UC Santa Barbara
UC Santa Barbara Electronic Theses and Dissertations

Title

Epistemic Vulnerability and the Structures of Political and Media Systems

Permalink

https://escholarship.org/uc/item/6906p143

Author

Labarre, Julien

Publication Date

2024

Peer reviewed|Thesis/dissertation

University of California
Santa Barbara

Epistemic Vulnerability
and the Structures of Political and Media Systems

A dissertation submitted in partial satisfaction
of the requirements for the degree

Doctor of Philosophy

in

Political Science

by

Julien Labarre

Committee in charge:

Professor Bruce Bimber, Chair
Professor Joseph B. Walther
Professor Heather Stoll

June 2024

The Dissertation of Julien Labarre is approved.

_____

Professor Joseph B. Walther

_____

Professor Heather Stoll

_____

Professor Bruce Bimber, Committee Chair

June 2024

Epistemic Vulnerability

and the Structures of Political and Media Systems

Acknowledgements

I would like to express my sincere gratitude to Professor Bruce Bimber, my advisor, for his unwavering support throughout my doctoral studies. Words alone cannot reflect the depth of my gratitude for the immeasurable impact you have had on me, both as a scholar and as a person. Your altruism, dedication, and exceptional mentorship have been a source of inspiration which I will keep with me for the rest of my life.

I would also like to extend my appreciation to Professor Heather Stoll. Your steady guidance and astute observations have enriched my dissertation and elevated the quality of my research in numerous ways. I am truly fortunate to have benefited from your expertise, wisdom, and benevolence.

To Professor Joe Walther, I am sincerely grateful for your kindness and trust, and for having always treated me like a fellow scholar. The gracious manner you have always approached our interactions has nurtured my confidence as a researcher and given me a sense of belonging within the scholarly community.

Lastly, I would like to also express my affection for my dearest friends and colleagues who have supported me throughout this journey: Matthew J. Rochat and George Tsouloufas. Your belief in my abilities, words of encouragement, and countless discussions have been an invaluable source of inspiration. I am so fortunate to have been surrounded by your brilliant minds and caring hearts.

Curriculum Vitæ
Julien Labarre

Education

2024	PhD in Political Science (Expected), UC Santa Barbara.
2020	MA in Political Science, UC Santa Barbara.
2017	MA in American Studies, Université de Strasbourg.
2015	BA in Anglophone Studies, Université de Strasbourg.

Professional employment

2023-24	Administrator, Center for Information Technology & Society.
2018-24	Teaching Assistant, Dpt. of Political Science, UC Santa Barbara.
2024	Research Partner, Democracy Reporting International.
2024	Research Partner, COST Action CA22165: Redressing Radical Polarisation: Strengthening European Civil Spheres facing Illiberal Digital Media.
2024	Research Partner, THREATPIE Project.
2022-23	Instructor, Dpt. of Political Science, UC Santa Barbara.
2021-23	Survey Methodologist & Questionnaire Designer, ReCitCom Project.
2022-23	Assistant to Director, Center for Information Technology & Society.
2020-21	Research Assistant, Dept. of Communication, UC Santa Barbara.
2016-17	Fulbright Language Teaching Assistant, Wabash College.
2015-17	Research Assistant, Université de Strasbourg, Research Unit UR2325.

Peer-reviewed publications & other research

2024	**Labarre, Julien.** "Epistemic Vulnerability: Theory and Measurement at the System Level." *Political Communication*. DOI: 10.1080/10584609.2024.2363545
2024	Bimber, Bruce, **Julien Labarre**, Daniel Gomez, Ilia Nikiforov, and Karolina Koc-Michalska. "Media Use, Feelings of Being Devalued, and Democratically Corrosive Sentiment in the US." *International Journal of Press/Politics*. DOI: 10.1177/19401612241253455
2024	**Labarre, Julien.** "French Fox News? Audience-Level Metrics for the Comparative Study of News Audience Hyperpartisanship." *Journal of Information Technology & Politics*. DOI: 10.1080/19331681.2023.2300845

2024	Gutiérrez Garcia-Pardo, Inma, Daniel Gómez Gonzalez, Javier Castro, Bruce Bimber, & **Julien Labarre**. "Beyond Large Language Models: Rediscovering the role of classical statistics in modern data science." *Proceedings of the 2024 IEEE World Congress on Computational Intelligence.*
2024	Koc-Michalska, Karolina, **Julien Labarre**, Magdalena Rudz, David Hopmann, Isabella Glogger, Toril Aalberg, Peter Van Aelst, Ana S. Cardenal, Nicoleta Corbu, Claes de Vreese, Frank Esser, et al. 2024. *Unconventional Voices: Alternative Media Trends in Europe and the US.* A THREATPIE Report.
2017	**Labarre, Julien.** "Becoming Madam Candidate: A Study of Hillary Clinton's Feminist Rhetoric on Facebook From Campaign Launch to Iowa." Unpublished thesis submitted in partial fulfillment of the requirements for the Master of Arts degree in American Studies, Université de Strasbourg. 110 pp.

Awards & scholarships

2024	Mercatus Center Adam-Smith Fellowship (declined).
2023	Academic Senate Outstanding Teaching Assistant Award, UC Santa Barbara.
2023, 22, 20	Adams-Lee Distinguished Teaching Assistant Award, Department of Political Science, UC Santa Barbara.
2019	Graduate Student Association Excellence in Teaching Award, UC Santa Barbara.
2016-17	Fulbright Scholarship, Franco-American Commission and US Department of State.

Fields of study

Political Communication, American Politics, Comparative Politics

Abstract

Epistemic Vulnerability

and the Structures of Political and Media Systems

by

Julien Labarre

A great deal is known about individual-level phenomena that harm the quality of engagement in the public sphere, such as perceptions of exposure to disinformation, actual exposure to false content, sharing of false news stories online, distrust towards the news media, news literacy, or individual perception of news quality and credibility. Some studies also consider those concepts and their incidence at the system-level. However, this literature remains highly US-centric and has tended to treat these concepts separately: as studies of news, or of social media, or of disinformation, or of trust in information. What connects these phenomena is epistemic in nature. With recent scholarship showing epistemic threats arise in the absence of outright falsehoods, the need for a more encompassing framework becomes ever more pressing. This dissertation integrates the literature on these epistemic problems by treating the problem of disinformation, distrust in the media and feelings of disorientation as distinct dimensions of a single, broader concept: epistemic vulnerability. This concept more accurately capture the broader phenomenon of the eroding authority and value traditionally attributed to political information.

This dissertation investigates this novel construct, epistemic vulnerability, from two angles: the global trend towards more hyperpartisan media, and system-level vulnerability. I ask the following questions. How can we differentiate hyper-partisan news outlets that contribute to epistemic vulnerability from moderately partisan or responsible "mainstream" news? How do levels of epistemic vulnerability vary across Western democracies? What is the relationship between the structure of political and media systems and levels of epistemic vulnerability?

Chapter 2 introduces a new approach for identifying channels that contribute to making news environments more epistemically vulnerable in national contexts outside the US. Using data from the ReCitCom survey project (wave 2022), I propose audience-level metrics that can detect abnormally partisan news audiences cross-nationally, relying on two indicators: ideological lean and bias in voting behavior. I test this approach on the French media ecosystem and find that the audience of CNEWS, a major 24/7 news channel, is much more ideologically radical compared to other French news audience. I also find that it is disproportionately supportive of the far right in national elections. Comparatively, CNEWS and Fox News are equivalent in terms of ideological lean, and the voting bias in favor of the far right is actually more pronounced in the case of CNEWS. In conjunction with its track record of violating French media rules, these indicators suggest that CNEWS engages in problematic behavior analogous to Fox News in the United States.

Chapter 3 integrates the literature on epistemic problems and builds the theoretical framework for epistemic vulnerability and articulates the relationship between disinformation, feelings of disorientation and distrust towards the professional news media.

Chapter 4 presents the Epistemic Vulnerability (EV) Index, a tool for quantifying the health of news environments in a comparative manner. The study employs Ordinary Least Squares (OLS) regression models to explore the relationship between epistemic vulnerability and various structural characteristics of political and media systems. The results indicate that Northern European countries demonstrate higher epistemic resilience, while the United States, Spain, and Eastern European countries exhibit greater vulnerability. The study confirms the significant role of factors such as populism, ideological polarization, political parallelism, public media viewership, and the size of party systems in influencing epistemic resilience or vulnerability.

Chapter 5 reflects on the findings and their implications for future research and policy. It critiques the "Pulitzer Prize Syndrome" in journalism research, emphasizing the importance of considering variations in national contexts and the impact of public broadcasting and media regulations.

Contents

Chapter 1

Epistemic Challenges

T HE last ten years have shone a bright light on the quality of the information citizens use to make decisions and engage in the public sphere. For many, the 2016 US Presidential Election was the starting point of a decade-long inquiry into problems related to poor journalism and information quality, as well as the psychological predictors that make individuals permeable to falsehoods and partisan propaganda. This was most certainly true in my case. These epistemic problems have since been extensively researched, and much is now known about exposure to disinformation, what predicts belief in falsehoods, and how these contribute to the seemingly unstoppable erosion of trust in democratic institutions.

As a discipline, political communication is experiencing growing pains. Not unlike political science and other social sciences, political communication suffers from remaining a highly US-centric field. This US- or, at best, Western-centrism—combined with endless elaboration on basic, old findings—explains our struggles in understanding some of the crucial media dynamics that one can observe in our globalized world and increasingly interdependent economy. The previous media era, characterized by top-down communication, legitimized research efforts that sought to identify the effects of media communications on cognitive processes and attitudes. However, in an era where mass-self communication has become the norm (Castells 2007), the field may need to pivot towards

understanding how citizens' attitudes and preferences, as well as their cognitive limitations, condition media markets, and in turn alter the quality and acquisition of information by news audiences.

Of the epistemic challenges currently facing democracies, the spread of disinformation is by far the most visible symptom. In the US, our understanding of disinformation and its consequences primarily comes from studies that followed the 2016 election cycle. That year brought to light the dangers posed by various new problems. These include foreign interference in domestic election cycles, easy access to largely unregulated online spaces, the poisoning of the informational well by non-state actors most concerned with profit, and the collapse of journalistic norms within the news business.

Exposure to disinformation and the numbers of falsehoods in circulation have been extensively investigated, with evidence suggesting these are very large-scale phenomena. Studies conducted on disinformation estimate that, in 2016, pro-Trump false stories were shared over 30 million times on Facebook, while pro-Clinton junk stories were shared 8 million times, amounting to a staggering 38 million shares (Tandoc et al. 2018, 143). Each eligible American is estimated to have read about three false stories during the 2016 election cycle, and false articles were accessed about 760 million times across social media platforms (Alcott and Gentzkow 2017, 212). Estimates in fact show that about 65 million US citizens, one in four, visited a false news website between October 7, and November 14, 2016 alone (Guess et al. 2018, 1). More perturbing than the mere number of false stories circulating online, studies show that for respondents remembering being exposed to faux news headlines in 2016, half were often persuaded by them (Alcott and Gentzkow 2017). Sixty-four percent of US adults say that false news stories cause "a great deal of confusion about the basic facts of current issues and events" (Barthel et al. 2016; Rainie et al. 2017, 2), And an Ipsos Public Affairs survey conducted for Buzzfeed even found that, when presented with a set of true and false news headlines that actually circulated in 2016, three fourth of the respondents who could recall having seen the false headlines at the time still rated them as 'somewhat' or 'very accurate' (Silverman et al. 2016; Tandoc et al. 2018).

Outside of the US, disinformation has also become a highly visible issue across many Western and non-Western democracies. A Pew Research Center study conducted in 11 non-Western economies

shows that more than half of the respondents in 10 out of the 11 surveyed countries (Tunisia, Lebanon, Venezuela, Vietnam, Jordan, Philippines, South Africa, India, Kenya, Colombia) say they encounter false news stories frequently or occasionally on those same platforms (Silver 2019). As for Europe, 68% of EU respondents say they encounter 'fake news' at least once a week, 37% of which say they come across fake news every day or almost every day (Flash Eurobarometer 464 2018, 4). In Greece, these figures go up to 55% of the population reporting daily exposure to false content, making it the highest level across all EU member states, closely followed by Spain (53%) and Hungary (52%) (13). Although important variations subsist across countries, at least 50% of respondents across all member states say they see false stories at least once a week and consider it to be a problem for democracy (Flash Eurobarometer 464 2018, 4). In fact, a public consultation conducted by the European Commission between November 13, 2017 and February 23, 2018 reveals that over 97% of citizens claim they have been exposed to 'fake news' (European Commission Synopsis 2018, 1).

An intuitive consequence of the spread of disinformation is the decline in trust in democratic and media institutions, and knowledge-producing bodies more generally (Bennett and Livingston 2018; Lazer et al. 2017). These variants of trust are highly correlated in most cases (Ariely 2015; Cappella 2002;2 Tsfati and Cohen 2005). Exposure to disinformation has been shown to lead to reduced trust in political institutions, and in an increase in political cynicism (Balmas 2014; Verstraete and Bambauer 2017). Hameleers, Brosius and de Vreese (2022) show in an experimental design that exposure to both misinformation and disinformation leads to a drop in trust toward the media, especially toward TV news, and to an increased reliance on social media and alternate sources for news on public affairs. This effect is found even without actual exposure to falsehoods; simply mentioning to an individual that they may have been shown a false story can lead to a decrease in perceived news media credibility (Tandoc et al. 2021). While the drop in trust towards the media is not universal, the phenomenon remains indisputable in many democracies (Hanitzsch et al. 2018). It is important to note that these metrics are sensitive to factors such as which parties are in government, or the circumstances of the time. Regardless, the data point to a deep, subterranean trend of democracies that

is quite alarming, for if citizens do not trust the media, they may turn to less reliable sources; and without trust in government, citizens may refuse to accept decisions resulting from the democratic process.

Previous research has primarily focused on the role of social media in the spread of disinformation, as these platforms allow an unfiltered flow of identity-confirming messages to infiltrate the public sphere. This entails communication from elites and from regular social media users. Other studies have looked to the professional news media for an explanation. These studies generally attribute drops in information quality to a loss of gatekeeping that is relatively pervasive across news brands, to an overcorrection by mainstream outlets against a presumed liberal bias, and to specific sources that are primary vectors of partisan propaganda (Benkler, Faris and Roberts 2018). This strand of disinformation research remains largely US-centric and has mostly focused on the role of television news in the US, especially Fox News.

The recent Dominion Voting Systems defamation lawsuit against Fox News highlighted a disconcerting disparity between private conversations among hosts and the content broadcasted to the audience. Fox News' financial success underscores the significance of its relationship with the audience within the context of partisan news in the US. While the absence of news media regulations and the susceptibility to disinformation in the US are distinctive, it is plausible to consider that profit-seeking motivations are not confined to American news businesses. The success of Fox News may inspire private news outlets in other countries to adopt a similar business model.

