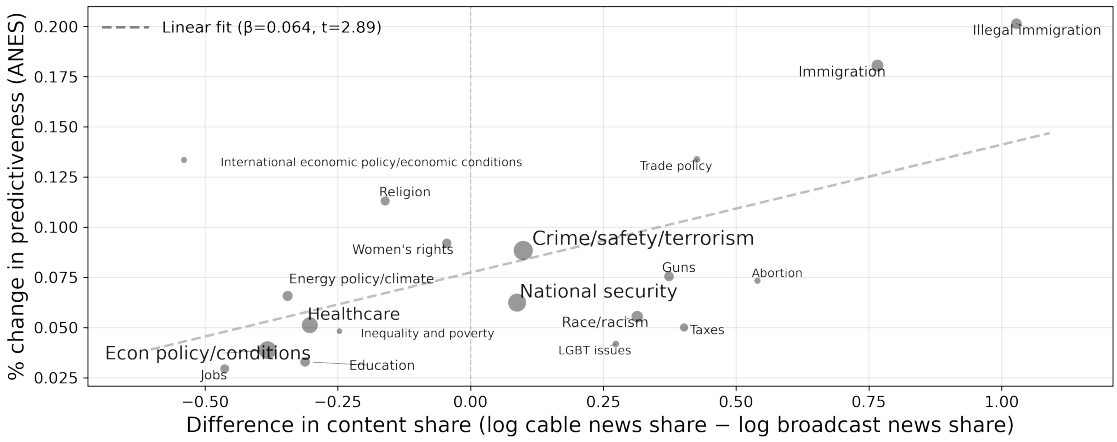
[25] See Appendix Table B2 for this mapping.

Figure 3: *Cable-broadcast coverage gaps and change in different measures of issue importance*

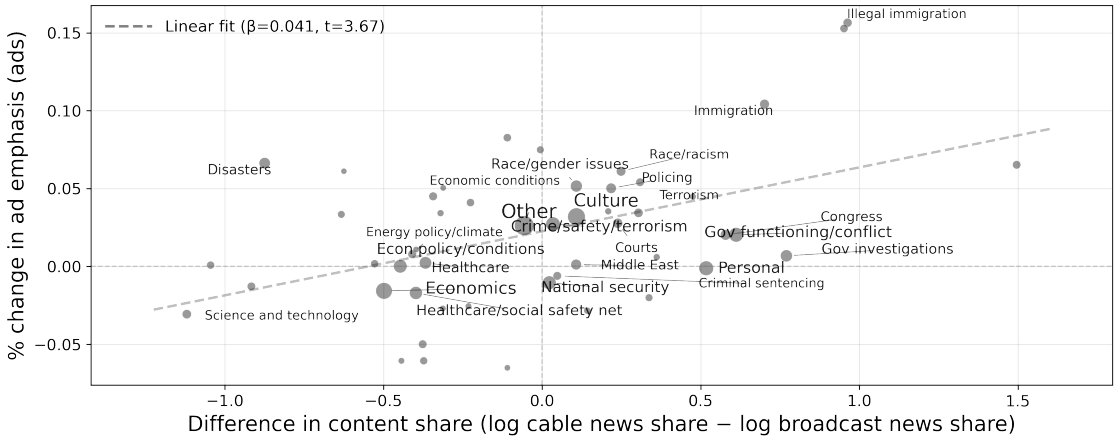
(a) *Growth in perceived importance (Gallup "Most Important Problem")*



(b) *Growth in predictiveness for voting*



(c) *Growth in share of political ads*



Notes: The x-axis for all plots is the cable-broadcast coverage gap of the issue: $\log\left(\text{share of } x \text{ in cable news}\right)$ minus $\log\left(\text{share of } x \text{ in broadcast news}\right)$. The y-axes are coefficients from regressing each of the three measures of issue importance on a linear time variable, as described in Section 3.2. Plots include the fit from a linear regression. We limit to topics that comprise a share of more than 0.1% both before and after 2010.

4.1 Interpreting Estimates

The following framework highlights the parallel problem facing news outlets and politicians. In each domain $d \in \{\textbf{N}\text{ews}, \textbf{P}\text{olitics}\}$, and in each "market" t (a specific date and timeslot for news, or a specific political race), a supplier i chooses its (multi-dimensional) content shares x to solve:

$$x^*_{i,t} = \arg\max_x V^d_i(x_{i,t};\xi_t) - \omega^d V^d_{-i}(x_{i,t};\xi_t) - C^d_i(x_{i,t};\gamma_t,\xi_t) \quad \text{s.t. } ||x||_1 = 1, \tag{1}$$

where V^d_i denotes the number of people choosing i, V^d_{-i} the number of people choosing i's competitor(s) (other news outlets or the opposing politician), ω^d the weight placed in domain d on people choosing competitor(s), and $C^d_i(x)$ the cost of choosing x. ξ_t collects factors that affect both viewership and costs, and γ_t collects factors that affect only costs; and suppliers observe both ξ_t and γ_t when making content decisions.

We outline a simplified version of our framework here, with the full model outlined in Appendix C. Below, we treat x as a scalar rather than a vector, facilitating an interpretation of increasing a single content dimension and allowing the others to adjust freely. Under standard regularity conditions, the optimal content choice $x^*_{i,t}$ is then characterized by the following first-order condition (assuming an interior solution):

$$\frac{d}{dx}\left[V^d_i(x^*_{i,t};\xi_t) - \omega^d V^d_{-i}(x^*_{i,t};\xi_t)\right] = \frac{d}{dx}\left[C^d_i(x^*_{i,t};\gamma_t,\xi_t)\right], \tag{2}$$

and our aim is to estimate the left-hand side of this equation for different topics. We also assume below that $\omega^N = 0$ and $\omega^P = 1$, i.e. that news outlets maximize their audience size, and politicians maximize their vote margin, though we relax this assumption in Appendix C.[26]

Interpreting identifying variation Since TV channels and politicians will equate the marginal returns to different categories of content, the variation in x^* required to estimate these marginal effects will stem from variation in the cost shifter γ_t. We interpret this cost shifter broadly. Variation in γ_t may literally reflect variation in the production cost of news content or an advertisement, but it also may reflect supplier misoptimization, longer-term reputational concerns, personal costs of deviating from a supplier's preferred content, or any other "supply-side" factors that do not influence demand. For TV news, variation in γ_t in part reflects day-to-day variation in newsworthy events (e.g., Hamilton 2004; Hayes 2025): it is less costly to produce a story on a given topic when real-world events related to that topic have occurred, and over time, networks or individual hosts may face reputational costs from repeatedly neglecting important news stories. For politicians, variation in γ_t is more likely to reflect misoptimization, idiosyncratic campaign decisions, or politicians' personal preferences (as in standard citizen-candidate models, e.g. Besley and Coate 1997): a large

[26] By formulating the supplier's program with an exact analogy to a consumer's Hicksian demand system, Appendix C shows that under weak regularity conditions and sufficiently strong diminishing returns, $\omega^N < \omega^P$ is a sufficient condition for news outlets to exhibit a relative preference for mobilization and politicians a relative preference for poaching.

body of research documents that political campaign strategists are no better at predicting which messages will be effective than laypeople (Broockman et al., 2024), that politicians hold systematic misperceptions about voters (Lucas et al., 2024; Furnas and LaPira, 2024), and that campaigns and advertising intermediaries are dominated by unrepresentative groups of highly active and vocal constituents, volunteers, and staffers (Laurison, 2022; Ward, 2021; Martin and Peskowitz, 2018) who may hold different preferences from everyday citizens.

To interpret our estimates as causal, we require that our controls eliminate the correlation between $V_i^d - \omega^d V_{-i}^d$ and C^d induced by the confound ξ, isolating variation attributable to the exogenous cost shifter γ. We discuss this identifying assumption in each domain.

Marginal vs. average effects Our objective is to compare the performance of different topics both within and across domains (news and politics). One measure of performance is *average* performance, $\left[[V_i^d(1) - \omega^d V_{-i}^d(1)] - [V_i^d(0) - \omega^d V_{-i}^d(0)]\right]$. However, since we rely on local variation within each domain (the precise nature of which depends on our choice of specification), we instead estimate *marginal* performance, and in the presence of decreasing marginal returns, marginal effects and average effects will differ. This complicates our comparison: if we estimate that economic content performs better than cultural content on the news, we do not know whether this is due to the fact that news emphasizes economic content less, and we do not know whether, if news were to balance its economic and cultural coverage shares, the marginal performance of economic content would remain higher than that of cultural content. Similarly, if we estimate that the marginal returns to economic content are higher for news than for politicians, we do not know whether this is solely due to the fact that news emphasizes economic content less than politicians.

However, the opposite finding is more informative. If the topics that news outlets emphasize *more* perform *better* on the margin than the topics outlets emphasize less, then in the presence of diminishing marginal returns to content, we will estimate a lower bound on average performance differences between topics. Similarly, if the topics that news outlets emphasize more than politicians also perform better in news than in politics, then we will estimate a lower bound on average performance differences between domains.

4.2 Viewership-Maximizing Content on Cable News

4.2.1 Empirical strategy

Our objective is to relate the viewership $V_{n,s,t}$ of network n during time of day s on day t to the network's contemporaneous content, $x_{n,s,t}$. Several threats to identification may confound a naive cross-sectional regression of viewership on content, arising from unobserved factors ξ which simultaneously influence both the content networks air and the audience size they attract. For example, networks may strategically choose to air content that they expect will perform well during periods that would have experienced high viewership regardless (e.g., Thursday evenings tend to have higher viewership than other periods during the week), or TV hosts who draw large audiences for reasons unrelated to their choice of content may have a preference for discussing certain types

of content.

We address these potential threats to identification both by including rich sets of controls and by estimating specifications that control for arbitrary shocks to viewers' propensity to tune in at a particular time, simulating an experiment of randomly assigning different content types to users when they turn on the channel. Our "event study" plots, which display coefficients on lags and leads of the content variable, enable visual inspection of potential pretrends; and we show that our estimates are stable (and pretrends statistically insignificant and small in magnitude) to several alternative event study structures. The identifying assumption is that residual variation in content is attributable to idiosyncratic variation in network decisions or the stock of available news events, unrelated to potential viewership outcomes.

In our baseline specification, the panel unit of our event study is a network n by fifteen-minute timeslot s (e.g., Fox News at 8:00-8:15pm) and our running variable t is the calendar-date (e.g., Thursday, June 7, 2018). Following Freyaldenhoven et al. (2021), we write the model as:

$$V_{n,s,t} = \sum_{m=-P}^{P} \beta_m x_{n,s,t-m} + \eta_t + g'_{n,s,t}\phi + \varepsilon_{n,s,t}, \tag{3}$$

where η_t are calendar date fixed effects, $x_{n,s,t}$ is a scalar measure of content, $P = 7$ is the number of pre- and post-periods we include, and g' are a vector of controls: at baseline, we include show-by-timeslot-by-month and show-by-timeslot-by-day of week fixed effects. The dependent variable in our baseline specification is the logged total number of seconds viewed across all households in our panel.

Our model exploits both variation in content within panel units across successive days (for example, variation in the content of Fox News at 8:00-8:15pm on June 7 compared to June 8) and variation across panel units within calendar days (for example, differences in content on June 7 between 8:00-8:15 on Fox News, 7:00-7:15 on Fox News, and 8:00-8:15 on MSNBC). The identifying assumption required for us to interpret β_0 as the causal effect of content at time t on viewership at time t is that $\mathbb{E}[\epsilon_{n,s,t}|x_{n,s,t-P}, \ldots, x_{n,s,t+P}, \eta_t, g_{n,s,t}] = 0$. The $m < 0$ coefficients can be interpreted as a test of pre-trends, i.e., whether network-by-timeslots that change their content emphasis at $m = 0$ are on different viewership trends on preceding days compared to network-by-timeslots that do not. The $m > 0$ coefficients capture potential persistent effects of economic content at $m = 0$ on viewership of the network-by-timeslot on subsequent days (e.g., the extent to which economic content alienates viewers such that they do not tune back in on subsequent days).

We report results from the baseline specification, discuss potential threats to identification, and then present further specifications that address these threats.

4.2.2 Results

For clarity of exposition, we first present results with a single measure of content: the share of each fifteen-minute segment devoted to economic issues minus the share devoted to cultural issues. Panel A of Figure 4 plots the resulting coefficients $\{\beta_m\}_{m=-6}^{7}$ in black, with associated 95% confidence intervals and with the $m = -7$ coefficient normalized to 0. Our estimates indicate that

when a network discusses a greater share of economic relative to cultural content, its viewership declines. Switching from an entirely cultural segment ($x_{n,s,t} = -1$) to an entirely economic segment ($x_{n,s,t} = 1$) results in a contemporaneous decrease in viewership of 2.2%; equivalently, a one standard deviation increase in the relative economic share results in a decrease in viewership of around 0.75%. Reassuringly, there is no evidence of pre-trends, suggesting that these effects are not driven by (for example) networks facing declining viewership in a timeslot switching to economic content in that timeslot.

A useful benchmark is the comparable effect of switching from a segment with no commercial advertising to a segment exclusively devoted to commercial advertising. We reproduce our event study, defining the treatment instead as the share of commercial advertising, in Appendix Figure A4. We estimate an effect on viewership of 14%, approximately six times the decline caused by a switch from cultural to economic coverage.

These results suggest that the relative dominance of cultural content on cable TV cannot be driven solely by cultural content being cheaper than economic content to produce on the margin, i.e. $\frac{d}{dx}C^N(x^*_{i,t}) > 0$. If cost differences drove content differences, then by Equation 2, cultural content would yield a *lower* viewership return than economic content on the margin of observed content choices.

Appendix Figure A5 shows that our estimates are extremely similar whether we restrict to cable news outlets (our default specification) or also include broadcast. We are underpowered to detect differences in content performance between cable and broadcast news, given that broadcast networks typically only air national news 1-2 hours a day.

4.2.3 Robustness

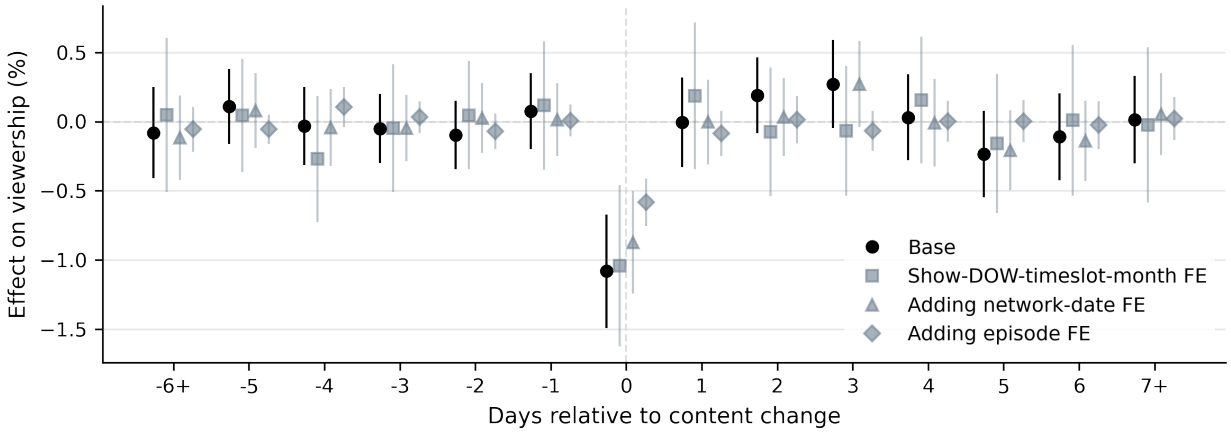
Additional show-level controls Panel A of Figure 4 presents additional specifications to rule out potential threats to identification. We include a specification with show-by-day of week-by-timeslot-by-month fixed effects, which exploit only variation in content between, for example, the 8:15pm-8:30pm timeslot across the four Tuesday episodes of *Tucker Carlson Tonight* in March 2016. We include a second specification that adds network-by-date fixed effects, ruling out shocks that might lead one, but not all, networks to both experience lower viewership on a given day and, separately, broadcast more economic content relative to cultural content. Finally, we include a specification that adds an *episode*-level fixed effect, e.g. comparing viewership during a more economic fifteen-minute timeslot within a given (60-minute) episode to viewership during a more cultural fifteen-minute timeslot in that same episode.

The estimated viewership penalty of economic relative to cultural content remains strong and statistically significant across all three alternative specifications. Relative to the baseline specification, show-by-day of week-by-timeslot-by-month fixed effects and network-by-date fixed effects have little effect on the the coefficient estimate. Episode fixed effects attenuate the magnitude of the coefficients, consistent with viewers being less sensitive to within-episode variation than across-episode variation.[27] Remaining confounds must operate at a level more granular than an

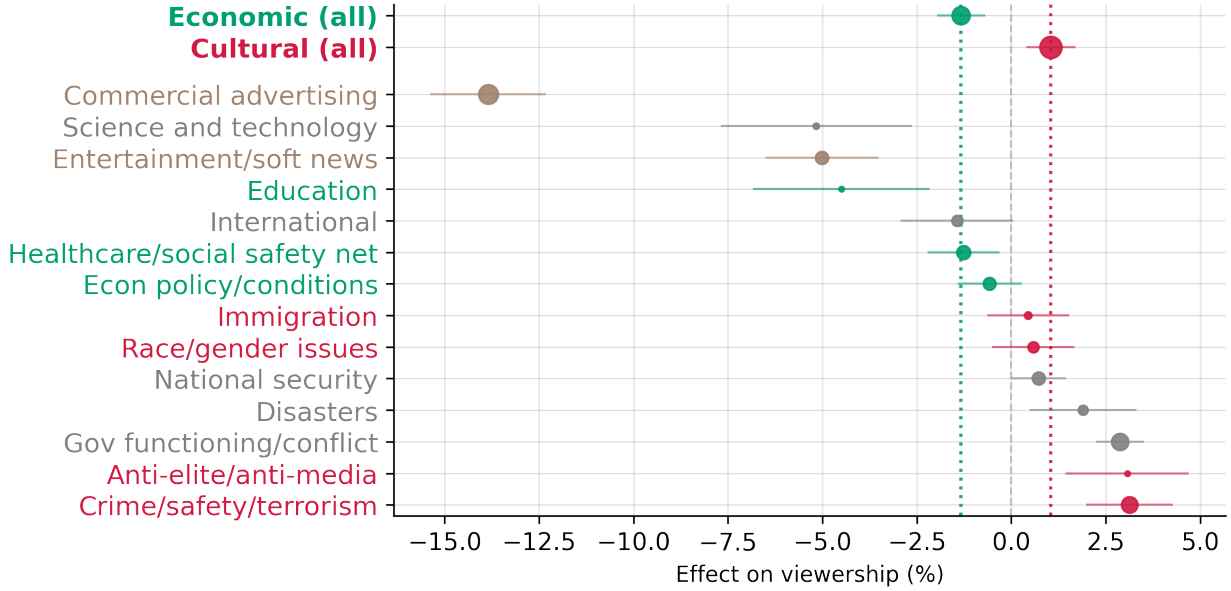
[27]The decrease in estimated effect is similar to the corresponding decrease in effect of commercial advertising

Figure 4: *Effect of segment content on segment viewership*

(a) *Effects of economic relative to cultural content*



(b) *Effects of all high-level content categories*



Notes: Panel A plots estimates of $\{\beta_m\}_{m=-6}^{7}$ from various specifications of Equation 3, with β_{-7} normalized to 0. The dependent variable in the top panel is logged total seconds viewed of the fifteen-minute segment, computed from FourthWall data; the explanatory variable of interest is the share of the segment's topics which are economic minus the share cultural, ranging from -1 to 1. Our base specification controls for calendar date fixed effects, show-by-timeslot-by-month fixed effects, and show-by-timeslot-by-day of week fixed effects. Additional specifications fully interact the latter two sets of fixed effects (i.e. control for show-by-day of week-by-timeslot-by-month fixed effects), add network-by-date fixed effects, and add fixed effects for the particular 60-minute episode. Panel B plots estimates of β_0 from the base specification, in which the explanatory variable of interest is the share of the segment devoted to each top-level type of content in our schema.

episode: for example, a show's producer would have to anticipate an unusually large viewership decline during a particular part of their show on a particular day and strategically time their economic content for that moment.

