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# News Cycles and Satisfaction With Democracy: How the Pandemic Short-Circuited Media Polarization

Omar Hammoud-Gallego<sup>1</sup> , Roberto S. Foa<sup>2</sup>  and Xavier Romero-Vidal<sup>3</sup> 

<sup>1</sup>School of Government and International Affairs, Durham University, Durham, United Kingdom, <sup>2</sup>Department of Politics and International Studies, University of Cambridge, Cambridge, United Kingdom and <sup>3</sup>Department of Social Sciences, Carlos III, Madrid, Spain

**Corresponding author:** Omar Hammoud-Gallego; Email: [Omar.Hammoud-Gallego@durham.ac.uk](mailto:Omar.Hammoud-Gallego@durham.ac.uk)

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## Abstract

During the coronavirus pandemic in the United Kingdom, media outlets shifted their focus from divisive political issues to more neutral topics like lifestyle, sports, and entertainment. This study explores how this change in media content relates to partisan divides in satisfaction with democracy. Using data from a representative survey of 201,144 individuals, we linked respondents' perceptions of democratic performance to their daily media exposure. We did so by analysing 1.5 million tweets from British newspapers using a topic modelling algorithm to identify shifts in topic salience and sentiment using sentiment analysis. Our findings reveal a decline in partisan media exposure during the pandemic, associated with increased satisfaction with democracy at both individual and collective levels, and a narrowing of cross-party divides. These results contribute to discussions on affective polarization, the winner-loser gap in democratic evaluation, and media framing effects, highlighting the potential influence of depoliticized news coverage on democratic attitudes.

**Keywords:** satisfaction with democracy; polarization; topic modelling; machine learning; Twitter (X)

The preservation of a sphere of activity that is outside of politics is important if one is to have the balanced participation of the civic culture. – Almond and Verba (1963)

## Introduction

Affective and media polarization are key drivers of political discontent in Western democracies. While some studies question the polarising effects of partisan media (for example, Guess et al. 2021; Wojcieszak et al. 2023), strong evidence suggests that partisan media exposure fuels affective polarization by promoting positive feelings toward members of political ingroups and negative feelings toward outgroups (Kubin and Sikorski 2021; Lelkes, Sood and Iyengar 2017; Levendusky 2013). In turn, affective polarization erodes interpersonal trust (Carlin and Love 2018) and diminishes satisfaction with democracy (Dassonneville and McAllister 2020). This dynamic is often depicted as a vicious circle in which escalating media polarization deepens public opinion divides, while partisan identities fuel the demand for increasingly polarized media content (Wilson, Parker

and Feinberg 2020), leading to growing discontent with the nature and quality of democratic life. While considerable scholarly attention has been devoted to understanding the factors behind rising discontent with democratic institutions (Beek 2019), limited knowledge exists regarding methods to slow down or reverse this trend or the role that the media can play in reducing civic polarization and disaffection. For example, emerging research suggests that decreasing exposure to national news, while increasing engagement with local news, could reduce polarization in the USA (Darr, Hitt and Dunaway 2018, 2021; Martin and McCrain 2019; Moskowitz 2021). This observation leads to a broader implication: if the media can have such negative effects on public opinion, it might also play a role in the reduction of polarization, and the restoration of satisfaction with democracy.

This study explores such a mechanism in the context of falling media polarization during the global coronavirus pandemic in the UK. We find that the onset of the stay-at-home (lockdown) order brought a sharp depoliticization of media content, as newspapers shifted from coverage of divisive domestic political subjects towards coverage of neutral, non-political areas such as entertainment, home improvement, sports, or leisure. Concurrent with this shift in the media landscape, we find both a sharp reduction in surveyed attention to politics and an increase in overall satisfaction with the democratic political system. These changes can be linked at the individual level to changes in news exposure and were especially pronounced among readers of media aligned with the political opposition, vis-à-vis readers of newspapers normally siding with the governing party. In contrast to conventional theories that focus on the role of collective mobilisation in securing satisfaction with the democratic process, we argue that the key to reducing partisan divides was a form of parochial *de*-mobilisation, as politically aligned citizens became less exposed to divisive political topics and less interested in politics on the whole.

We rely for this study on original cross-sectional survey data from a daily tracker of satisfaction with democracy in the UK (including over 200,000 respondents) and on data from X (formerly known as Twitter) for the contents of the newspapers people surveyed read. We use a Latent Dirichlet Allocation algorithm (LDA) to identify the topics, and the AFINN method to identify the tone of the contents each respondent was exposed to. After matching each respondent to the content and sentiment of the newspaper they report reading, we then use that information to explain variation in satisfaction with democracy. Our findings suggest that media content changed during the pandemic, particularly among newspapers ordinarily critical of the governing party, and that, at the same time, their readers' satisfaction with democracy increased. We also identify the specific topics that display weaker or stronger associations with levels of expressed satisfaction with democracy. While we cannot establish definitive causal links, our analysis fills existing gaps in the literature on the possible influence of the media on satisfaction with democracy by identifying significant correlations between exposure to specific news and changes in the perceived functioning of democratic institutions.

Accordingly, the rest of this article is structured as follows. We begin by reviewing the research on the influence of mass media on democratic attitudes. Subsequently, we discuss the existing literature on the shifts in democratic attitudes observed during the pandemic. Following this, we present our data and the methodology employed in this study. After presenting our findings, we engage in a thorough discussion of our results and their limitations, accompanied by suggestions for future research. Finally, we conclude with a reflection on the significance of our findings in relation to democratic theory.

### Mass Media, Selective Exposure, and Democratic Attitudes

The literature on the impact of mass media on democracy broadly offers two dominant opposing perspectives. A substantial body of research presents a 'media malaise' hypothesis, highlighting the potential role of the media in fostering civic cynicism and a decline in civic engagement (Putnam 2000; Patterson 2002; Mutz and Reeves 2005). By contrast, other studies argue that media exposure can enhance citizens' political interest and participation (Norris 1999) and even

contribute to the reduction or prevention of political polarization (Melki and Pickering 2014; Darr, Hitt and Dunaway 2018).

One means of reconciling these divergent perspectives would be to posit cross-cutting effects, resulting in a non-monotonic relationship between media consumption and democratic functioning. At early stages of economic and social development, increases in news consumption improve political knowledge and civic agency, resulting in a positive information-satisfaction relationship at the global cross-country level (Wegscheider and Stark 2020). However, in developed democracies, these benefits are largely exhausted as news saturation leads to diminished marginal returns, and further increases in media consumption carry risks as well as gains. Firstly, in line with the psychological literature on ‘information overload’ (Schmitt, Debbelt and Schneider 2018), higher levels of news exposure may exceed the cognitive threshold at which citizens can process additional facts and form new judgements. Secondly (and as a means of reducing cognitive burden) greater media intake may covary with confirmation bias, further reinforcing civic misperceptions. Many scholars apply this latter thesis to today’s media landscape, which not only offers citizens a wide range of choices in their media consumption but also algorithms that reinforce the role of partisanship in source selection. As individuals gravitate towards media sources that reinforce their pre-existing political leanings, this reinforces selective exposure or the behaviour where individuals actively seek out messages that align with their political beliefs (Iyengar and Hahn 2009; Mutz and Martin 2001; Steppat, Castro Herrero and Esser 2022). Meanwhile, the choices of editors and newsroom staff in selecting and presenting news also augment this effect due to the association between content partisanship and viewership appeal. Media providers not only deliver information on specific issues but also play a significant role in shaping the perceived importance of those issues through the amount of coverage and positioning they receive. This phenomenon, commonly referred to as ‘agenda-setting’ (McCombs and Shaw 1972), underscores the influence of television and the press in determining which issues receive attention and are deemed important by the public. As the relative prominence of news issues significantly impacts the public attention they are given (Dearing and Rogers 1996), it follows that the media agenda has the potential to shape citizens’ considerations when evaluating the performance of democracy, in both positive and negative regards.

To date, much of the literature on partisanship and satisfaction with democracy focuses not on media effects per se but, rather, the broader ‘winner-loser gap’ in satisfaction with democracy separating voters for the winning candidate or party and supporters of the losing side (Anderson and Guillory 1997; Blais and Gélinau 2007; Singh, Lago and Blais 2011). However, this difference can be attributed in part to information exposure biases, as citizens actively seek out information that aligns with their pre-existing views, thereby reinforcing partisan differences in perceptions of institutional performance (Nadeau, Daoust and Dassonneville 2021). Furthermore, given the varying priorities and emphases of different media outlets, we can anticipate parallel agenda-setting dynamics, wherein audiences form distinct conclusions about the political landscape based on the information they selectively consume. Thus, the satisfaction levels of election losers are influenced not only by the outcome of the election but also by the issues highlighted by the news sources of their choice. By catering to specific ideological affiliations, media outlets contribute to the formation of distinct political narratives and interpretations of current events. This, in turn, fosters partisan gaps in political satisfaction, as individuals align themselves with media sources that reinforce their pre-existing beliefs. Consequently, this partisan-driven media consumption behaviour serves to reinforce and amplify existing political beliefs, potentially exacerbating political polarization and shaping citizens’ perceptions of the political landscape they inhabit.

In addition to ‘issue salience’, or the relative importance of a topic in the media, it is equally important to understand *how* these issues are discussed (Balmas and Sheaffer 2010). The concept of ‘negative news’ and its influence on individuals’ perceptions and evaluations is a fertile area of research in communication and political science (Lengauer, Esser and Berganza 2012). For instance, exposure to negative news about the European Union has shown a corresponding

depressive effect on citizens' evaluations of the institution (Desmet, Spanje and Vreese 2015; Brosius, Elsas and Vreese 2019; Foos and Bischof 2022). This suggests that negative media coverage can shape public perceptions and attitudes towards political entities, including national democratic institutions, particularly in cases where partisan news outlets contribute to fostering negative perceptions of democratic functioning.

If it is true that the degree and framing of media exposure in contemporary Western democracies have produced adverse consequences, then the 'suspension' in partisan news coverage during a major national crisis, such as the COVID-19 pandemic, offers a unique opportunity to observe how changes in media coverage, including a potential reduction in partisan bias, could possibly influence public perceptions of democratic performance. Examining such possible influence of media coverage during this critical period will provide us with valuable insights into how the media can shape citizens' evaluations of democratic institutions.

### Political Satisfaction During the Pandemic

A range of studies suggest that the global coronavirus pandemic led to a rise in support for existing leaders and enhanced trust in political institutions (for an early literature review, see Devine *et al.* 2021; Adam *et al.* 2023; León *et al.* 2023). The implementation of lockdown measures not only bolstered voting intentions for the governing party but also increased levels of confidence in the government and overall satisfaction with democracy in a number of European countries, including the UK (Bol *et al.* 2021; Davies *et al.* 2021). Such increases have been led by segments of the population that typically display lower levels of trust, indicating a catch-up effect that reduced enduring perception divides (Hegewald and Schraff 2022). Moreover, this increased trust spilled over to institutions that were not directly involved in crisis management, indicating a broader impact on public perceptions of the government (Baekgaard *et al.* 2020).