Although the deterioration of news environments is often attributed to editorial positioning, content, and journalistic norm violations, these markers pose challenges for large-scale cross-national research efforts. To address this, my dissertation proposes a comparative metric that can identify news outlets characterized by the erosion of journalistic norms, the promotion of disinformation and partisan propaganda, and the radicalization of their viewers. This metric, along with the measure of audience partisanship and electoral behavior, will enable future research to identify other channels similar to Fox News in different media ecosystems.

In the current political climate marked by the resurgence of hard-right ideologies and populist movements in Western democracies, it is crucial for the fields of political science and communication to prioritize the study of how these news outlets propagate disinformation and influence the politics of their respective countries. This growing distrust toward the news media necessitates a comprehensive examination of the epistemic challenges posed by our information-saturated world. These challenges encompass issues of news quality, exposure to disinformation and conspiracy theories, public distrust, and individual confusion regarding facts and falsehoods.

This dissertation also aims at creating a theoretical framework from a literature about epistemic challenges that remains rather poorly integrated. While studies have focused on specific elements like exposure to online disinformation, it is important to acknowledge the multifaceted nature of the problem. The professional news media, in conjunction with social media, plays a significant role since journalists have the ability to debunk falsehoods, ignore them, or even promote them. Generally, professional news media enjoy a higher reputation for reliability compared to online sources. Therefore, it is essential to identify predictors for the growing distrust toward the news media, perceptions of exposure to disinformation, and perceptions of news quality.

Previous research has treated ambient information quality, public perceptions of the media, and knowledge about public affairs as separate yet related concepts. What unites these concepts is epistemic in nature. Perceived exposure to disinformation, distrust in the professional news media, and feelings of disorientation regarding the truthfulness of news messages all suggest a degradation of the news environment. With recent scholarship showing epistemic threats arise in the absence of outright falsehoods (Hameleers 2023; Hoes et al. 2023; van Doorn 2023), the need for a more encompassing framework becomes ever more pressing. In response to our field's growing pains, I propose a new construct that better captures the breadth and depth of these challenges, both at the individual and system level. I call this construct 'epistemic vulnerability.' The challenges associated with studying the complex relationship between variables across different levels of analysis and conducting cross-national studies on context-dependent issues have contributed to our lacunary understanding

5

of epistemic problems. To address this, I propose a new index to quantify epistemic vulnerability at the system level: the Epistemic Vulnerability Index.

This dissertation aims to answer the following research questions. How can we differentiate hyper-partisan news outlets—the kind likely to pose dangers to democracies—from moderately partisan news or responsible mainstream news that have some degree of partisan editorial orientation? Are there observable, substantive cross-national differences in levels of epistemic vulnerability? If so, how do levels of epistemic vulnerability vary across Western democracies? Finally, what is the relationship between the structure of political and media systems and levels of epistemic vulnerability?

Chapter 2 of this dissertation dives into the challenges of measuring news source hyperpartisanship in a cross-national manner. In this chapter, I discuss the role of media regulations and implications for journalistic (mal)practice. I then develop simple audience-level metrics for detecting abnormal audience behavior and apply them to the French news channel CNEWS, comparing it to Fox News in the US. I find that CNEWS's audience disproportionately receptive to the far right compared to other news audiences, which, coupled with the channel's long record of violating media regulations and pluralism rule, speaks to the channel's position within the French ecosystem as a hard-right propaganda outlet.

Chapter 3 integrates the literature on epistemic problems and builds the theoretical framework of epistemic vulnerability. The chapter notably articulates the relationship between disinformation, feelings of disorientation and distrust towards the professional news media.

Chapter 4 introduces the epistemic vulnerability index and reports on a comparative, quantitative study of epistemic vulnerability at the system level. The study finds that Northern European countries exhibit higher epistemic resilience, while the US, Spain, and Eastern European countries exhibit greater vulnerability. The study confirms the significant role of factors such as populism, ideological polarization, political parallelism, public media viewership, and party system size in epistemic vulnerability.

Chapter 5 concludes this dissertation by summarizing the main findings, discussing their impli-

cations for the study of democracy and policy, and suggesting avenues for future research.

References

Alcott, Hunt, and Matthew Gentzkow. 2017. "Social Media and Fake News in the 2016 Election."
Journal of Economic Perspectives 31: 211–36. doi:10.1257/jep.31.2.211.

Ariely, Gal. 2015. "Does Commercialized Political Coverage Undermine Political Trust? Evidence Across European Countries." *Journal of Broadcasting & Electronic Media* 59: 438-455. doi: 10.1080/08838151.2015.1055\\000.

Balmas, Meital. 2014. "When Fake News Becomes Real: Combined Exposure to Multiple News Sources and Political Attitudes of Inefficacy, Alienation, and Cynicism." *Communication Research* 41(3): 430–454. doi:10.1177/0093650212453600.

Barthel, Michael, and Amy Mitchell. 2017. "Americans' Attitudes About the News Media Deeply Divided Along Partisan Lines." *Pew Research Center*. Washington, D.C. (May 10, 2017). Available at: https://www.journalism.org/2017/05/10/americans-attitudes-about-the-news-media -deeply-divided-along-partisan-lines.

Benkler, Yochai, Robert Faris, and Hal Roberts. 2018. *Network propaganda: Manipulation, disinformation, and radicalization in American politics.* Oxford, UK: Oxford University Press. doi:10.1017/S1537592719001816.

Bennett, W. Lance, and Steven Livingston. 2018. "The disinformation order: Disruptive communication and the decline of democratic institutions." *European Journal of Communication* 33:

122–139. doi:10.1177/0267323118760317.

Cappella, Joseph N. 2002. "Cynicism and Social Trust in the New Media Environment." *Journal of Communication* 52(1): 229-241. doi:10.1111/j.1460-2466.2002.tb02541.x.

Castells, Manuel. 2007. "Communication, Power and Counter-Power in the Network Society." *International Journal of Communication* 1: 238-266.

European Commission. 2018. *European Commission Synopsis 2018.* Brussels, Belgium: Directorate-General for Communication.

Flash Eurobarometer 464. 2018. *Fake News and Disinformation Online.* Brussels, Belgium: Directorate-General for Communication.

Guess, Andrew, Brendan J. Nyhan, and Jason Reifler. 2018. *Selective Exposure to Misinformation: Evidence from the Consumption of Fake News during the 2016 U.S. Presidential Campaign.* Brussels: European Research Council.

Hameleers, Michael, Anna Brosius, and Claes H. de Vreese. 2022. "Whom to trust? Media expposure patterns of citizens with perceptions of misinformation and disinformation related to the news media." *European Journal of Communication* 37(3): 237-268. doi:10.1177/02673231211072667.

Hameleers, Michael. 2023. "The (Un)Intended Consequences of Emphasizing the Threats of Mis- and Disinformation." *Media and Communication* 11(2): 5-14. doi:10.17645/mac.v11i2.6301.

Hanitzsch, Thomas, Arjen Dalen, and Nina Steindl. 2018. "Caught in the Nexus: A Compar-

ative and Longitudinal Analysis of Public Trust in the Press." *The International Journal of Press/Politics* 23(1): 3-23. doi:10.1177/1940161217740695.

Hoes, Emma, Brian Aitken, Jingwen Zhang, Thomas Gackowski, and Magdalena Wojcieszak. (Forthcoming). "Prominent Mis-information Interventions Reduce Misperceptions but Increase Skepticism." *Nature Human Behavior*. doi:10.31234/osf.io/zmpdu.

Lazer, David M. J., Matthew A. Baum, Yochai Benkler, Adam J. Berinsky, Kelly M. Greenhill, Filippo Menczer, Miriam J. Metzger, et al. 2017. "The Science of Fake News." *Science* 359(6380): 1094-1096. doi:10.1126/science.aao2998.

Rainie, Lee, Janna Anderson, and Jonathan Albright. 2017. "The Future of Free Speech, Trolls, Anonymity and Fake News Online." *Pew Research Center: Internet, Science & Tech.* http://www.pewinternet.org/2017/03/29/the-future-of-free-speech-trolls-anonymity-and-fake-news-online/ (May 21, 2018).

Silver, Laura. 2019. "Misinformation and Fears About its Impact Are Pervasive in 11 Emerging Economies." *Pew Research Center.* Washington D.C. (May 13, 2019). Available at: https://www.pewresearch.org/fact-tank/2019/05/13/misinformation-and-fears-about-its-impact-are-pervasive-in-11-emerging-economies.

Silverman, Craig, and Jeremy Singer-Vine. 2016. "Most Americans Who See Fake News Believe It, New Survey Says." *BuzzFeed*. (May 21, 2018). Available at: https://www.buzzfeed.com/craigsilverman/fake-news-survey.

Tandoc, Edson C. Jr, Zheng Wei Lim, and Richard Ling. 2018. "Defining 'Fake News.'" *Digital*

Journalism 6(2): 137–53. doi:10.1080/21670811.2017.1360143.

Tsfati, Yariv, and Jonathan Cohen. 2005. "Democratic Consequences of Hostile Media Perceptions: The Case of Gaza Settlers." *Harvard International Journal of Press/Politics* 10(4): 28-51. doi:10.1177/1081180X05280776.

Van Doorn, Maarten. 2023. "Advancing the debate on the consequences of misinformation: clarifying why it's not (just) about false beliefs." *Inquiry.* doi:10.1080/0020174X.2023.2289137

Verstraete, Mark, and Derek E. Bambauer. 2017. "Ecosystem of distrust." *First Amendment Law Review* 16: 129–152.

Chapter 2

Media Regulations, Journalistic Standards & Audience Behavior

A critical question in the study of disinformation concerns the sour-ces of disinformation and the mechanisms behind its dissemination. Existing literature has primarily linked the circulation of falsehoods to the unrestricted nature of online environments like social media platforms. These digital spaces enable identity-confirming and otherwise pro-attitudinal messages to inundate the public sphere. In that aspect, past research has considered both the role of elite and non-elite social media or internet users. Aside from social media, other studies have attributed the drop in information quality to a collapse in journalistic norms within the professional news media, such as through the erosion of gatekeeping, and to a small number of outlets that have proved to be unconcerned with journalistic norms. Some have also suggested a link between the collapse in news quality and the observed overcorrection of mainstream outlets against a presumed liberal bias, notably during the 2016 presidential election (Benkler, Faris and Roberts 2018).

The main limitation of that literature is the fact that it primarily stems from US-centric research, with studies overwhelmingly focusing on the example of Fox News. Yet other outlets exhibit problematic behavior. CNEWS in France is one such example. Just like Fox News in the US, CNEWS's

own news coverage has been contested and investigated by other news outlets. *The New York Times* went as far as labelling the outlet "the French Fox News," insinuating that CNEWS's editorial line, content, and audience have drifted rightward. *The New York Times* also denounced a clear collapse in journalistic norms (Onishi 2021).

A clear consensus has formed around the dangers and effects on attitudes that result from exposure to such an influential hyperpartisan outlet (Benkler, Faris and Roberts 2018; DellaVigna and Kaplan 2007; Feldman et al. 2012; Hoewe, Brownell and Wiener 2020; Hoewe et al. 2020; Hollander 2018; Jamieson and Cappella 2008). The comparison between CNEWS and Fox News raises a methodological question that has received little attention: How can we identify outlets analogous to Fox News in other countries? How can we differentiate hyperpartisan news outlets—the kind likely to pose dangers to democracies—from moderately partisan news or responsible "mainstream" news that have some degree of partisan editorial orientation? The apparent parallels between CNEWS and Fox News highlight the excesses and malpractices of both news channels. It also raises an empirical problem: By what reliable metrics are the two channels' audiences similar?

Partisanship in the news business has mostly been studied in terms of editorial positioning, norm violations, and content. While useful, these traditional indicators can be difficult to apply comparatively, because news agendas vary by country, as do journalistic norms and practices. In this chapter, I argue that identifying hyperpartisan news organizations can be accomplished via two key measures that facilitate comparisons: audience ideological lean, and bias in audience voting behavior. By bringing news audiences squarely into the picture, it is possible to develop a more complete and robust understanding of partisanship in the news industry.

I demonstrate this approach using survey data from the ReCitCom project. I hypothesized the following:

Hypothesis 1: *The audience of CNEWS exhibits the greatest rightward ideological lean within the French ecosystem, irrespective of frequency of use.*

Hypothesis 2: *The audience of CNEWS is the most electorally receptive to the far right within the French ecosystem, irrespective of frequency of use.*

Hypothesis 3: *The audiences of CNEWS and Fox News are equivalent in terms of ideological lean and receptiveness to the far right.*

The results show that CNEWS has the most ideologically radical news audience of all French news media, and that its viewers voted disproportionately for far-right candidates in both rounds of the 2022 presidential election. Comparatively, the findings also substantiate comparisons between Fox News and CNEWS in terms of audience hyperpartisanship.

The Position of Fox News in the American Media Ecosystem

Little empirical research has been conducted on the French media ecosystem in comparison to the vast literature on its American counterpart. Thus far, literature on Fox News has characterized it in terms of its promotion of hyperpartisan content, its position within the broader media ecosystem, and its repeated violations of journalistic norms. Conceptually, these phenomena may well affect audiences and attitudes. More critically, they provide context for understanding the role of Fox News in US media.

Studies show the US media ecosystem is not only highly polarized (Benkler, Faris and Roberts, 2018; Fletcher, Cornia and Nielsen 2020), but it is also highly fragmented (Fletcher and Nielsen 2017). It is also marked by clear disparities in terms of news quality and journalistic standards between mainstream and conservative media. Long before the Dominion Voting Systems defamation lawsuit against Fox News exposed an embarrassing disconnect between what its hosts said privately to one another and what it broadcast to its audience, Benkler, Faris and Roberts (2018) emphasized its

radicalness relative to mainstream outlets. Benkler and colleagues also showed how Fox News abandoned traditional journalistic norms and blurred the line between opinion and fact, with high rates of false statements. They describe a great level of permeability between Fox News and far-right fringe websites that allowed conspiracy theories to filter into mainstream news, a phenomenon they call the "propaganda pipeline." The partisan bias of Fox News has become so evident over the last few years that its anchors and hosts regularly appear at GOP-sponsored events, rallies, and fundraisers, when they are not blatantly campaigning on behalf of Republican candidates (Maza 2018). The lawsuit between Dominion Voting Systems and Fox News is just the culmination of a long, slow erosion of journalistic norms motivated by profit. Fox News is now the largest US cable news business, both in terms of revenue and daily audience size (Joyella 2023).

The financial success of Fox News makes its relationship to its audience central to the narrative of partisan news in the US. Audience-centric studies have long identified a strong partisan bias among Fox News viewers. Its partisanship is reflected in the stark differences in media consumption across partisan groups within the US population. As of 2020, 40% of all US adults, and 61% of Dem/Lean Dem respondents named Fox News as the news outlet they trusted least, while a staggering 65% of Rep/Lean Rep respondents report it as their preferred, most trusted source (Jurkowitz et al. 2020). Under such conditions, news organizations may find themselves in a position where audience preferences end up driving content production.