Conditioning on tuning in We next estimate a specification that controls even for shocks at this level of granularity. We condition on the event that a household tunes into a channel at all (and watches at least five seconds, the minimum viewership duration represented in our data) and examine whether households watch a longer proportion of the remaining segment when cultural content is being aired than when economic content is being aired. Since viewers cannot anticipate the content being aired at the time of tuning in, this specification approximates the experiment of a household tuning into a show and randomly seeing cultural or economic content. As shown in Panel A of Appendix Figure A6, households tune out of a network significantly more quickly when it is airing economic, rather than cultural, content, with the magnitude of the economic viewership penalty similar but slightly smaller than the magnitude of our main specification. The only remaining potential confounds must affect the *intensive* margin of how long households remain tuned in, even after accounting for the *extensive* margin of whether they tune in at all.

Replication using representative sample The FourthWall sample is not representative of the TV-viewing population and is drawn from only the 28 Nielsen media markets from which FourthWall began collecting data in 2015. We therefore replicate our results using aggregate audience sizes ("ratings") for each hour-long TV news segment from Nielsen. The Nielsen panel upon which audience estimates are based is recruited to be representative of the American TV-viewing population and has been extensively used in prior work (see, e.g., Gentzkow et al. 2024; Shapiro et al. 2021). Too facilitate comparison, we compute our FourthWall event studies at the level of a 60-minute rather than 15-minute segment.[28] As shown in Panel B of Appendix Figure A6, the estimates based on the FourthWall and Nielsen are virtually identical.

Alternative panel setups To evaluate potential pretrends operating at a timescale different from the calendar day and to assess the robustness of our estimates to alternative sources of variation, we present two alternative specifications of the event study. The first takes as the panel unit the *show*-by-timeslot (e.g., *Tucker Carlson Tonight* at 8:15pm) and the running variable as the episode number (e.g., the third episode of Tucker Carlson Tonight aired since our data begins). The second instead takes as the panel unit the day of week-network-by-timeslot (e.g., Fox News at 8:15pm on Tuesdays) and the running variable as the calendar week. As shown in Panel C of Appendix Figure A6, the estimated effects under these alternative specifications are, if anything, slightly larger than those under our preferred network-by-date specification.

induced by episode fixed effects (Appendix Figure A4).

[28] Per our data use agreement, we make no effort to analyze how this outcome is defined. However, Nielsen publications (e.g. Nielsen 2023) suggest that households must watch an (unspecified) length of a program in order to count for the purposes of that program's ratings.

Alternative segment lengths Finally, we examine the extent to which our effects change as we change the length of our unit of analysis. Panel D of Appendix Figure A6 presents estimates at the length of a five minute segment, a fifteen-minute segment (our preferred specification) and an entire sixty minute episode. The estimated effect remains strong and significant across all specifications, but grows as we increase the duration of the segment. This pattern is consistent with increasing disutility to economic content: viewers may be willing to tolerate five minutes of economic content in anticipation of future cultural content, but are more likely to turn off if the entire episode is economically focused.

4.2.4 Estimates for all content categories

We replicate these estimates for each of our individual fourteen high-level categories: economic policy/conditions, entitlements/healthcare, and education ("economic" topics); crime/safety, gender/race/religion, immigration, and anti-elite content ("cultural" topics); government functioning and political conflict, military and national security, international events, science and technology, and natural/manmade disasters ("other hard" topics); and commercial advertising and entertainment and "soft news". We summarize these results in Panel B of Figure 4, which plots the β_0 coefficients representing the effect of content on contemporaneous viewership. Every high-level cultural topic in the schema generates more viewership than any of the high-level economic topics in our schema, although these differences are not always statistically significant. Among the topicsgenerating the highest largest viewership premium are anti-elite content and government functioning/political content, a fact potentially related to the sharp rise of affective partisan polarization since 1996 (e.g., Levendusky and Malhotra 2016; Iyengar et al. 2019).

We next replicate these estimates for each of the topics in our schema, plotting the corresponding β_0 coefficients in Appendix Figure A7. Although our results for less common topics are significantly noisier, most cultural topics generate significantly greater viewership responses than most economic topics, with "Guns", "Religion", and "Terrorism" attracting the largest audiences.

4.3 Poaching versus Mobilization Flows on Cable News

4.3.1 Decomposing performance results

Our household-by-second smart TV data, in which we can track households as they switch between different channels, allow us to directly measure poaching and mobilization flows. For each news segment, we calculate the share of viewers who tuned into the segment who (1) switch to a different news channel and (2) switch to the "outside option" of a non-news channel, or turning off the TV.[29] Flow (1) captures poaching loss, and flow (2) captures mobilization loss. We study net outflows (rather than also including households who flow *in* to the segment) because only the

[29] We classify a household as having switched from channel A to channel B if (1) the household has no other viewing intervals of more than five seconds between when they stop watching A and start watching B, and (2) the start time of viewing B is less than two minutes after the end time of viewing A. This definition ensures that if a viewer manually switches from channel A to channel B by way of the intermediate channels, we still capture this as an A-B switch.)

former households know what content is being broadcast on the channel and can plausibly respond to it.

Panel A of Figure 5 replicates our standard event-study specification (Equation 3) using flows to the competitor and the outside option as outcomes. Shifts from cultural to economic content increase flows to the outside option (i.e., entail a loss of mobilization) but *decrease* flows to competitor channels (i.e., achieve a gain in poaching), suggesting that on the margin, economic content is better for poaching but worse for mobilization than cultural content.

Robustness We collapse these results to a single dependent variable by subtracting flows to the competitor from flows to the outside option, then replicate Equation 3 to estimate each topic's "diversion": its relative effectiveness for mobilization relative to poaching. We then replicate our battery of robustness checks in Appendix Figure A8. Estimating these specifications for each high-level topic in Panel B in Figure 5, and for all topics in Appendix Figure A9, we find that cultural topics are consistently better for mobilization and economic topics consistently better for poaching.

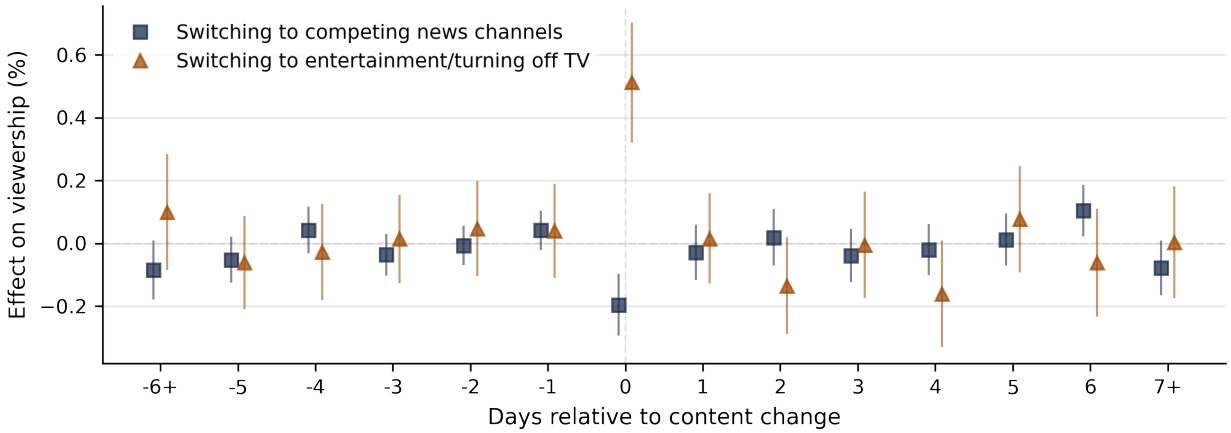
4.3.2 Historical evidence from consumer survey data

The rich television viewership module included in the MRI Survey of the American Consumer enables a broader test, in the spirit of Prior (2005), of whether Fox News and MSNBC attracted their early audience by "poaching" viewers from watching other news programs or "mobilizing" viewers who were previously watching entertainment. To conduct this test, we classify every show or network included in the viewership survey as either "news" or "entertainment" programming, then compute, for each survey respondent, the number of news and entertainment programs they report watching in the past week. Using data from 1994-1995 (the two years before the entry of Fox News and MSNBC), we fit a generalized random forest (Athey et al., 2019) to predict news and entertainment viewership based on the demographic variables available in MRI: age, education, income, household composition, race, and employment status. We use this model to generate predicted news and entertainment viewership for respondents between 1998 (the first year for which we have viewership data for Fox and MSNBC) and 2004. In this post-entry sample, we then estimate bivariate regressions of (z-scored) indicators for respondents' self-reported viewership of each network in the MRI survey on (z-scored) predicted entertainment viewership or predicted news viewership. For a given network, the difference between these two coefficients captures the extent to which the network's post-1998 viewers comprised the demographic groups previously watching entertainment rather than news.

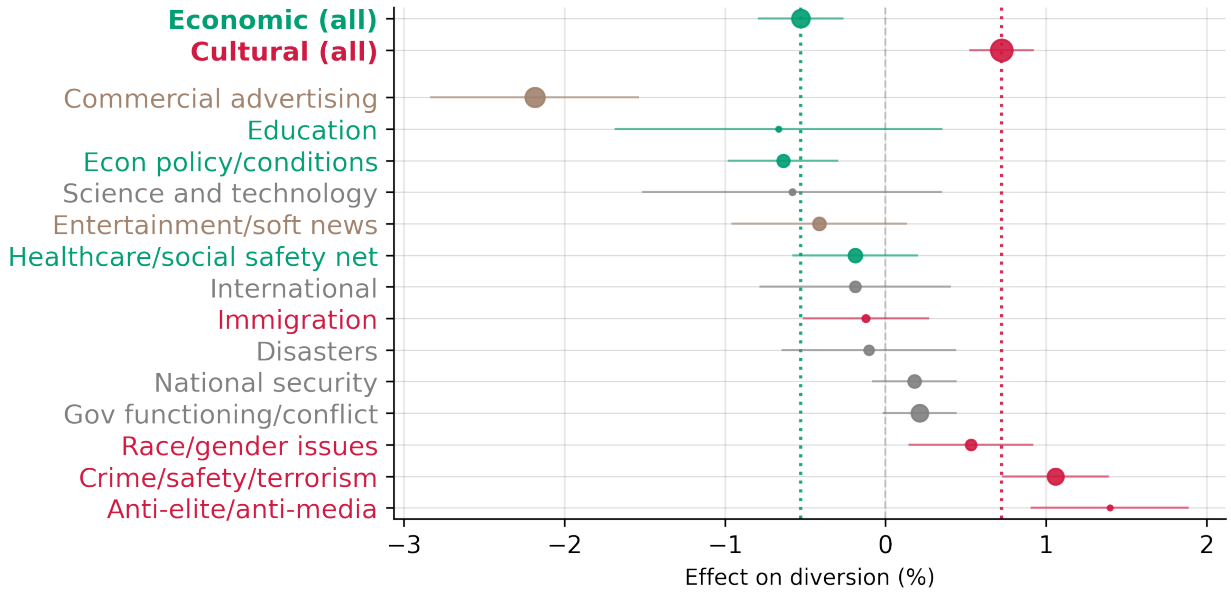
Figure 6 presents these coefficients. Reassuringly, the three broadcast news divisions (ABC News, CBS News, and NBC News) have by far the most negative coefficients, while entertainment-focused networks such as ESPN, HBO, Comedy Central, and MTV have by far the most positive coefficients. CNN, MSNBC, and Fox News all have significant and positive coefficients — indicating that viewership is more strongly predicted by predicted entertainment than predicted news viewership — and they fall closer to the entertainment extreme on the left-hand side of the plot than

Figure 5: *Effect of segment content on switching behavior away from segment*

(a) *Effect of relative economic content on switching rate to competitors and switching rate to outside option*

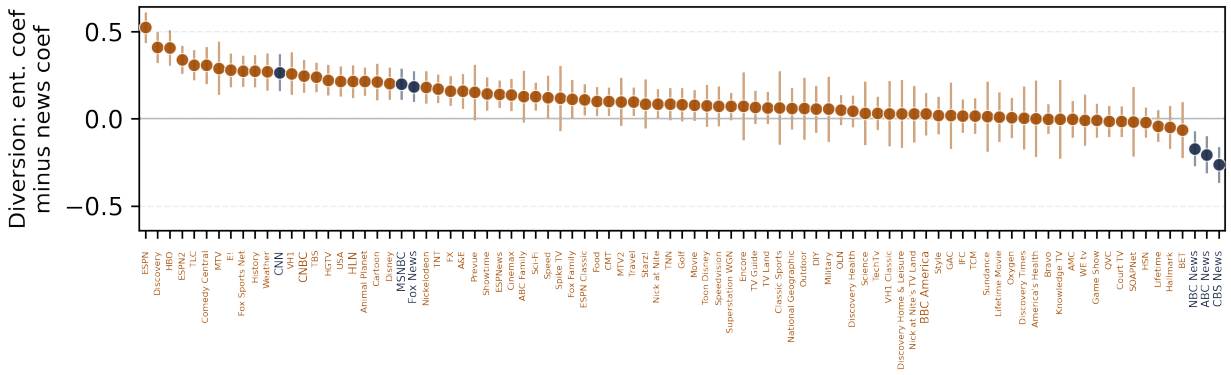


(b) *Effect of all high-level content categories on switching rate to competitor minus switching rate to outside option*



Notes: Panel A plots estimates of $\{\beta_m\}_{m=-6}^{7}$ from two specifications of Equation 3: one in which the dependent variable is the share of households switching to a competing news channel and one in which the dependent variable is the share of households switching off the news (i.e. either switching to a non-news channel or turning off the TV). The explanatory variable of interest is the share of the segment's topics which are economic minus the share cultural, ranging from -1 to 1. Panel B plots estimates of β_0 from parallel specifications in which we replace the outcome variable with the *difference* in the switching rate to competing news channels relative to the switching rates to the outside option, and we replace the explanatory variable with the share of the segment devoted to each type of content. In both panels, we control for calendar date, show-by-timeslot-by-month, and show-by-timeslot-by-day of week fixed effects.

Figure 6: *Predictiveness of demographic groups' prior entertainment consumption minus predictiveness of prior news consumption for network viewership*



Notes: Figure presents the difference two bivariate regression coefficients: the coefficient from a regression of a (z-scored) indicator for whether the respondent reported watching each network in the past seven days on their predicted (z-scored) number of news programs, and the coefficient from an analogous regression using their predicted number of entertainment programs. Data limits to MRI survey waves between 1998 and 2004. The prediction is by a random forest model trained on survey waves 1994-1995 to predict the (z-scored) number of news programs and entertainment programs each respondent watches, using as covariates the demographic variables available in MRI: age, education, income, household composition, race, and employment status. We present 95% confidence intervals calculated by jointly bootstrapping the first-stage prediction and second-stage regression.

the news extreme on the right.[30] That these networks appealed to similar demographic groups as these entertainment networks — rather than similar demographics as the broadcast news networks — further suggests a "mobilizing" strategy focused on competing with entertainment rather than a "poaching" strategy focused on competing with broadcast news.

4.4 Voteshare-Maximizing Content in Elections

4.4.1 Empirical strategy

Our analysis for politicians parallels the analysis for TV news, but our data are significantly less rich: whereas both content and our primary outcome (household-level viewership) vary at the fifteen-minute level in our analysis of news, our primary outcome for politicians varies only at the candidate-by-election-year level (for aggregate electoral performance, computed from electoral returns) or at the respondent-by-candidate-by-election-year level (for individual-level voting choices). These limitations preclude the fine-grained event study approach we used for TV news, and we instead proceed via a two-way fixed effects model. Without a credible source of exogenous variation in campaign emphasis, we interpret these results as suggestive rather than causal.[31]

[30] These patterns do not solely reflect differences between households subscribing vs. not subscribing to cable: Appendix Figure A10 replicates these regressions, limiting to individuals who report subscribing to cable in both the pre-1996 and the post-1996 sample, and we find similar results. Nor does it appear to be a mechanical result stemming from the fact that MSNBC and Fox News were new networks in 1998; BBC America was established in 1998 and has a significantly smaller coefficient, and CNN was established in 1980 and has a significantly larger coefficient.

[31] Our aim is not to estimate the effects of campaign ads per se (Spenkuch and Toniatti, 2018; Sides et al., 2022) but rather to characterize the candidate's broader campaign strategy (including speeches and public appearances, media

We limit our sample to general elections contested by at least one Democrat and one Republican. Our panel unit is a party p by "seat" s: we define a seat as an office-by-constituency pair, (e.g., Gubernatorial races in Alabama, House races in Louisiana's 4th district, Presidential elections). Our time variable is an election year t. Our regression specification for aggregate returns, corresponding to Column 2 of Table 1, is:

$$V_{ipost} = \beta x_{it} + g'_{it}\phi + \varepsilon_{it}, \tag{4}$$

where i is a unique candidate, V_{ipost} is an indicator for whether the candidate won their race (or, in alternative specifications, the candidate's vote share), p denotes i's party, s denotes the seat i is contesting, and o denotes the office i is contesting (e.g. House or Governor). Our coefficient of interest is $x_{i,t}$, the average share of economic content minus the average share of cultural content in i's campaign ads. In all specifications, our controls g include party-by-state-by-office FE (e.g., Democrats' average propensity to win House races in California), party-by-office-by-year FE (e.g., Democrats' average propensity to win House seats in 2006), and an incumbency indicator. We therefore examine whether candidates who run more economically focused campaigns perform better, compared both to other campaigns in the same constituency by the same party for the same office in other years and compared to other campaigns in the same election year by the same party for the same office in other seats. Our regression specification at the individual level is similar, but enables us to include controls for individual demographic characteristics.