Despite the large number of studies documenting this improvement in both trust and political satisfaction during the COVID-19 pandemic, there remains a surprising lack of research examining its underlying mechanisms. Some researchers have characterized the rise in confidence as a 'rally-round-the-flag' effect (Baekgaard *et al.* 2020; Hegewald and Schraff 2022), which describes the tendency of public opinion to become more favourable toward political leaders in times of crisis (Mueller 1970). Yet this leaves unexplained the *means* by which such an effect has been produced.

We suggest that changes in mass media coverage can help to explain why such a rally effect took place. The proliferation of partisan news outlets and the prevalence of a high-choice media environment has often been attributed to exacerbating divisions and creating a polarized atmosphere (Lelkes, Sood and Iyengar 2017), while Chang (2018) provides evidence of a negative association between reading newspapers and satisfaction with democracy. Yet, if the media has contributed to this increase in political dissatisfaction, it might also have contributed to the restoration of trust and satisfaction with democracy, once its content shifted in partisan balance and tone.

Throughout the COVID-19 pandemic, the portrayal of the rapidly evolving situation by the media significantly influenced public perceptions of risk and the broader discursive environment. In particular, national newspapers play a crucial role in shaping how other media outlets cover the same subject across different platforms (Ball and Maxmen 2020; Mach *et al.* 2021). The influence of newspaper coverage of the pandemic on public opinion has been attested by Mach *et al.*'s (2021) comparative study between the USA and the UK. In the USA, newspapers aligned with opposition parties adopted a more sensationalist approach to reporting on the pandemic, contributing to its politicization. Conversely, the situation in the UK exhibited a distinct pattern: sensationalism was low in British media, and it did not significantly vary across news outlets in the UK, regardless of their ideological alignment (Mach *et al.* 2021). In fact, studies have shown that affective polarization was lower in the UK, compared to other countries such as the USA (Flores *et al.* 2022), most likely because health policy experts were treated in a non-partisan manner, thus reinforcing their credibility in the eyes of the electorate. This leads us to question whether the lack

of sensationalism and polarization in media coverage, particularly regarding partisan divides, could have played a role in reducing political dissatisfaction.

### Argument and Hypotheses

Building upon the existing body of literature, this study aims to investigate the role of mass media in the observed increase in satisfaction with democracy during the COVID-19 pandemic, focusing on the UK. The UK has been characterized by a notable surge in political dissatisfaction that reached historical highs in late 2019 due to escalating political polarization along partisan lines and the Brexit divide (Foa et al. 2020, Hobolt et al. 2022). The sudden reversal of this downward trend in satisfaction with democracy presents a unique opportunity to investigate the underlying mechanisms responsible for this restoration.

While we do not make any strict causal claims, our study aims to address a significant research gap by specifically examining the relationship between media exposure and changes in satisfaction with democracy. While several studies have investigated the influence of media coverage on satisfaction with democratic institutions at the European Union level (Desmet, Spanje and Vreese 2015; Foos and Bischof 2022), there is a notable scarcity of research exploring the impact of media coverage on satisfaction with the functioning of national democratic institutions (Maurer 2023; Ceron and Memoli 2016; Chang 2018). Furthermore, to the best of our knowledge, while a few studies have analysed the ‘rally-round-the-flag’ effect on governmental support during the COVID-19 pandemic (Hegewald and Schraff 2022), no study has so far explained how traditional media sources act as the main mechanisms through which such effect is diffused. Similarly, to our understanding, there is no research on the relationship between the tone, or sentiment, associated with specific news topics, and satisfaction with democracy. Therefore, our research seeks to fill this gap and shed light on how differences in media coverage might relate to the observed restoration of democratic satisfaction during the pandemic. While alternative explanations for the media effect exist (Kritzinger et al. 2021; Erhardt et al. 2021), the scope of our study is limited to the role of traditional media outlets.

Understanding the relationship between reporting by mainstream media outlets and citizens’ democratic attitudes requires an examination of the polarized nature of the British media landscape. Unlike in the USA, the UK print media market continues to be characterized by the dominance of a few national newspapers that serve as significant sources of political information (Brynin and Newton 2003). The British newspaper industry has played a notable role as a political actor, marked by its controversial and often overtly partisan nature (Wring and Deacon 2010). Consequently, we should expect substantial differences in content between newspapers supporting the Conservative government and those aligned with the opposition Labour Party.

Against this backdrop of polarization, the emergence of the COVID-19 pandemic had the potential to bring partisan groups closer as a common threat to all citizens regardless of their political views. For example, in the first weeks of the pandemic, even opposition parties expressed a more positive tone in parliamentary debates (Louwerse et al. 2021). This convergence also might have taken place in the media landscape: as discussed earlier, British media showed no significant variation across news outlets in the first months of the pandemic, irrespective of their ideological alignment (Mach et al. 2021). Building upon this evidence from the UK context, we propose the following hypothesis:

*H1: Media content polarization decreased in response to the pandemic.*

This hypothesis suggests that the COVID-19 pandemic may have prompted media outlets to reduce polarization in their content, thereby potentially contributing to the restoration of democratic satisfaction. It is important to consider that the dynamics of media polarization during the pandemic may have evolved over time, with potential variations across different phases of the crisis. Therefore, we will test this hypothesis by tracking content polarization throughout the pandemic.

The editorial stance of different news outlets shapes the extent and emphasis of particular issues, which in turn influence how citizens evaluate the effectiveness of democratic institutions (Desmet, Spanje and Vreese 2015; Foos and Bischof 2022). Moreover, the relative prominence of different news topics can significantly impact individuals' perceptions of the political landscape (Hegewald and Schraff 2022). Given these considerations, we anticipate that alterations in the media content to which citizens are exposed may be linked to the observed increase in political satisfaction during the pandemic:

*H2: Shifts in media content during the pandemic towards more politically neutral topics are associated with increases at the individual level in satisfaction with the democratic political system.*

This hypothesis aligns with the argument that partisan dissatisfaction is often influenced by media bubbles and echo chambers, where individuals selectively consume information that aligns with their political beliefs, leading to polarization (Stroud 2010). However, if media contents converge and become less polarized during the pandemic, it is reasonable to expect that the satisfaction gap between media bubbles will decrease.

Finally, in order to further refine our understanding of the mechanism by which media correlates with satisfaction with democracy, it is important to consider the salience of different topics in media coverage. During the pandemic, the global health crisis dominated news agendas and overshadowed the polarized political climate in the UK, following protracted Brexit negotiations and a snap general election in December 2019. This raises the question of how exposure to specific negative or neutral news itself may have affected individuals' satisfaction with democracy. Based on this consideration, we propose the following hypothesis:

*H3: Exposure to specific negative news during the pandemic is associated with corresponding decreases in satisfaction with democracy.*

This hypothesis suggests that the nature and tone of news coverage during the pandemic are associated with changes in individuals' perceptions of democratic functioning. By examining the relationship between exposure to different topics in the news and satisfaction with democracy, we aim to shed light on the role of specific news topics in possibly shaping citizens' attitudes and satisfaction with the democratic political system. Overall, our three hypotheses provide a comprehensive framework for investigating the correlation between media consumption and democratic satisfaction during the COVID-19 pandemic. By analysing changes in media content polarization (H1), the possible effects of content exposure (H2), and the role of specific news topics (H3), we aim to contribute to a deeper understanding of the complex interplay between media, democracy, and citizen satisfaction.

## Data and Methods

### *Survey Data and Linkage Analysis*

In this study, we scrutinize the evolution of citizen satisfaction with democracy between November 2019 and December 2021 in the UK.<sup>1</sup> We rely on cross-sectional data from the YouGov tracker of satisfaction with democracy, with 201,144 respondents through that period of time.<sup>2</sup>

<sup>1</sup>The YouGov survey does not sample within Northern Ireland, but only the territories of Great Britain (England, Scotland and Wales). As these nations make up 97.1 per cent of the UK population, we refer in this article to the UK, even though strictly speaking the scope of our respondent sample is Great Britain.

<sup>2</sup>As YouGov data is collected anonymously, we cannot establish if any repeat respondents are present in the dataset. However, given the size of the dataset, if any repeat respondent is present, we would estimate it to have a negligible effect on our results.

Founded over two decades ago with just 1,000 participants, the YouGov web panel is now one of the largest in the world with over two million British adults, of which approximately 0.5m are active respondents. Its core instrument is the Omnibus survey, in which a demographically representative sample of members are asked daily on a wide range of topics. The items included in this project were fielded three times per week, with respondents asked about their level of satisfaction with democracy and their newspaper consumption.<sup>3</sup> Satisfaction with democracy was measured using the classic formulation: ‘On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the way democracy works in Britain?’ For ease of coefficient interpretation and effect estimation, we re-factor this ordinal dependent variable on satisfaction with democracy to a dichotomous format (‘satisfied’ or ‘dissatisfied’), in line with existing studies in the literature such as Anderson and Guillory (1997), Singh (2014), or Mayne and Hakhverdian (2017). We then coded a variable for the partisanship of newspaper exposure, classifying as left-leaning *The Guardian*, *The Mirror*, and *The Independent*, and as right-leaning *The Telegraph*, *The Times*, *The Sun*, and the *Daily Mail*.<sup>4</sup> Additionally, the survey also included a battery of questions concerning respondents’ personal characteristics such as household income, education, region, and how they voted in the last general election or in the Brexit referendum (see appendix for a summary of the data).

We use self-reported newspaper readership to build a dataset of exposure to media content by matching readers with the news content of the newspaper read in the days leading to the interview, as further explained below. The idea of constructing individual measures of exposure to relevant media messages was first explicitly described and implemented by Miller, Goldenberg and Erbring (1979). Such an approach allows us to take into account the actual media content individuals consume instead of assuming the kind of media messages the respondents were exposed to. This type of study, commonly defined as ‘linkage analysis’, combines content analysis (media message variables are aggregated for each media outlet and, possibly, time period) and survey data (containing self-reported media consumption and the outcome/s of interest). One of the main challenges in studying media effects is that errors in media use self-reports attenuate media effect estimates (Ansolabehere and Iyengar 1995; Bartels 1993; Zaller 2002; Scharnow and Bachl 2017). Even more importantly, there are limitations related to the coding and classification of contents respondents are exposed to. Scharnow and Bachl (2017) argue that automatic content analysis is particularly beneficial for linkage analysis, as it enables the coding and classification of huge amounts of text and allows for the estimation of misclassification error probabilities. Furthermore, one can easily employ an ensemble of multiple classifiers for the same message coding and increase the coding quality (Hillard, Purpura and Wilkerson 2008). Following this line of thought, we rely on automated text analysis techniques to analyze the contents our respondents were exposed to.