In any media system, the public is expected to seek identity-confirming content while at the same time be exposed to disconfirming content. However, the usual expectation is that news businesses will compete with one another in terms of news quality, rather than just sensationalism or ideological congruence. This relies on the assumption that viewer preferences for accuracy outweigh preferences for confirmation. However, in an increasingly polarized environment, where upholding one's partisan identity matters more than being well-informed, citizens often engage in motivated reasoning, and prioritize "feeling validated" over "being correct" (Hart et al. 2009; Lodge and Taber 2013). Documents made public in the defamation suit against Fox News suggest it distributed falsehoods about

the 2020 election in part because it feared losing its conservative audience to the even more partisan Newsmax (Peters and Robertson 2023). As such, Fox News illustrates the exploitation of selective exposure as a business strategy, to the point of airing known falsehoods to its audience. This results in what Benkler and colleagues (2018) call the "propaganda feedback loop," whereby news businesses deliver identity-confirming content to their audiences at the cost of news quality and fairness for the sole purpose of making a profit. This propaganda feedback loop stands in opposition to the "reality-check dynamics model," under which news outlets police deviations from journalistic norms.

From a comparative perspective, the American media ecosystem is quite deficient when it comes to providing citizens with nonprofit alternatives to commercial media. Where the US spends 1.36 dollars per capita on public media, European media systems, on the other hand, typically gravitate around strong public broadcasting that are well-funded and that can focus on delivering high quality news (Castro-Herrero, Nir and Skovsgaard 2018; European Audiovisual Observatory 2019). Nevertheless, the nature of political behavior is such that citizens of all countries can be expected to be torn between accuracy and directional epistemic motivations.

Parallels Between CNEWS and Fox News

Headquartered in Paris, France, CNEWS was born from the ashes of I-Télé, which disappeared in 2016 after years of internal turmoil, marked by regular staff strikes over alleged editorial interference, and periods of suspended live programming that ultimately led to its commercial failure. A free-to-air 24/7 news channel, CNEWS competes in the French media ecosystem with two other 24/7 news channels—BFMTV and LCI. Four years before the channel's successful rebranding into CNEWS, Rodolphe Belmer—CEO of Canal+, the media group that owned I-Télé—announced a refocus on hard news. He also explicitly cited Fox News as a counterexample (Garrigos and Roberts 2011). However, despite several changes in programming and editorial line, I-Télé suffered large losses in viewership and revenue after three quarters of its journalists resigned to protest the hiring of a new host who

was accused of sexual misconduct. In 2016, Vincent Bolloré, leader of the Vivendi media conglomerate, led the channel's rebranding into a "debate channel" that would give more airtime to political commentary. As of 2022, CNEWS has become the second-largest 24/7 news channel, with a market share of 2.2%, right behind BFMTV's leading position at 2.7% (French Senate 2021a: 204; Galtier 2023).

CNEWS operates in a very different context from Fox News in the US. Unlike the US Federal Communications Commission (FCC), which abolished the Fairness Doctrine in 1987, the French equivalent *Autorité de Régulation de la Communication Audiovisuelle et Numérique* (ARCOM), formerly known as *Conseil Supérieur de l'Audiovisuel* (CSA), remains tasked with regulating broadcast and enforcing political pluralism in French news media. The Léotard Law of 1986 (86-1067) precludes any news outlet from engaging in partisan propaganda and requires them to uphold the highest standards of journalistic integrity. Yet, a Senate commission pointed out CNEWS's questionable practices with regards to political pluralism. Recent Senate hearings suggested that three-fourths of the journalists employed by CNEWS left, were replaced, or let go, allegedly in an attempt to change editorial lines upon purchase by the Vivendi media conglomerate (French Senate 2022a: 203).

Vincent Bolloré and CNEWS's editor-in-chief Thomas Bauder both denied having motivated a change in the channel's editorial line when subpoenaed by the French Senate (French Senat, 2022a: 203; French Senate 2022b: 105, 282-296). However, the CSA has repeatedly put CNEWS on formal notice for contravening French laws and regulations. In 2019, the CSA formally admonished CNEWS for inciting racial hatred and violence after its star commentator Éric Zemmour justified the massacre of Muslims and Jews during French colonization in Algeria (French Senate 2022a: 208). In 2021, the CSA released a formal demand notice requesting that CNEWS enforce the pluralism doctrine and put an end to its unfair practice of giving airtime to government spokespersons and left-wing politicians at nighttime, when audience numbers are low. A Senate report estimated that 82% of the airtime granted to government spokespersons and 53% of airtime given to left-wing LFI party representatives was broadcast between midnight and 6:00am (209). In addition, the CSA pointed out how

CNEWS repeatedly violated the equal-time rule, for example by favoring far-right candidate Philippe Ballard (RN) who was running for office in the 2021 regional elections in the Île-de-France region (209). That same year, the CSA pointed out a "lack of plurality in the viewpoints expressed" over the channel's coverage of a tribune published by disgruntled militaries in far-right magazine Valeurs Actuelles (CSA 2021). The CSA also fined CNEWS for inciting racial hatred and inciting violence after Zemmour, who would launch a presidential bid a few months later, referred to unaccompanied migrant children as "thieves," "murderers" and "rapists" (French Senate 2022a: 208). Most recently, ARCOM publicly condemned an opinion segment in which a journalist questioned the logistical role played by the Warsaw Ghetto in the holocaust. ARCOM also condemned the promotion of COVID-19 disinformation by CNEWS journalists (ARCOM 2022a; ARCOM 2022b).

It is important to note that ARCOM predominantly delivers its formal notices and formal admonishments based on citizen reports and complaints. One may wonder whether this series of formal notices from ARCOM and the political turmoil around CNEWS are merely anecdotal or whether they reflect a broader empirical phenomenon. In 2021, left-leaning *Libération* published data suggesting CNEWS's lean toward the far right is more than anecdotal. Using data from politiquemedia.com, *Libération* reported that CNEWS guests are far more to the right of the political spectrum than the guests of any other outlet (Irrien and Sadoun 2021). Between April 5 and June 10, 2021, 26.5% of all the political figures featured on CNEWS's political morning show were associated with far-right parties (RN and affiliates). Taken together with mainstream right parties (LR and affiliates), the figure climbs to 64.7% of all CNEWS interviewees. In comparison, only 10.3% of guests of all the morning political shows tested were associated with far-right parties (RN and affiliates). This figure peaks at 36.1% when far-right politicians are clustered with mainstream right guests. Over a longer period of observation, from June 2020 to June 2021, the proportion of CNEWS far-right guests reached 36% of all interviewees (Clair, Guillot and Rivet 2021). This trend indicates a clear rightward drift of the channel in terms of the content that is being broadcast.

Using thematic content-analysis, Abdoul-Bagui (2021) establishes a correlation between CNEWS's

rise in audience size and the channel's overt promotion of far-right themes. This trend is supported by meta-journalistic reports and experiments conducted by individual journalists who emphasize CNEWS's obsession with "woke-ism" and its disproportionate coverage of issues like immigration and crime. CNEWS also stands out in the French televisual landscape as the only mainstream vector of conspiracy theories such as the Great Replacement theory, and for its lack of gatekeeping surrounding COVID-19 disinformation, antivax propaganda and climate-change denialism.

Existing Comparative Measures and the

Need for Outlet-Level Metrics

The success of Fox News may inspire private news outlets in other countries to emulate its business model. CNEWS appears to be one such example. It is essential, for this reason, to develop a comparative metric to identify analogous outlets. However, comparing content and measuring norm violations is difficult to achieve cross-nationally, as exemplified by the two channels, which operate in vastly different contexts. While Fox News is much older and has a longer track record, there is a richer, official record of regulatory complaints against CNEWS from which to assess its partisanship. On the other hand, there is more research evidence from surveys and experimental work about Fox News's audience, showing patterns of selective exposure (Iyengar and Hahn 2009), the effect of Fox News viewership on political knowledge (Hollander 2018), policy preferences (Feldman et al. 2012; Hoewe, Brownell and Wiemer 2020; Hoewe et al. 2020; Jamieson and Cappella 2008; Morris 2007) or voting behavior (DellaVigna and Kaplan 2007; Morris 2007).

Reliably measuring the partisan bias of news organizations like CNEWS and Fox News is challenging. A small number of studies have tried to quantify partisan bias at the system level. Hallin and Mancini (2004)'s classification of media systems proposed the term media parallelism to describe media systems that mirror the political divides in society through media slant, journalistic practices, and

direct connections between media outlets and partisan organizations. These studies produced typologies of country and media systems that are theoretically useful and are regularly used in country-level studies of media systems. In these studies, France usually fits within a "Mediterranean polarized pluralist" cluster (Hallin and Mancini 2004) or within a "Southern cluster" (Brüggeman et al. 2014), both characterized by very high levels of political parallelism. Subsequent studies have measured parallelism across platforms. Lelkes (2016) thus gives a more nuanced understanding of parallelism in French news, showing high parallelism observed for television news, counterbalanced by much more modest levels for print press.

These system-level approaches are more helpful to compare media systems with one another than to understand individual media organizations and their audience. Yet individual media businesses may be very important. Fox News, for example, is important in the US precisely because it is different from much of the rest of the US media system. I argue that more insightful comparisons of individual outlets can be achieved using an audience-centric approach.

Little is known about the audience of CNEWS or its overall position in relation to other media sources within the French ecosystem. Resolving this blind spot is a promising way forward in understanding CNEWS and providing a way to compare it to Fox News and any other news outlet. If we can reliably measure the ideological lean of an outlet's audience and its bias in terms of voting behavior, we can say a good deal more about its overall partisanship than we can infer only from looking at media systems classification or critiques of editorial positioning and content. Identifying patterns in the audience of specific outlets will also inform future individual-level studies about the effects of news diet on individual-level outcomes.

The method of Fletcher, Cornia, and Nielsen (2020) is a good starting point. They propose a way to quantify the partisan bias of news audiences in their superb system-level study of media polarization. They calculate the ideological lean score of each news source as the average position of its viewers on a left-right scale, relative to the country's ideological center of gravity. The latter is operationalized as the mean respondent position on the left-right scale in the national sample. I propose to repurpose

their metric to study individual outlets and quantify the ideological radicalness of their audience. In addition, I propose to build upon their ideological lean score by combining it with audience voting bias, in order to measure partisanship more accurately.

The Challenge of Measuring Audience Partisanship

Accurately measuring audience partisanship may be confounded in certain cases. One would be the admittedly unusual situation where an outlet's viewers are distributed bimodally toward both extremes of the political spectrum. In that scenario, the outlet's ideological lean score would not differ from a case of a centrist outlet with an audience that is normally distributed around the country's ideological center of gravity. For that reason, measuring audience dispersion along with ideological lean is critical.

A potentially larger concern with relying on respondent left-right scores is that it assumes voters understand and can situate themselves on the left-right scale appropriately. This should not cause issues in system-level studies, like Fletcher, Cornia and Nielsen's study of audience polarization, as errors can be expected to fall equitably on both sides of the political spectrum. However, this issue may cause more error when looking at individual outlets rather than entire media systems. First, cross-national studies show that as much as half of respondents in a given country will select the midpoint on the left-right scale, though this obviously does not translate into voting behavior (Zuell and Scholz 2019). Secondly, differences in education, respondent cultural background, or how individual voters interpret the left-right cleavage can largely drive individual self-placements on the left-right scale (Bauer et al. 2017). Fuchs and Klingemann (1990) also found that the left-right scale does not port well to the American context, where using a liberal-conservative scale is more appropriate. Finally, some country-specific idiosyncrasies relating to the left-right cleavage, such as issue salience, or

how far-right voters tend to select the "neither right nor left" option when available, may render the measure insufficiently accurate (Zuell and Scholz 2019).

The French case presents a unique challenge in assessing the far-right vote. While the historical problem of underreporting has diminished since Marine Le Pen's leadership of the Front National (now Rassemblement National), another factor continues to complicate the measurement of the far-right electorate. In France, not only have far-right parties long championed the slogan "neither right nor left" (Eatwell 2000; Sternhell 1987), but a substantial proportion of far-right voters, when asked to position themselves on the left-right scale, tend to choose left-of-center positions. This phenomenon, termed "gaucho-lepénisme" (i.e, leftish lepenism) by Perrineau (2016) and "ouvriéro-lepénisme" (i.e., blue-collar lepenism) by Mayer (1999), refers to culturally and economically left-leaning voters who support Marine Le Pen, and previously, Jean-Marie Le Pen. Mayer (2014) reports figures from the 2007 French Electoral Panel showing that among blue-collar workers who voted Le Pen in 2007, 43% selected a right-wing position on the left-right scale, 16% selected a left-wing position, and 41% selected the "neither right nor left" option (283).

In the case of France and CNEWS, the existence of gaucho-lepénistes and neither-nor-er voters suggests that ideological lean scores may significantly underestimate an audience's proximity to the far right. Figures from the ReCitCom project survey are displayed in Table 1. They clearly show that a significant proportion of 2022 Le Pen voters either reject the left-right cleavage or identify as left-wing voters, which confounds the use of the left-right scale alone to assess receptiveness to far-right candidates. In other countries, any phenomena that interfere with accurate ideological self-placement by the public may likewise introduce error. In general, it should be possible to enhance the ideological lean measures of Fletcher, Cornia and Nielsen (2020) and adapt it to the study of specific news audiences with the addition of more data. Survey data on candidate preferences are a promising way to make this improvement in cases where party competition provides clear distinctions between far-right and other candidates. Just such data is available in the ReCitCom project survey for both rounds of the French 2022 presidential election, and the US 2020 presidential election.

If the US 2020 presidential election that opposed Donald J. Trump and Joe Biden was widely scrutinized internationally, the French political landscape may be less familiar to outsiders. Twelve candidates competed in the first round. Philippe Poutou (NPA), Natalie Arthaud (LO), Fabien Roussel (PCF), Jean-Luc Mélenchon (LFI), Yannick Jadot (EELV) and Anne Hidalgo (PS) competed for the left-wing vote. The center was represented by incumbent President Emmanuel Macron (LREM), who is increasingly considered as leaning right-of-center, and Jean Lasalle (Résistons !). On the right, mainstream right-wing candidate Valérie Pécresse (Les Républicains) faced an unusually high number of far-right competitors: Nicolas Dupont-Aignan (DLF), who left the mainstream conservative party in 2007 and has since become a Eurosceptic, a staunch opponent to immigration and an antivaxx conspiracy theorist; Marine Le Pen (RN), a classic European right-wing populist, who intermixes her protectionist policies with a tough line on immigration and crime, and Eurosceptic views; and Éric Zemmour (Reconquête !), former CNEWS star commentator, who champions the Great Replacement conspiracy theory and France's colonial legacy, regularly defends the collaborationist Vichy regime, and argues that France is being colonized by hordes of Muslim immigrants.

The second round of the French 2022 presidential election saw a run-off between far-right Marine Le Pen, and incumbent President Emmanuel Macron. Data combining voting behavior as well as news diet provide an opportunity to enhance our measurement of audience partisanship in a manner that is robust to the concerns related to left-right scores mentioned earlier.