4.4.2 Results

Table 1 presents estimates of Equation 4 across various combinations of controls. Column 1 presents a regression of an indicator for whether the politician won the election on the relative economic content of the politician's ads (standardized to mean zero and standard deviation one). Column 2 adds party-seat fixed effects (e.g. Democrats' average propensity to win the CA-03 House race). In Column 3, we add a control for the *opponent's* campaign emphasis, thus dropping all races in which only one candidate aired a campaign ad. In Column 4, we add controls for the interaction of incumbency with measures of the current economic conditions in the area (log income per capita, unemployment rate, and labor force participation). In Column 5, we further add controls for the interaction of incumbency with measures of the voteshare won by the candidate's party in the past election for the same seat. Finally, in Column 6, we include unique *race* fixed effects, exploiting only variation in the economic content between the Democrat and Republican in a race(doubling the estimated coefficient). Across specifications, we estimate significant effects of increasing relative economic content on electoral success: a one standard deviation increase in relative economic content is associated with a 3-9 percentage point higher probability of winning the election. We plot the estimates for each individual topic in our schema in Appendix Figure A11. While these estimates are noisier, economic topics tend to outperform cultural topics.

interviews, debates, etc.), for which we view the contents of the candidate's ads as the best available proxy.

Table 1: *Political advertising content and electoral success*

	Dependent variable: Won election					
	(1)	(2)	(3)	(4)	(5)	(6)
Relative econ (std.)	0.037***	0.047***	0.091***	0.072***	0.077***	0.158***
	(0.013)	(0.016)	(0.024)	(0.021)	(0.018)	(0.038)
Opponent relative econ (std.)			-0.093***	-0.090***	-0.102***	
			(0.025)	(0.024)	(0.022)	
Party × state × office FE	Yes	—	—	—	—	—
Party × office × year FE	Yes	Yes	Yes	Yes	Yes	Yes
Party × seat FE	No	Yes	Yes	Yes	Yes	Yes
Incumb. × (econ. conds.)	No	No	No	Yes	Yes	Yes
Incumb. × (voting. conds.)	No	No	No	No	Yes	Yes
Race FE	No	No	No	No	No	Yes
Observations	3088	3088	2196	2194	1946	1946

Notes: Table presents coefficient estimates from regressions of an indicator for whether the candidate won a general election on the share of the politician's ad content that is economic minus the share that is cultural (standardized to a z-score). Observations are unique candidate-years. We include only elections contested by at least one Republican and one Democrat. All columns control for an incumbency indicator and party interacted with county-level demographics (share white, share black, share Hispanic, and log population). Economic controls include log income per capita, the unemployment rate, and labor force participation. Political controls include the log number of airings of the opponent's ads and the lagged voteshare of the candidate's party in the previous election for the same seat. We cluster standard errors at the level of a unique race.

Heterogeneity In Appendix Table A1, we show that the effects are slightly stronger if we restrict to "competitive" races, which we define as races for which the previous race for that seat was decided by a margin of less than 20%. In Appendix Table A2, we show that these results hold for each office individually (House, Senate, and Governor).

Our controls rule out many plausible confounds — for example, that incumbents presiding over good economic conditions both are electorally rewarded and separately discuss their economic performance; or that candidates from the more popular party in the seat are both more likely to win the election and separately to air economic ads. However, we are unable to rule out important potential confounds: for example, candidates who are less skilled campaigners may both perform worse in elections and tend to air more cultural ads; or candidates who expect to lose may turn to culture as a higher-variance strategy.[32]

Given these potential confounds, we view our results as suggestive. At a minimum, our results indicate there is no obvious economic *penalty* for politicians, as we found for TV news. The fact that there are likely diminishing marginal returns to emphasizing a given dimension (e.g., because news outlets report on the most exciting or important stories first, or politicians talk about the most important or persuasive issues first) makes the *higher* marginal returns to cultural content for TV — even when TV is already discussing cultural issues significantly more than politicians — even more striking.

4.4.3 Poaching versus mobilization in politics

Without rich individual-level panel data, we cannot directly replicate the individual-level "switching" specifications of Section 4.3. However, we conduct a coarser version of these tests by examining the relationship between a candidate i's campaign emphasis and two outcomes proxying for poaching and mobilization. Our proxy for poaching is the difference between the number of votes for candidate i, V_i, and the number of votes for i's opponent, V_{-i}; our proxy for mobilization is the difference between the number of votes for candidate i and the number of eligible voters who did not vote, V_0. We divide outcomes by the total number of eligible voters in the constituency to preserve comparability across different levels of races, writing $v_i = V_i/(V_i + V_{-i} + V_0)$ (and similarly for v_{-i} and v_0).

Columns 1–2 of Table 2 presents estimates of Equation 4 in which we replace the dependent variable with $(v_i - v_j)$ (Column 1) or with $(v_i - v_0)$ (Column 2). A one standard-deviation increase in relative economic emphasis is associated with a 0.4 percentage point increase in the vote margin (0.05 standard deviations). In contrast, we do not detect a statistically significant relationship between relative economic emphasis and substitution to voting for the candidate from non-voting. In Columns 3–4, we replicate these specifications in the individual-level CES data, replacing the dependent variables with their (administratively validated) individual-level analogues, and find

[32] We employ the approach of Altonji et al. (2005), extended by Oster (2019), to calculate the degree of selection on unobservables required to spuriously generate our coefficient under the null hypothesis that there is no causal effect of the relative economic emphasis of a campaign's ads on vote shares; we find that selection on unobservables would need to be 155% the size of selection on observables in order to explain away our estimated effect.

similar results. As an additional test in the CES, we can *predict* each individual's ex ante probability of turning out (for either candidate) and investigate whether economic content is disproportionately effective in poaching individuals with high predicted turnout probability ("high-propensity voters"). We implement this prediction using a generalized random forest (Athey et al., 2019), using as predictors the set of individual-level demographic characteristics used in Panel B of Table 1 and (self-reported) partisanship and levels of political interest. Columns 5–6 replicate Columns 3–4, but add as explanatory variables predicted turnout (scaled to mean zero and standard deviation one) and the interaction of scaled predicted turnout with the campaign's relative economic emphasis. We find that economics is disproportionately effective in poaching voters who have a higher ex-ante probability of turning out, consistent with economics being disproportionately effective for poaching voters who would otherwise turn out for an opponent.

Table 2: *Political poaching and mobilization*

Dataset:	Electoral returns		Cooperative Election Studies			
Dependent variable:	$v_i - v_{-i}$	$v_i - v_0$	$v_i - v_{-i}$	$v_i - v_0$	$v_i - v_{-i}$	$v_i - v_0$
	(1)	(2)	(3)	(4)	(5)	(6)
Relative econ %	0.0089**	-0.0015	0.0211***	-0.0017	0.0218***	-0.0009
	(0.0043)	(0.0060)	(0.0076)	(0.0084)	(0.0076)	(0.0075)
Rel. econ % × pred. turnout					0.0175*	-0.0033
					(0.0093)	(0.0062)
R^2	0.77	0.95	0.01	0.09	0.01	0.10
Observations	1,835	1,835	622,857	622,857	620,616	620,616

Notes: Table presents coefficient estimates from regressions of measures of poaching (Columns 1, 3, and 5) and measures of mobilization (Columns 2, 4, 6) on the share of the politician's ad content that is economic minus the share that is cultural. The measure of poaching is the number of votes for the candidate minus the number of votes for the opposing candidate, normalized by the number of eligible voters in the constituency. The measure of mobilization is the number of votes for the candidate minus the number of eligible voters who did not vote for either candidate, similarly normalized. Observations in Columns 1–2 are unique candidate-years; observations in Columns 3–6 are unique respondent-candidate pairs. The predicted turnout variable is scaled to mean zero and standard deviation one and is estimated by random forest, taking as predictors the full set of individual demographic controls, self-reported political interest, and self-reported partisan alignment; we include predicted turnout as a control. All specifications include only general elections contested by at least one Republican and one Democrat. Columns 3–6 restrict to respondents who were successfully matched to the voter file. All columns control for the variables included in Column 3 of Table 1. We cluster standard errors at the level of a unique race. Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

As a second suggestive test, Appendix Table A3 replicates our overall performance results separately for years without a presidential race (2002, 2006, ..., 2022) and years with a presidential race. Non-presidential years see approximately 20% lower turnout than presidential years, disproportionately drawing highly-engaged voters (McDonald, 2025). We find that the positive correlation

between relative economic content and candidate success is entirely driven by years without a presidential race, consistent with economics being more effective at appealing to highly-engaged voters (i.e. poaching). These heterogeneous results also constitute evidence against the positive correlation between relative economic content and candidate success being driven by candidate-level confounders (e.g., ex-ante stronger candidates using more economic messaging).

5 Time-Series Changes in Issue Importance

In this section, we turn from the *determinants* of cable TV's greater emphasis on cultural content to the *consequences* of this emphasis. In particular, we show that constituencies exogenously more exposed to cultural news coverage report placing greater importance on cultural issues and lower importance on economic issues, and that politicians respond by supplying more cultural and less economic rhetoric.

We use the instrumental variables approach pioneered by Martin and Yurukoglu (2017) to isolate exogenous variation in cable news viewership. The logic of the instrument is as follows. The 210 Nielsen Designated Market Areas (DMAs) in the United States vary significantly in their assignment of different networks to different channel numbers. The process by which MSNBC and Fox News were assigned channels was, conditional on a basic set of controls, random: Martin and Yurukoglu (2017), and follow-up work (Simonov et al., 2022; Ash et al., 2024a), show that channel numbers are orthogonal to a wide range of demographic characteristics. Moreover, Fox News and MSNBC receive higher viewership in areas in which they are assigned a lower channel number: since other popular networks tend to have low channel numbers, viewers who "channel-surf" are more likely to watch more Fox News or MSNBC when these networks are placed near the popular networks.

5.1 Effects of cable news on voter priorities

We match our Gallup data on individual voters' responses to Most Important Problem questions with Nielsen data on the channel numbers and ratings of Fox News and MSNBC in those voters' ZIP codes. Since the Gallup surveys do not consistently ask respondents about their personal media consumption, we use average viewership of Fox News or MSNBC in the respondent's DMA as the endogenous variable instrumented with the channel numbers of these networks.

We estimate the following equation:

$$Y_{imt} = \beta \widehat{R_{mt}} + X_i \eta + Z_{mt} \sigma + \varepsilon_{imt}, \tag{5}$$

where Y_{imt} is the individual's stated importance of economic issues relative to cultural issues, $\widehat{R_{mt}}$ is the fitted value of the network's rating in media market m in year t, X_i is a vector of individual-level controls, and Z_{mt} is a vector of media market-by-year-level controls. As described in Section 2.3, we construct our outcome variable from responses to Gallup's Most Important Problem question. Y_{imt} is operationalized as the difference between an indicator for the individual's Most Important

Problem being economic and an indicator for their Most Important Problem being cultural (so it takes on values $-1, 0$, and 1). Standard errors are clustered at the DMA level.

Panel A of Table 3 presents results from various specifications of Equation 5. These specifications sum across Fox and MSNBC to consider their joint effect, though we also present results separating the two and find that the two networks' effects are fairly similar. Column 1 presents a parsimonious specification in which we control only for year fixed effects and individual-level demographic controls. We sequentially add controls: county demographic controls (shares white, black, and Hispanic and log population both as of the year of the survey and as of 2000, and log income per capita in 2000), economic controls (log income per capita, unemployment rate, and labor force participation), and voting controls (indicators for each individual's choice on a five-point party alignment scale). Voting controls are a "bad control" in the sense that increases in a voter's relative weight on culture should affect their voting behavior; we nevertheless find it valuable to include these controls to assess whether our results are distinct from the well-established effect of cable viewership on Republican or Democratic voting (DellaVigna and Kaplan, 2007; Martin and Yurukoglu, 2017).

The estimated effects remain stable and significant across combinations of controls: in our preferred specification in Column 3, an increase in viewership of one rating point decreases the average stated importance of economic issues relative to cultural issues by approximately 0.15 (on a scale ranging from 1 = economic to -1 = cultural). Equivalently, an increase in viewership by one standard deviation decreases the stated relative importance of economic issues by approximately 0.06 standard deviations. We report credible intervals, calculated via a Bayesian bootstrap procedure clustered at the media market level (Andrews and Shapiro, 2025; Rubin, 1981), in brackets.

We explore dynamics in Panel A of Appendix Figure A12. Following the procedure of Cattaneo et al. 2024, we plot binscatters of the reduced-form relationship between channel numbers and Most Important Problems. Cross-sectional differences emerge as early as 2000-2007, and the variation between counties decreases over time. This decreased cross-sectional variation is consistent with a combination of increasing cable ratings and diminishing marginal effects. Appendix Table A4 shows that although the estimated effects of MSNBC are similar to those of Fox News, they are estimated less precisely; we are unable to reject that the effects of the two networks are equal. We present estimates for all topics on the left-hand panel of Appendix Figure A13.

5.2 Effects of cable news on political rhetoric

We next link cable news exposure to political appeals. We construct measures of both cable news viewership and channel numbers at the *constituency* level by averaging across all counties overlapping with the constituency, weighted by the share of the constituency's population each county comprises. We then estimate various specifications of:

$$c_{i,t} = \beta \widehat{R_{a(i)}} + X_{i,t}\eta + Z_{a(i),t}\sigma + \varepsilon_{it}, \tag{6}$$

Table 3: *Effect of cable news on voter priorities and political ads*

Panel A: MIP	*Economic relative to cultural MIP*			
Fox News + MSNBC rating	-0.176***	-0.168***	-0.150***	-0.117**
	(0.06)	(0.05)	(0.06)	(0.05)
Bayes bootstrap 95% CI	[-0.33, -0.10]	[-0.29, -0.06]	[-0.27, -0.06]	[-0.23, -0.04]
Observations	375,715	375,715	372,081	372,081
Panel B: Ads	*Economic relative to cultural ads*			
Fox News + MSNBC rating	-0.460***	-0.373**	-0.283*	-0.291
	(0.13)	(0.15)	(0.16)	(0.18)
Bayes bootstrap 95% CI	[-0.75, -0.27]	[-0.62, -0.07]	[-0.61, 0.02]	[-0.58, 0.09]
Observations	3,094	3,094	3,089	2,745
County demographic controls	No	Yes	Yes	Yes
County econ controls	No	No	Yes	Yes
Voting controls	No	No	No	Yes

Notes: Table presents 2SLS regressions. In Panel A, the unit of observation is a survey respondent, and the dependent variable is the difference between the respondent's reported importance of economic issues and their reported importance of cultural issues. In Panel B, the unit of observation is a candidate-by-year, and the dependent variable is the share of economic videos minus the share of cultural videos aired by the candidate. All columns in Panel A control for individual demographic controls (race, education, and age) and year fixed effects; all columns in Panel B control for office-by-party fixed effects, year fixed effects, and an indicator for whether the candidate is incumbent. County-level demographic controls include shares white and black and log population. County economic controls include log income per capita, unemployment rate, and labor force participation. Voting controls include each individual's choice on a five-point party alignment scale (ranging from Strong Democrat to Strong Republican) in Panel A and the voteshare of the candidate's party in the previous race for that seat in Panel B. Standard errors are clustered at the media market level (Panel A) and race level (Panel B); we present 95% credible intervals from a Bayes bootstrap clustered at the same levels.

where $c_{i,t}$ is the average content of politician i's advertisements in election year t, $\widehat{R_{a(i),t}}$ is the fitted average rating of the network across all counties that make up the constituency $a(i)$ in which the politician is running (instrumented by the average channel numbers across all markets in $a(i)$), $X_{i,t}$ is a vector of politician-by-year-level controls, and $Z_{a(i),t}$ is a vector of constituency-by-year-level controls.

Panel B of Table 3 presents results. Column 1 presents a specification including only office $\times$ party and year fixed effects and an incumbency indicator. Through Columns 2–4, we add the same controls as in Panel A: county-level demographics, economic conditions, and voting controls. Across specifications, we estimate a meaningful effect of cable viewership on politician campaign emphasis: an increase in cable viewership by one rating point decreases the relative economic emphasis of campaigns by approximately 0.3 standard deviations. We are underpowered to reject the null hypothesis of no effect in Column 4, but the coefficient estimate remains similar to those in previous columns.

Panel B of Appendix Figure A12 presents the reduced-form relationship between campaign emphasis and channel numbers. The effect is strongest in 2008-2015, consistent with politicians responding to the changing voter preferences documented in Panel A with a delay. Disaggregating by network in Appendix Table A5, we find that the effects of MSNBC are larger but less precisely estimated. We present estimates for all topics on the right-hand panel of Appendix Figure A13.

5.3 Back-of-the-envelope quantification

We close this paper with a back-of-the-envelope exercise using the cross-sectional variation exploited in Table 3 to quantify the extent to which the growth of Fox News and MSNBC can explain the observed changes in voter priorities and political advertising since 2000 (the first year for which we have non-presidential advertising data). This quantification must be interpreted with caution, particularly because it abstracts from time-series changes in the Democratic or Republican parties' overall positions or from the effects of elections themselves. Both endogenous party realignment, and which party or politician won the prior election, are likely to influence both voters' Most Important Problem responses and individual politicians' advertisements; and there are many other shocks during this period affecting both voter priorities and politicians' advertisements, including the Great Financial Crisis and the rise of social media. We thus view this quantification as suggestive.

To perform our quantification, we multiply the estimated effect of one additional rating point of Fox News, MSNBC, or both together on voters' Most Important Problem (Appendix Table A4, Column 2) or on politicians' campaign ads (Appendix Table A5) by the ratings of Fox News and MSNBC in 2022. We then subtract this value from the observed Most Important Problem or ad content in 2022 to compute the counterfactual outcomes. Table 4 shows that Fox News and MSNBC can jointly account for 34% of the growth in cultural relative to economic MIPs between 2000 and 2022, and 41% of the growth in cultural relative to economic political advertising over the same period.