### **Media Content: Topic Modelling and Sentiment Analysis**

Twitter (now known as X) has become an important platform for sharing news and political information, making it a suitable proxy for measuring the salience of news in the public sphere. With the declining reach of print and online newspapers in recent years, especially among younger age groups, social media has emerged as a dominant source of news for many individuals. The statistics from Ofcom in 2022 suggest that 46 per cent of UK adults use social media for news consumption, whereas the reach of newspapers decreased from 47 per cent in 2020 to 38 per cent

<sup>3</sup>Among the mass media, newspapers offer more detailed coverage of news and, therefore appear to provide more transparency than other traditional forms of media (Moy and Hussain 2011). As a result, newspapers seem to be particularly influential in the way citizens regard the attributes of the country’s political institutions (Camaj 2014, p.198).

<sup>4</sup>We exclude the *Financial Times* from our analysis due to its more technical orientation and international news coverage, and lack of a specific domestic partisan news angle.

in 2022. This indicates that social media platforms, like Twitter, play a crucial role in disseminating news from mainstream media. Therefore, we rely on news disseminated on Twitter by national newspapers to assess the type of news that dominates the public agenda. We scraped 1,564,350 tweets between October 2019 and December 2021 from all major British newspapers (*Daily Mail*, *Daily Mirror*, *Financial Times*, *The Guardian*, *The Independent*, *The Sun*, *The Telegraph*, and *The Times*), using the Twitter (X) API. Building on previous studies (Barberá *et al.* 2019), we use newspaper tweets as a proxy to study the salience of topics that are discussed in the public sphere. In our case, we use them as indicators of what each newspaper focused on in the days leading up to the YouGov respondents being interviewed.

Once we compiled and cleaned our corpus of circa 1.5 million tweets, we applied a topic modelling approach to identify the issues covered by these media outlets. As Grimmer and Stewart (2013) succinctly explain, topic models are a type of unsupervised learning method useful when approaching a problem without a predetermined categorisation scheme. To put it in other words, they are useful methods to apply in an exploratory context without a predetermined list of topics (Quinn *et al.* 2010). Out of different topic modelling approaches, such as ‘*Dynamic*’, ‘*Correlated*’, and ‘*Structural Topic Models*’, the ‘*Latent Dirichlet Allocation*’ (LDA) developed by Blei, Ng and Jordan in 2003 is the most widely used approach. Following previous studies, we apply LDA in our research (Barberá *et al.* 2019; Blei, Ng and Jordan 2003; Blei and Lafferty 2007; Grimmer and Stewart 2013).<sup>5</sup>

The LDA algorithm, being an unsupervised method, only requires the specification of the number of clusters ( $K$ ) as input. As Grimmer and Stewart (2013) note, ‘determining the number of clusters is one of the most difficult questions in unsupervised learning’ (19). Scholars have suggested several metrics to select the optimal  $K$  number in LDA, based on various measures of statistical fit, including held-out likelihood (Arun *et al.* 2010; Cao *et al.* 2009; Deveaud, Sanjuan and Bellot 2014; Griffiths and Steyvers 2004; Mimno *et al.* 2011; Taddy 2012). However, Quinn *et al.* (2010) advise that rather than focusing on statistical fit, the primary criteria for  $K$  selection should be the ‘substantive and conceptual’ fit (216), that is, the identification of homogeneous and well-defined clusters (news topics, in this case) (Chang *et al.* 2009). The final number of clusters can be reached through an iterative process, based first on statistical fit, and then, upon the aggregation of clusters closest to one another (by Euclidean distance) to form fewer more coherent groups. We take a comprehensive approach in our selection of  $K$  clusters, by following a four-step approach. First, we use four different measures of statistical fit to identify the ideal  $K$  number of topics (see appendix for more detail). The four measures we use to do so seem to converge, for our corpus, around the ideal number of nineteen topics. In a second step, we explore the automatically generated clusters by scrutinizing the most common words in each cluster of tweets and thus identify the substantive issues in each cluster. Third, we aggregate the clusters with shared topics (for example, we group three clusters of tweets on COVID-19) for further analysis, resulting in twelve topics (see appendix for more details).<sup>6,7</sup>

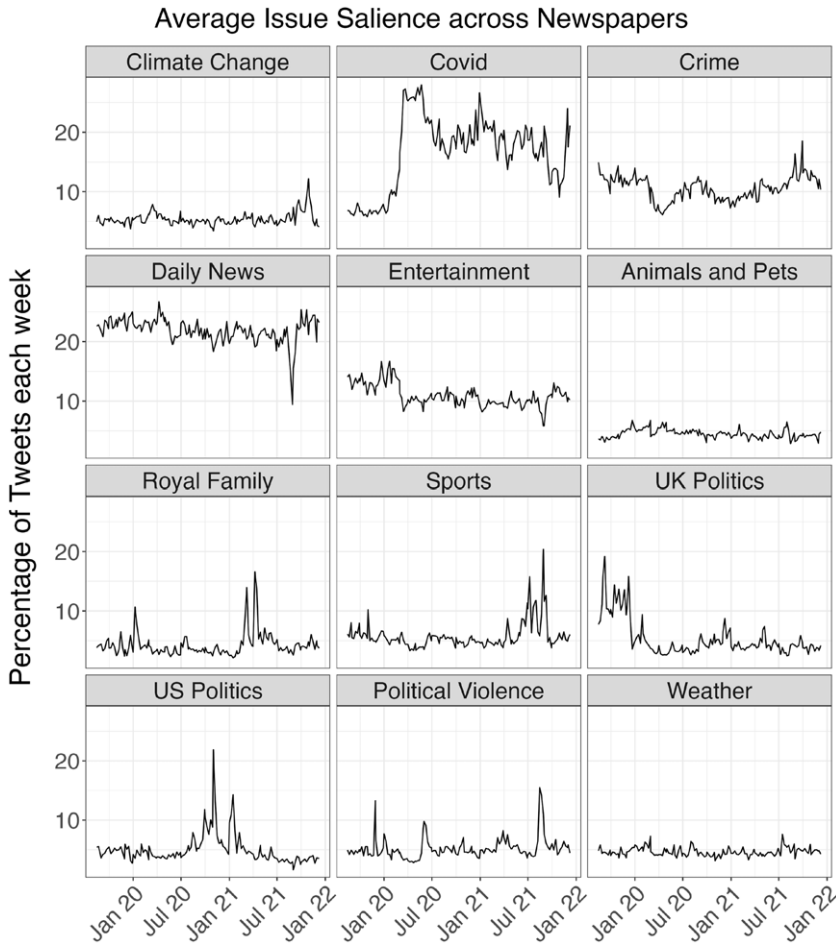
In Figure 1, we plot the percentage of tweets on each topic between November 2019 and December 2021. We find that tweets relating to COVID-19 increased substantially in March 2020, and remain at a substantial level (above 10 per cent of total tweets) until the end of our period of analysis. Similarly, tweets related to political violence spiked in November 2019, June 2020, and

<sup>5</sup>Applying topic modelling algorithms by aggregating the texts by day or author has generally been found to outperform individual text analysis (Hong and Davison 2010). However, in our case, we found that the broader topics identified by modelling all of our tweets together (over 1.5 million), identified more reliable and coherent broad topics, which better suit our research goals, rather than more specific newspaper-dependent topics, as identified by modelling each newspaper separately.

<sup>6</sup>Validation of the topic modelling results can be conducted only after the final output has been provided, and as Grimmer and Stewart (grimmer\_text\_2013) suggest, two main options are available: assessing its ‘semantic validity’, i.e. the internal coherence of topics, and assessing for ‘predictive validity’, i.e. how well variation in topic usage can be explained by external events (see also Quinn *et al.* 2010).

<sup>7</sup>The three COVID-related topics that we clustered are: *COVID-19*, *Lockdown*, and *Lockdown Consequences*.





**Figure 1.** Average Issue Salience Across Newspaper Tweets. Source: X (Twitter) API.

August 2021, following the London Bridge attack in London, the murder of George Floyd in the USA, and the takeover of Kabul by the Taliban, respectively. However, tweets about American politics increase around the time of the 2020 US presidential election and the January 6 assault on the Capitol. Finally, increases in sports-related news are clearly visible in July and August 2021, during the UEFA European Football Championship and the Tokyo Summer Olympics. Overall, our modelling seems quite reliable in terms of its ability to describe changes in coverage of news from across the world as reported in UK newspapers.<sup>8</sup>

As discussed previously, we are not only interested in knowing *what* topics each newspaper is focusing on but also *how* they talk about different topics. By quantifying the positivity or negativity by which topics are covered in the media, we are able to assess our first hypothesis (H1) regarding whether differences in sentiment between left- and right-wing newspapers may have narrowed during the pandemic. Thus, in addition to the unsupervised modelling, we also conducted sentiment analysis to understand how newspapers covered each topic. Sentiment analysis is an approach to text analysis used to identify and evaluate opinions of issues through automated methods (Zimbra et al. 2018). As an established method in the analysis of tweets, we apply the

<sup>8</sup>In the appendix we provide further evidence of the validity of the shifts in salience of selected topics we identify using results from relevant keywords using Google Trends.

AFINN technique to understand how different newspapers in the UK reported over time on the topics identified using LDA (Nielsen 2011). The integration of topic modelling and sentiment analysis is a well-established approach to Twitter data analysis (Xiang and Zhou 2014; Saif, He and Alani 2012; Huang *et al.* 2013; Tan *et al.* 2014).

The adoption of a dictionary-based AFINN approach reflects a preference for transparency and ease of replication, as though some alternative automated sentiment analysis algorithms are better performing, they are also opaque and harder to reproduce (Zimbra *et al.* 2018). Another clear advantage of AFINN is that it was developed specifically for the analysis of Tweets (Nielsen 2011). AFINN scores individual words from  $-5$  to  $5$ , with the former indicating very negative emotions, and the latter having a more positive affect. The closer word scores approximate to zero, the more neutral they are in tone. We further validate our application of the AFINN method by comparing how different topics are associated with specific sentiments, and how distinctively (or not) newspapers from across the spectrum report on certain issues (see the Appendix).

As reported in Figure 2, some topics are systemically associated with more negative sentiment, whereas others are more positively framed. Validating our prior intuition, the topics with the lowest affective baseline are crime and political violence, followed by reporting on climate change, coronavirus, and both domestic and US politics. However, softer topics such as sports or entertainment oscillate around a neutral mid-point, at times reaching positive emotive scores. Although sentiment within topics seems stable to a large extent, short shifts in sentiment are described by the data. For instance, we find a sharp decrease in positive coverage of the British royal family in November 2019 following an interview with Prince Andrew attempting to address allegations of sexual misconduct, and then again in early 2020 following Prince Harry and Meghan Markle's announcement to withdraw from official duties. Thus, also our sentiment analysis seems to be reliable as an instrument to understand how different topics were covered in the news in the UK for the period under study.

### **Modelling Strategy**

Having clarified the origin of our Twitter data and the methods to measure it, we turn to our two-step methodological approach. With the first step, we aim to explain patterns in satisfaction with democracy in the UK, investigating its relationship with party affiliation and newspaper readership, thus testing H2. In a second step, we seek to disentangle how exposure to specific topics might correlate - and possibly influence - satisfaction with democracy, and therefore address the expectations set out in H3.