Data & Methods

To measure the partisanship of the news audiences, I rely on a Kantar Media survey conducted in France and in the US for the ReCitCom project. In France, the survey was carried out from May 17 to June 13, 2022, targeting a quota sample of 2,004 adults matched to the overall French population on age, gender, education, income, and region. In the US, data were collected between May 17, 2022, and June 22, 2022, using a quota sample of 2,000 adults matched to the US population on the same

Table 1. Multi-dimensional ideological self-placements of first-round Le Pen voters in 2022.

Dimension	Left					Center					Right	Neither right nor left	DK
	0	1	2	3	4	5	6	7	8	9	10		
Economic issues	2.1%	2.7%	2%	4.5%	3.4%	8.7%	5.3%	11.3%	14.2%	7.2%	13.2%	20.8%	4.7%
	total left 14.7%						total right 51.2%						
Political issues	1.6%	1.8%	3%	2.1%	2.6%	7.5%	3.9%	8.5%	13.6%	9.5%	20.4%	22.9%	2.5%
	total left 11.1%						total right 56%						
Cultural and social issues	2.6%	1.3%	2.6%	4.4%	4%	9%	5.4%	10.3%	11.8%	8.3%	16.4%	20.2%	3.8%
	total left 14.8%						total right 52.2%						

criteria. Basic quality control techniques were employed to eliminate respondents who appeared to be answering in a repetitive or unrealistic fashion.

My approach consists in measuring every respondent's news diet, their self-placement on a multi-dimensional ideological measure, and their vote choice in either the 2020 US presidential election, or in the two rounds of the 2022 French presidential election, as applicable. These data can then be used to assess the position of CNEWS within the French media ecosystem, and compare it to Fox News on my two metrics: Ideological lean and audience voting bias.

For news diet, I use survey questions that asked respondents about the sources they use to obtain news about public affairs, and how often they use them. Frequency is captured using a 7-point scale going from never to several times a day. I collapsed frequency levels into 4 categories: Never, at least once a week (thereafter weekly+), every day (daily+), and multiple times a day (multi-daily). In France, the outlets tested were the six main TV channels and groups that deliver political news: France Télévisions,[1] BFMTV,[2] LCI,[3] M6,[4] TF1,[5] and CNEWS. I use the same survey question in the US to measure consumption of Fox News. The audience size for each source and frequency level is provided in the appendix (see Appendix 4).

For ideology, respondents were asked to place themselves on an eleven-point left-right scale on three separate dimensions: Political issues, economic issues, and cultural and social issues. The three dimensions are strongly correlated and significant at the 0.01 level (2-tailed) both in France and in the US (see Appendix 1). I aggregated the three dimensions into a single measure of respondent ideology by taking the average respondent score on the three subscales.

I calculate each channel's ideological lean score as the average position of all its users on the aggregate eleven-point left-right scale, subtracted from the country's ideological center of gravity, itself calculated as the average position of all respondents on the same scale. A negative coefficient corresponds to a left-leaning audience, while a positive coefficient indicates a lean towards the right. Note that respondents who chose the "neither right nor left" option on one of the ideological dimensions mentioned above were not included in the calculations of the ideological lean scores.

A question about vote choice was included in the ReCitCom project survey. In France, respondents were surveyed about their vote choice in both rounds of the 2022 presidential election. To make the results more legible, the vote intentions for Philippe Poutou, Nathalie Arthaud, Fabien Roussel, Yannick Jadot, and Anne Hidalgo were clustered into "other left." In the US, respondents were asked about who they voted for in the 2020 presidential election. Votes for candidates other than Donald J. Trump or Joe Biden were removed from the analysis.

Results

Table 2: Channel Ideological Lean Scores Broken Down by Channel and Frequency Level.

	FranceTV	LCI	BFMTV	M6	TF1	CNEWS	Fox News
Multi-daily	-0.24	1.13	0.84	0.77	0.71	1.98	2.10
Daily+	-0.21	0.78	0.64	0.36	0.63	1.22	1.39
Weekly+	-0.11	0.30	0.44	0.25	0.65	0.83	0.66
Never	0.34	-0.25	-0.52	-0.39	-0.43	-0.60	-1.40

Ideological lean scores for each media outlet are displayed in Table 2, broken down by frequency groups. Focusing on the French media ecosystem, CNEWS consistently displays the most right-leaning audience of the six outlets across all frequency levels, providing support for H1. Not only are CNEWS viewers more right-leaning, but their distance from the ideological center of gravity is far greater than for any other outlet. This pattern is particularly pronounced for daily+ and multi-daily users. The rightward ideological lean of multi-daily CNEWS users (1.9831) is more than 8 times larger than the leftward lean of multi-daily France TV viewers, the most left-leaning audience group of all (-0.2385). The ideological lean scores also suggest that selective avoidance is a key feature of CNEWS, as the respondents who report never watching CNEWS are the furthest to the left of all the audience groups considered and across all frequency levels (-0.5967).

Figure 1 allows us to visualize these trends. Once should note a slight yet consistent rightward tilt across the entire French media ecosystem. While users of most French news channels cluster near the center, CNEWS users distinctly lean toward the right. Without positing a causal relationship, one observes that these patterns intensifies with higher frequency of use. The daily+ audiences of TF1, M6, LCI and BFMTV form a clear center-right cluster, with apparent ideological proximity, but CNEWS users appear to sharply diverge from the rest of the ecosystem, with a much larger ideological lean (1.2245). While daily+ France TV users also appear slightly detached from the central cluster, they do not exhibit such extreme partisanship, and remain closer to the country's ideological midpoint (-0.2125). At the multi-daily level, the distance between CNEWS viewers and the rest of the French media ecosystem increases drastically, suggesting hyperpartisanship from the former (1.9831). This finding is remarkable when contextualized with the fact that close to half of Le Pen voters select left-leaning positions on the left-right scale, "neither right nor left," or "don't know," thereby mechanically pushing the ideological lean score of the CNEWS audience to the left.

After discussing the ideological lean scores of each news audience as displayed in Table 2 and Figure 1, it is important to consider the dispersion of the left-right scores from which each ideological lean score was calculated. This provides additional insight into audience characteristics. Analysis of standard deviations reveals that neither CNEWS nor Fox News audiences exhibit greater dispersion of respondent left-right scores compared to other outlets. In fact, CNEWS consistently shows the smallest or second smallest standard deviation among the French outlets surveyed, and across all frequency levels. This suggest that CNEWS has a distinct audience profile, characterized by a slightly narrower range of ideological variation that skews to the right. For a detailed representation of this dispersion, standard deviations and density plots for each audience group are provided in the appendix (see Appendices 2 and 3).

The distribution of votes in the first round of the French presidential election corroborates the hyperpartisan nature of CNEWS's audience. Figure 2 visually represents the differences in votes between each news audience and how the entire survey sample voted. For context, Éric Zemmour and
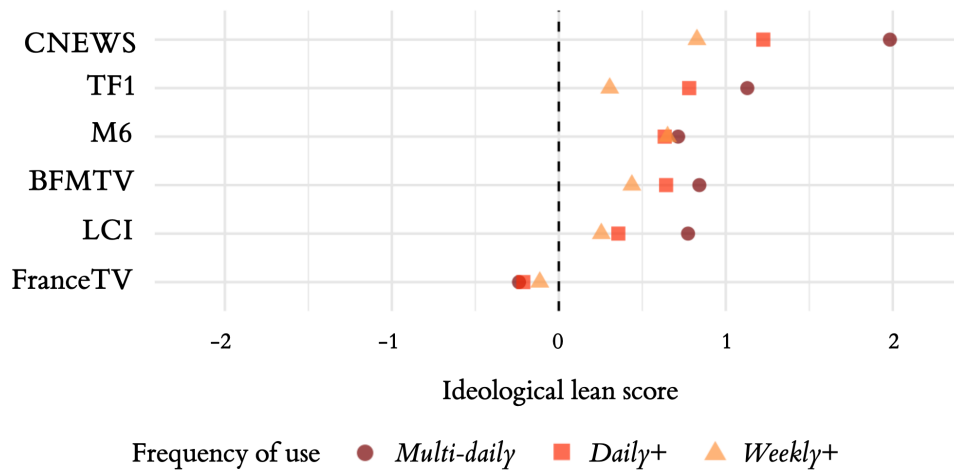
Figure 1: Ideological Lean of French News Audiences.

Marine Le Pen only received 7% (122) and 22.2% (388) of the vote among all the respondents in our survey, for a total of 29.2% (510). In contrast, daily+ users of CNEWS gave 21.1% (48) and 26.4% (60) of their first round vote to Éric Zemmour and Marine Le Pen respectively, for a total of 47.5% (108). If we add the 2.6% (6) of Nicolas Dupont-Aignan, the third far-right candidate in this election, the cumulated vote share of all far-right candidates climbs to 50.1% (114) of the vote. Such plebiscite for the far right does not exist among the audiences of other channels. This trend intensifies with multi-daily users of CNEWS, who gave the three far-right candidates a comfortable majority in the first round, with 55.9% (33) of the vote.

Interestingly, the apparent radicalness of CNEWS users also appears in their clear disaffection for the mainstream right-wing candidate Valérie Pécresse (LR), who received no votes from multi-daily CNEWS viewers in our sample, compared to 5.7% (99) among all respondents. By comparison, the viewers of LCI, who appear relatively conservative based on their ideological lean scores, gave far less votes to the three far-right candidates. Instead, they favored mainstream conservative candidate Valérie Pécresse, particularly among multi-daily LCI users (17.2% or 5 votes).

France's two-round majoritarian electoral system can complicate the analysis of voting behavior. Luckily, the French runoff may approximate the situation of a general election in a two-party system

like the US. Figure 2 shows second round voting differentials between the national sample and each news audience. In every case, CNEWS users deviate from the election results about twice as much as the next contender, usually France TV users. For example, Marine Le Pen's vote share among CNEWS weekly+ users (50.7% or 270 votes) exceeds her final score in the national sample (41.7% or 613 votes) by 9 percentage points. The differential climbs to 19.6 percentage points for CNEWS daily+ users (61.3%) and 25 percentage points for CNEWS multi-daily users (66.7%). These figures provide strong support for H2 and are especially striking given the traditionally strong pressure on French voters to oppose far-right candidates in runoffs, a phenomenon known as "front républicain."

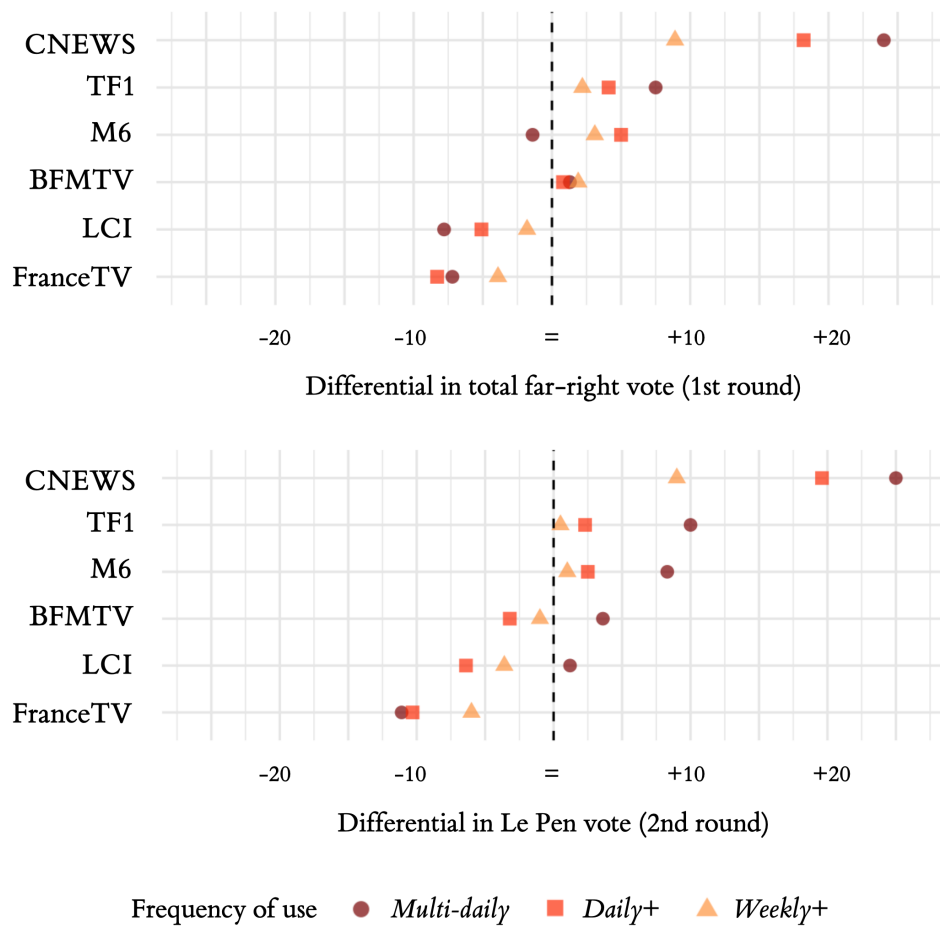Pivoting to the direct comparison between CNEWS and Fox News, how do the two channels

Figure 2: Differential in Presidential Vote, National Sample v. News Audiences.

differ in terms of ideological lean and voting bias? The ideological lean scores for both channels are displayed in Table 2, and both ideological lean and voting bias are plotted in Figure 3. Despite different ideological centers of gravity in France (5.2886) and the US (5.7722), both channels exhibit similar leans across frequency levels, deviating by up to 2 points on the left-right scale for their multi-daily audiences.

Are CNEWS and Fox News more similar to each other in terms of ideological lean than CNEWS is to other French outlets? The ideological gap between CNEWS and Fox News is consistently narrower than between CNEWS and other French channels. For example, the disparity between multi-daily CNEWS and LCI users is over 7 times greater than between multi-daily CNEWS and Fox News users, even though the multi-daily LCI users are the second closest, ideologically.

In terms of voting behavior, both CNEWS and Fox News viewers are characterized by a marked receptiveness to far-right candidates, which lends support for H3. In fact, the daily+ and multi-daily CNEWS audiences exceed Fox News in terms of their deviation from the national sample. While Trump's vote among multi-daily Fox News users surpasses the US national sample by 19.4 percentage points, Le Pen's share among multi-daily CNEWS viewers exceeds her final score in the national sample by 25 points.