Table 4: *Back-of-the-envelope quantification of effects of cable*

	Observed		Counterfactual 2022, removing...		
	2000	2022	Fox	MSNBC	Both
Panel A: MIP	*Economic minus cultural MIP*				
Level	0.29	-0.02	0.07	0.00	0.08
2000 → 2022 growth explained	—	—	29%	7%	34%
Panel B: Ads	*Economic % minus cultural % of ads*				
Level	0.59	0.17	0.33	0.20	0.34
2000 → 2022 growth explained	—	—	38%	7%	41%

Notes: We compute the counterfactual value in 2022 for Fox, MSNBC, and the two networks jointly by multiplying the estimated effect of one rating point (see Appendix Table A4 for effects on MIP and Appendix Table A5 for effects on ads) by the average rating in 2022, and subtracting this value from the observed late-period average. We compute percent of growth explained as $100 \times \frac{y^{\text{obs}}_{2022} - y^{\text{counterfactual}}_{2022}}{y^{\text{obs}}_{2022} - y^{\text{obs}}_{2000}}$.

6 Discussion

This paper traces recent growth in political conflict on cultural issues — the "culture war" — in part to changes in the landscape of entertainment and news media competition in the 1980s and 1990s. Our analysis centers on the 24-hour cable news outlets which responded to the incentives these changes created, and on the distinctive, culture war-centered business strategy they employed to do so. We show that this business strategy can explain a significant fraction of subsequent growth in the importance of cultural issues among both voters and politicians.

International perspective and social media Most Western liberal democracies have experienced patterns of educational polarization (Gethin et al., 2022) that may be attributable to a common growth in the salience of cultural issues (Danieli et al., 2024). However, cultural divisions in the US emerged earlier, and appear much deeper, than in other liberal democracies. The US is an outlier in terms of affective and partisan polarization (Boxell, Gentzkow and Shapiro, 2024; Desmet, no Ortín and Wacziarg, 2025), populist cultural values (Iversen and Soskice, 2020), urban-rural voting divides (Taylor et al., 2024), trust in the news media and the partisan gap in trust (Newman et al., 2021; Burn-Murdoch, 2024), and the percentage of respondents reporting that the country is in a "culture war" (Duffy et al., 2021). The US culture war is also broader: divisions over guns, abortion, policing, religion, and gay rights are mostly unique to the US, whereas culture wars in other democracies are largely dominated by immigration. Disputes over these issues that do erupt in other countries often appear directly exported from the US (The Economist, 2021).

Though social media is empirically beyond the scope of this project, the same underlying forces

— a gap between the objectives of share-maximizing politicians and size-maximizing content creators — are likely to apply, and may explain some part of the recent surge in European populist parties focused largely on immigration and anti-elite affect (e.g. Guriev et al. 2021). We attribute the earlier and sharper rise of cultural conflict in the US in part to the outsized role of partisan TV news.[33]

Domestic historical perspective While we contrast politicians specifically with cable news, many other political actors are *size*- rather than *share*-maximizers — membership- or contribution-based interest groups, pundits and social media personalities, and the organizers of protest movements — and thus may favor mobilizing strategies that diverge from politicians' poaching-focused messaging. In some instances, these strategies may actively undermine the objectives of politicians in the same coalition (Hacker and Pierson, 2020; Wasow, 2020). A corollary is that polarization or issue realignment should generally be "led" by size-maximizing actors, with politicians adhering to the median of status quo political cleavages until voter preferences change enough to warrant a pivot in campaign strategy.

This perspective sheds light on several episodes of cultural polarization in American politics since World War II. In the 1960s, (size-maximizing) activist groups raised the salience of polarizing social issues such as civil rights, feminism, and the Vietnam War. Fault lines over these issues initially cross-cut partisan divisions (Mason, 2018) among both legislators and citizens: for example, the Democratic Party contained a segregationist wing and the Republican Party a racially liberal wing. The Democratic Party's decision to incorporate the socially progressive movements of this era and the Republican Party's pivot towards embracing anti-counterculture backlash, law and order, and Southern white racial grievances (Carmines and Stimson, 1989; Kuziemko and Washington, 2018) aligned these cultural divisions with partisan ones; but the initial salience of the divisions was driven by size-maximizing actors, not politicians (Noel, 2014).

From the 1970s to 1990s, another wave of cultural polarization grew on the right. This polarization originated with televangelists and Religious Right movement leaders in the 1970s and 1980s, who were eventually incorporated into the Republican Party (Schlozman, 2015); partisan talk radio shows unleashed by the 1987 abolition of the Fairness Doctrine (Pienkny, 2025; Hemmer, 2022); and finally Fox News. Many of the key planks of Trumpism were first popularized in their modern form by right-wing media personalities in the 1990s, including the radio personality Rush Limbaugh and popular TV commentator (and unsuccessful presidential candidate) Pat Buchanan (Hemmer, 2022; Ganz, 2024).

[33]Indeed, Boxell et al. (2024) find that trends in affective polarization are positively correlated with growth in the number of private 24-hour news channels in the country, whereas they are negatively correlated with growth in inequality or the share of the population accessing news online.

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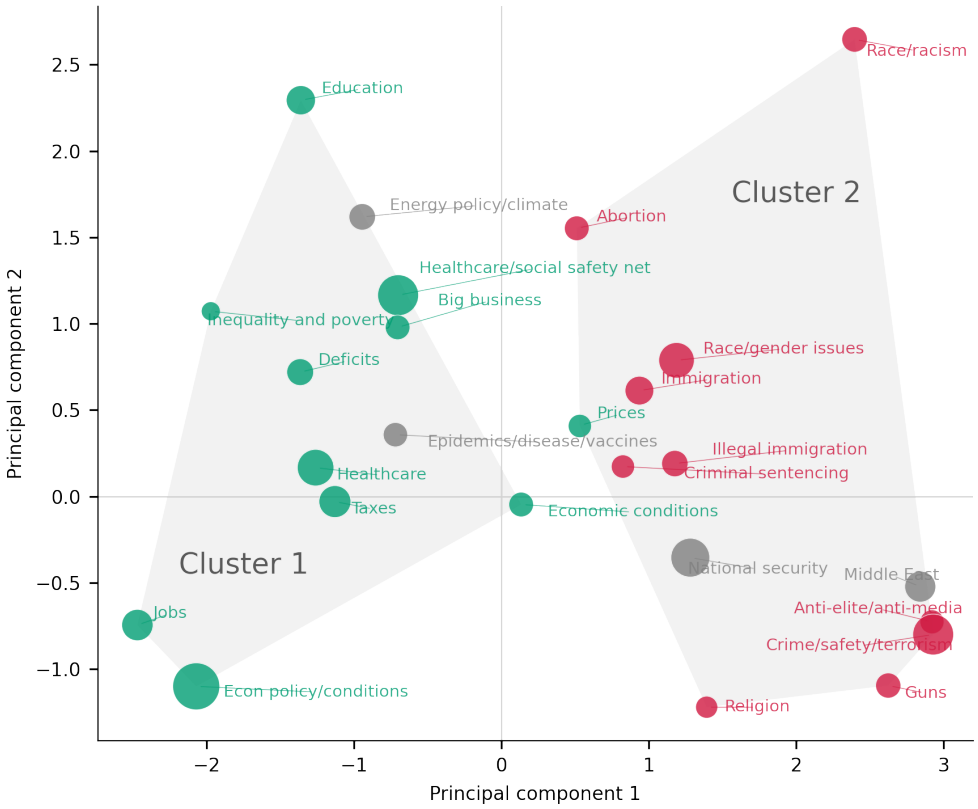
Online Appendix

"The Business of the Culture War"

Shakked Noy and Aakaash Rao

A Additional Tables and Figures

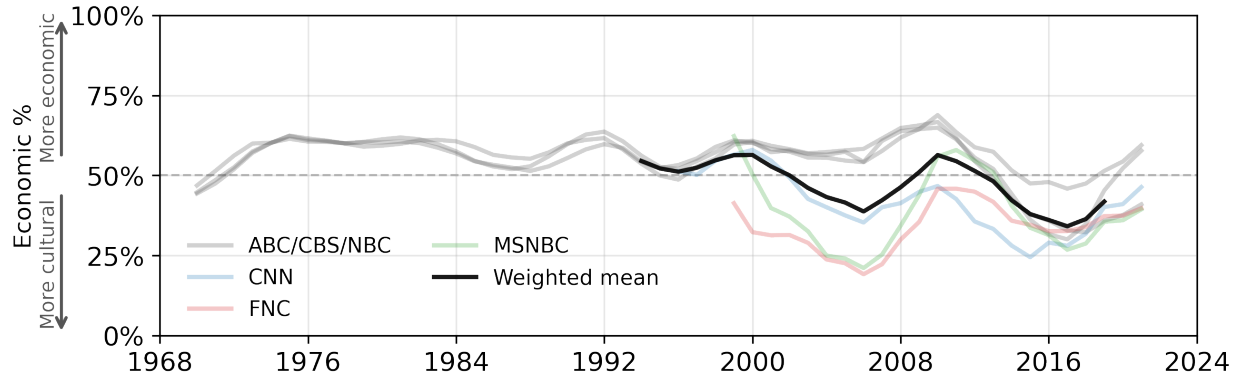
Appendix Figure A1: *Validation of "economic" and "cultural" labels*



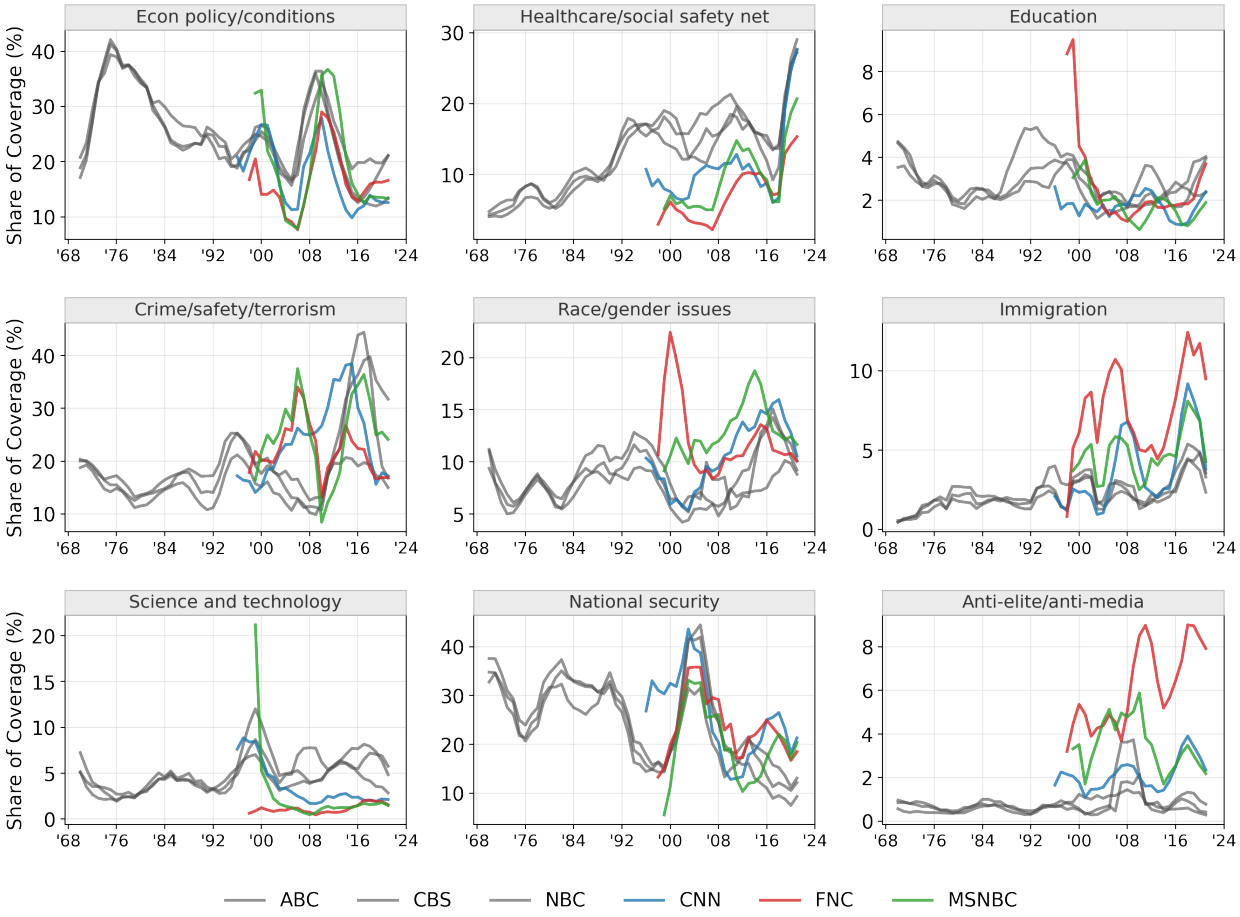
Notes: Figure presents a validation of our subjective "economic" and "cultural" labels of each topics. To perform this validation, we form an $N \times 6$ matrix collecting the six sets of topic-level results described in this paper, where $N = 25$ is the number of unique topics for which we have valid estimates across all six exercises: differential topic *emphasis* in cable vs. ads, topic *performance* in cable, topic *performance* in ads, relative topic *performance* for poaching vs. mobilization (in cable), effects of cable on topic *importance* as measured by Most Important Problem responses, and effects of cable on topic *emphasis* in ads. We then calculate the loadings of each topic onto the first two principal components of this matrix, and we plot those loadings, with the topics we label as "economic" in green and those we label as "cultural" in red. We also shade the clusters implied by k-means clustering (with 2 categories) of the 25×6 results matrix.

Appendix Figure A2: *Prevalence of top-level categories in broadcast and cable over time*

(a) *Average viewership-weighted content*

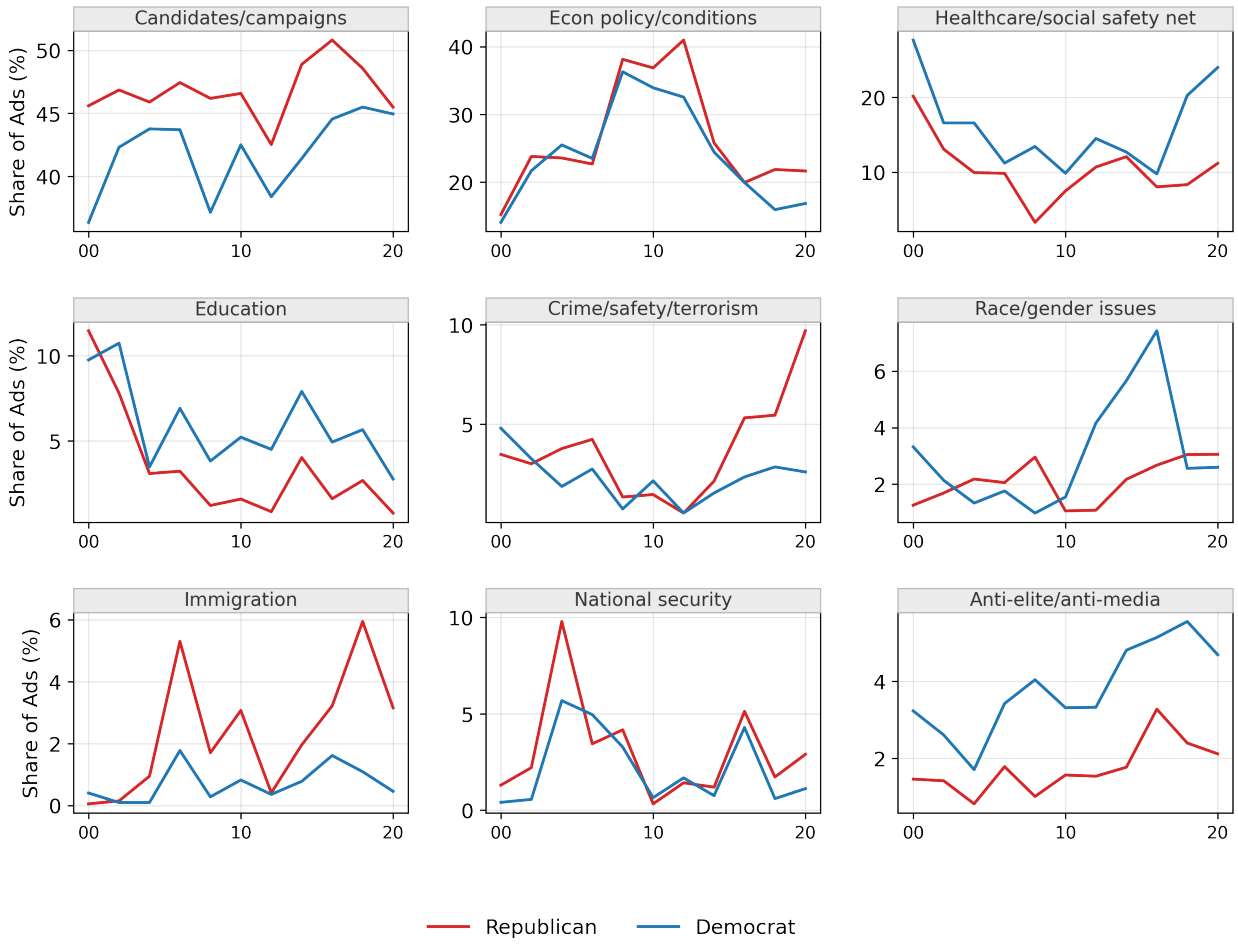


(b) *Top-level categories*



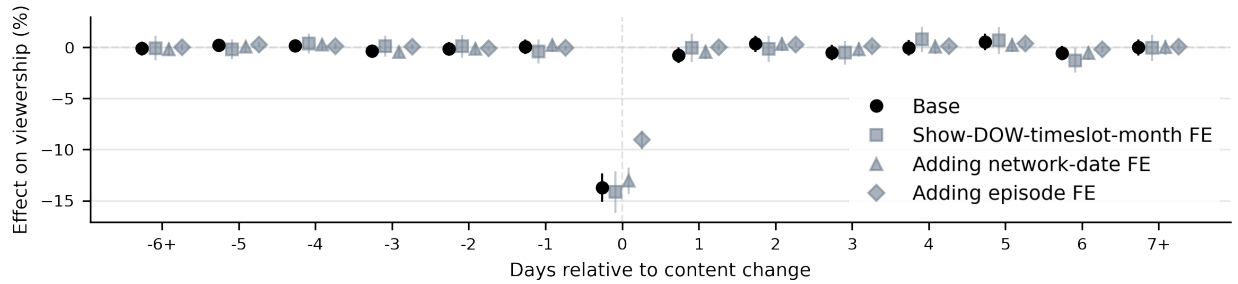
Notes: Panel A plots the airtime of economic content as a percentage of the airtime of all economic and cultural content. We smooth shares using a four-year rolling average. The weights used in the calculation of the weighted mean are the fraction of MRI respondents who indicate they have watched the network in the past seven days. We define economic, cultural, and "other" topics in Appendix B. Panel B presents the share of TV news segments about each of the nine topics in each year, weighted by duration and smoothed with four-year rolling means. Calculations for 1968-1991 use exclusively Vanderbilt TV News Archive Data; calculations for 1992-2013 adds Lexis Nexis data; and calculations for 2014-2022 use exclusively TVArchive data.