### **Multilevel Models**

We use the YouGov tracker data to estimate multilevel models with random slopes and intercepts by week of observation for the key variables of consideration, such as partisan affiliation (past vote) or newspaper readership (left- or right-leaning), as well as fixed effects for age, gender, education, region, and income. A multi-level model is a statistical model applied to data collected at more than one level, with slopes varying by group (Luke 2020; Gelman and Hill 2007). By grouping coefficient estimates by week of observation, such a modelling approach allows us to disentangle the relationship over time between satisfaction with democracy and other relevant factors during this period, such as political party support, media exposure, or Brexit position, while still controlling for relevant respondent attributes. As such, multilevel models offer an effective means of analysing trends in data, as they allow for the estimation of separate slopes by period between individual attributes and outcomes of interest while taking into account demographic fixed effects and short-term sample biases (Skrondal and Rabe-Hesketh 2004; Singer and Willett 2003; Steele 2008; Wright and London 2009). As noted, fixed effects for age, gender, education, region, and income are estimated at the first level, while at the second level, we include

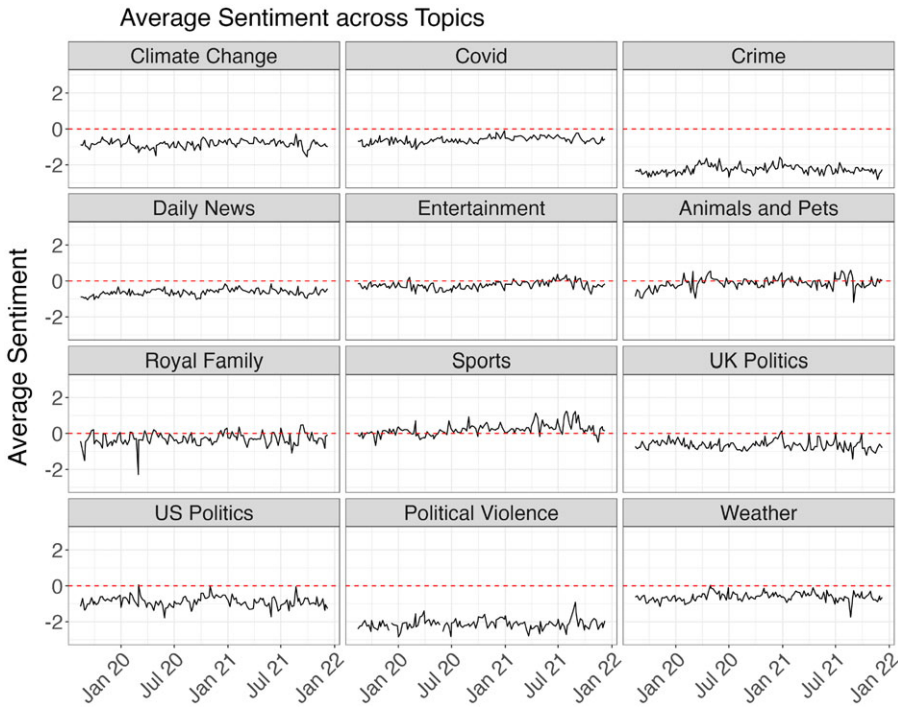


Figure 2. Average Sentiment Across Topics. Source: X (Twitter) API.

random slopes for party support and media preference. This allows us to parse out changes in satisfaction with democracy by group within Britain from November 2019 to early 2022 in order to identify changes over time in the independent association of partisan identity or news readership with perceptions of democratic performance.

Multilevel models were estimated according to the standard specification:

$$SWD_{ij} = (\beta_{0j} + X_{0j}) + \beta_1 A_{ij}$$

Where  $SWD_{ij}$  represents the score of subject  $i$  on satisfaction with democracy in period  $j$ ,  $X_{0j}$  denotes the random effects design matrix consisting of ones in the first column (corresponding to the estimation of random slope intercepts) and second-level variables in the other columns,  $\beta_{0j}$  to the set of random slope coefficients for each time period  $j$ ,  $A_{ij}$  to a matrix of first-level independent variables including a constant term, for which time-invariant coefficients are provided by the vector  $\beta_1$ . As random slopes estimated by week, we include the constant term together with three variables that allow us to measure the changing association between partisanship and satisfaction with democracy during the period under consideration: political party support (based on respondent vote preference in the previous general election); whether the respondent had supported remaining in the European Union (based on respondent vote choice in the 2016 referendum); and whether the respondent is a reader of a left- or right-leaning news source. Fixed-effect results of the multilevel models are shown in Appendix Table (A.2), and weekly random slopes by key variable are charted in the results section below.

### Logit Models

In addition to the multilevel model described above, as a second step, we seek to explain how exposure to specific topics relates to satisfaction with democracy. To do that, we match each respondent to the retweets by topic on the days previous to the one in which they were interviewed

for the newspaper that they usually report reading.<sup>9</sup> We then develop a robust research design to explain the relationship between satisfaction with democracy and exposure to certain topics by taking the average number of retweets in each newspaper for selected theoretically relevant topics 2, 10, 15, 20, and 25 days prior to the interview (that is, the lags of retweet by topic/newspaper) as a proxy for topic salience in each newspaper over a certain period. The following model should thus help answer the question about what topics seem temporally to predate a shift in satisfaction with democracy.

We therefore estimate the following general logit model given the binary nature of our dependent variable:

$$SWD_{i,t} = \beta Retweets_{i,t-n} + \gamma PastVotes_i + \delta Personal_i + \zeta Newspaper_i + \iota Pol.Attitude_i + \xi_t + \varepsilon_{i,t}$$

where  $SWD_{i,t}$  is the binary outcome variable for satisfaction with democracy for individual  $i$  at time  $t$ ,  $\beta Retweets_{i,t}$  is a vector of mean retweets by topics each day in the matched newspaper in the  $t$ -days before the survey took place,  $\gamma PastVotes_i$  a vector of political variables (party voted in last general election and Brexit referendum),  $\delta Personal_i$  a vector of personal covariates, such as sex, income, education, age and region.  $\zeta Newspaper_i$  is type of newspaper readership (left or right-wing),  $\iota Pol.Attitude_i$  is political attitude (that is, the self-reported level of attention to politics),  $\xi_t$  the week fixed effects, and  $\varepsilon_{i,t}$  is the standard error, with subscripts  $i = 1, \dots, n$ ;  $t = 22/11/2019, \dots, 06/12/2021$ .

## Results

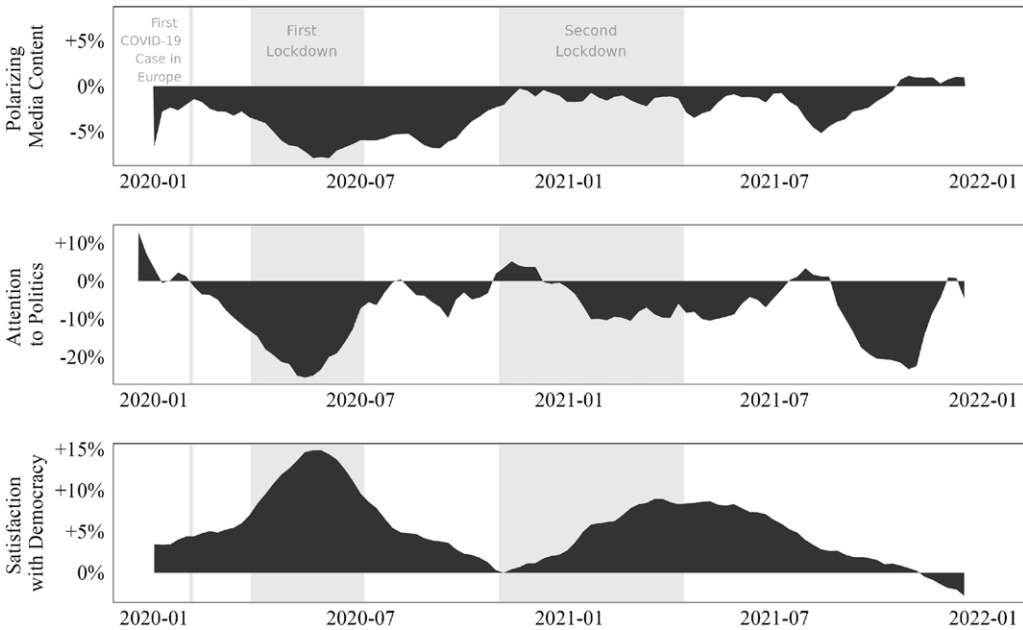
We begin our empirical analysis by exploring the evolution of media content and citizen attitudes during the two years under study. As shown in Figure 1, the salience of different topics has varied dramatically over time. By contrast, the sentiment of each topic remains quite stable, with some topics being consistently negative while others remain neutral or moderately positive (see Figure 2). Combining both dimensions of our content analyses, we estimate the combined salience of negative and neutral topics. We consider ‘negative’ the topics with negative average sentiment scores across all newspapers (*climate change, COVID-19, crime, daily news, UK politics, US politics, political violence, and weather*). In contrast to these, news in the categories of *entertainment, animals and pets, royal family and sports* have sentiment values above -0.5 and reach positive average sentiment scores for some newspapers. We classify these as ‘neutral’ topics.<sup>10</sup>

Figure 3 shows the trend lines during the pandemic across three key variables: the share of media stories that focus on ‘polarizing’, rather than neutral, topics (for example, domestic politics rather than lifestyle or entertainment); surveyed levels of attention to politics (self-reported on a 1-10 scale); and levels of surveyed dissatisfaction with the functioning of democracy. As the pandemic struck in March 2020, we found the confluence of three trends: media content became less polarizing, interest in politics declined, and satisfaction with democracy increased.

Concurrent with this reduction in media attention to divisive topics, we also discover a marked narrowing of the partisan political divide. Figure 4 plots the differences between partisan groups across three variables: the share of left vs. right-leaning media stories that focus on ‘polarizing’ rather than neutral topics (for example, UK domestic politics rather than lifestyle or entertainment); the gap in surveyed levels of attention to politics (self-reported on a 1–10 scale) between left- and right-leaning newspaper readers; and the gap in levels of surveyed dissatisfaction with the functioning of democracy between readers of left- and right-wing media. In line with H1, we find that media content polarization decreased during the pandemic: left-wing

<sup>9</sup>The Omnibus Survey data asks respondents to choose the ‘daily newspaper read most often’. Only one newspaper can be selected, regardless of the fact that likely many survey respondents get their information from multiple sources. This limitation in the dataset reflects a limitation of this study, which future research might wish to address.

<sup>10</sup>For a detailed account of the average sentiment of each topic for each newspaper, see Figure 9 in the Appendix.