Discussion

In the context of ample public discussion over CNEWS's presumed radicalization and corrosion of journalistic practices, CNEWS representatives have disputed the change in editorial line and rejected the label of "opinion channel." The audience-centric approach I use in this chapter produces empirical indicators to quantify the level of partisanship of its audience within the French media ecosystem. I hypothesized that the CNEWS audience would exhibit the greatest rightward ideological lean within the French ecosystem, irrespective of frequency of use. I also hypothesized that it would be the most supportive of far-right candidates in elections. The findings show that the CNEWS audi-
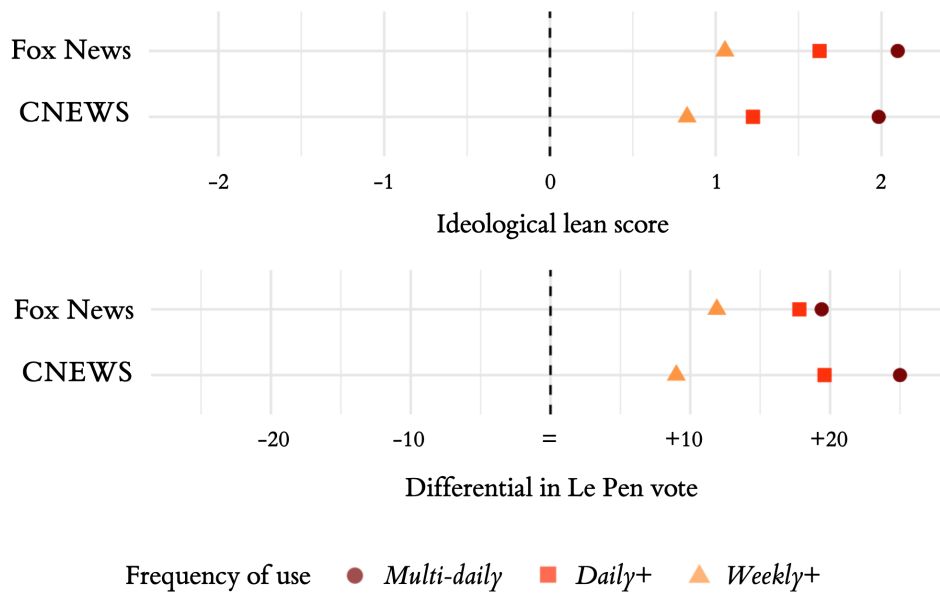
Figure 3: Comparison of Fox News and CNEWS audiences.

ence is indeed the most right-skewed of all French media, and the one most supportive of far-right candidates in elections. Marine Le Pen, who lost the 2022 election by large margins, would have won the election in a landslide if the CNEWS audience was representative of the national electorate. Even users who report using CNEWS as little as once a week show large differences from the general population in terms of vote choice. Within the context of a highly regulated media environment where each news source is expected to uphold political pluralism, one would expect those vote differentials to be somewhat contained. Considering the idiosyncrasies of the French electoral system and the very strong pressure on voters to oppose far-right candidates during presidential runoffs, one should interpret these figures as a strong sign of hyperpartisanship.

Are parallels between CNEWS and Fox News justified, and by what metric? I hypothesized that the two channels would exhibit similar patterns in terms of ideological lean and voting bias. The audience-centric approach used in this study corroborates comparisons between the two channels along these two indicators. The ideological gap between the two news sources is consistently narrower than that between CNEWS and any other French channel. Regarding their receptiveness to

the far right, viewers of CNEWS are, in fact, proportionally more biased in favor of far-right candidates than the Fox News audience is in the US. The disparity in second-round votes for Le Pen, observed between the French national sample and the most devoted CNEWS viewers, is larger than the gap observed in Trump votes between the most ardent Fox News viewers and the US national sample.

This study follows a literature that has identified characteristics displayed by Fox News as potentially corrosive to a healthy news environment. If the editorial positioning of news outlets, the news content they air, and journalistic norm violations are all routinely described as contributing to the deterioration of a country's news environment, these markers do not easily lend themselves to large-scale cross-national research efforts. In addition, establishing causal relationships between content, journalistic practices, and audience behavior, is an arduous task that has greatly limited studies of media. Conceptually, one may expect these to be mutually reinforcing, as suggested by Benkler, Faris, and Roberts (2018). However, the data produced in this chapter are not sufficient to substantiate claims that the hyperpartisanship of the CNEWS and Fox News audiences results from the erosion of journalistic norms or the constant supply of pro-attitudinal content. Nor are the data sufficient to weigh in on the accusations that CNEWS is being intentionally turned into an opinion channel. That being said, any private, for-profit media outlet is incentivized to retain its most faithful consumers by supplying more and more identity-confirming content to their audience. From a comparative perspective, the French media system is very tightly regulated, with overall high levels of state intervention when it comes to television news. The institutional barriers to adopting such a hard ideological stance are very high in that country. This suggests that other news businesses that cater to hyperpartisan audiences, and operate in more polarized countries or less regulated media systems, may follow the Fox News blueprint.

The audience-level metrics of audience hyperpartisanship I proposed in this chapter should assist in identifying news audiences analogous to that of Fox News in other media ecosystems. In addition to being robust to the measurement issues that come with relying on a single measure of ideology,

this approach can be used across countries that are different in terms of electoral and party systems. This approach could also easily be repurposed for studying news audiences across outlet types and social media platforms. It may also serve for the study of membership in various online groups. In an era characterized by the revival of the hard-right and various populist parties across Western democracies, the study of how these hyperpartisan outlets spread and how they influence the politics of their respective countries ought to become an absolute priority for the fields of political science and communication.

In this chapter, my main objective was to develop simple metrics that can be used cross-nationally to identify media vectors that pollute public spheres with partisan propaganda and poor-quality journalism. The next chapter proposes a theoretical framework to quantify the epistemic dimension of the crisis of democracy.

Notes

[1]France Télévisions is a public broadcaster TV conglomerate. It is the parent group of free-to-air channels such as France 2, France 3, France 4, France 5, France Ô, France Info, and regional subsets of France 3 providing region-specific programming (e.g. France 3 Bretagne). It is publicly funded through a license fee paid by all households owning a TV set. These channels provide a large variety of content, including entertainment, documentaries, talk shows, and news shows.

[2]BFMTV is a free-to-air 24-hour news channel launched in 2005. It is regularly described as the most watched television news channel. The outlet primarily focuses on public affairs, especially political and economic news.

[3]LCI is a news channel launched in 1994 as part of the TF1 group. It became a 24-hour news channel in 1999. The channel was a subscription-only cable news channel until 2016, when it was turned into a free-to-air channel. Prior to becoming a free-to-air channel, LCI's programming had a particular emphasis on economic content. The channel became more politics and debate-oriented post-2016. In 2022, LCI made the decision to amplify its coverage of international

issues, with the Russian invasion of Ukraine receiving massive, daily news coverage.

[4]M6 is a free-to-air commercial teevision channel created in 1987. The channel primarily delivers entertainment, music, drama, sports, reality shows, and youth programming. However, it also offers afternoon and evening news shows. Negotiations for a merger with TF1 took place between 2021 and 2022, but the project was officially scrapped.

[5]TF1 is a free-to-air commercial television channel created in 1975. It is one of the largest and most popular television channels in Europe, aired in several French-speaking regions outside of France. Originally a public channel, it was privatized in 1987. The channel delivers a mix of entertainment, drama, sports, reality shows, and primetime news.

References

Abdoul-Bagui, Armiyaou Gombo. 2021. "Media and the rise of right-wing populism: Gauging the role of CNews in promoting far-right ideology in France." *Open Journal of Political Science* 11(4) : 752-769. doi:10.4236/ojps.2021.114048.

Autorité de Régulation de la Communication Audiovisuelle et Numérique. 2022a. Émission Les Points sur les i diffusée le 21 novembre 2021 : CNews mise en demeure. ["Les Points sur les i" aired November 21, 2021: CNews put on formal notice]. *ARCOM*. Retrieved from https://www.arcom.fr/nos-ressources/espace-juridique/decisions/emission-les-points-sur-les-i-diffusee-le-21-novembre-2021-cnews-mise-en-demeure.

Autorité de Régulation de la Communication Audiovisuelle et Numérique. 2022b. Émission L'Heure des pros 2 diffusée le 1er février 2021 : CNews mise en demeure. ["L'heure des pros 2" aired February 1, 2021: CNews put on formal notice]. *ARCOM*. Available at: https://www.arcom.fr/nos-ressources/espace-juridique/decisions/emission-lheure-des-pros-2-diffusee-le-1er-fevrier-2021-cnews-mise-en-demeure.

Bauer, Paul C., Pablo Barberá, Kathrin Ackermann, and Aaron Venetz. 2017. "Is the Left-Right Scale

a Valid Measure of Ideology?" *Political Behavior* 39: 553–583. doi:10.1007/s11109-016-9368-2.

Benkler, Yochai, Robert Faris, and Hal Roberts. 2018. *Network propaganda: Manipulation, disinformation, and radicalization in American politics.* Oxford, UK: Oxford University Press. doi:10.1017/S1537592719001816.

Brüggemann, Michael, Sven Engesser, Florin Büchel, Edda Humprecht, and Laia Castro. 2014. "Hallin and Mancini revisited: Four empirical types of Western media systems." *Journal of Communication* 6(6): 1037–1065. doi:10.1111/jcom.12127.

Castro-Herrero, Laia, Lilach Nir, and Morten Skovsgaard. 2018. "Bridging Gaps in Cross-Cutting Media Exposure: The Role of Public Service Broadcasting." *Political Communication* 35(4): 542-565. doi:10.1080/10584609.2018.1476424.

Clair, Alice, Julien Guillot, and Savinien de Rivet. 2021. "36% des invités politiques de CNews sont d'extrême droite." [36% of CNews guests are affiliated with the far right]. *Libération*. Retrieved from https://www.liberation.fr/economie/medias/36-des-invites-politiques-de-cnews-sont-d extreme-droite-20210614_TN2KC5AHHHR7AH3ULWI6WU.

Conseil Supérieur de l'Audiovisuel. 2021. "Émission L'Heure des pros diffusée le 26 avril 2021 : CNews mise en garde." ["L'heure des pros" aired on April 26, 2021: CNews put on formal notice]. *Conseil Supérieur de l'Audiovisuel.* Retrieved from https://www.csa.fr/Reguler/Espace-j uridique/Les-textes-adoptes-par-l-Arcom/Les-decisions-du-CSA/Emission-L-Heure-des-pro s-diffusee-le-26-avril-2021-CNews-mise-en-garde.

DellaVigna, Stefano, and Ethan Kaplan. 2007. "The Fox News Effect: Media Bias and Voting." *The*

Quarterly Journal of Economics 122(3): 1187–1234. doi:10.1162/qjec.122.3.1187.

Eatwell, Roger. 2000. "The Rebirth of the 'Extreme Right' in Western Europe?" *Parliamentary Affairs* 53(3): 4-7-425. doi:10.1093/pa/53.3.407.

European Audiovisual Observatory. 2019. *European Audiovisual Observatory Yearbook 2019: Television in Europe*. Council of Europe Publishing.

Feldman, Lauren, Edward W. Maibach, Connie Roser-Renouf, and Anthony Leiserowitz. 2012. "Climate on Cable: The Nature and Impact of Global Warming Coverage on Fox News, CNN, and MSNBC." *The International Journal of Press/Politics* 17: 3–31. doi:10.1177/1940161211425410.

Fletcher, Richard, Alessio Cornia, and Rasmus Kleis Nielsen. 2020. "How polarized are online and offline news audiences? A comparative analysis of twelve countries." *The International Journal of Press/Politics* 25(2): 169-195. doi:10.1177/1940161219892768.

Fletcher, Richard, and Rasmus Kleis Nielsen. 2017. "Are news audiences increasingly fragmented? A cross-national comparative analysis of cross-platform news audience fragmentation and duplication." *Journal of Communication* 67(4): 476-498. doi:10.1111/jcom.12315.

French Senate, Commission d'enquête "Concentration des médias en France." 2022a. *Rapport 593, Tome I.* Retrieved from http://www.senat.fr/fileadmin/Fichiers/Images/commission/affaires_culturelles/CEmedias/r21-593-11.pdf.

French Senate, Commission d'enquête "Concentration des médias en France." 2022b. *Rapport 593,*

Tome II. Retrieved from http://www.senat.fr/fileadmin/Fichiers/Images/commission/affair es_culturelles/CEmedias/r21-593-21.pdf.

Fuchs, Dieter, and Hans-Dieter Klingemann. 1990. "The Left-Right Schema." In *Continuities in Political Action: A Longitudinal Study of Political Orientations in Three Western Democracies* (pp. 203-234). Berlin, Boston: De Gruyter. doi:10.1515/9783110882193.203.

Garrigos, Raphaël, and Isabelle Roberts. 2011. "Canal+ fait tourner les têtes à I-Télé." [Canal+ makes heads spin at I-Télé]. *Libération*. Retrieved from https://www.liberation.fr/ecrans/2011/06/1 5/canal-fait-tourner-les-tetes-a-i-tele_948290/?page=article.

Galtier, Ludovic. 2023. "Audiences janvier 2023 : TF1 leader en baisse avec France 2 à ses trousses, M6 dévisse encore, C8 double Arte et TMC." [Audience ratings January 2023: TF1 closely followed by France 2, M6 continues to drop, C8 overtakes Arte and TMC]. *Ozap*. Retrieved from: https://www.ozap.com/actu/audiences-janvier-2023-tf1-leader-en-baisse-avec-france-2-a-ses -trousses-m6-devisse-encore-c8-double-arte-et-tmc/627209.

Hallin, Daniel C., and Paolo Mancini. 2004. *Comparing media systems: Three models of media and politics.* Cambridge, England: Cambridge University Press.

Hart, William, Dolores Albarracin, Alice Eagly, Inge Brechan, Matthew J. Lindberg, and Lisa Merrill. 2009. "Feeling Validated Versus Being Correct:A Meta-Analysis of Selective Exposure to Information." *Psychological Bulletin* 135(4): 555-588. doi:10.1037/a0015701.

Hoewe, Jennifer, Kathryn Cramer Brownell, and Eric C. Wiemer. 2020. "The Role and Impact of Fox News." *The Forum* 18(3): 367-388. doi:10.1515/for-2020-2014.

Hoewe, Jennifer, Cynthia Peacok, Bumsoo Kim, and Matthew Barnidge. 2020. "The Relationship Between Fox News Use and Americans' Policy Preferences Regarding Refugees and Immigrants." *International Journal of Communication* 14(2020): 2036-2056.

Hollander, Barry A. 2018. "Partisanship, Individual Differences, and News Media Exposure as Predictors of Conspiracy Beliefs." *Journalism & Mass Communication Quarterly* 95(3): 691-713. doi:10.1177/1077699017728919.

Humprecht, Edda, Frank Esser, and Peter Van Aelst. 2020. "Resilience to Online Disinformation: A Framework for Cross-National Comparative Research." *The International Journal of Press/Politics* 25(3): 493-516. doi:10.1177/1940161219900126.

Irrien, Antoine, and Noémie Sadoun. 2021. "Le RN est-il davantage invité que les autres partis dans les matinales des radios et chaînes d'info?" [Is the RN more frequently invited than other parties in political morning shows of radio and TV news?]. *Libération*. Retrieved from https://www.liberation.fr/checknews/le-rn-est-il-davantage-invite-que-les-autres-partis-dans-les-matinales-des-radios-et-chaines-dinfo-20210612_DR556MBMQJCZJCHNVF7ATCIPEM.