Appendix Figure A3: *Content of campaign television advertisements, 2000-2022*



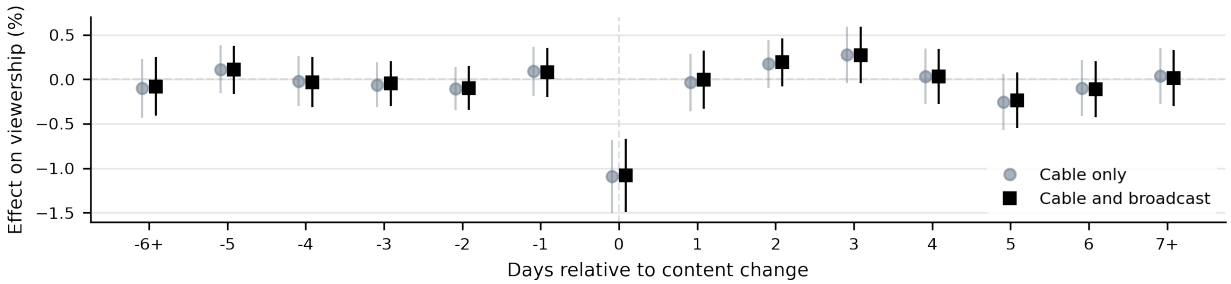
Notes: Figure presents the share of campaign ads about each of the nine topics. "Candidates and campaigns" includes ads mentioning non-policy-related personal characteristics. Ads are weighted by total airings.

Appendix Figure A4: *Effect of advertising on TV viewership*



Notes: Panel plots estimates from Equation 3. The dependent variable is (logged) total seconds watched of the fifteen-minute segment, computed from FourthWall. The explanatory variable of interest is the share of the segment devoted to commercial advertising. The base specification controls for network-by-timeslot (panel unit) fixed effects and calendar date (time) fixed effects, along with show-by-month and show-by-timeslot-by-day of week fixed effects.

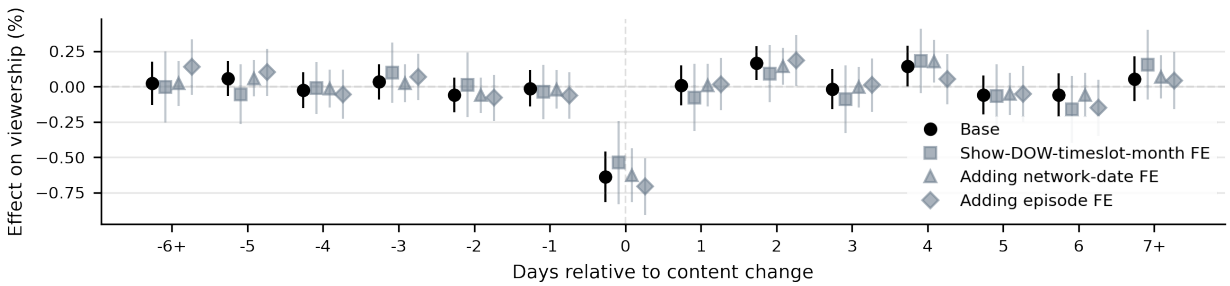
Appendix Figure A5: *Effect of economic relative to cultural content on TV viewership, with or without broadcast*



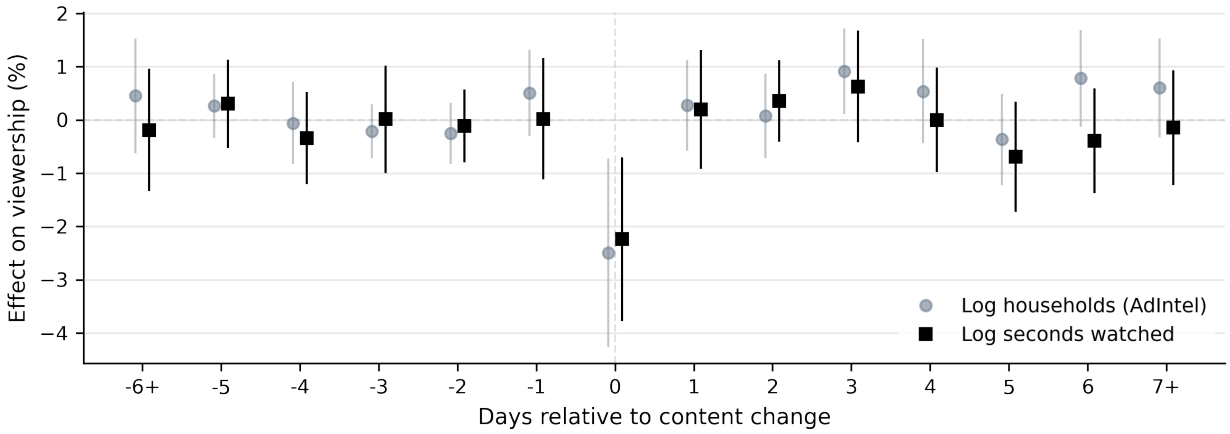
Notes: Figure plots estimates from Equation 3. The dependent variable is (logged) total seconds watched of the fifteen-minute segment, computed from FourthWall. The explanatory variable of interest is the share of the segment's topics which are economic minus the share cultural, ranging from -1 to 1. The specification controls for network-by-timeslot (panel unit) fixed effects and calendar date (time) fixed effects, along with show-by-month and show-by-timeslot-by-day of week fixed effects. Figure plots estimates including and excluding data from broadcast news.

Appendix Figure A6: *Effect of economic relative to cultural content on TV viewership: robustness*

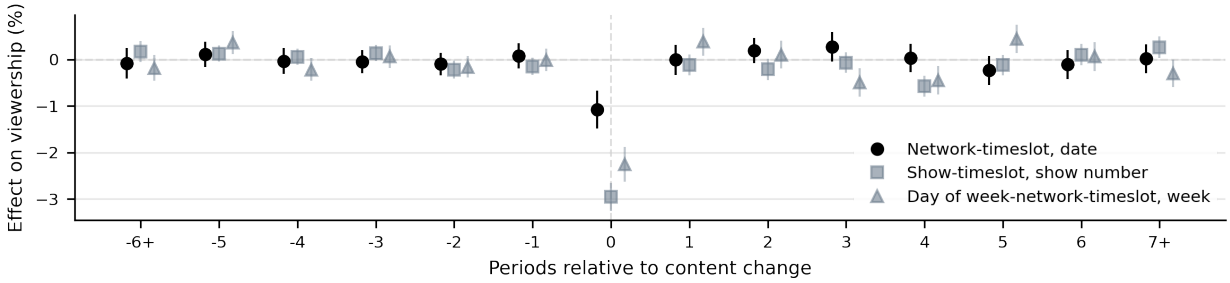
(a) *Proportion of segment watched, conditional on tuning in*



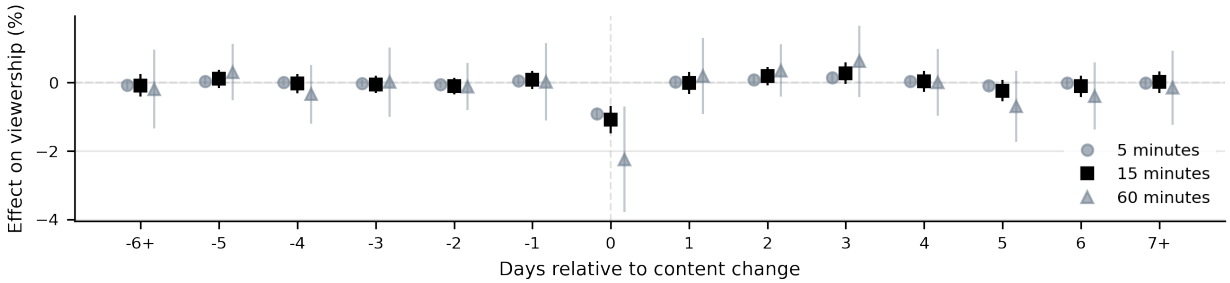
(b) *Comparison with estimates from Nielsen data*



(c) *Alternative panel specifications*



(d) *Alternative segment lengths*



Notes: Figures plot estimates from various versions of Equation 3. Panel A replaces the dependent variable with the proportion of the segment the respondent watched, starting from the second they first tuned into the segment. Panel B replicates our FourthWall estimates (using a 60-minute segment length) and presents them alongside estimates using the more representative but more aggregated Nielsen ratings data. Panel C shows our default specification where the panel variable is the network-timeslot (e.g., Fox News at 8:00-8:15) and the time variable is the date, as well as specifications where the panel variable is the show-timeslot (e.g., *Sean Hannity* at 8:00-8:15) and the time variable is the *n*th show, and where the panel variable is the network-day-of-week-timeslot (e.g., Fox News on Tuesdays at 8:00-8:15) and the time variable is the week. Panel D aggregates our dependent and independent variables (which are measured at the 5-minute level) to the 15-minute level (our preferred specification) and the 60-minute level.

Appendix Figure A7: *Effect of all segment content types on viewership*



Notes: Figure plots estimates of β_0 from Equation 3, separately for each type of content in the schema. The dependent variable is (logged) total seconds watched of the fifteen-minute segment, computed from FourthWall. The explanatory variable in each row is the share of the segment classified as the corresponding topic. We control for calendar date fixed effects, show-by-timeslot-by-month fixed effects, and show-by-timeslot-by-day of week fixed effects.

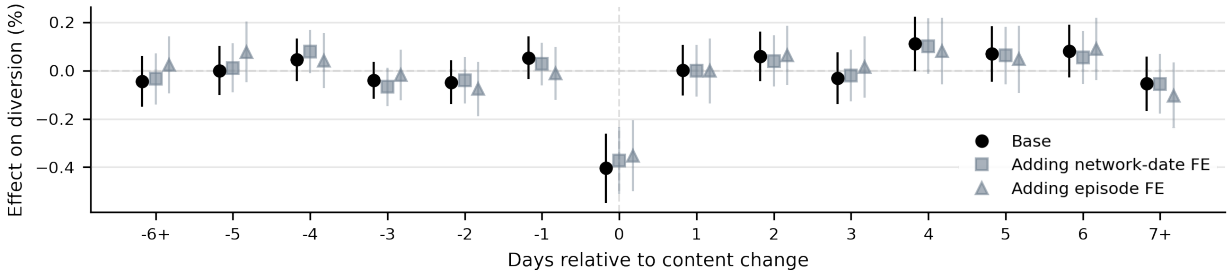
Appendix Figure A9: *Effect of all segment content types on relative switching to news vs. outside option*



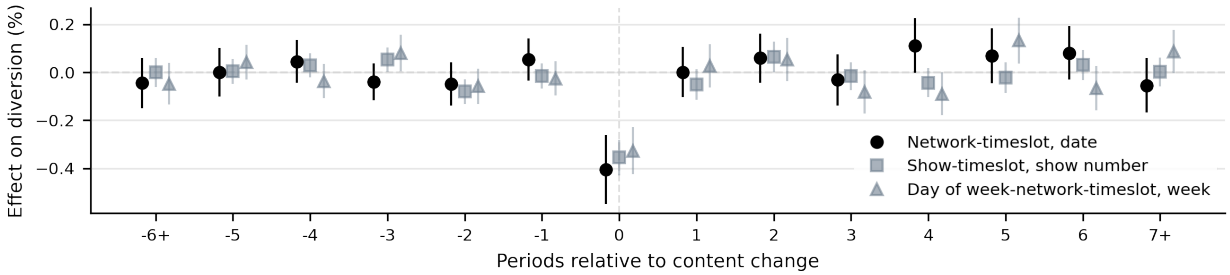
Notes: Figure plots estimates of β_0 from Equation 3, separately for each type of content in the schema. The dependent variable is the share switching to news minus the share switching to non-news options (turning off the TV or switching to entertainment), computed from FourthWall. The explanatory variable in each row is the share of the segment classified as the corresponding topic. We control for calendar date fixed effects, show-by-timeslot-by-month fixed effects, and show-by-timeslot-by-day of week fixed effects

Appendix Figure A8: *Effect of economic relative to cultural content on diversion to competitors minus diversion to outside option: robustness*

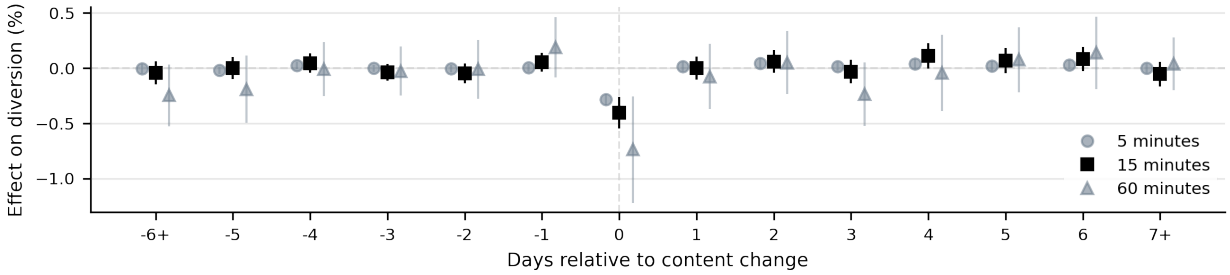
(a) *Alternative controls*



(b) *Alternative panel specifications*

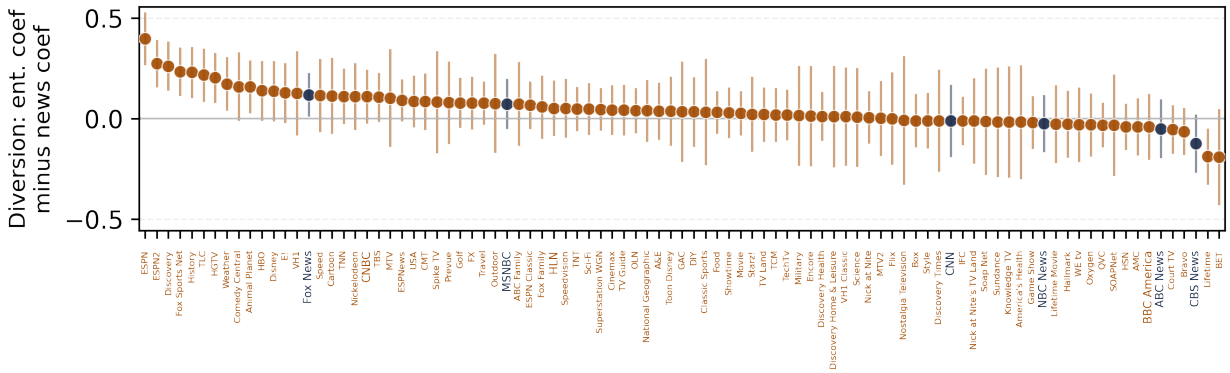


(c) *Alternative segment lengths*



Notes: Figure replicates the robustness checks in Figure 4 and Appendix Figure A6 but using as the dependent variable the share switching to competing news channels minus the share switching to an entertainment channel or turning off the TV. We control for calendar date fixed effects, show-by-timeslot-by-month fixed effects, and show-by-timeslot-by-day of week fixed effects.

Appendix Figure A10: *Predictiveness of demographic groups' prior news and entertainment consumption for network viewership, cable viewers only*



Notes: Figure presents regression coefficients of a (z-scored) indicator for whether the respondent reported watching each network in the past seven days on their predicted (z-scored) number of news programs and number of entertainment programs watched, limiting to MRI survey waves between 1998 and 2004 and further limiting to cable subscribers. The prediction is by a random forest model trained on survey waves 1994-1995 (for cable subscribers only) to predict the (z-scored) number of news programs and entertainment programs each respondent watches, using as covariates the demographic variables available in MRI: age, education, income, household composition, race, and employment status. We present 95% confidence intervals calculated via jointly bootstrapping the first-stage prediction and second-stage regression.

Appendix Table A1: *Political advertising content and electoral success (competitive races only)*

	Dependent variable: Won election					
	(1)	(2)	(3)	(4)	(5)	(6)
Relative econ (std.)	0.065***	0.082***	0.114***	0.093***	0.079***	0.193***
	(0.021)	(0.030)	(0.031)	(0.025)	(0.023)	(0.045)
Opponent relative econ (std.)			-0.112***	-0.131***	-0.132***	
			(0.033)	(0.032)	(0.030)	
Party × state × office FE	Yes	—	—	—	—	—
Party × office × year FE	Yes	Yes	Yes	Yes	Yes	Yes
Party × seat FE	No	Yes	Yes	Yes	Yes	Yes
Incumb. × (econ. conds.)	No	No	No	Yes	Yes	Yes
Incumb. × (voting. conds.)	No	No	No	No	Yes	Yes
Race FE	No	No	No	No	No	Yes
Observations	1419	1419	1104	1102	1102	1102

Notes: Table presents coefficient estimates from regressions of an indicator for whether the candidate won a general election on the share of the politician's ad content that is economic minus the share that is cultural (standardized to a z-score). Observations are unique candidate-years. We include only elections contested by at least one Republican and one Democrat in which the previous election for the seat was decided by a margin of less than 20%. All columns control for an incumbency indicator and party interacted with county-level demographics (share white, share black, share Hispanic, and log population). Economic controls include log income per capita, the unemployment rate, and labor force participation. Political controls include the log number of airings of the opponent's candidate and the lagged voteshare of the candidate's party in the previous election for the same seat. We cluster standard errors at the level of a unique race.

Appendix Figure A11: *Correlation between political advertising content and electoral success*



Notes: Figure plots estimates from Equation 4, separately for each type of content in the schema. The dependent variable is an indicator for whether the candidate won the election; The explanatory variable in each row is the share of the segment classified as the corresponding topic. Controls are as in Column 2 of Table 1. We cluster at the level of a unique race.