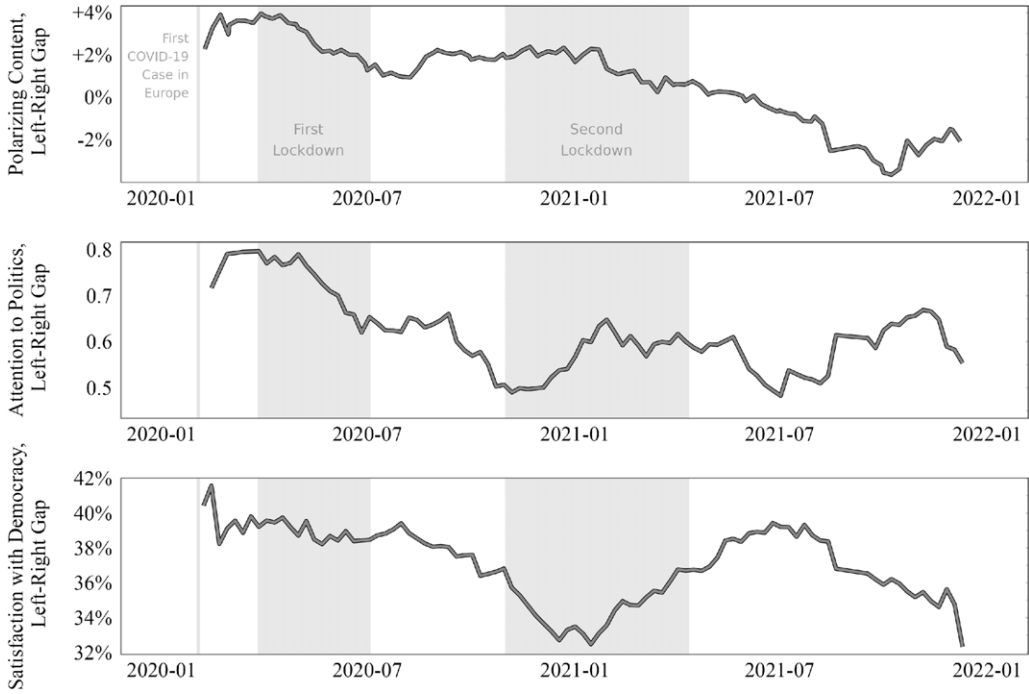
**Figure 3.** Media Content, Attention to Politics and Democratic Satisfaction: Key Trends. Sources: YouGov, X (Twitter).

media made the largest movement away from coverage of politically divisive subjects, such as domestic politics, and towards more neutral content such as lifestyle, travel, or personal interest stories. Simultaneously, the descriptive trends suggest that levels of attention to politics have equalized, and so has the winner-loser gap in satisfaction with democracy.

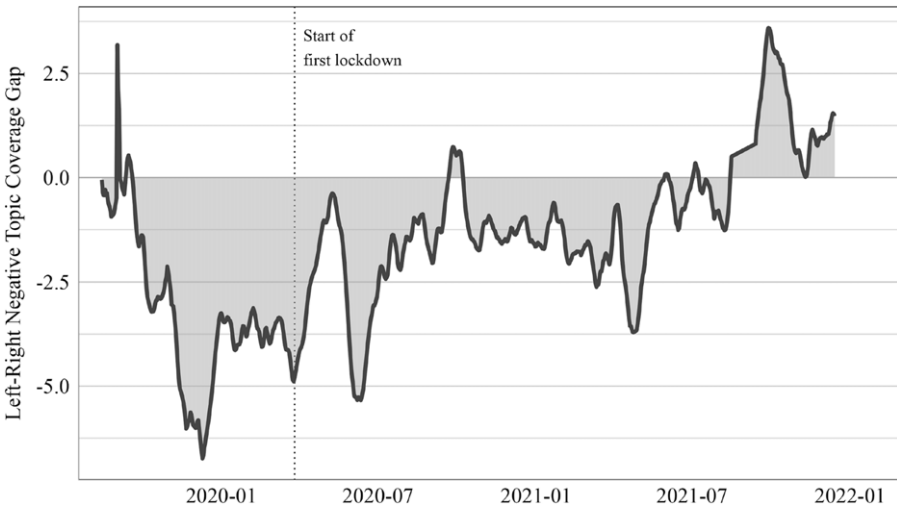
Figure 5 zooms in on the narrowing gap in the salience of negative topics between left- and right-wing newspapers, as a result of left-wing newspapers decreasing their coverage of negative news, thus supporting our predictions as set out in H1.

These descriptive trends in Figures 4 and 5 indicate a parallel decrease in attitudes across partisan lines as well as in newspaper content differences. In our second hypothesis, we posit that the increase in political satisfaction during the pandemic is associated with changes in individual exposure to media content. In order to thoroughly investigate the association between news exposure and readers' satisfaction with democracy at the individual level, as well as track the evolution of this relationship during the pandemic, a more sophisticated approach is warranted. We apply a linear mixed-effects model to our survey data, with random slopes for the last party voted for and the type of newspaper readership by week. Figure 6 plots the weekly association between reading left- or right-leaning newspapers and feeling satisfied with the functioning of democratic institutions in the UK. This allows us to assess the extent to which the narrowing partisan divide in perceptions of democratic performance at the macro level is independently associated at the individual level with either partisan support (past vote) or partisan media exposure, respectively.

Changes in these estimated coefficients by week suggest a difference of trend in the association of each variable with democratic satisfaction over time. While at a descriptive level, left-wing respondents became more satisfied with democracy over the course of the pandemic, as shown by the steady reduction of the left-right satisfaction gap in Figure 4, after controlling for newspaper readership, the independent association between political orientation and satisfaction with democracy was found to remain stable. This is shown by the series line for past Labour vote in Figure 6 which plots period-specific coefficients that fluctuate around a -10 percentage point



**Figure 4.** Depolarization During the Pandemic: the Closing Left-Right Media Gap. Trendlines during the pandemic Sources: YouGov, Twitter (X).



**Figure 5.** Gap in Salience of Negative Topics between Types of Newspaper.

midpoint. Alternatively stated, *after* controlling for media exposure, Labour voters remained around ten percentage points less satisfied with democracy over the course of the period.

By contrast, coefficient magnitudes for newspaper readership follow an upward trendline, with the implication that (*ceteris paribus*) consumers of left-wing media became steadily less negative in their evaluation of democratic performance over time. At the pandemic’s outset, such readers were estimated to have a 10 percentage point shortfall in their rate of satisfaction with democracy,

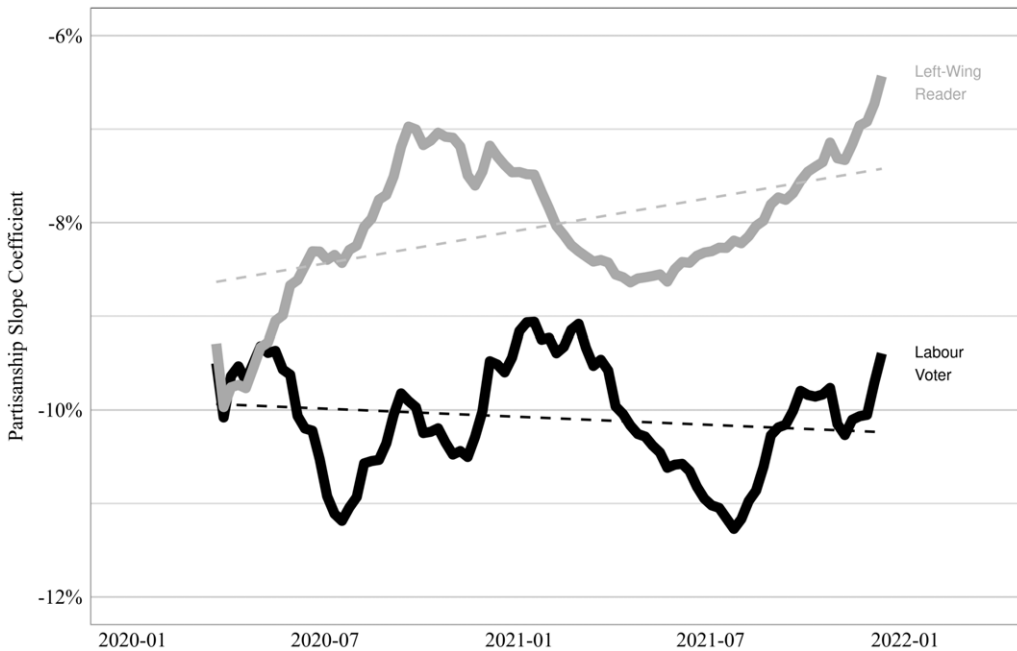


Figure 6. Satisfaction with Democracy by Type of Newspaper Readership and Party Affiliation (Past Vote).

over and above the estimated electoral partisanship effect. However, the newspaper readership coefficient moderated by several percentage points over the course of the first COVID-19 lockdown from April to July 2020 before declining further the following year. As a result, the model coefficients imply that a substantial proportion of the overall reduction in the winner-loser gap during the pandemic seen in Figure 4 – that is, the left-right gap in satisfaction with democracy – can be associated with changing attitudes by newspaper partisanship rather than electoral party of support.<sup>11</sup>

For inferential purposes, these findings have two implications. Firstly, in line with hypothesis H2, increases in satisfaction with democracy during the pandemic exhibit an independent association with media exposure. Given the moderation of partisan media negativity bias revealed by Figure 5, this provides a basis to explore further the connection between individual content exposure and respondent attitudes. Secondly, the stability of the negative partisanship coefficient is inconsistent with the alternative hypothesis that a narrowing winner-loser gap reflected reversion to baseline following the heightened political mobilisation of the December 2019 election. Were this the case, we would expect to observe a diminution of the partisanship coefficient, especially given its operationalisation using respondent votes in that very electoral contest. However, this coefficient remained stable after controlling for the choice of respondent media.

### The Role of Negative News: Survey-Weighted Generalized Linear Model

The analyses presented so far suggest that media content changed during the pandemic and that there were divergent trends between progressive and conservative outlets. The multilevel models,

<sup>11</sup>Furthermore, it should be noted that these two variables express no collinearity. Respondent vote preference and preferred media source are only imperfectly aligned at the individual level, whether we examine the correlation of Labour vote with left-wing newspaper choice ( $R = 0.29$ ), or Conservative vote and right-wing readership ( $R = 0.35$ ).