Iyengar, Shanto, and Kyu S. Hahn. 2009. "Red Media, Blue Media: Evidence of Ideological Selectivity in Media Use." *Journal of Communication* 59(1): 19-39. doi:10.1111/j.1460-2466.2008.01402.x.

Jamieson, Kathleen Hall, and Joseph N. Cappella. 2008. *Echo Chamber: Rush Limbaugh and the Conservative Media Establishment.* Oxford, UK: Oxford University Press.

Joyella, Mark. 2023. "Fox News Hits 23rd Consecutive Month As Most Watched in Cable News As CNN Sees Gains In January." *Forbes*. Retrieved from https://www.forbes.com/sites/markjoy

ella/2023/02/01/fox-news-hits-23rd-consecutive-month-as-most-watched-in-cable-news-as-c
nn-sees-gains-in-january/?sh=106e3e465f59.

Jurkowitz, Mark, Amy Mitchell, Elisa Shearer, and Mason Walker. 2020. "U.S. media polarization
and the 2020 Election: A Nation Divided." *Pew Research Center.* Retrieved from https://ww
w.journalism.org/2020/01/24/media-polarization-and-the-2020-election-a-nation-divided.

Lelkes, Yphtach. 2016. "Winners, losers, and the press: The relationship between political parallelism
and the legitimacy gap." *Political Communication* 33: 523–543. doi:10.1080/10584609.2015.1117
031.

Lodge, Milton, and Charles S. Taber. 2013. *The Rationalizing Voter*. Cambridge: Cambridge Uni-
versity Press.

Mayer, Nonna. 1999. *Ces Français qui votent FN.* [The French who vote FN]. Paris: Flammarion.

Mayer, Nonna. 2014. The electoral impact of the crisis on the French "working class": More to the
right? In N. Bermeo & L. M. Bartels (Eds.), *Mass politics in tough times: Opinions, votes, and
protest in the great recession* (pp. 266-297). New York, NY: Oxford University Press.

Maza, Carlos. 2018. "Fox News keeps breaking its own rules." *Vox*. Retrieved from https://www.vo
x.com/videos/2018/11/27/18113442/fox-news-breaking-rules-journalism-campaign-gop-hanni
ty.

Morris, Jonathan S. 2007. "Slanted Objectivity? Perceived Media Bias, Cable News Exposure, and
Political Attitudes." *Social Science Quarterly* 88(3): 707-728. doi:10.1111/j.1540-6237.2007.004

79.x.

Onishi, Norimitsu. 2021. "A Fox-style news network rides a wave of discontent in France." *The New York Times.* Retrieved from https://www.nytimes.com/2021/09/14/world/europe/france-cnews-fox-far-right.html.

Perrineau, Pascal. 2016. "Le gaucho-lepénisme : Des fractures dans la transmission des valeurs et des orientations politiques ?" [Leftish lepenism: are there fractures in the transmission of values and political attitudes ?]. In Muxel, A. (Ed.), *Temps et Politique*, ed. Anne Muxel (pp. 181-202). Paris, France: Presses de Sciences Po.

Peters, Jeremy W., and Katie Robertson. 2023. "Fox News Suffers Major Setback in Defamation Case." *The New York Times.* Retrieved from https://www.nytimes.com/2023/03/31/business/fox-dominion-defamation-case.html.

Sternhell, Zeev. 1987. *Neither Right nor Left: Fascist Ideology in France*. Berkeley, CA: University of California Press.

Zuell, Cornelia, and Evi Scholz. 2019. "Construct Equivalence of Left-Right Scale Placement in a Cross-National Perspective." *International Journal of Sociology* 49(1): 77-95. doi:10.1080/00207659.2018.1560982/

Chapter 3

A Fragmented Literature

THE last ten years have marked a turning point for the study of democracy. While the US has seen a resurgence of political participation and political interest, a growing number of political scientists worry about the state of democracy in the Western world. Problems with the state of democracy are multidimensional, reflecting intersections and interactions among several pathologies. Among these are the increasingly tumultuous relationship between citizens of many countries and their own democratic institutions, the resurgence of far right and populist voices, the various forms of partisan and societal polarization, and the ongoing erosion of democratic norms. Practices that erode broad public confidence in institutions and question the legitimacy of the electoral process have received much scholarly attention.

There is an important dimension that is frequently the subject of comment and study, but which is less thoroughly theorized than problems in norms, polarization, and institutional stress. This involves the epistemic challenges of our information-saturated world. These challenges include problems in news quality and journalistic norms, exposure to disinformation and conspiracy theories, distrust towards the news media, and individual feelings of disorientation or confusion regarding the nature of facts and falsehoods.

Scholarly understanding of this epistemic dimension appears to be incomplete and not fully inte-

grated. The examination of isolated or, at best, adjacent epistemic threats, such as conspiracy ideation (Douglas et al. 2017), belief polarization (Benson 2023; Rekker 2021), the sharing of online disinformation (Humprecht et al. 2020), or how media systems may amplify or dampen the spread of falsehoods (Benkler, Faris, and Roberts 2018; Hump-recht et al. 2020), has been extremely valuable. However, I contend that approaching epistemic threats in isolation, even cross-nationally or longitudinally, does not fully capture the broader epistemic crisis.

While falsehoods are certainly part of the problem, epistemic problems arise even in the absence of falsehoods or conspiratorial instincts (Hameleers 2023; Hoes et al. 2023; van Doorn 2023). Besides, the relationship between citizens and the professional news media is important in its own right and in conjunction with social media, as journalists can debunk falsehoods, promote them, or simply ignore them. Since professional news media generally enjoy a reputation of greater reliability than online media, their rejection may reflect an equally important epistemic problem. An important line of work in this area consists in identifying the predictors of distrust towards the news media, perceptions of exposure to disinformation, and perceptions of news quality. More concerning, the loss of authority and value of political information, and its primary vectors, has led large segments of the public to feel confused and ill-equipped to distinguish truths from falsehoods about public affairs.

Research has tended to treat these problems as separate but related: as studies of news, or of social media, or of disinformation, or of trust in information. What binds them is epistemic in nature. Perceived exposure to disinformation, distrust in the professional news media, and feelings of disorientation regarding which news messages are true or false all signal the erosion of the authority and value traditionally attributed to political information. In this chapter, I take on the problem of developing a measurable concept that can capture this broader epistemic phenomenon: epistemic vulnerability.

Understanding these problems comparatively enables exploitation of what is only context in single-country studies: how the structure of a country's media and political systems affects epistemic vulnerability across the whole polity. In this chapter, I take on the problem of integrating this the

literature on these epistemic problems, which remains very fragmented. Understanding these problems comparatively enables exploitation of what is only context in many studies: how the structure of a country's media and political systems affect epistemic vulnerability across the whole polity. This chapter lays the theoretical foundations for the next chapter, which introduces a new metric to quantify epistemic vulnerability across countries.

Integrating the Literature on Epistemic Dimensions

Exposure to Disinformation & Its Limits

Disinformation, deliberately fabricated or manipulated information disseminated to achieve political, partisan, financial or other ends, needs to be distinguished from misinformation, which is the inadvertent sharing of false information without intent to mislead (Benkler, Faris, and Roberts 2018). The spread of disinformation is the most obvious dimension of the epistemic challenge facing modern democratic societies. A recent study by Kapantai et al. (2021) consolidated existing taxonomies of disinformation and identified at least 10 sub-types described in the literature: clickbait, conspiracy theories, fabrication, misleading connections, hoaxes, biased or one-sided reporting, imposter, pseudo-science, rumors, fake reviews and trolling. These are more or less applicable to public affairs, and may present varying degrees of facticity or danger.

In addition to directional motivations, acceptance of falsehoods and conspiracy theories is facilitated by motives that are epistemic, social, and existential in nature (see Douglas et al. 2017). In terms of consequences, disinformation is more easily recalled than truthful messages, has lingering effects that are resistant to correction, and impedes problem-solving (Ecker et al. 2022; Thorson 2016). Frequent exposure can also lead to illusory truth effects (Pillai and Fazio 2021) and is predictive of phenomena that are corrosive to democracy such as distrust in institutions and experts, political po-

larization, populism, and ideological extremism. From many perspectives, a healthy public sphere requires that citizens have access to a shared set of facts. In consequence, the level of exposure to falsehoods is an essential indicator of the health of news environments.

Yet, exposure to disinformation is notoriously difficult to measure due to confounds and problems with self-reporting that are difficult to account for outside of strictly controlled experimental designs. Several measures relying on different forms of data are in use, e.g., frequency of exposure, perceived exposure, actual exposure, or ratio of false versus true content. Accurate recall poses enormous problems for many survey measures, and findings are often contingent on domestic and temporal contexts. These difficulties have impeded the comparative literature on disinformation. A few studies focus on system-level resilience to online disinformation (Humprecht et al. 2020) or its sharing (Humprecht et al. 2021). These comparative reports are highly valuable, and they suggest that the structure of media systems and the political environment play a significant role in facilitating or impeding the spread of disinformation.

The problem of disinformation represents only one dimension of the epistemic challenge facing democracies. Recent contributions show that the adverse effects of disinformation extend far beyond the harms of accepting or being exposed to falsehoods, leading to non-attitudes, skepticism and rejection of factual information, and general impediments to truth attainment (Hameleers 2023; Hoes et al. 2023; van Door 2023). Additionally, citizens may or may not recognize false claims, and they may accept or reject messages in either case, compounded by reception gaps. Disinformation may also come from clearly identified sources, unidentified sources, or be more pervasive across sources and news brands. Source as well as content can elicit more or less motivated reasoning about messages. In that way, epistemic attitudes are shaped by more considerations than just perceptions of news quality or exposure to disinformation. A robust measure of epistemic vulnerability needs to consider the relationship the public has with the media system itself, and also their level of confidence in navigating the wealth of messages, both true and false, that circulate in the public sphere.

(Dis)Trust in the Media

Scholars of democracy generally agree that some degree of trust—in the political process, in institutions, and in one another—is a requirement for healthy democracy. Trust in the media is largely associated with trust in institutions (Ariely 2015). It is therefore not surprising that studies about democracy regularly include trust in the media as an indicator of a broader trust concept. However, in comparison, most studies about the news media treat trust either as a predictor for some other behavior, as an outcome variable of its own, or seek to compare the evolution of trust across countries, thereby overlooking its inherent value as an indicator of the epistemic health of democracies (Hanitzsch et al. 2018).

Trust has been researched and debated extensively (for thorough reviews, see Engelke et al. 2019 and Fawzi et al., 2021). Various questions subsist regarding both the conceptualization and measurement of trust and distrust, including towards the news media (Fisher 2016). Notable critiques emphasize problems associated with conceiving trust and distrust as the ends of a single spectrum (Engelke et al. 2019; Van De Walle and Six 2014). In addition, the two concepts have often been captured only partially, via their antecedents: media skepticisim and hostile media perceptions for distrust, trustworthiness and credibility for trust (Engelke et al. 2019; Strömbäck et al. 2020). Despite recommendations to disentangle these nuances, scholarship has been limited by the absence of widely accepted survey instruments to distrust (Engelke et al. 2019). As a result, distrust is almost exclusively measured by reversing measures of trust.

Kohring and Matthes (2007) reviews the multiple dimensions of the concept of media trust and further point out the methodological shortcomings of previous operationalizations. Their characterization of trust in the media as a second-order concept, reflective of the interaction of four individual-level phenomena, could suggest that single-item measures of trust might be less useful to assess individual attitudes than to understand perceptions of media systems as a whole at the macro level. That being said, more recent studies by Yale et al. (2015) and Prochazka and Schweiger (2019) report con-

cerns of potentially insufficient discriminant validity. Moreover, Tsfati and colleagues (2022) demonstrate that general and topical trust in the media must be differentiated and cannot be substituted, highlighting asymmetric patterns of trust depending on the topic covered. Their study emphasizes the usefulness of general trust in the media as a metric for comparative research.

The potential sources of distrust in the professional news media are numerous at the individual level, making inferences about the aggregate state of journalism or the health of a media system difficult. Trust is associated with many characteristics relating to audience attributes and perceived media performance (Livio and Cohen 2018). Prominent among these are ideology (Gronke and Cook 2007; Lee 2010), political extremism (Stroud and Lee 2013) and populist attitudes (Fawzi 2019; Hanitzsch et al. 2018; Livio and Cohen, 2018). Trust may also be confounded by individual news diets and discrepancies in the evaluation of individual outlets as opposed to the media in general (Arceneaux et al. 2012; Daniller et al. 2017), ideological selectivity in news consumption (Arceneaux et al. 2012), the ever-growing partisan and propaganda outlets, or trust in individual journalists versus media companies. Empirically, however, evidence suggests that news diet and ideology plays little role in evaluations of general trust in the media (Tsfati et al. 2023). There remains some uncertainty regarding what media respondents consider when assessing general trust in the media, and which cognitive strategy respondents use to come to an evaluation. However, a study by Tsfati and colleagues (2023) suggests that respondent evaluations primarily proceed from a representativeness heuristic–mainly mainstream media–and are not skewed by negativity bias, irrespective of respondent ideology.

Another way in which an improved conceptualization of trust in media is possible concerns news quality. While studies have long treated perceptions of news quality and trust as interchangeable (Fawzi et al. 2021), credibility only partially captures the larger trust construct (Engelke et al. 2019). Interestingly, Tsfati and colleagues (2023) report only minor differences between news credibility and their single-item measure of trust in the media. This begs the question of whether perception of news quality and trust in the media capture different dimensions of a single epistemic problem. In line with third-person perception, individuals who distrust the news media may actually feel adequately shel-

tered from disinformation in their own lives. The source of distrust may be perceived ideological slant and the hostile media perceptions—something a measure of exposure to disinformation would likely not capture. No matter the source, lack of trust in the news media is toxic to democracy. From a normative standpoint, the role of the news media is to inform the public and to sanction that the information provided was verified or obtained following widely accepted journalistic norms. In that way, distrust in the professional news media corrodes the epistemic foundation of democratic politics.

Going Beyond Disinformation and Distrust: Disorientation

Disinformation surely contributes to creating a toxic epistemic environment. A generalized lack of trust in the media also participates in making democracies epistemically fragile by encouraging citizens to use unreliable sources that poorly equip them to engage with the public sphere, and it is distinct from evaluations of news quality. However, exposure to disinformation and distrust towards the news media are not sufficient indicators to measure epistemic vulnerability. A third component is also necessary for a robust way to understand epistemic vulnerability across countries. This component addresses the internal mental state of citizens that is associated their perceptions of what is happening externally to them – the flows of disinformation and the trustworthiness of news businesses.