Appendix Table A2: *Political advertising content and electoral success by office*

	Dependent variable: Won election		
	House	Senate	Governor
	(1)	(2)	(3)
Relative econ (std.)	0.0362**	0.0487*	0.1205**
	(0.0142)	(0.0277)	(0.0481)
Opponent relative econ (std.)	-0.0365**	-0.0562*	-0.1269**
	(0.0145)	(0.0286)	(0.0505)
Observations	1680	352	162
Mean of rel. econ	0.36	0.35	0.47
SD of rel. econ	0.26	0.20	0.17

Notes: Table presents coefficient estimates from regressions of an indicator for whether the candidate won the election on the share of the politician's ad content that is economic minus the share that is cultural (standardized to a z-score). Columns 1–3 report estimates separately by office (House, Senate, Governor) for general elections. Observations are unique candidate-years. We include only elections contested by at least one Republican and one Democrat. All columns control for an incumbency indicator and party interacted with county-level demographics (share white, share black, share Hispanic, and log population), log income per capita, the unemployment rate, and labor force participation. We cluster standard errors at the level of a unique race.

Appendix Table A3: *Political advertising content and electoral success by electorate*

	Dependent variable: Won election			
	Generals	Primaries	Off-cycle years	Presidential years
	(1)	(2)	(3)	(4)
Relative econ (std.)	0.0679***	-0.0464	0.1108***	0.0134
	(0.0195)	(0.0471)	(0.0303)	(0.0389)
Opponent relative econ (std.)	-0.0853***		-0.1409***	-0.0152
	(0.0214)		(0.0348)	(0.0379)
Observations	2194	789	1258	936
Mean of rel. econ	0.36	0.22	0.37	0.36
SD of rel. econ	0.25	0.32	0.24	0.26

Notes: Table presents coefficient estimates from regressions of an indicator for whether the candidate won the election on the share of the politician's ad content that is economic minus the share that is cultural (standardized to a z-score). Column 1 reports estimates for all general elections (all offices). Column 2 reports estimates for primary elections. Columns 3–4 restrict to general elections and split by calendar timing: off-cycle years (2002, 2006, 2010, 2014, 2018, 2022) and presidential years (2000, 2004, 2008, 2012, 2016, 2020), respectively. Observations are unique candidate-years. We include only elections contested by at least one Republican and one Democrat. All columns control for an incumbency indicator and party interacted with county-level demographics (share white, share black, share Hispanic, and log population), log income per capita, the unemployment rate, and labor force participation. We cluster standard errors at the level of a unique race.

Appendix Table A4: *Effect of cable news on voter priorities*

Panel A: Effects of FNC	*Economic relative to cultural MIP*			
Fox News rating	-0.1915***	-0.1838***	-0.1644***	-0.1282**
	(0.0611)	(0.0609)	(0.0600)	(0.0548)
Bayes bootstrap 95% CI	[-0.1960, -0.1555]	[-0.1924, -0.1178]	[-0.1764, -0.0837]	[-0.1528, -0.0632]
Observations	375,715	375,715	372,081	372,081
Panel B: Effects of MSNBC	*Economic relative to cultural MIP*			
MSNBC rating	-0.2698**	-0.1881	-0.1336	-0.0980
	(0.1270)	(0.1219)	(0.1426)	(0.1313)
Bayes bootstrap 95% CI	[-0.5497, -0.1381]	[-0.3336, -0.1072]	[-0.3258, 0.0470]	[-0.3874, 0.1048]
Observations	375,715	375,715	372,081	372,081
Panel C: Effects of FNC + MSNBC	*Economic relative to cultural MIP*			
Fox News + MSNBC rating	-0.1762***	-0.1676***	-0.1502***	-0.1167**
	(0.0551)	(0.0546)	(0.0554)	(0.0507)
Bayes bootstrap 95% CI	[-0.2198, -0.1042]	[-0.2294, -0.1148]	[-0.1367, -0.0846]	[-0.1497, -0.0688]
Observations	375,715	375,715	372,081	372,081
Year FE	Yes	Yes	Yes	Yes
Ind. demographic controls	Yes	Yes	Yes	Yes
County demographic controls	No	Yes	Yes	Yes
County econ controls	No	No	Yes	Yes
Voting controls	No	No	No	Yes

Notes: Table presents 2SLS regressions at the individual level in which the dependent variable is the difference between respondents' reported importance of economic issues and their reported importance of cultural issues. The explanatory variable of interest in Panel A is the rating of Fox News in the respondent's DMA, which we instrument using Fox News' channel number in the DMA; Panel B is analogous using the rating and channel number of MSNBC; and Panel C is analogous summing the ratings and channel numbers of Fox and MSNBC. Individual-level demographic controls include race, education, and age. County-level demographic controls include shares white, black, and Hispanic and log population. County economic controls include log income per capita, unemployment rate, and labor force participation. Voting controls include each individual's choice on a five-point party alignment scale (ranging from Strong Democrat to Strong Republican). Standard errors are clustered at the media market level.

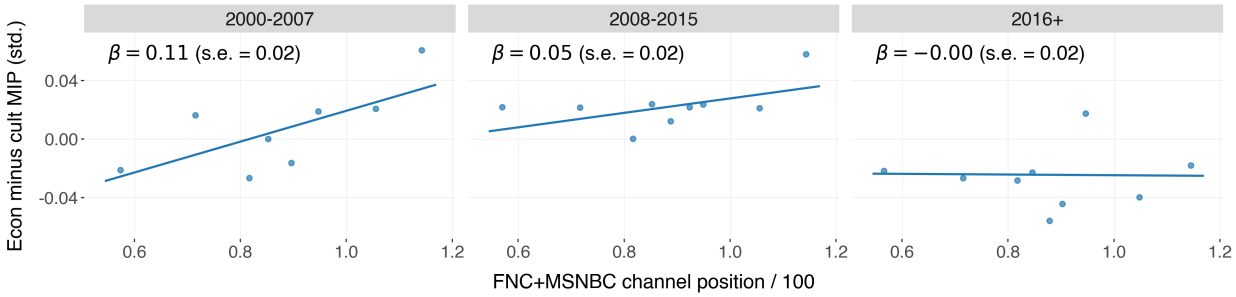
Appendix Table A5: *Effect of cable news on political ads*

Panel A: Effects of FNC	*Economic relative to cultural ads*			
Fox News rating	-0.5773***	-0.3675**	-0.3255*	-0.3235
	(0.1730)	(0.1511)	(0.1807)	(0.1999)
Bayes bootstrap 95% CI	[-0.6532, -0.5371]	[-0.4138, -0.3077]	[-0.5881, -0.2346]	[-0.3164, -0.1147]
Observations	3,094	3,094	3,089	2,745
Panel B: Effects of MSNBC	*Economic relative to cultural ads*			
MSNBC rating	-0.9045***	-0.7085*	-0.4098	-0.4880
	(0.3266)	(0.3981)	(0.4568)	(0.4876)
Bayes bootstrap 95% CI	[-1.1284, -0.4272]	[-1.3968, -0.6483]	[-0.7471, 0.1776]	[-1.2317, 0.1555]
Observations	3,094	3,094	3,089	2,745
Panel C: Effects of FNC + MSNBC	*Economic relative to cultural ads*			
Fox News + MSNBC rating	-0.4598***	-0.3734**	-0.2827*	-0.2905
	(0.1324)	(0.1511)	(0.1642)	(0.1810)
Bayes bootstrap 95% CI	[-0.7223, -0.4383]	[-0.6445, -0.3075]	[-0.2151, -0.0762]	[-0.4557, -0.1662]
Observations	3,094	3,094	3,089	2,745
Year FE	Yes	Yes	Yes	Yes
Party controls	Yes	Yes	Yes	Yes
County demographic controls	No	Yes	Yes	Yes
County econ controls	No	No	Yes	Yes
Voting controls	No	No	No	Yes

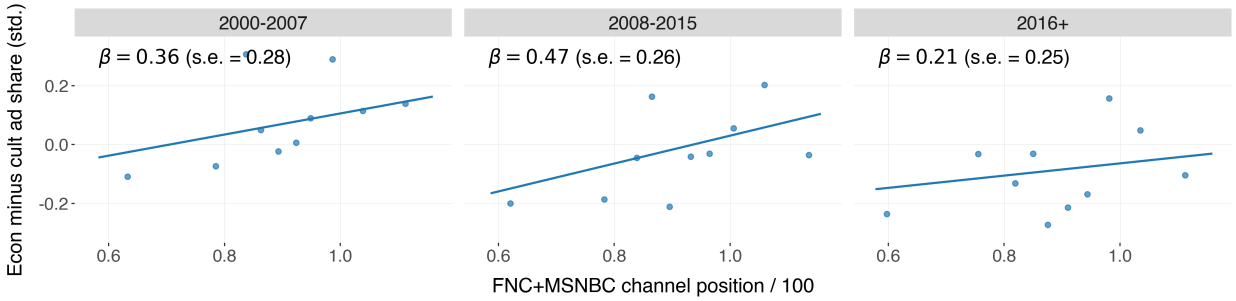
Notes: Table presents 2SLS regressions at the candidate by year level in which the dependent variable is the share of economic videos minus the share of cultural videos aired by the candidate (Panel B). All columns control for office fixed effects, an indicator for whether the candidate is incumbent, and county-level demographic controls: shares white and black and log population. The explanatory variable of interest in Panel A is the rating of Fox News in the respondent's DMA, which we instrument using Fox News' channel number in the DMA; Panel B is analogous using the rating and channel number of MSNBC; and Panel C is analogous summing the ratings and channel numbers of Fox and MSNBC. County economic controls include log income per capita, unemployment rate, and labor force participation. Voting controls include the voteshare of the candidate's party in the previous race for that seat. Standard errors are clustered at the media market and race level.

Appendix Figure A12: *Reduced-form relationship between MIP/ad content and channel numbers*

(a) *Econ minus cultural MIP*



(b) *Econ minus cultural share of ads*



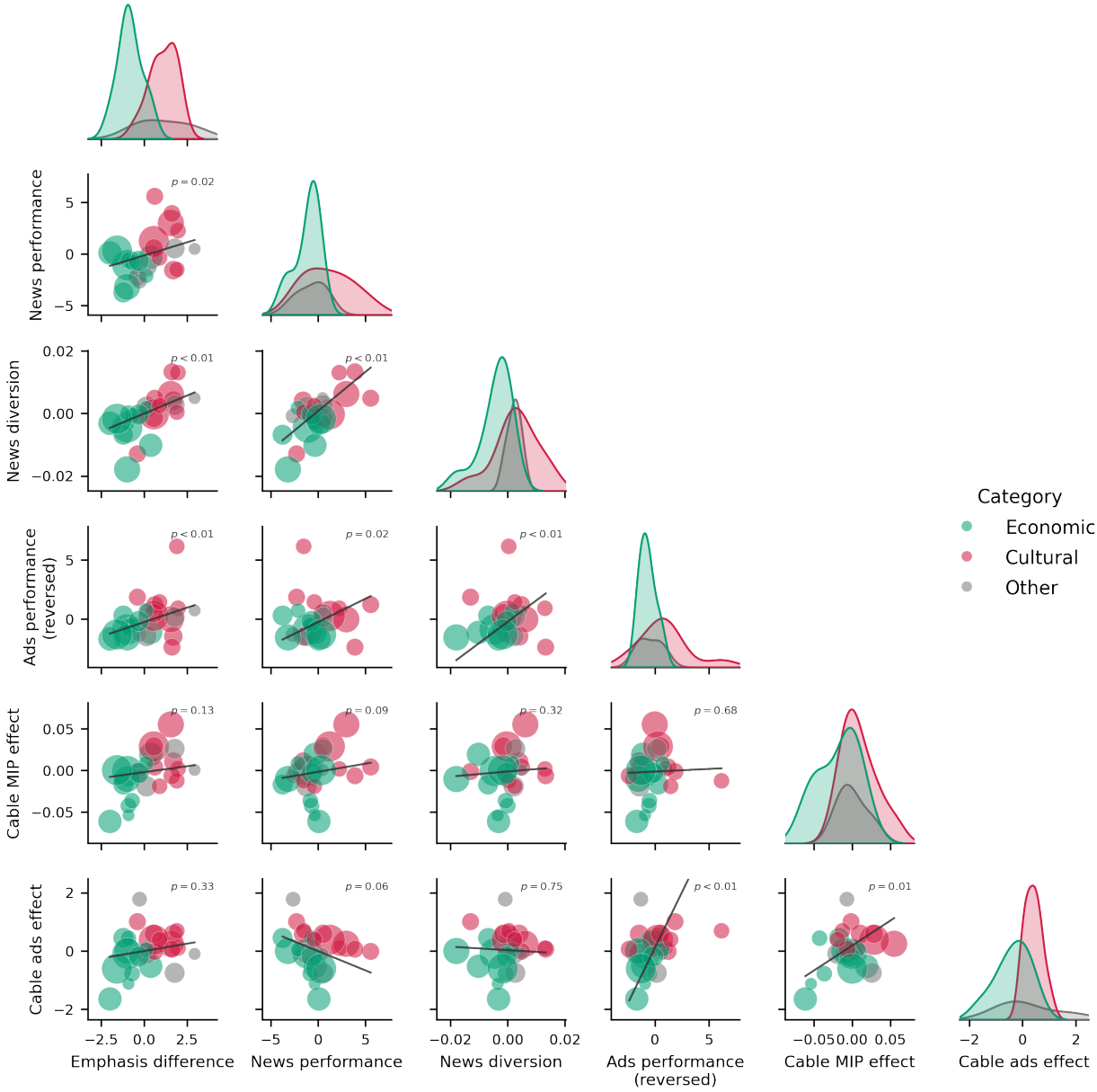
Notes: Figure presents reduced-form estimates from regressions of the difference between an indicator for whether the individual mentioned an economic MIP and an indicator for whether the individual mentioned a cultural MIP (top) or the difference between the share of politician advertising devoted to economic issues and the share devoted to cultural issues (bottom) on the sum of Fox and MSNBC's channel number in the county. Controls are those used in Column 2 of Table 3.

Appendix Figure A13: *Effects of cable on voter priorities and political advertising*



Notes: Figure presents 2SLS estimates from regressions of indicators for whether a respondent mentioned the issue as a Most Important Problem (left) or the share of politician advertising devoted to the issue (right) on the sum of Fox and MSNBC's ratings in the county, instrumented by channel numbers. Controls are those used in Column 2 of Table 3.

Appendix Figure A14: *Summary of results*



Notes: Figure presents correlations between each of the issue-level results presented in the paper: issue *emphasis* (Panel A of Figure 2), overall issue *performance* in news (Appendix Figure A7), issue *performance* for poaching vs. mobilization in news (Appendix Figure A9), issue *performance* in politics (Appendix Figure A11), effects of cable on issue *importance* among voters (left side of Appendix Figure A13), and effects of cable on issue *emphasis* in political ads (right side of Appendix Figure A13).

B Classification and Issue Linkage

This section describes the schema we use to classify news segments and campaign advertisements, linkages between the Most Important Problem and American National Election Studies questions and the schema, and details on classifier performance.

B.1 Schema

Appendix Table B1 presents the classification schema. We indicate whether each topic is tagged as **E**conomic, **C**ultural, and **O**ther and report the share of campaign ad, broadcast news, and cable news airtime devoted to the topic.

Appendix Table B1: *Classification schema*

Topic	Ads	Broadcast	Cable	E	C	O
Politicians, candidates and political campaigns	—	7.24	12.80			
Politician, candidate campaign activities, polling, horserace coverage	—	5.56	10.92			
Politician, candidate competence, endorsements, constituent service	—	0.89	1.20			
Economic policy and economic conditions	22.66	12.58	8.59	✓		
Taxes	5.70	0.76	1.06	✓		
Taxes on businesses	0.82	0.05	0.05	✓		
Trade policy	0.79	0.43	0.39	✓		
Prices	0.50	1.08	0.45	✓		
Housing prices	0.07	0.12	0.12	✓		
Food prices	0.02	0.12	0.02	✓		
Energy and gas prices	0.31	0.34	0.27	✓		
Inflation	0.01	0.21	0.04	✓		
Energy policy, environment, climate	1.90	1.82	1.29	✓	✓	
Economic inequality and poverty	0.68	0.32	0.23	✓		
Employment, labor, wages, unions	5.92	1.51	0.76	✓		
Economic forecasts and economic conditions	0.99	1.71	1.34	✓		
Regulation, misconduct of business	1.47	1.79	0.96	✓		
Deficit, surplus, budget, debt	2.57	0.71	0.82	✓		
Farms, agriculture, fishing	0.43	0.49	0.11	✓		
Manufacturing	0.70	0.33	0.12	✓		
Transportation, infrastructure, utilities	0.49	1.16	0.45	✓		
Stock market conditions	0.05	0.43	0.61	✓		
Entitlements, healthcare, welfare, social safety net	13.41	6.41	4.89	✓		

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Topic	Ads	Broadcast	Cable	E	C	O
Healthcare	7.87	4.69	3.59	✓		
Opioid crisis	0.19	0.03	0.05	✓		
Epidemics, disease, vaccines	0.91	0.82	0.91	✓	✓	
Housing, homelessness	0.23	0.27	0.15	✓		
Childcare	0.13	0.23	0.13	✓		
Veterans	0.95	0.35	0.35	✓		
Senior issues	3.83	0.51	0.49	✓		
Social Security	1.41	0.16	0.26	✓		
Medicare	1.76	0.12	0.20	✓		
Unemployment and disability insurance	0.13	0.14	0.08	✓		
Education	3.55	1.39	1.11	✓		
Primary and secondary education	2.53	0.99	0.75	✓		
Religious and moral education in public schools	0.01	0.03	0.03		✓	
Universities	0.84	0.33	0.32	✓		
Government functioning	3.74	8.75	13.92			✓
Judicial system, Supreme Court	0.29	2.10	3.18			✓
Congressional bills, debate, negotiation, votes, appointments	0.48	2.20	4.12			✓
Government reform and investigation of wrongdoing by elected officials	2.56	3.84	5.48			✓
Election administration and security	0.20	0.31	0.89			✓
Crime and safety	3.09	8.89	12.74		✓	
Criminal sentencing	0.29	0.91	1.39		✓	
Terrorism	0.28	1.55	2.44		✓	
Guns	0.94	0.66	1.47		✓	
Gangs and organized crime	0.10	0.32	0.20		✓	
Illegal drugs	0.15	0.54	0.46		✓	
Policing	0.79	1.54	3.08		✓	
Riots and protests	0.13	1.01	0.83		✓	
Social issues and women and minority issues	2.69	4.18	6.14		✓	
Women's rights	0.88	0.65	1.05		✓	
Sexual harassment, abuse, assault, domestic violence	0.39	0.30	0.73		✓	
Equal pay, rights, representation in workforce	0.22	0.09	0.06	✓	✓	
Abortion, contraception, birth control	0.98	0.30	0.62		✓	
Racial equity, race relations, civil rights, racism	0.33	1.46	2.07		✓	
LGBTQ rights, policies	0.09	0.25	0.64		✓	