**Table 1.** Survey-Weighted Generalized Linear Model (Logit)

	<i>Dependent Variable: Satisfaction with Democracy Lag Average</i>				
	2 Day	10 Day	15 Day	20 Day	25 Day
RT Climate Change	−0.226*** (0.075)	−0.707*** (0.119)	−0.938*** (0.139)	−0.797*** (0.136)	−1.226*** (0.166)
RT Covid	0.034 (0.026)	0.204*** (0.044)	0.247*** (0.050)	0.192*** (0.052)	0.261*** (0.056)
RT Crime	0.050 (0.048)	0.079 (0.077)	0.060 (0.093)	0.379*** (0.108)	0.216** (0.107)
RT Daily News	−0.001 (0.028)	0.037 (0.051)	0.050 (0.059)	0.121* (0.062)	0.128** (0.063)
RT Entertainment	−0.056 (0.041)	−0.113 (0.084)	−0.184* (0.101)	−0.131 (0.120)	−0.014 (0.127)
RT Animals and Pets	0.284*** (0.067)	0.118** (0.047)	0.179*** (0.061)	0.070 (0.064)	0.104 (0.070)
RT Royal Family	0.122** (0.058)	0.069 (0.076)	0.065 (0.088)	0.334*** (0.115)	0.386*** (0.117)
RT Sports	0.009 (0.104)	−0.004 (0.177)	0.074 (0.203)	−0.140 (0.203)	0.028 (0.188)
RT UK Politics	−0.103 (0.089)	−0.282** (0.142)	−0.368** (0.161)	−0.450*** (0.164)	−0.503*** (0.189)
RT US Politics	0.001 (0.002)	−0.006 (0.007)	−0.004 (0.007)	−0.002 (0.008)	0.001 (0.010)
RT Political Violence	−0.027 (0.037)	−0.119* (0.071)	−0.110 (0.071)	−0.208*** (0.077)	−0.154* (0.080)
RT Weather	0.043 (0.054)	0.093 (0.122)	0.193 (0.146)	−0.147 (0.152)	−0.166 (0.164)
Week FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Weights	Yes	Yes	Yes	Yes	Yes
Observations	76,805	76,805	76,805	76,805	76,805
Log Likelihood	−41,720.360	−41,682.840	−41,665.080	−41,634.210	−41,611.340

Notes: \*p < 0.1; \*\*p < 0.05; \*\*\*p < 0.01.

in turn, demonstrate the existence of a statistically significant relationship between these content changes and the changing relationship between newspaper readership and satisfaction with democracy. To further substantiate this association and test our H3 regarding the specific effect of negative news on satisfaction with democracy, in this section, we turn to the effect of exposure to specific news in different newspapers.

Our results, presented in Table 1 using a survey-weighted generalized linear model (logit), show the relationship between exposure to different news topics and individuals' attitudes. Controlling for other factors, we find that individuals who were exposed to media content covering issues relating to partisan political matters, such as UK politics, political violence, and climate change, all negatively correlate with satisfaction with democracy. Note that these effects control for partisanship and are relative to identical individuals who differed only in not being exposed to such media content in the days prior to the interview. Therefore, our analysis provides robust support for Hypothesis 3, which posits that exposure to negative news during the pandemic is associated with a decrease in satisfaction with democracy.

In contrast to the negative effects of some topics, we find that exposure to media sources with greater neutral content – notably 'personal interest' stories (the daily news category), entertainment, and crime show no consistent effect. Feelgood stories about animals and pets seem to correlate positively, though, only in the short term. Meanwhile, exposure to content regarding non-partisan 'unifying' topics such as responses to the COVID-19 pandemic or news about the



British royal family is associated with higher levels of democratic satisfaction relative to those whose media sources did not cover such issues. The models include individuals who were surveyed and who reported not reading any news. For these respondents, the exposure to topics is estimated at zero. To clarify, an increase in the salience of a topic here is measured as the average of retweets by topic for a given newspaper in the 2 to 25 days prior to the survey.

We can easily transform the log odds in Table 1 to changes in the predicted probabilities to express satisfaction with democracy as a function of the salience of each topic. For example, a one standard deviation increase in retweets of British politics or climate change news over a period of 20 days (211 and 279 RTs, respectively) is associated with a 3 percentage point decrease in the probability of being satisfied with democracy. By contrast, the salience of COVID-19 or the royal family predicts substantially higher levels of satisfaction with democracy. The probability of being satisfied increases by one percentage point for each one-standard-deviation increase in retweets of royal family news (178 RTs). The estimated effect is even larger for coronavirus-related news, with a one standard deviation rise in salience (of 635 RTs) predicting a three percentage point increase in the probability of feeling satisfied with democracy. These estimates show that the usual changes in the salience of topics are associated with non-negligible changes in democratic evaluation, often altering the probability of being satisfied above or below 50 per cent, depending on the sign of the effect. Thus, news exposure seems to be a significant predictor of citizens' satisfaction with democracy.

The time lags in the results suggest that, consistent with theory, the greater the delay between exposure to specific topics in the news and the interview, the less of an association that exposure will have with a person's perceptions of democratic performance. In other words, there might be an effect of exposure to certain news on satisfaction with democracy but for some topics, at least, it is only a temporary one. For instance, news stories about animals and pets appear to lose significance very quickly, while COVID-19, climate change, and UK politics retain a significant negative association almost one month subsequent to exposure. This suggests that, during the period of study, news exposure on these topics consistently correlated with lower satisfaction with democracy, to the extent that outlets focused on those issues.<sup>12</sup>

All the individual-level logit models are consistent with the trends observed in the multi-level models regarding changing media exposure during the pandemic and the reduction in the partisan affect divide. As media content became more balanced across sources between divisive and non-divisive topics, individuals who previously were 'primed' to be dissatisfied with democratic performance became less so, and we can confirm that this association exists at the individual level after being matched with personal news source content. Moreover, this association is robust to the inclusion of political and demographic controls and shows the estimated effect of individual exposure relative to other individuals with similar beliefs and attitudes who were not similarly exposed in the days prior to the interview. Our study suggests that a relationship between media exposure and satisfaction with democracy exists, and these results hold important consequences for our understanding of democratic functioning in an era of heightened polarization.

## Conclusion

In recent years, political scientists have dedicated greater attention to the study of rising media polarization, animosity across partisan divides, and the associated deterioration in civic satisfaction (Boxell, Gentzkow and Shapiro 2022). However, less attention has been given to broader policy questions that arise from this analysis. For instance, is rising media polarization a secular process or are there periods in which tensions can subside? If so, how do such periods arise

<sup>12</sup>In the appendix we report the results using probit estimates as a robustness check and using the four levels of our dependent variable 'Satisfaction with Democracy' in Table 4 instead of only a binary dependent variable. We also report the coefficients for all the relevant control variables in the appendix.

and for how long can they endure? And, finally, could reforms to the informational environment (for example, requiring news filter neutrality, extension of legal liability for third-party content, or tagging of contested claims) aid in maintaining civility and balance in the public sphere, or is civic polarization ultimately a result of socioeconomic frustrations that cause citizens to seek polarizing content? These important questions belong to a broader research agenda. Yet to the extent that our study contributes, it is by observing that large shifts in media polarization are possible, can endure from one year to the next, and may be associated with substantial narrowing of partisan divides over democratic evaluation.

By focusing on partisan variation in news exposure, we were able to link such attitudes to the nature of content to which respondents were exposed, and while we refrained from any direct assertion of causality, our results invalidate the expectations of key alternative hypotheses. Meanwhile, our analyses also identify a significant shift in the nature of content exposure, namely, the ‘depoliticization’ of topic selection. During the pandemic, newspapers moved away from covering divisive political issues and instead focused on neutral and non-political story content. This shift in the media landscape led to an increase in overall satisfaction with the democratic political system. At the individual level, these changes can be attributed to variations in content exposure. Specifically, readers of newspapers aligned with the political opposition experienced more pronounced shifts compared to readers of newspapers that typically support the governing party. These findings suggest that the content exposure experienced by individuals might have played a role in shaping their perceptions and satisfaction with the democratic political system.

Our results also touch on a broader finding, which is that, as the UK was shifting to home-working and social distancing in 2020 and 2021, media content, in general, appears to have shifted its ‘topic balance’ from more divisive issues, such as UK domestic politics, towards more neutral areas, such as entertainment stories, personal interest, or sport. As this occurred, the shift in exposure was associated with higher levels of satisfaction with democracy – not only at the individual level but also nationally, as average satisfaction levels increased. This effect has persisted beyond the pandemic, with a majority of UK respondents continuing to evaluate the country’s democratic functioning positively from March to April 2022, according to data collected by the Pew Research Center. Yet the implications of this macro-level shift for democratic life merit debate. If democratic performance depends upon ‘critical citizenship’, then such a change may be interpreted negatively (Norris 2004). However, another interpretation would be that of Gabriel Almond and Sidney Verba, who, in their 1963 classic text, *The Civic Culture*, argued that while the functioning of representative democracy depends upon the presence of a sufficiently large number of individuals ready to participate in partisan contests through election campaigns, pressure groups, and public debate over salient national issues, it also depends upon the presence of two further groups: firstly, a bulwark whose loyalty remains subject to the political system as a whole, rather than any party or faction within it; and, second, a residual number whose focus lies upon improving conditions in their ‘parochial’ circle of agency, such as their household, neighbourhood, or local community (Almond and Verba 1963).

In a similar vein, our findings suggest that while news consumption may play an important role in raising access to political information and overall citizen engagement with politics, in a partisan media landscape, continuous exposure could possibly undermine satisfaction with democracy. During the pandemic, as media content shifted to more ‘parochial’ topics – such as entertainment or ‘human interest’ stories – individual respondents exposed to such content reported higher levels of institutional satisfaction. This, in turn, opens another possible mechanism by which crisis events, such as a global pandemic, can restore citizen confidence in the political system: not simply through the reduction of partisanship in news coverage but also via a reduced focus on politics *per se*, or a change in the tone of such coverage towards less polarization – and a rebalancing of interest towards other domains of life.

**Supplementary Material.** The supplementary material for this article can be found at <https://doi.org/10.1017/S0007123424000395>.

**Data Availability Statement.** Replication files for this study are available on the Harvard Dataverse at: <https://doi.org/10.7910/DVN/GS6N40>. The original files from YouGov's Tracker on Satisfaction with Democracy, part of its Omnibus Survey, and Twitter(X) cannot be shared directly due to copyright. However, access to the former can be requested from YouGov. The relevant contact at YouGov is Joel Rogers de Waal at [joel.rogers@yougov.com](mailto:joel.rogers@yougov.com). Twitter(X) data can be accessed via the Twitter(X) API: <https://developer.x.com/en/docs/x-api>. Replication code for this article can be found in the Harvard Dataverse at: <https://doi.org/10.7910/DVN/HL0NKK>.