As citizens perceive the existence of true and false claims in circulation, and as they attend more or less to news businesses about which they have varying degrees of trust, they may vary in the extent to which they feel confident or disoriented. Some people could report frequent exposure to disinformation and low trust in the professional news media, but feel relatively confident in their own epistemic state for any of a number of reasons: high political sophistication, third-person perception, ego-defense mechanisms, or over-confidence associated with low political sophistication, as in the Dunning-Kruger effect. Some may react to perceptions of ubiquitous falsehoods and untrustworthy

media with uncertainty and disorientation, while others exposed to reliable information from trust-worthy sources may doubt it and experience disorientation, nonetheless. Therefore, while exposure to disinformation and trust in the professional news media are useful and important indicators of the health of a news environment, they are limited in capturing epistemic vulnerability.

A robust measure of epistemic vulnerability should include people's cognitive reactions to the state of news and disinformation. This idea is captured in "disorientation," which refers to the condition in which citizens have lost the capacity to distinguish facts and falsehoods (Benkler, Faris, and Roberts 2018; Humprecht, Esser, and Van Aelst 2020; Nielsen and Graves 2017). Individuals who report feeling disoriented are expressing the belief that either the entire news environment is corrupted with deceitful information, or that even their most trusted news sources fail to give them the tools to find accurate information where their knowledge is limited. Discussions of this phenomenon are often adjacent to the notion of 'post-truth era.' This phrase is often used to describe the erosion of journalistic standards and the loss of trust in the expert-systems traditionally responsible for knowledge production.

A crisp image of disorientation transpires through surveys and self-reports. Sixty-four percent of US adults say that false news stories cause "a great deal of confusion about the basic facts of current issues and events" (Barthel, Mitchell, and Holcomb 2016; Rainie, Anderson, and Albright 2017, 2). Disorientation is also measurable at the cognitive level. Reading false or inconsistent information has been shown to subsequently slow down cognitive processing of correct information (Jacovina, Hinze, and Rapp 2014; Rapp 2008; Rapp and Salovich 2018).

These elements highlight the role of disinformation in inducing confusion about the nature of truthful and disingenuous information, which is congruent with theoretical frameworks, such as Paul and Matthew's (2016) Russian Firehose of Falsehoods model, that seek to explain why some state actors sow disinformation that is inconsistent or sometimes grossly evident. The effect sought is not persuasion, but rather disorientation. It should be noted that recent technological progress, such as deepfake technology or content fabricated using artificial intelligence that seeks to imitate reliable

communication, can exacerbate disorientation, and will most likely contribute to more self-reports of confusion in future surveys.

The inability to distinguish facts from falsehoods may lead to political apathy, similar to feelings of political inefficacy. Indeed, disorientation is akin to internal inefficacy, but it focuses on information and news rather than political institutions and processes. Past research on political efficacy has established positive associations with political participation (Vecchione et al. 2014). This line of work suggests that it is not actual political knowledge initiates political participation, but rather perceptions of knowledge. Both Kuklinski and colleagues (2000) as well as Delli Carpini and Keeter (1996) suggested that knowledge is "the currency of democratic citizenship" and emphasized the public's "impecunious state." Standard measures of political knowledge typically include survey items the knowledge of which is questionably useful for engaging in the public sphere. For example, surveys of public knowledge regularly test knowledge of statements like "the 22nd Amendment determines the maximum number of presidential terms." If holding basic knowledge about political institution certainly helps engage in the public sphere, having what Lupia and McCubbins (1986) call "trusted speakers" who citizens can take cue from to understand day-to-day public affairs is arguably more useful. If indeed knowledge is the currency of democratic citizenship, knowing who serves as the current UN Secretary General is like going to the restaurant with a Louis d'Or coin in one's pocket. It surely is a valuable possession. It may even suggest significant wealth. It will be of little use to pay the check, however. Having a reliable news source that you can obtain accurate information from when your knowledge falls short is analogous to the reliable friend who will pick up the check when your method of payment gets declined.

This is the role of the professional news media. The fact that a large proportion of the population reports being skeptical of their own capacity to determine whether a news story is true or false in spite of the abundance of channels available is alarming, and it highlights the importance of understanding not only the state of disinformation and the state of news, but the state of people's minds about their ability to comprehend politics accurately.

Epistemic Vulnerability

Current scholarship widely acknowledges a dynamic process, marked by the proliferation of disinformation and shifts in epistemic attitudes, often encapsulated in the disinformation literature by the phrase 'epistemic crisis.' But where does this crisis lead to? What is the scale of the epistemic problems that result from this crisis? Traditional responses have primarily focused on problems like disinformation and conspiracy belief; sometimes, epistemic tribalism. Recent research, however, suggests that epistemic problems may arise even in the absence of outright falsehoods (Hame-leers 2023; Hoes et al. 2023; van Doorn 2023), indicating the need for a more encompassing conceptual framework. I propose a framework that extends beyond this traditional focus, what I call 'epistemic vulnerability.'

Epistemic vulnerability is way to conceptualize the condition resulting from widespread epistemic disorder throughout public spheres. Work on disordered public spheres has identified various contributors to disorder, including the perceived decline in news quality, distrust towards *bona fide* epistemic authorities and other co-occuring epistemic problems. Though distinct, these challenges all relate to the overall epistemic health of democracies. In that way, epistemic vulnerability reflects a common, cross-cutting epistemic dimension that is corroded throughout public spheres and is both theoretically valuable and helpful to quantify.

Empirically, epistemic vulnerability should manifest as widespread distrust in professional news media, heightened perceptions of exposure to falsehoods, and widespread inability to discern factual accuracy in political information. This state emerges from a convergence of factors, which include the proliferation of disinformation and partisan propaganda, anti-establishment sentiment, the multiplication of alternative news sources, the diminishing effectiveness of gatekeeping, news fragmentation and perceived media bias, all variants of political polarization, and the erosion of democratic norms, among others. Epistemic vulnerability more broadly reflects a shift in the way authority is attributed to political information such that it harms the public's ability to engage in public affairs and make informed political decisions. Epistemic vulnerability affects collective understanding, behavior, and

decision-making processes, and it may lead to various negative outcomes at the individual and system level. These include but are not limited to decreased civic engagement and political apathy, cynicism, ideological extremism, conspiracy mindset, tribal epistemology, further polarization, populist sentiment, and other phenomena frequently described as pathologies of democracy in the literature. At its most serious stage, epistemic vulnerability might beget challenges to the legitimacy of democratic institutions and governance.

Theoretical Links With Epistemic Vulnerability

To my knowledge, no study has explored the relationship between a comprehensive epistemic concept like epistemic vulnerability and other variables common to the comparative study of media and democracy. Several theoretical relationships can be reasonably proposed, though it is essential to note that the type of data used in this study precludes drawing causal inferences.

The Political Environment

Polarization should be associated with epistemic vulnerability, as it is evidently predictive of the three dimensions the index is built from. The dominant framework for studying polarization consists of distinguishing between ideological and affective forms. It is reasonable to assume that the direction of association between ideological polarization and epistemic vulnerability flows from the former to the latter. For affective polarization, however, a stronger theoretical case exists for a mutually reinforcing relationship. Many scholars agree that high polarization of both kinds makes a society more prone to experiencing epistemic failures (Allcott and Gentzkow 2017; Benkler, Faris, and Roberts 2018; Benson 2023; Humprecht et al. 2020). A polarized environment exacerbates the contamination of the news environment with partisan propaganda, whether its dissemination seeks to advance ideological goals or to score points against a demonized adversary (Benkler, Faris, and Roberts 2018). This should increase perceived exposure to disinformation, a good proportion of which may be caused by the

hostile media phenomenon. Polarization also reduces critical engagement with diverse viewpoints (Benson, 2023). Conversely, epistemic problems, such as manipulation or the loss of authoritative news source may lead to a deepening of partisan divides. Finally, citizens who find that the news they consume is polluted by slanted, polarized content may report feeling disoriented regarding the veracity of the news they receive and less trusting of the news media (Newman and Fletcher 2017). This phenomenon may be especially true for those citizens most disengaged from partisan politics.

The second characteristic of political systems that should be associated with epistemic vulnerability is concomitant to the role of polarization: the size of party systems. On the one hand, more parties might reduce the probability that the supporters of both parties will find themselves in homogeneous informational and social environments. On the other hand, a small party system clarifies ideological divides and encourages citizens to process politics in terms of simple in-group and out-group perceptions. This may lead to belief polarization (Rekker, 2021) and create opportunities for epistemic problems to rise.

The third characteristic that should predict epistemic vulnerability is the strength of populist organizations. Populist rhetoric strips down political stories of their nuance, by conflating the factual and normative dimensions of political issues and boiling them down to a simple dichotomy between right and wrong (Rosenberg 2022). Connections between populism and disinformation have been widely observed (Bennett and Livingston 2018; Humprecht et al. 2020; Marwick and Lewis 2017). In blurring the frontier between "claims of truth" and "claims of right," populists redefine knowledge in terms of affective and normative evaluations. Their consistent denunciation of knowledge-producing bodies such as scientific institutions and the professional news media (Krange et al. 2021; Ross and Rivers 2018; Schulz et al. 2018), and their paranoid worldview create fertile ground for conspiracy theories (Bergman 2018; Christner 2022; Imhoff et al. 2022). Populism therefore likely feeds off and contributes to the ambient distrust and disorientation felt by citizens, especially those most disengaged with politics.

The Structure of Media Systems

Recent studies converge on the key role of media systems in the dissemination of disinformation, trust, and perceptions of journalism quality. The first aspect of media systems is the relative weight of public broadcasting (PBS) in the news environment. Numerous studies demonstrate a strong positive correlation between a well-established PBS system and higher levels of political knowledge (Aalberg and Curran 2012; Curran et al. 2009) as well as higher exposure to cross-cutting content (Aalberg et al. 2010; Castro-Herrero et al. 2019; Esser et al. 2012; Wessler and Rinke 2014). PBS also exerts an 'ecological' influence on private outlets that leads to an increase in news quality across the entire news environment, an influence that Humprecht, Esser and van Aelst (2020, 10) call 'market conditioning.' This virtuous competition slows the dissemination of falsehoods, notably on television, and may contribute to improving trust in the news media. From a theoretical perspective, the direction of association between epistemic vulnerability and PBS is likely uni-directional, going from the latter to the former.

The second characteristic of media systems that should matter for epistemic vulnerability is political parallelism. The concept finds its roots in party-press parallelism, which referred to the formal affiliation or more informal commitment of certain news sources to political parties (Blumler and Gurevitch 1995; Seymour-Ure 1974). The concept was broadened in Hallin and Mancini's (2004) typology of media systems and operationalized in studies by Brüggeman et al. (2014) and Humprecht et al. (2022) to encompass the following dimensions: the lack of separation of news and commentary, partisan influence and policy advocacy, political orientation of journalists, media-party parallelism, political bias, and dependence of PBS. Faithful to the concept's grounding in path dependence, recent scholarship has noted shifts in levels of parallelism in several countries, like the US (Nechushtai 2018). These changes respond to the digitalization of media systems and, more contextually, political polarization (Humprecht et al. 2022; Nechushtai 2018). Theoretically, the perception that certain outlets are engaging in partisan advocacy should generate more distrust toward the news media in general. Suprisingly, Ariely (2015) finds a small positive correlation between media parallelism and

media trust. However, Newman and Fletcher (2017) find that perceived political bias in reporting is largely cited by respondents as a justification for not trusting the news media. Their respondents also attribute the blurring of facts and fiction to political advocacy in the media.

All of these considerations can be summarized in a set of five hypotheses.

Hypothesis 1: *Countries where ideological polarization is higher will exhibit higher levels of epistemic vulnerability.*

Hypothesis 2: *Countries where affective polarization is higher will exhibit higher levels of epistemic vulnerability.*

Hypothesis 3: *The effective number of parties in a given country is inversely correlated with levels of epistemic vulnerability.*

Hypothesis 4: *Epistemic vulnerability will be higher in countries where populist organizations are stronger.*

Hypothesis 5: *Countries with larger PBS viewership will have lower levels of epistemic vulnerability.*

The next chapter tests these hypotheses, using a custom country-level dataset and three OLS regression models. More generally, chapter four seeks to answer the following questions. How do levels of epistemic vulnerability vary across Western democracies? What is the relationship between the structure of political and media systems and levels of epistemic vulnerability?

References

Aalberg, Toril, and James Curran. 2012. *How Media Inform Democracy: A Comparative Approach.* New York: Routledge. doi:10.4324/9780203803448.

Aalberg, Toril, Peter van Aelst, and James Curran. 2010. "Media Systems and the Political Information Environment: A Cross-National Comparison." *The International Journal of Press/Politics* 15(3): 255-271. doi:10.1177/1940161210367422.

Alcott Hunt, and Matthew Gentzkow. 2017. "Social Media and Fake News in the 2016 Election." *Journal of Economic Perspectives* 31: 211–36. doi:10.1257/jep.31.2.211.

Arceneaux, Kevin, Martin Johnson, and Chad Benjamin Murphy. 2012. "Polarized Political Communication, Oppositional Media Hostility, and Selective Exposure." *The Journal of Politics* 74: 174-186. doi:10.1017/s002238161100123x.

Ariely, Gal. 2015. "Does Commercialized Political Coverage Undermine Political Trust? Evidence Across European Countries." *Journal of Broadcasting & Electronic Media* 59: 438-455. doi: 10.1080/08838151.2015.1055000.

Barthel, Michael, Amy Mitchell, and Jesse Holcomb. 2016. "Many Americans Believe Fake News Is Sowing Confusion." *Pew Research Center's Journalism Project.* http://www.journalism.org/2016/12/15/many-americans-believe-fake-news-is-sowing-confusion/ (May 21, 2018).

Benkler, Yochai, Robert Faris, and Hal Roberts. 2018. *Network propaganda: Manipulation, disinformation, and radicalization in American politics.* Oxford, UK: Oxford University Press.

doi:10.1017/S1537592719001816.

Bennett, W. Lance, and Steven Livingston. 2018. "The disinformation order: Disruptive communication and the decline of democratic institutions." *European Journal of Communication* 33: 122–139. doi:10.1177/0267323118760317

Benson, Jonathan. 2023. "Democracy and the Epistemic Problems of Polarization." American Political Science Review. doi:10.1017/S0003055423001089.

Bergman, Eirikur. 2018. *Conspiracy & Populism: The Politics of Misinformation.* London, England: Palgrave MacMillan. doi:10.1007/978-3-319-90359-0.

Blumler, Jay G., and Michael Gurevitch. 1995. "Towards a comparative framework for political communication research." In J. Blumler M. Gurevitch (eds.), *The crisis of public communication*. London: Routledge. (Original work published 1975).

Brüggeman, Michael, Sven Engesser, Florin Büchel, Edda Humprecht, and Laia Castro. 2014. "Hallin and Mancini Revisited: Four Empirical Types of Western Media Systems." *Journal of Communication* 64(6): 1037-1065. doi:10.1111/jcom.12127.

Castro-Herrero, Laia, Lilach Nir, and Morten Skovsgaard. 2018. "Bridging gaps in cross-cutting media exposure: The role of public service broadcasting." *Political Communication* 35: 542–565. doi:10.1080/10584609.2018.1476424.