Continued on next page

Topic	Ads	Broadcast	Cable	E	C	O
Religion, faith	0.25	0.97	1.20		✓	
Freedom of speech, political correctness, cancel culture	0.05	0.24	0.38		✓	
Gambling, tobacco, alcohol	0.07	0.20	0.10	✓	✓	
Immigration to the US, immigrants in the US	1.61	1.01	2.31	✓	✓	
Border security, border conditions, illegal immigration	1.13	0.47	1.58		✓	
Science and technology	0.17	2.41	1.37			✓
Military and national security	2.05	12.76	11.60			✓
Foreign relations with, policy toward China	0.28	0.50	0.61			✓
Foreign relations with, policy toward Middle East	0.32	4.59	5.51			✓
Government surveillance	0.07	0.29	0.45		✓	
Military spending, budget, waste	0.19	0.51	0.38			✓
Natural or manmade disasters, extreme weather events in the US	0.16	4.69	3.06			✓
Extreme weather events	0.12	3.13	2.01			✓
Plane crashes or other manmade disasters	0.03	1.30	0.87			✓
International events not involving the US	0.03	8.33	5.66			✓
Terrorism in countries other than US	0.01	0.48	0.52			✓
Wars not involving the US	0.00	1.90	1.04			✓
Protests, disturbances in countries other than US	0.00	1.61	0.91			✓
Elections in countries other than US	0.00	0.52	0.54			✓
International economic policy, economic conditions	0.01	0.61	0.43	✓		
International humanitarian issues	0.01	1.09	0.85			✓
International natural disasters	0.00	0.42	0.38			✓
International agreements and organizations	0.00	0.58	0.51			✓
Anti-elite, anti-media rhetoric	3.06	0.43	1.76		✓	
Media bias	0.06	0.34	1.53		✓	
Influence of the wealthy on politics	2.81	0.05	0.16	✓	✓	
Influence of Hollywood and cultural elites	0.02	0.02	0.04		✓	
Entertainment, popular culture, sports	—	9.65	5.63			
Commercial (non-political) advertising	—	2.09	5.84			

B.2 ANES and MIP linkages

We present the mapping between MIP responses and ANES questions and the schema below. ANES question numbers refer to question numbers in the ANES Time Series Cumulative Data File.[34]

Appendix Table B2: *Schema categories linked to MIP responses and ANES questions*

Category	MIP responses	ANES questions
Candidates/campaigns	Presidential choices/election year	0218, 0224
Politician/candidate campaign activities/polling/horserace coverage	–	–
Politician/candidate competence/endorsements/constituent service	–	–
Econ policy/conditions	Economy (General), Other Economic	9132
Taxes	Taxes	0606
Taxes on businesses	–	–
Trade policy	Foreign Trade-Trade Deficit	9231
Prices	–	–
Housing prices	–	–
Food prices	–	–
Energy and gas prices	Fuel/Oil Prices, Lack of energy Sources, Energy crisis	–
Inflation	Cost of Living-Inflation	–
Energy policy/climate	Lack of energy Sources, Energy crisis, Environment-Pollution	0842
Inequality and poverty	Gap Between the Rich and Poor, Poverty-Hunger-Homelessness, Wage Issues, Lack of money	0886, 0894
Jobs	Unemployment-Jobs, Wage Issues	0210, 0809
Economic conditions	Economy (General), Lack of money, Recession	–
Big business	Corporate Corruption	0209
Deficits	Federal Budget Deficit-Debt, Federal Budge Deficit-Debt	0839, 0890
Farms/agriculture/fishing	–	–
Manufacturing	–	–

Continued on next page

[34] See `https://electionstudies.org/data-center/anes-time-series-cumulative-data-file/`.

Category	MIP responses	ANES questions
Transportation/infrastructure/utilities	–	–
Stock market conditions	–	–
Healthcare/social safety net	Welfare	0220, 0894, 9013
Healthcare	Health Care-Hospitals, Costs associated with health insureance, Costs associated with health insurance	0806, 0839
Opioid crisis	–	–
Epidemics/disease/vaccines	AIDS, Cancer/Diseases	–
Housing/homelessness	–	–
Childcare	Childrens Needs, Way children are raised	0887
Veterans	–	–
Senior issues	Care for the Elderly	–
Social Security	Social Security Issues	9049
Medicare	Medicare Increases-Senior Citizen Insurance	–
Unemployment and disability insurance	–	–
Education	Education, Access to Education	0890
Primary and secondary education	–	–
Religious and moral education in public schools	–	–
Universities	–	–
Gov functioning/conflict	Government-President-Congress-Politicians	–
Courts	Judicial System/Courts/Laws	–
Congress	–	–
Gov investigations	Poor leadership/corrupt, Dishonesty/Lack of Integrity, Abuse of power	–
Election administration	Election/Election Reform	–
Crime/safety/terrorism	Crime-Violence, Child Abuse	0888
Criminal sentencing	Judicial System/Courts/Laws	0811
Terrorism	Terrorism	–

Continued on next page

Category	MIP responses	ANES questions
Guns	Gun control/Guns, School Shootings, Gun Laws too Weak-Availability of Guns, Gun Control-Gun Laws Too Strong	9238
Gangs and organized crime	–	–
Illegal drugs	Drugs	–
Policing	Police brutality	0214
Riots and protests	–	–
Race/gender issues	–	–
Women's rights	–	0853
Sexual harassment	–	–
Equal pay/rights/representation in workforce	–	0867
Abortion	Abortion Issues	0838
Race/racism	Race Relations	0830, 0206, 0867a
LGBT issues	Gay marriage/Homosexual rights	0232
Religion	Ethical-Moral-Religious Decline, Breakdown of the Family	0234, 0850, 0853, 9267
Political correctness	Lack of respect for each other	0854
Gambling/tobacco/alcohol	–	–
Immigration	–	0217, 0879a
Illegal immigration	Immigration-Illegal Aliens, Licenses for the Undocumented	0233, 0233
Science and technology	Advancement of computers/technology	–
National security	Lack of a Military/Defense, National Security, Fear of War, Situation with Russia, Situation with Korea, Situation in Afghanistan	0843
China	Situation with China	–
Middle East	War-Conflict in the Middle East, Iraq, Iraq-Saddam Hussein, Syria	–
Government surveillance	–	–
Military spending/budget/waste	–	–
Disasters	–	–

Continued on next page

Category	MIP responses	ANES questions
Extreme weather events	Natural disaster response, Natural disaster response'	–
Plane crashes or other manmade disasters	Space Shuttle Disaster	–
International	International Problems-Foreign Affairs	–
Terrorism in countries other than US	–	–
Wars not involving the US	–	–
Protests/disturbances in countries other than US	–	–
Elections in countries other than US	–	–
International economic policy/economic conditions	Foreign Aid-Focus Overseas	–
International humanitarian issues	–	–
International natural disasters	–	–
International agreements and organizations	–	–
Anti-elite/anti-media	–	–
Media bias	The media	–
Influence of the wealthy on politics	–	–
Influence of Hollywood and cultural elites	–	–
Entertainment	–	–
Commercial advertising	–	–

B.3 Classification details

We fine-tune classifiers based on OpenAI's `GPT-4o` to classify news segments between 2015 and 2020 and all political advertisements. We use `GPT-4o-mini` to economize on token costs when classifying pre-2015 and post-2020 news segments, since we use these classifications only to provide descriptive statistics (rather than linking them to contemporaneous viewership behavior). We thus train three separate classifiers: one each for news segments from 2015-2020, news segments pre-2015, and political ads.

To create a training dataset for the model, we hired human coders from the platform Upwork. Each coder independently classified news segments or ads according to the schema in Appendix Table B1. Given the length of the schema, we developed desktop applications to facilitate classification, enabling coders to easily add and remove categories, save their progress, and reconcile potential errors.[35] Panel A of Appendix Figure B1 shows screenshots of the application for classifying news; Panel B shows screenshots of the application for classifying ads.

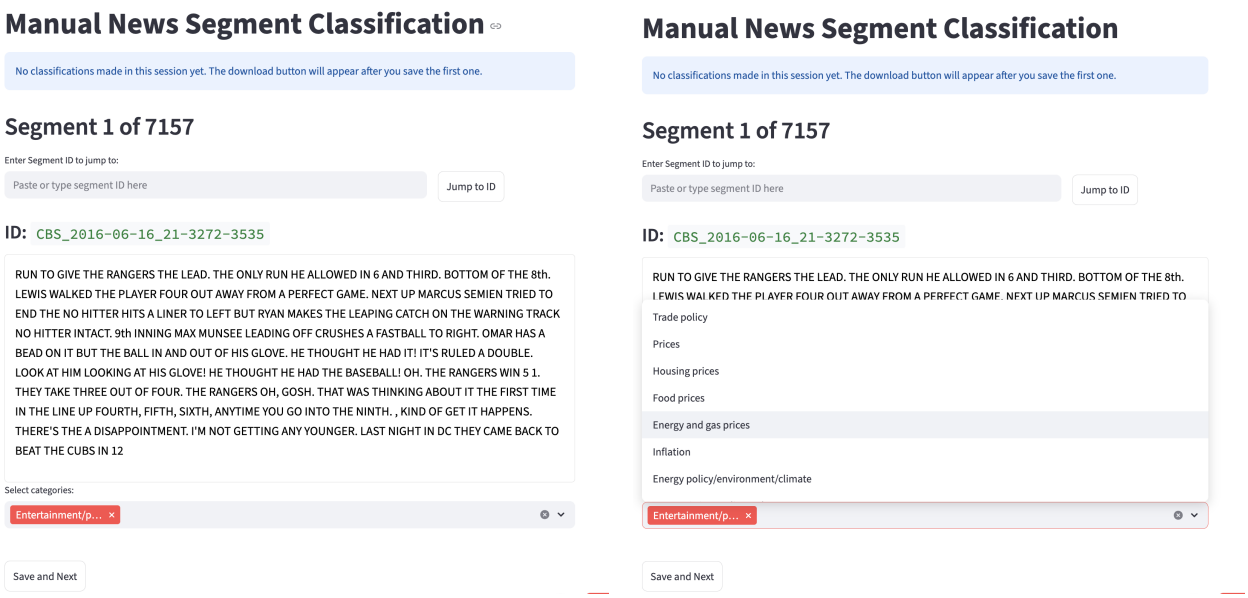
We hired five coders to generate the news training set, each of whom had experience with journalism or in politics, or had degrees in journalism or political science. We hired two coders to generate the ads training set, both of whom were former staffers to members of Congress, and we also classified all ads in the training set ourselves. In both domains, we assigned a given category to an ad if and only if a majority of coders (including ourselves, for ads) assigned that category.

Appendix Table B3 presents results from the validation set, comparing the "rolled-up" features (per the procedure described in Section 2.1) derived from the GPT classifications to those derived from human classifications. We present both the correlation between the GPT-derived and human-derived continuous scores and the accuracy, precision, and recall of the classifier (relative to the human scores) for a binary indicator for whether the feature is nonzero.

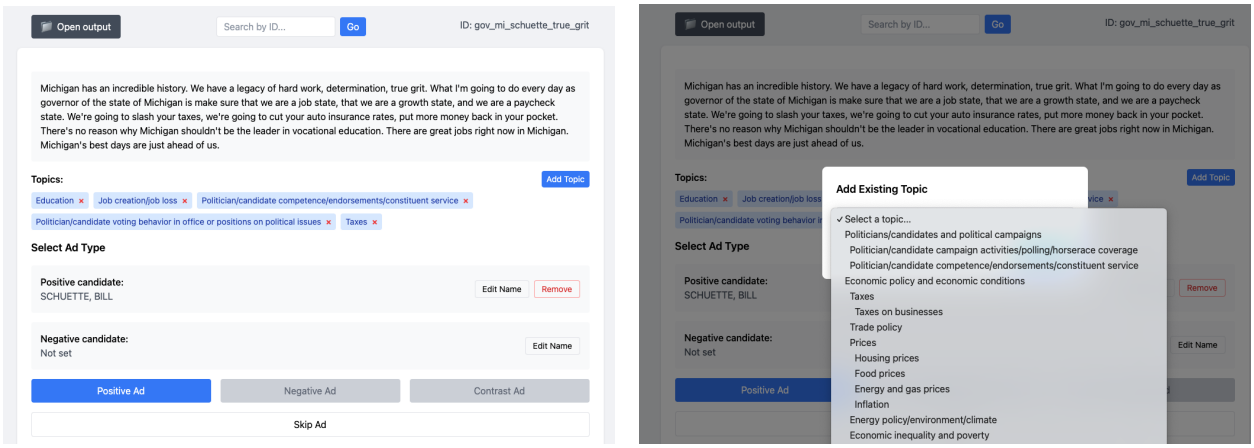
[35]The application for classifying ads had additional features, which allowed coders to correct infrequent errors in our "tone" classification (positive/negative/contrast ads) and to our record of the candidate(s) portrayed positively and/or negatively in the ad.

Appendix Figure B1: *Screenshots of classification applications*

(a) *News classifier*



(b) *Ads classifier*



Appendix Table B3: *Classifier validation*

	Continuous	Binary (> 0)				
	Correlation	Accuracy	Precision	Recall	# human	# classifier
Panel A: News						
Economic (group)	0.603	0.903	0.659	0.572	690	599
Cultural (group)	0.683	0.862	0.813	0.634	1388	1082
Other (group)	0.677	0.852	0.717	0.808	1496	1687
Candidates/campaigns	0.709	0.918	0.795	0.590	751	557
Econ policy/conditions	0.640	0.943	0.670	0.549	410	336
Healthcare/social safety net	0.688	0.957	0.709	0.638	356	320
Education	0.561	0.991	0.604	0.492	59	48
Gov functioning/conflict	0.667	0.914	0.659	0.716	677	736
Crime/safety/terrorism	0.702	0.922	0.828	0.614	783	581
Race/gender issues	0.589	0.944	0.706	0.494	403	282
Immigration	0.749	0.985	0.656	0.829	129	163
National security	0.669	0.947	0.599	0.754	366	461
Disasters	0.647	0.971	0.688	0.635	233	215
International	0.549	0.966	0.500	0.563	174	196
Entertainment/soft news	0.625	0.937	0.699	0.588	486	409
Commercial advertising	0.822	0.949	0.922	0.784	928	790
Total	—	—	—	—	5161	5161
Panel B: Ads						
Economic (group)	0.894	0.981	0.989	0.989	372	372
Cultural (group)	0.877	0.949	0.933	0.933	163	163
Other (group)	0.824	0.900	0.829	0.979	193	228
Econ policy/conditions	0.864	0.907	0.914	0.914	233	233
Healthcare/social safety net	0.908	0.949	0.926	0.948	172	176
Education	0.875	0.972	0.879	0.911	56	58
Gov functioning/conflict	0.703	0.854	0.473	0.930	57	112
Crime/safety/terrorism	0.840	0.958	0.854	0.788	52	48
Race/gender issues	0.819	0.965	0.857	0.800	45	42
Immigration	0.841	0.988	1.000	0.773	22	17
National security	0.835	0.979	0.786	0.880	25	28
Total	—	—	—	—	432	432

Notes: Rows compare final rolled-up features derived from GPT-based classifications to rolled-up features derived from human classifications. Correlation uses continuous values. Binary metrics treat a topic share greater than zero as present: accuracy is the proportion of matching GPT and human indicators, precision is the share of GPT positives that are human positives, and recall is the share of human positives that are GPT positives. Counts report the number of binary positives for each source. Categories with fewer than 10 observations in the validation set suppressed.

C Conceptual Framework

In this section, we analyze the problem facing news producers or political candidates in choosing their issue emphases and show how their different objective functions translate into differences in coverage. In particular, we formally justify the claim from the main text that "our argument requires only that politicians place relatively greater weight on share-maximization and media outlets relatively greater weight on size-maximization." This argument can be formalized with an exact analogy to the Hicksian substitution matrix, in which a change in share vs. size maximization takes the place of a compensated price change.

C.1 Setup

Fix a domain $d \in \{\textbf{N}\text{ews}, \textbf{P}\text{olitics}\}$. In market t, a supplier i chooses a content vector $x = (x_1, \ldots, x_J)$ with $x_j \geq 0$ and a budget (time/space) constraint $\sum_j x_j = 1$ to maximize

$$\Pi^d(x; \omega^d) \equiv V_i^d(x; \xi) - \omega^d V_{-i}^d(x; \xi) - C^d(x; \gamma, \xi),$$

where V_i^d and V_{-i}^d are aggregate demand for i and its competitor(s), C^d represents the cost of x, ξ denotes any factors that affect both viewership and cost, γ denotes factors that affect only costs, and $\omega^d \geq 0$ is the weight on competitor demand. In the analysis below, we hold (ξ, γ) fixed and suppress the superscript d for notational convenience.

Flow decomposition For each topic j, a marginal increase in x_j produces three flows at the margin:

- *Mobilization to i*: $m_j^+(x_j) \in \mathbb{R}$ (net change in i's audience from the outside option).
- *Poaching from $-i$ to i*: $p_j(x_j) \in \mathbb{R}$ (net switches from the competitor to i).
- *Countermobilization to $-i$*: $m_j^-(x_j) \in \mathbb{R}$ (net change in the competitor's audience from the outside option in reaction to i's content).

Holding opponents' content fixed, the marginal accounting identities are

$$\frac{\partial V_i}{\partial x_j} = m_j^+(x_j) + p_j(x_j), \qquad \frac{\partial V_{-i}}{\partial x_j} = m_j^-(x_j) - p_j(x_j), \tag{7}$$

and so the marginal increase in the supplier's objective generated by increasing topic j is

$$U_j'(x_j; \omega) \;\equiv\; \frac{\partial}{\partial x_j}\big[V_i - \omega V_{-i}\big] \;=\; m_j^+(x_j) \;-\; \omega\, m_j^-(x_j) \;+\; (1+\omega)\, p_j(x_j). \tag{8}$$

Define the *share-sensitivity* of topic j as

$$s_j(x_j) \;\equiv\; \frac{\partial}{\partial \omega} U_j'(x_j; \omega) \;=\; p_j(x_j) - m_j^-(x_j), \tag{9}$$

which captures how increasing ω reweights topic j by rewarding poaching and penalizing countermobilization.

Let μ denote the Lagrange multiplier on the budget constraint. For any interior $x_j > 0$, the first-order condition is

$$m_j^+(x_j) \;-\; \omega\, m_j^-(x_j) \;+\; (1+\omega) p_j(x_j) \;-\; C_j'(x_j) \;=\; \mu. \tag{10}$$

At corners, Equation (10) holds as a weak inequality in the usual KKT sense. We begin by assuming an interior solution in which all topics are used, then generalize to allow for corner solutions.

C.2 Assumptions

A1. **Smoothness and interiority.** For topics used in the optimum, m_j^+, m_j^-, p_j, C_j are twice continuously differentiable and the solution is interior.