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## References

- Adam S, Urman A, Arlt D, Makhortykh M, Gil-Lopez T and Maier M** (2023) Media Trust and the COVID-19 Pandemic: An Analysis of Short-Term Trust Changes, Their Ideological Drivers and Consequences in Switzerland. *Communication Research* 50(2), 205–229. <https://doi.org/10.1177/00936502221127484>.
- Almond GA and Verba S** (1963) *The Civic Culture: Political Attitudes and Democracy in Five Nations*. Princeton University Press.
- Anderson CJ and Guillory CA** (1997) Political Institutions and Satisfaction with Democracy: A Cross-National Analysis of Consensus and Majoritarian Systems. *American Political Science Review* 91(1), 66–81. <https://doi.org/10.2307/2952259>.
- Ansolabehere S and Iyengar S** (1995) *Going negative*. New York: Free Press.
- Arun R, Suresh V, Veni Madhavan CE and Narasimha Murthy MN** (2010) On Finding the Natural Number of Topics with Latent Dirichlet Allocation: Some Observations. In Mohammed J. Zaki, Jeffrey Xu Yu, B. Ravindran, and Vikram Pudi (eds), *Advances in Knowledge Discovery and Data Mining*. Berlin, Heidelberg: Springer Berlin Heidelberg, 391–402.
- Baekgaard M, Christensen J, Madsen JK and Mikkelsen KS** (2020) Rallying around the flag in times of COVID-19: Societal lockdown and trust in democratic institutions. *Journal of Behavioral Public Administration* 3(2), 1–12. <https://doi.org/10.30636/jbpa.32.172>.
- Ball P and Maxmen A** (2020) The epic battle against coronavirus misinformation and conspiracy theories. *Nature* 581(7809), 371–375.
- Balmas M and Sheaffer T** (2010) Candidate Image in Election Campaigns: Attribute Agenda Setting, Affective Priming, and Voting Intentions. *International Journal of Public Opinion Research* 22(2), 204–229. <https://doi.org/10.1093/ijpor/edq009>.
- Barberá P, Casas A, Nagler J, Egan PJ, Bonneau R, Jost JT and Tucker JA** (2019) Who Leads? Who Follows? Measuring Issue Attention and Agenda Setting by Legislators and the Mass Public Using Social Media Data. *American Political Science Review* 113(4), 883–901. <https://doi.org/10.1017/S0003055419000352>.
- Bartels LM** (1993) Messages Received: The Political Impact of Media Exposure. *American Political Science Review* 87(2), 267–285. <https://doi.org/10.2307/2939040>.
- Beek U van, (ed.)** (2019) *Democracy under Threat*. Cham: Springer International Publishing. <https://doi.org/10.1007/978-3-319-89453-9>.
- Blais A and Gélinau F** (2007) Winning, Losing and Satisfaction with Democracy. *Political Studies* 55(2), 425–441. <https://doi.org/10.1111/j.1467-9248.2007.00659.x>.
- Blei DM and Lafferty JD** (2007) A correlated topic model of Science. *The Annals of Applied Statistics* 1(1), 17–35. <https://doi.org/10.1214/07-AOAS114>.
- Blei DM, Ng AY and Jordan MI** (2003) Latent dirichlet allocation. *The Journal of Machine Learning Research* 1(1), 993–1022.

- Bol D, Giani M, Blais A and Loewen PJ** (2021) The effect of COVID-19 lockdowns on political support: Some good news for democracy? *European Journal of Political Research* **60**(2), 497–505. <https://doi.org/10.1111/1475-6765.12401>.
- Boxell L, Gentzkow M and Shapiro JM** (2022) Cross-Country Trends in Affective Polarization. *The Review of Economics and Statistics* **106**(2), 557–565. [https://doi.org/10.1162/rest\\_a\\_01160](https://doi.org/10.1162/rest_a_01160).
- Brosius A, van Elsas EJ and de Vreese CH** (2019) Trust in the European Union: Effects of the information environment. *European Journal of Communication* **34**(1), 57–73. <https://doi.org/10.1177/0267323118810843>.
- Brynin M and Newton K** (2003) The National Press and Voting Turnout: British General Elections of 1992 and 1997. *Political Communication* **20**(1), 59–77. <https://doi.org/10.1080/10584600390172347>.
- Camaj L** (2014) The Consequences of Attribute Agenda-Setting Effects for Political Trust, Participation, and Protest Behavior. *Journal of Broadcasting & Electronic Media* **58**(4), 634–654. <https://doi.org/10.1080/08838151.2014.966363>.
- Cao J, Xia T, Li J, Zhang Y and Sheng Tang** (2009) A density-based method for adaptive LDA model selection. *Neurocomputing, Advances in Machine Learning and Computational Intelligence*, **72**(7), 1775–1781. <https://doi.org/10.1016/j.neucom.2008.06.011>.
- Carlin RE and Love GJ** (2018) Political Competition, Partisanship and Interpersonal Trust in Electoral Democracies. *British Journal of Political Science* **48**(1), 115–139. <https://doi.org/10.1017/S0007123415000526>.
- Ceron A and Memoli V** (2016) Flames and Debates: Do Social Media Affect Satisfaction with Democracy? *Social Indicators Research* **126**(1), 225–240. <https://doi.org/10.1007/s11205-015-0893-x>.
- Chang J, Gerrish S, Wang C, Boyd-Graber J and Blei D** (2009) Reading tea leaves: How humans interpret topic models. In Bengio Y, Schuurmans D, Lafferty J, Williams C and Culotta A (eds) *Advances in Neural Information Processing Systems*, vol. **22**. Curran Associates, Inc.
- Chang W-C** (2018) Media Use and Satisfaction with Democracy: Testing the Role of Political Interest. *Social Indicators Research* **140**(3): 999–1016. <https://doi.org/10.1007/s11205-017-1806-y>.
- Darr JP, Hitt MP and Dunaway JL** 2018. Newspaper Closures Polarize Voting Behavior. *Journal of Communication* **68**(6), 1007–1028. <https://doi.org/10.1093/joc/jqy051>.
- Darr JP, Hitt MP and Dunaway JL** (2021) *Home Style Opinion: How Local Newspapers Can Slow Polarization*. Cambridge: Cambridge University Press.
- Dassonneville R and McAllister I** 2020. The party choice set and satisfaction with democracy. *West European Politics* **43**(1): 49–73. <https://doi.org/10.1080/01402382.2019.1609286>.
- Davies B, Lalot L, Peitz L, Heering MS, Ozkececi H, Babaian J, Davies Hayon K, Broadwood J and Abrams D** (2021) Changes in political trust in Britain during the COVID-19 pandemic in 2020: integrated public opinion evidence and implications. *Humanities and Social Sciences Communications* **8**(1), 166. <https://doi.org/10.1057/s41599-021-00850-6>.
- Dearing JW and Rogers EM** 1996. *Agenda-Setting*. Thousand Oaks, California: SAGE.
- Desmet P, van Spanje J and de Vreese C** (2015) European Public Sphere| Discussing the Democratic Deficit: Effects of Media and Interpersonal Communication on Satisfaction with Democracy in the European Union. *International Journal of Communication* **9**, 22.
- Deveaud R, Sanjuan E and Bellot P** (2014) Accurate and Effective Latent Concept Modeling for Ad Hoc Information Retrieval. *Document Numérique* **17**(1), 61–84. <https://doi.org/10.3166/DN.17.1.61-84>.
- Devine D, Gaskell J, Jennings W and Stoker G** (2021) Trust and the Coronavirus Pandemic: What are the Consequences of and for Trust? An Early Review of the Literature. Publisher: SAGE Publications, *Political Studies Review* **19**(2), 274–285. <https://doi.org/10.1177/1478929920948684>.
- Erhardt J, Freitag M, Filsinger M and Wamsler S** (2021) The Emotional Foundations of Political Support: How Fear and Anger Affect Trust in the Government in Times of the Covid-19 Pandemic. *Swiss Political Science Review* **27**(2), 339–352. <https://doi.org/10.1111/spsr.12462>.
- Flores A, Cole JC, Dickert S, Eom K, Jiga-Boy GM, Kogut T, Loria R, Mayorga M, Pedersen Eric J., Pereira B, Rubaltelli E, Sherman DK, Slovic P, Västfjäll D and Van Boven L** (2022) Politicians polarize and experts depolarize public support for COVID-19 management policies across countries. *Proceedings of the National Academy of Sciences* **119**(3), e2117543119, 1–7. <https://doi.org/10.1073/pnas.2117543119>.
- Foa RS, Klassen A, Slade M, Rand A and Collins R** (2020) The global satisfaction with democracy report 2020. *Bennett Institute for Public Policy, University of Cambridge*.
- Foos F and Bischof D** (2022) Tabloid Media Campaigns and Public Opinion: Quasi-Experimental Evidence on Euroscepticism in England. *American Political Science Review* **116**(1): 19–37. <https://doi.org/10.1017/S000305542100085X>.
- Gelman A and Hill J** (2007) *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge: Cambridge University Press.
- Griffiths TL and Steyvers M** (2004) Finding scientific topics. *Proceedings of the National Academy of Sciences* **101** (suppl. 1), 5228–5235. <https://doi.org/10.1073/pnas.0307752101>.
- Grimmer J and Stewart BM** (2013) Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Texts. *Political Analysis* **21**(3), 267–297. <https://doi.org/10.1093/pan/mps028>.
- Guess AM, Barberá P, Munzert S and Yang J** (2021) The consequences of online partisan media. *Proceedings of the National Academy of Sciences* **118**(14), e2013464118, 1–8. <https://doi.org/10.1073/pnas.2013464118>.

- Hammoud Gallego O** (2024) Replication data for news cycles and satisfaction with democracy: How the pandemic short-circuited media polarisation. <https://doi.org/10.7910/DVN/HL0NKK>, Harvard Dataverse, V1.
- Hammoud Gallego O, Foa RS and Romero Vidal X** (2025) Replication files for: News Cycles and Satisfaction With Democracy: How the Pandemic Short-Circuited Media Polarization. <https://doi.org/10.7910/DVN/GS6N40>, Harvard Dataverse, V1.
- Hegewald S and Schraff S** (2022) Who rallies around the flag? Evidence from panel data during the Covid-19 pandemic. *Journal of Elections, Public Opinion and Parties* 34(1), 158–179. <https://doi.org/10.1080/17457289.2022.2120886>.
- Hillard D, Purpura S and Wilkerson J** (2008) Computer-Assisted Topic Classification for Mixed-Methods Social Science Research. *Journal of Information Technology & Politics* 4(4), 31–46. <https://doi.org/10.1080/19331680801975367>.
- Hobolt SB, Popa SA, Van der Brug W and Schmitt H** (2022) The Brexit deterrent? How member state exit shapes public support for the European Union. *European Union Politics* 23(1), 100–119. <https://doi.org/10.1177/14651165211032766>.
- Hong L and Davison BD** (2010) Empirical study of topic modeling in Twitter. In *Proceedings of the First Workshop on Social Media Analytics. SOMA '10*. Washington D.C., District of Columbia: Association for Computing Machinery, 80–88. <https://doi.org/10.1145/1964858.1964870>.
- Huang S, Peng W, Li J and Lee D** (2013) Sentiment and topic analysis on social media: 3rd Annual ACM Web Science Conference, WebSci 2013. *Proceedings of the 5th Annual ACM Web Science Conference, WebSci'13*, Proceedings of the 5th Annual ACM Web Science Conference, WebSci'13, 172–181. <https://doi.org/10.1145/2464464.2464512>.
- Iyengar S and Hahn KS** (2009) Red Media, Blue Media: Evidence of Ideological Selectivity in Media Use. *Journal of Communication* 59(1), 19–39. <https://doi.org/10.1111/j.1460-2466.2008.01402.x>.
- Kritzinger S, Foucault M, Lachat R, Partheymüller J, Plescia C and Brouard S** (2021) 'Rally round the flag': The COVID-19 crisis and trust in the national government. *West European Politics* 44(5-6), 1205–1231. <https://doi.org/10.1080/01402382.2021.1925017>.
- Kubin E and von Sikorski C** (2021) The role of (social) media in political polarization: a systematic review. *Annals of the International Communication Association* 45(3), 188–206. <https://doi.org/10.1080/23808985.2021.1976070>.
- Leikes Y, Sood G and Iyengar S** (2017) The Hostile Audience: The Effect of Access to Broadband Internet on Partisan Affect. *American Journal of Political Science* 61(1), 5–20. <https://doi.org/10.1111/ajps.12237>.
- Lengauer G, Esser F and Berganza R** (2012) Negativity in political news: A review of concepts, operationalizations and key findings. *Journalism* 13(2), 179–202. <https://doi.org/10.1177/1464884911427800>.
- León E de, Makhortyk M, Gil-Lopez T, Urman A and Silke A** (2023) News, Threats, and Trust: How COVID-19 News Shaped Political Trust, and How Threat Perceptions Conditioned This Relationship. *The International Journal of Press/Politics* 28(4), 952–974. <https://doi.org/10.1177/19401612221087179>.
- Levendusky MS** (2013) Why Do Partisan Media Polarize Viewers? *American Journal of Political Science* 57(3), 611–623. <https://doi.org/10.1111/ajps.12008>.
- Louwerse T, Sieberer U, Tuttnauer O and Andeweg RB** (2021) Opposition in times of crisis: COVID-19 in parliamentary debates. *West European Politics* 44(5-6), 1025–1051. <https://doi.org/10.1080/01402382.2021.1886519>.
- Luke DA** (2020) *Multilevel Modeling: Second Edition*. Thousand Oaks, California: SAGE Publications Inc.
- Mach KJ, Reyes RS, Pentz B, Taylor J, Costa CA, Cruz SG, Kerronia ET et al.** 2021. News media coverage of COVID-19 public health and policy information. *Humanities and Social Sciences Communications* 8(1), 1–11. <https://doi.org/10.1057/s41599-021-00900-z>.
- Martin GJ and McCrain J** (2019) Local News and National Politics. *American Political Science Review* 113(2), 372–384. <https://doi.org/10.1017/S0003055418000965>.
- Maurer P** (2023) Perceptions of media influence and performance among politicians in European democracies. *International Communication Gazette* 85(5), 347–364. <https://doi.org/10.1177/17480485221146088>.
- Mayne Q and Hakhverdian A** (2017) Ideological Congruence and Citizen Satisfaction: Evidence From 25 Advanced Democracies. *Comparative Political Studies* 50(6), 822–849. <https://doi.org/10.1177/0010414016639708>.
- McCombs ME and Shaw DL** (1972) The Agenda-Setting Function of Mass Media. *The Public Opinion Quarterly* 36(2), 176–187. <https://doi.org/10.1086/267990>.
- Melki M and Pickering A** (2014) Ideological polarization and the media. *Economics Letters* 125(1), 36–39. <https://doi.org/10.1016/j.econlet.2014.08.008>.
- Miller AH, Goldenberg EN and Erbring L** (1979) Type-Set Politics: Impact of Newspapers on Public Confidence. *American Political Science Review* 73(1), 67–84. <https://doi.org/10.2307/1954731>.
- Mimno D, Wallach H, Talley E, Leenders M and McCallum A** (2011) Optimizing semantic coherence in topic models. In Barzilay R and Johnson M (eds) *Proceedings of the 2011 Conference on Empirical Methods in Natural Language Processing*. Edinburgh, Scotland, UK.: Association for Computational Linguistics.
- Moskowitz DJ** (2021) Local News, Information, and the Nationalization of U.S. Elections. *American Political Science Review* 115(1), 114–129. <https://doi.org/10.1017/S0003055420000829>.
- Moy P and Hussain MM** (2011) Media Influences on Political Trust and Engagement. In Edwards GC, Jacobs LR and Shapiro RY (eds), *The Oxford Handbook of American Public Opinion and the Media*, 1st edn, 220–235. Oxford: Oxford University Press.

- Mueller JE** (1970) Presidential popularity from Truman to Johnson. *American Political Science Review* **64**(1), 18–34. <https://doi.org/10.2307/1955610>.
- Mutz DC and Martin PS** (2001) Facilitating Communication across Lines of Political Difference: The Role of Mass Media. *American Political Science Review* **95**(1), 97–114. <https://doi.org/10.1017/S0003055401000223>.
- Mutz DC and Reeves B** (2005) The New Videomalaise: Effects of Televised Incivility on Political Trust. *American Political Science Review* **99**(1), 1–15. <https://doi.org/10.1017/S0003055405051452>.
- Nadeau R, Daoust J-F and Dassonneville R** (2021) Winning, losing, and the quality of democracy. *Political Studies* **71**(2), 483–500. <https://doi.org/10.1177/003232172111026189>.
- Nielsen FÅ** (2011) A new ANEW: Evaluation of a word list for sentiment analysis in microblogs. *Proceedings of the ESWC2011 Workshop on 'Making Sense of Microposts': Great things come in small packages*, 93–98. <https://doi.org/10.48550/ARXIV.1103.2903>.
- Norris P** (1999) *Critical Citizens: Global Support for Democratic Government*. Oxford: Oxford University Press.
- Norris P** (2004) *Electoral Engineering: Voting Rules and Political Behavior*. Cambridge: Cambridge University Press.
- Patterson TE** (2002) *The Vanishing Voter: Public Involvement in an Age of Uncertainty*. New York: Alfred Knopf.
- Putnam RD** (2000) *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Quinn KM, Monroe BL, Colaresi M, Crespin MH and Radev DR** (2010) How to Analyze Political Attention with Minimal Assumptions and Costs. *American Journal of Political Science* **54**(1), 209–228. <https://doi.org/10.1111/j.1540-5907.2009.00427.x>.
- Saif H, He Y and Alani H** (2012) Semantic Sentiment Analysis of Twitter. In Philippe Cudré-Mauroux, Jeff Heflin, Evren Sirin, Tania Tudorache, Jérôme Euzenat, Manfred Hauswirth, Josiane Xavier Parreira, et al. (eds). *The Semantic Web – ISWC 2012*, 7649, 508–524. Berlin, Heidelberg: Springer Berlin Heidelberg.
- Scharkow M and Marko Bachl M** (2017) How Measurement Error in Content Analysis and Self-Reported Media Use Leads to Minimal Media Effect Findings in Linkage Analyses: A Simulation Study. *Political Communication* **34**(3), 323–343. <https://doi.org/10.1080/10584609.2016.1235640>.
- Schmitt JB, Debbelt CA and Schneider FM** (2018) Too much information? Predictors of information overload in the context of online news exposure. *Information, Communication & Society* **21**(8), 1151–1167. <https://doi.org/10.1080/1369118X.2017.1305427>.
- Singer JD and Willett JB** (2003) *Applied longitudinal data analysis: Modeling change and event occurrence*. Applied longitudinal data analysis: Modeling change and event occurrence. Oxford: Oxford University Press.
- Singh S, Lago I and André Blais A** (2011) Winning and Competitiveness as Determinants of Political Support\*. *Social Science Quarterly* **92**(3), 695–709. <https://doi.org/10.1111/j.1540-6237.2011.00788.x>.
- Singh SP** (2014) Not all election winners are equal: Satisfaction with democracy and the nature of the vote. *European Journal of Political Research* **53**(2), 308–327. <https://doi.org/10.1111/1475-6765.12028>.
- Skrondal A and Rabe-Hesketh S** (2004) *Generalized Latent Variable Modeling: Multilevel, Longitudinal, and Structural Equation Models*. New York: Chapman & Hall, CRC.
- Steele F** (2008) Multilevel models for longitudinal data. *Journal of the Royal Statistical Society: Series A (Statistics in Society)* **171**(1), 5–19. <https://doi.org/10.1111/j.1467-985X.2007.00509.x>.
- Steppat D, Herrero LC and Esser F** (2022) Selective exposure in different political information environments – How media fragmentation and polarization shape congruent news use. *European Journal of Communication* **37**(1), 82–102. <https://doi.org/10.1177/02673231211012141>.
- Stroud NJ** (2010) Polarization and partisan selective exposure. *Journal of Communication* **60**(3), 556–576. <https://doi.org/doi:10.1111/j.1460-2466.2010.01497.x>.
- Taddy M** (2012) On Estimation and Selection for Topic Models. In *Proceedings of the Fifteenth International Conference on Artificial Intelligence and Statistics*, 1184–1193. PMLR, March.
- Tan S, Li Y, Sun H, Guan Z, Yan X, Bu J, Chen C and He X** (2014) Interpreting the Public Sentiment Variations on Twitter. *IEEE Transactions on Knowledge and Data Engineering* **26**(5), 1158–1170. <https://doi.org/10.1109/TKDE.2013.116>.
- Wegscheider C and Stark T** (2020) What drives citizens' evaluation of democratic performance? The interaction of citizens' democratic knowledge and institutional level of democracy. *Zeitschrift für Vergleichende Politikwissenschaft* **14**(4), 345–374. <https://doi.org/10.1007/s12286-020-00467-0>.
- Wilson AE, Parker VA and Feinberg M** (2020) Polarization in the contemporary political and media landscape. *Current Opinion in Behavioral Sciences* **34**, 223–228. <https://doi.org/10.1016/j.cobeha.2020.07.005>.
- Wojcieszak M, de Leeuw S, Menchen-Trevino E, Lee S, Huang-Isherwood KM and Weeks B** (2023) No Polarization From Partisan News: Over-Time Evidence From Trace Data. *The International Journal of Press/Politics* **28**(3), 601–626. <https://doi.org/10.1177/19401612211047194>.
- Wright DB and London K** (2009) Multilevel modelling: Beyond the basic applications. *British Journal of Mathematical and Statistical Psychology* **62**(2), 439–456. <https://doi.org/10.1348/000711008X327632>.

- Wring D and Deacon D** (2010) Patterns of press partisanship in the 2010 General Election. *British Politics* 5(4), 436–454. <https://doi.org/10.1057/bp.2010.18>.
- Xiang B and Zhou L** (2014) Improving Twitter Sentiment Analysis with Topic-Based Mixture Modeling and Semi-Supervised Training. In *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers)*, 434–439. Baltimore, Maryland: Association for Computational Linguistics. <https://doi.org/10.3115/v1/P14-2071>.
- Zaller J** (2002) The statistical power of election studies to detect media exposure effects in political campaigns. *Electoral Studies* 21(2), 297–329. [https://doi.org/10.1016/S0261-3794\(01\)00023-3](https://doi.org/10.1016/S0261-3794(01)00023-3).
- Zimbra D, Abbasi A, Zeng D and Chen H** (2018) The State-of-the-Art in Twitter Sentiment Analysis: A Review and Benchmark Evaluation. *ACM Transactions on Management Information Systems* 9(2), 5:1–5:29. <https://doi.org/10.1145/3185045>.

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