A2. **Diminishing marginal flows.** For each j, $m_j^{+\prime}(x_j) \le 0$, $p_j'(x_j) \le 0$, and $m_j^{-\prime}(x_j) \le 0$.

A3. **Additivity and convexity of topic costs.** $C^d(x) = \sum_j C_j(x_j)$ with $C_j''(x_j) \ge 0$.

A4. **Local concavity.** In a neighborhood of the optima and for all $\omega \in (\omega^N, \omega^P)$, between the news and politics values, we have

$$\Gamma_j(\omega) \;\equiv\; m_j^{+\prime}(x_j) + (1+\omega) p_j'(x_j) - \omega m_j^{-\prime}(x_j) - C_j''(x_j) < 0,$$

which guarantees that the bordered Hessian of $V_i - \omega V_{-i} - C$ is negative definite.

C.3 Claim and proof: interior solution, two topics

To build intuition, we illustrate the proof in the case of two topics, culture and economics.

A5. Suppose that in a neighborhood of the optimum, culture is locally less share-sensitive than economics:

$$s_c(x_c) \;<\; s_e(x_e) \qquad \text{i.e.} \qquad p_c(x_c) - m_c^-(x_c) \;<\; p_e(x_e) - m_e^-(x_e).$$

$\Gamma(\omega) = \Gamma_c(\omega) + \Gamma_e(\omega)$ is the derivative of the left-hand side of (11) with respect to x_c along the budget line $dx_e = -dx_c$, i.e. the curvature of the difference in marginal net benefit between culture and economics as the network shifts from culture to economics. Under **A2**–**A4**, $\Gamma(\omega) < 0$: as x_c rises (and x_e falls), the marginal advantage of culture declines.

Claim 1. *Suppose **A1–A5** hold. Then the optimal cultural share $x_c^*(\omega)$ is strictly decreasing in ω:*

$$\frac{dx_c^*(\omega)}{d\omega} \;<\; 0.$$

Consequently, if media place relatively less weight on share than politicians, $\omega^{\mathbf{N}} < \omega^{\mathbf{P}}$, then

$$x_c^*(\omega^{\mathbf{N}}) \;>\; x_c^*(\omega^{\mathbf{P}}), \qquad x_e^*(\omega^{\mathbf{N}}) \;<\; x_e^*(\omega^{\mathbf{P}}).$$

Proof. Subtract the first-order condition for e from that for c:

$$\underbrace{\left[m_c^+(x_c) - m_e^+(x_e)\right]}_{\Delta m^+} + (1+\omega)\ \underbrace{\left[p_c(x_c) - p_e(x_e)\right]}_{\Delta p} - \omega\ \underbrace{\left[m_c^-(x_c) - m_e^-(x_e)\right]}_{\Delta m^-} - \ \underbrace{\left[C_c'(x_c) - C_e'(x_e)\right]}_{\Delta C'} = 0. \tag{11}$$

Differentiate Equation (11) with respect to ω, use $dx_e = -dx_c$, and use (9) to substitute $\partial U_j'/\partial\omega = s_j = p_j - m_j^-$:

$$\left(m_c^{+\prime} + (1+\omega)p_c' - \omega m_c^{-\prime} - C_c''\right) dx_c + \left(m_e^{+\prime} + (1+\omega)p_e' - \omega m_e^{-\prime} - C_e''\right) dx_e + \left[s_c(x_c) - s_e(x_e)\right] d\omega = 0,$$

which implies

$$\Gamma(\omega)\, dx_c \;+\; \left[s_c(x_c) - s_e(x_e)\right] d\omega \;=\; 0.$$

Therefore, by the Implicit Function Theorem,

$$\frac{dx_c^*(\omega)}{d\omega} \;=\; -\,\frac{s_c(x_c) - s_e(x_e)}{\Gamma(\omega)}.$$

Assumption **A5** states $s_c(x_c) - s_e(x_e) < 0$, and **A4** gives $\Gamma(\omega) < 0$, so $dx_c^*/d\omega < 0$. The comparative-statics inequalities for $\omega^{\mathbf{N}} < \omega^{\mathbf{P}}$ follow immediately. □

C.4 Extensions

C.4.1 More than two topics

Let $J \geq 2$, and suppose all topics are interior at $x^*(\omega)$. Let the *curvature weights* be $w_j(\omega) \equiv \frac{1/(-\Gamma_j(\omega))}{\sum_{\ell=1}^J 1/(-\Gamma_\ell(\omega))}$ and define the corresponding weighted average share-sensitivity

$$\bar{s}(\omega) \;\equiv\; \sum_{\ell=1}^{J} w_\ell(\omega)\, s_\ell(x_\ell).$$

Claim 2. *Under **A1–A4** with all $x_j^*(\omega) > 0$, the derivative of the optimal allocation satisfies*

$$\frac{dx_j^*(\omega)}{d\omega} \;=\; \frac{\bar{s}(\omega) - s_j(x_j)}{\Gamma_j(\omega)}.$$

In particular, $\operatorname{sign}\left(dx_j^*/d\omega\right) = \operatorname{sign}\left(s_j - \bar{s}(\omega)\right)$*: as ω increases, budget is reallocated toward topics with share-sensitivity above the curvature-weighted average and away from those below it.*

Proof. Differentiate the interior FOCs given in Equation (10): $\Gamma_j(\omega)\, dx_j - d\mu + s_j(x_j)\, d\omega = 0$ for

each j to obtain $dx_j = (d\mu - s_j d\omega)/\Gamma_j$. Summing over j and imposing $\sum_j dx_j = 0$ yields

$$d\mu \sum_j \frac{1}{\Gamma_j} \;=\; d\omega \sum_j \frac{s_j}{\Gamma_j} \quad \Rightarrow \quad d\mu \;=\; d\omega \, \frac{\sum_j s_j/\Gamma_j}{\sum_j 1/\Gamma_j}.$$

Since $\bar{s}(\omega) = \frac{\sum_j s_j/\Gamma_j}{\sum_j 1/\Gamma_j}$, substitute back to obtain $dx_j/d\omega = (\bar{s} - s_j)/\Gamma_j$. □

This has a familiar interpretation in consumer theory: a change in ω is a compensated price change that rotates the vector of prices by $s_j \equiv \partial U_j'/\partial\omega = p_j - m_j^-$, and the resulting changes dx_j are the changes in Hicksian demands induced by such a price change.

C.4.2 Non-interior solutions

Let $\mathcal{A}(\omega)$ denote the "active set" of interior topics at ω and suppose $\mathcal{A}(\omega)$ is nonempty. Define Γ_j and s_j as above for $j \in \mathcal{A}(\omega)$, and let

$$\bar{s}_{\mathcal{A}}(\omega) \;\equiv\; \frac{\sum_{j\in\mathcal{A}(\omega)} s_j(x_j)/\Gamma_j(\omega)}{\sum_{j\in\mathcal{A}(\omega)} 1/\Gamma_j(\omega)}.$$

Claim 3. *Under **A1–A4**, in a neighborhood of any ω for which the active set $\mathcal{A}(\omega)$ is well-defined:*

1. *For $j \in \mathcal{A}(\omega)$,*
$$\frac{dx_j^*(\omega)}{d\omega} \;=\; \frac{\bar{s}_{\mathcal{A}}(\omega) - s_j(x_j)}{\Gamma_j(\omega)}.$$

2. *For $k \notin \mathcal{A}(\omega)$ with $x_k^*(\omega) = 0$, the KKT inequality is $U_k'(0;\omega) - C_k'(0) \le \mu(\omega)$. Differentiating yields*
$$s_k(0)\, d\omega \;\le\; d\mu \;=\; \bar{s}_{\mathcal{A}}(\omega)\, d\omega.$$
Hence, if $s_k(0) < \bar{s}_{\mathcal{A}}(\omega)$, there exists $\epsilon > 0$ such that $x_k^*(\omega') = 0$ for all $\omega' \in [\omega, \omega + \epsilon)$ (the constraint remains binding). If $s_k(0) > \bar{s}_{\mathcal{A}}(\omega)$, the inequality loosens and topic k can (weakly) enter; if it enters, its right-hand derivative obeys the interior formula in (a).

Proof. For (1), differentiate the FOCs only for $j \in \mathcal{A}(\omega)$ and repeat the argument of Claim 2, restricted to the active set. For (2), use the KKT inequality for $k \notin \mathcal{A}(\omega)$ and $d\mu/d\omega = \bar{s}_{\mathcal{A}}(\omega)$ implied by part (1). □

D Social Media and Digital Advertising

D.1 Data and classification

Despite some transparency efforts by major platforms, data on social media and digital advertising is not widely available and remains difficult to access. After its purchase by Elon Musk, Twitter also restricted access to historical Tweets. For our supplementary analysis of digital and social media, we use two data sources:

1. Comprehensive advertising on Google (including YouTube video ads, banner ads, and sponsored search ads) and Meta (including Facebook and Instagram ads) for all candidates in 2022, made available by Fowler et al. (2025)

2. The Twitter posts of all House and Senate incumbents between 2008 and 2017, made available by Noxon (2023)

We classify the content of all advertisements (using speech-to-text transcriptions for video advertisements) using the same schema and classification approach described in Section 2.1.

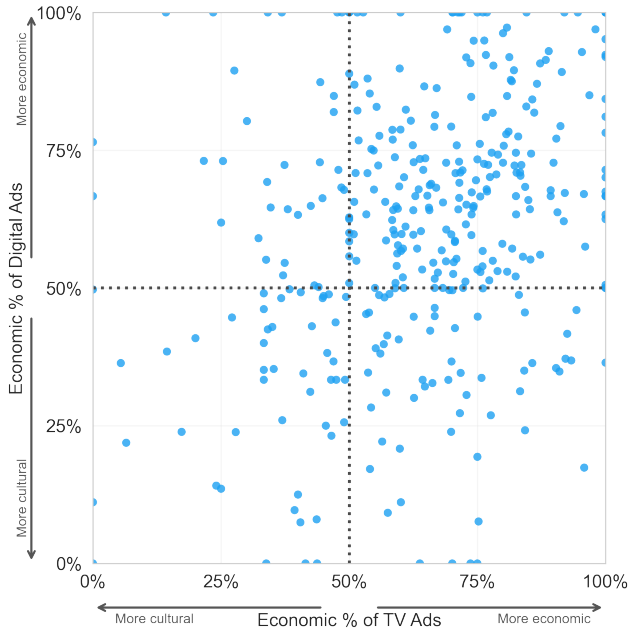
D.2 Results

We present results for 2022 advertising in Appendix Figure D1. Panel A plots the economic share of each candidate's television advertising against the economic share of that candidate's digital advertising, where the denominator for both shares is the total share of economic or cultural advertising, as in Figure 1. Panel B plots the parent-level category shares (restricting to candidates who ran at least one TV ad and at least one digital ad to facilitate comparability). Candidates' issue focus in TV ads is correlated with their issue focus in digital ads and social media posts, and the overall issue emphases of digital and television advertising are extremely similar. In particular, while the share of cultural advertising in both TV and digital ads in 2022 is substantially higher than the share of cultural advertising on TV before 2022 (as also documented in Figure 1), the cultural share remains lower than the economic share.

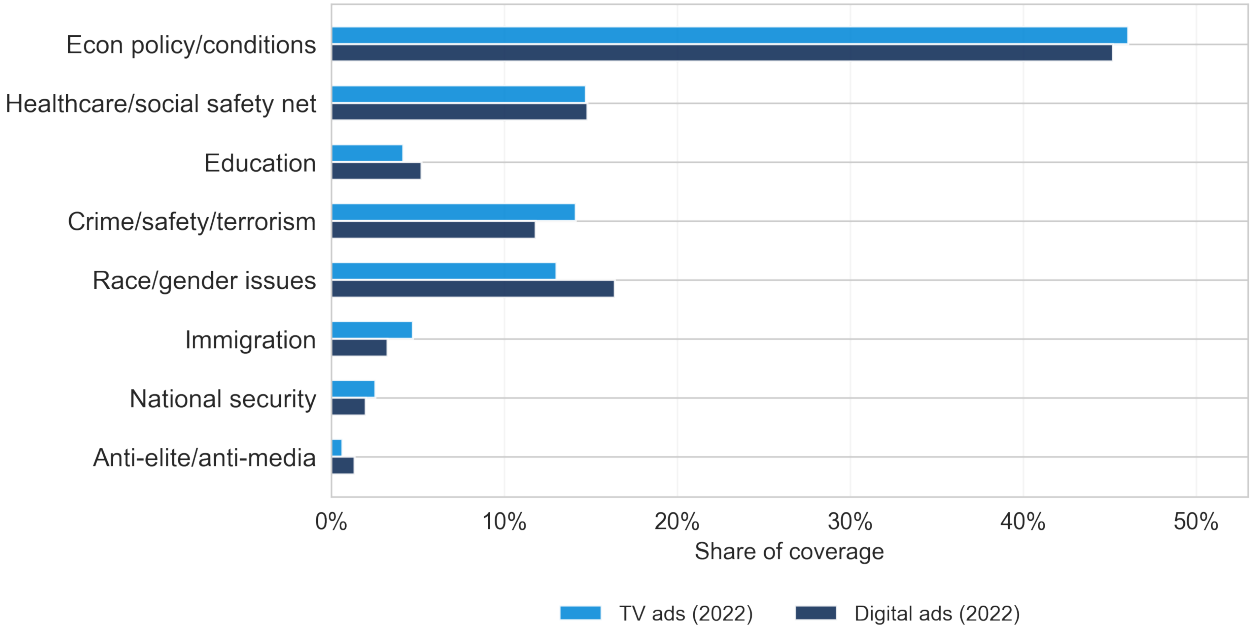
Figure D2 shows that the same broad patterns are true of candidates' Twitter posts. Although Twitter posts emphasize cultural topics significantly more than do television ads, economic topics still comprise the majority of candidate Twitter content.

Appendix Figure D1: *Content of television vs. digital ads, 2022*

(a) *Economic content as share of economic + cultural content*



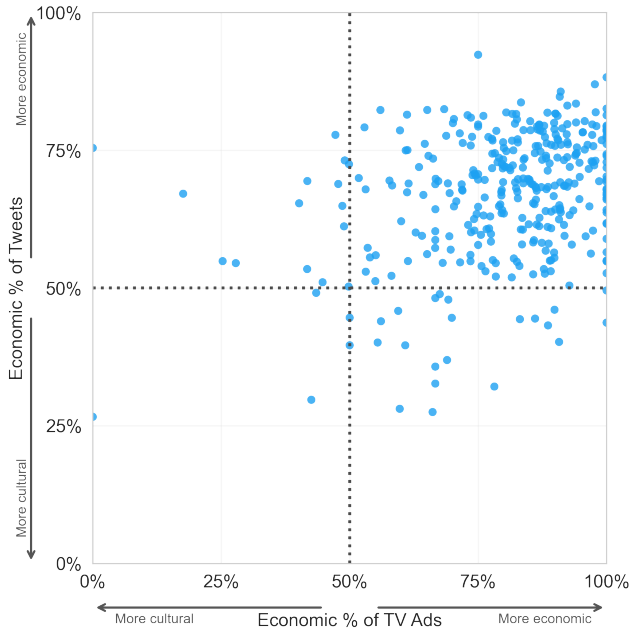
(b) *All parent-level topics*



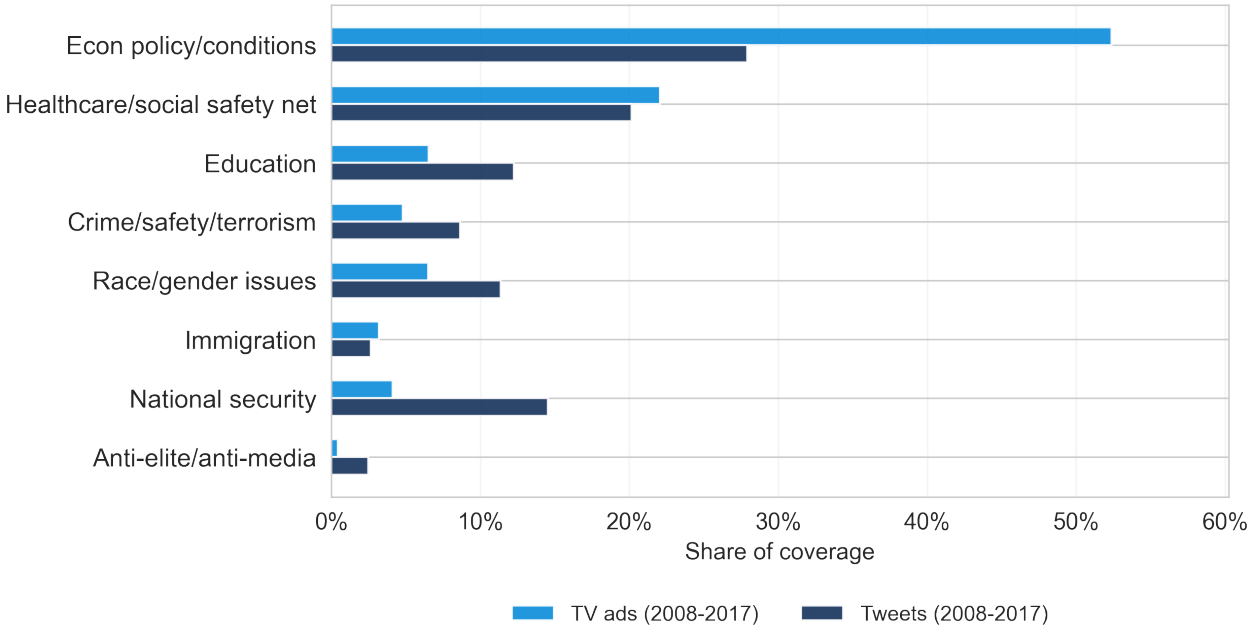
Notes: Panel A plots the economic share of each candidate's television advertising against the economic share of that candidate's digital advertising (on Instagram, Facebook, Youtube, and Google), where the denominator for both shares is the total share of economic or cultural advertising, as in Figure 1. Panel B plots the parent-level category shares (restricting to candidates who ran at least one TV ad and at least one digital ad to facilitate comparability).

Appendix Figure D2: *Content of television ads vs. Twitter posts, 2008-2017*

(a) *Economic content as share of economic + cultural content*



(b) *All parent-level topics*



Notes: Panel A plots the economic share of each candidate's television advertising against the economic share of that candidate's Tweets, where the denominator for both shares is the total share of economic or cultural advertising, as in Figure 1. Panel B plots the parent-level category shares (restricting to candidates who ran at least one TV ad and who posted at least one Tweet to facilitate comparability).