Christner, Clara. 2022. "Populist Attitudes and Conspiracy Beliefs: Exploring the Relation Between the Latent Structures of Populist Attitudes and Conspiracy Beliefs." *Journal of Social and Po-*

litical Psychology 10: 72-85. doi:10.5964/jspp.7969.

Curran, James, Shanto Iyengar, Anker Brink Lund, and Inka Salovaara-Moring. 2009. "Media System, Public Knowledge and Democracy: A Comparative Study." *European Journal of Communication* 24(1): 5-26. doi:10.1177/0267323108098943.

Daniller, Andrew M., Douglas Allen, Ashley Tallevi and Diana C. Mutz. 2017. "Measuring Trust in the Press in a Changing Media Environment." *Communication Methods and Measures* 11: 76-85. doi:10.1080/19312458.2016.1271113.

Delli Carpini, Michael X., and Scott Keeter. 1996. *What Americans Know About Politics and Why It Matters.* New Haven: Yale University Press.

Douglas, Karen M., Robbie M. Sutton, and Aleksandra Cichocka. 2017. "The Psychology of Conspiracy Theories." *Current Directions in Psychology Science* 26(6): 538-542. doi:10.1177/096372 1417718261.

Ecker, Ullrich K.H., Stephan Lewandowsky, John Cook, Philipp Schmid, Lisa K. Fazio, Nadia Brashier, Panayiota Kendeou, Emily K. Vraga, and Michelle A. Amazeen. 2022. "The psychological drivers of misinformation belief and its resistance to correction." *Nature Reviews Psychology* 1: 13–29. doi:10.1038/s44159-021-00006-y.

Engelke, Katherine M., Valerie Hase, and Florian Wintterlin. 2019. "On measuring trust and distrust in journalism: Reflection of the status quo and suggestion for the road ahead." *Journal of Trust Research* 9(1): 66-86. doi:10.1080/21515581.2019.1588741.

Esser, Frank, Claes H. de Vreese, Jesper Strömbäck, Peter van Aelst, Toril Aalberg, James Stanyer, Günther Lengauer, et al. 2012. "Political Information Opportunities in Europe: A Longitudinal and Comparative Study of Thirteen Television Systems." *The International Journal of Press/Politics* 17(3): 247-274. doi:10.1177/1940161212442956.

Fawzi, Nayla. 2019. "Untrustworthy News and the Media as "Enemy of the People?" How a Populist Worldview Shapes Recipients' Attitudes toward the Media." *The International Journal of Press/Politics* 24(2): 146-164. doi:10.1177/1940161218811981.

Fawzi, Nayla, Nina Steindl, Magdalena Obermaier, Fabian Prochazka, Doro-thee Arlt, Bernd Blöbaum, Marco Dohle, et al. 2021. "Concepts, causes and consequences of trust in news media – a literature review and framework." *Annals of the International Communication Association* 45: 154-174. doi:10.1080/23808985.2021.1960181.

Fisher, Caroline. 2016. "The trouble with 'trust' in news media." *Communication Research and Practice* 2(4): 451-465. doi:10.1080/22041451.2016.1261251.

Fletcher, Richard, Alessio Cornia, and Rasmus Klein Nielsen. 2020. "How Polarized Are Online and Offline News Audiences? A Comparative Analysis of Twelve Countries." *The International Journal of Press/Politics*: 1-27. doi:10.1177/1940161219892768.

Gronke, Paul, and Timothy E. Cook. 2007. "Disdaining the Media: The American Public's Changing Attitudes Toward the News." *Political Communication* 24: 259-281. doi:10.1080/10584600 701471591.

Hallin, Daniel C., and Paolo Mancini. 2004. *Comparing Media Systems.* Cambridge, MA: Cam-

bridge University Press.

Hameleers, Michael. 2023. "The (Un)Intended Consequences of Emphasizing the Threats of Mis-
and Disinformation." *Media and Communication* 11(2): 5-14. doi:10.17645/mac.v11i2.6301.

Hanitzsch, Thomas, Arjen Dalen, and Nina Steindl. 2018. "Caught in the Nexus: A Compar-
ative and Longitudinal Analysis of Public Trust in the Press." *The International Journal of
Press/Politics* 23(1): 3-23. doi:10.1177/1940161217740695.

Hoes, Emma, Brian Aitken, Jingwen Zhang, Thomas Gackowski, and Magdalena Wojcieszak. (Forth-
coming). "Prominent Mis-information Interventions Reduce Misperceptions but Increase Skep-
ticism." *Nature Human Behavior: 1-116*. doi:10.31234/osf.io/zmpdu.

Humprecht, Edda, Laia Castro Herrero, Sina Blassnig, Michael Brüggeman, and Sven Engesser.
2022. "Media Systems in the Digital Age: An Empirical Comparison of 30 Countries." *Jour-
nal of Communication* 00: 1-20. doi:10.1093/joc/jqab054.

Humprecht, Edda, Frank Esser, and Peter Van Aelst. 2020. "Resilience to Online Disinformation: A
Framework for Cross-National Comparative Research." *The International Journal of Press/Politics*:
1-24. doi:10.1177/1940161219900126.

Humprecht, Edda, Frank Esser, Peter Van Aelst, Anna Staender, and Sophie Morosoli. 2021. "The
sharing of disinformation in cross-national comparison: analyzing patterns of resilience." *Infor-
mation, Communication & Society*: 1-21. doi:10.1080/1369118X.2021.2006744.

Imhoff, Roland, Felix Zimmer, Olivier Klein, João H. C. António, Maria Babinska, Adrian Bangerter,

Michal Bilewicz, et al. 2022. "Conspiracy mentality and political orientation across 26 countries." *Nature human behaviour* 6(3): 392–403. doi:10.1038/s41562-021-01258-7.

Jacovina, Matthew E., Scott R. Hinze, and David N. Rapp. 2014. "Fool me twice: The consequences of reading (and rereading) inaccurate information." *Applied Cognitive Psychology* 28: 558-568. doi:10.1002/acp.3035.

Kapantai, Eleni, Androniki Christopoulou, Christos Berberidis, and Vassilios Peristeras. 2020. "A systematic literature review on disinformation: Toward a unified taxonomy." *New Media & Society* 23(5): 1301-1326. doi:10.1177/1461444820959296.

Kohring, Matthias, and Jörg Matthes. 2007. "Trust in news media: Development and validation of a multidimensional scale." *Communication Research* 34(2): 231-252. doi:10.1177/0093650206298071.

Krange, Olve, Bjørn Kaltenbrorn, and Martin Hultman. 2021. "'Don't confuse me with facts'—how right wing populism affects trust in agencies advocating anthropogenic climate change as a reality." *Humanities and Social Sciences Communications* 8(1): 1-9. doi:10.1057/s41599-021-00930-7.

Kuklinski, James, Paul J. Quirk, Jennifer Jerit, David Schwieder, and Robert F. Rich. 2000. "Misinformation and the Currency of Democratic Citizenship." *Journal of Politics* 62(3): 790–816.

Laakso, M., & Taagepera, R. (1979). The 'Effective' number of parties: a measure with application to West Europe. Comparative Political Studies, 12(1), 3-27. doi:10.1177/001041407901200101.

Lee, Tien-Tsung. 2010. "Why They Don't Trust the Media: An Examination of Factors Predicting

Trust." *American Behavioral Scientist* 54(1): 8-21. doi:10.1177/0002764210376308.

Livio, Oren, and Jonathan Cohen. 2018. "Fool me once, shame on you": Direct personal experience and media trust. *Journalism* 19(5): 684–698. doi:10.1177/146488491667\\1331.

Lupia, Arthur, and Mathew McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What They Need to Know*. Cambridge: Cambridge University Press. doi:10.2307/2586046.

Marwick, Alice, and Rebecca Lewis. 2017. "Media manipulation and disinformation online." *Data & Society Research Institute*. Retrieved from https://datasociety.net/output/media-manipulation-and-disinfo-online.

Nechushtai, Efrat. 2018. "From Liberal to Polarized Liberal? Contemporary U.S. News in Hallin and Mancini's Typology of News Systems." *The International Journal of Press/Politics* 23(2): 183-201. doi:10.1177/1940161218771902.

Newman, Nic, and Richard Fletcher. 2017. "Bias, Bullshit and Lies: Audience Perspectives on Low Trust in the Media." *SSRN Electronic Journal*. doi:10.2139/ssrn.3173579.

Nielsen, Rasmus Kleis, and Lucas Graves. 2017. *"News You Don't Believe": Audience Perspectives on Fake News.* Oxford: Reuters Institute for the Study of Journalism.

Pillai, Raunak M., and Lisa K. Fazio. 2021. "The effects of repeating false and misleading information on belief." *WIREs Cognitive Science* 12(6): article e1573. doi:10.1002/wcs.1573.

Rainie, Lee, Janna Anderson, and Jonathan Albright. 2017. "The Future of Free Speech, Trolls,

Anonymity and Fake News Online." *Pew Research Center: Internet, Science & Tech.* http://www.pewinternet.org/2017/03/29/the-future-of-free-speech-trolls-anonymity-and-fake-news-online/ (May 21, 2018).

Rapp, David N. 2008. "How do readers handle incorrect information during reading?" *Memory & Cognition* 36: 688-701. doi:10.3758/MC.36.3.688.

Rapp, David N., and Nikita A. Salovich. 2018. "Can't we just disregard fake news? The consequences of exposure to inaccurate information." *Policy Insights from the Behavioral and Brain Sciences* 5(2): 232-239. doi:10.1177/2372732218785193.

Rekker, Roderik. 2021. "The nature and origins of political polarization over science." *Public Understanding of Science* 30(4). doi:10.1177/0963662521989193.

Rosenberg, S. W. 2020. Democracy devouring itself: The rise of the incompetent citizen and the appeal of right-wing populism. In D. U. Hur & J. M. Sabucedo (Eds.), *Psychology of political and everyday extremisms* (Editora Vozes) 2-37.

Ross, Andrew S., and Damian J. Rivers. 2018. "Discursive Deflection: Accusation of 'Fake News' and the Spread of Mis- and Disinformation in the Tweets of President Trump." *Social Media + Society* 4(2): 1-12. doi:10.1177/2056305118776010.

Schulz, Anne, Philipp Müller, Christian Schemer, Dominique Stefanie Wirz, Martin Wettstein, and Werner Wirth. 2018. "Measuring Populist Attitudes on Three Dimensions." *International Journal of Public Opinion Research* 30(2): 316-326. doi:10.1093/ijpor/edw037.

Seymour-Ure, Colin. 1974. *The political impact of mass media*. London: Constable.

Strömbäck, Jesper, Yariv Tsfati, Hajo Boomgaarden, Alyt Damstra, Elina Lindgren, Rens Vliegen-thardt, and Torun Lindholm. 2020. "News media trust and its impact on media use: a framework for future research." *Annals of the International Communication Association* 44(2): 139-156. https://doi.org/10.1080/23808985.2020.1755338.

Stroud, Natalie Jomini, and Jae Kook Lee. 2013. "Perceptions of cable news credibility." *Mass Communication & Society* 16(1): 67-88. doi:10.1080/15205436.2011.646449.

Thorson, Emily. 2016. "Belief Echoes: The Persistent Effects of Corrected Misinformation." *Political Communication* 33(3): 460–80. doi:10.1080/10584609.2015.1102187.

Tsfati, Yariv, Jesper Strömbäck, Elina Lindgren, Alyt Damstra, Hajo G. Boomgaarden, and Rens Vliegenthart. 2022. "Going Beyond General Media Trust: An Analysis of Topical Media Trust, its Antecedents and Effects on Issue (Mis)perceptions." *International Journal of Public Opinion Research* 34(2). doi:10.1093/ijpor/edac010.

Tsfati, Yariv, Jesper Strömbäck, Elina Lindgren, Hajo G. Boomgaarden, and Rens Vliegenthart. 2022. "What News Outlets do People Have in Mind When They Answer Survey Questions about Trust in "Media?"" *International Journal of Public opinion Research* 35(2). doi:10.1093/ijpor/edad008.

Van De Walle, Steven, and Frédérique Six. 2014. "Trust and Distrust as Distinct Concepts: When Distrust in institutions is Important." *Journal of Comparative Policy Analysis: Research and Practice* 16(2): 158-174. doi:10.1080/13876988.2013.785146.

Van Doorn, Maarten. 2023. "Advancing the debate on the consequences of misinformation: clarifying why it's not (just) about false beliefs." *Inquiry.* doi:10.1080/0020174X.2023.2289137

Vecchione, Michele, Gian V. Caprara, Maria G. Caprara, Guido Alessandri, Carmen Tabernero, and José Luis González-Castro. 2014. "The Perceived Political Self-Efficacy Scale-Short Form (PPSE-S): A validation study in three Mediterranean countries." *Cross-Cultural Research* 48(4): 368–384. doi:10.1177/1069397114523924

Wessler, Hartmut, and Eike Mark Rinke. 2014. "Deliberative performance of television news in three types of democracy: Insights from the United States, Germany, and Russia." *Journal of Communication* 64: 827–851. doi:10.1111/jcom.12115.

Yale, Robert N., Jakob D. Jensen, Nick Carcioppolo, Ye Sun, and Miao Liu. 2015. "Examining First- and Second-Order Factor Structure for News Credibility." *Communication Methods and Measure* 9(3): 152-169. doi:10.1080/19312458.2015.1061652.

Chapter 4

Quantifying the Health of News Environments

O UR information-saturated world has germinated new threats to democratic governance. Among these are the proliferation of disinformation, the growing distrust towards the professional news media, and individual feelings of disorientation or confusion regarding the nature of facts and falsehoods. The previous chapter sought to integrate a highly fragmented literature and posited that these phenomena represent distinct dimensions of a singular concept: epistemic vulnerability. In this chapter, I introduce a system-level metric that can capture this epistemic phenomenon, common to many studies of news environments as they relate to democratic health.

Understanding these problems comparatively enables exploitation of what is only context in many studies: how the structure of a country's media and political systems affect epistemic vulnerability across the whole polity. Quantifying epistemic vulnerability across countries can also help identify the role that the degradation of news environments plays in the declining health of many democracies.

First, I propose the Epistemic Vulnerability (EV) index to measure epistemic vulnerability comparatively at the system-level. This additive index relies on three components derived from individual

survey responses: average perceived exposure to disinformation, average level of distrust towards the professional news media, and average feelings of disorientation, i.e., individuals' perceived ability to distinguish falsehoods from facts. The study seeks to answer the following questions. How do levels of epistemic vulnerability vary across Western democracies? What is the degree of correspondence between levels of epistemic vulnerability and previous classifications of media systems? What is the relationship between the structure of political and media systems and levels of epistemic vulnerability?

I apply the metric to 20 Western democracies and use Ordinary Least Squares (OLS) regression to test whether a country's level of epistemic vulnerability is predicted by the size of its party system, levels of ideological and affective polarization, the electoral strength of populist parties, political parallelism, and public television viewership. The results show that Northern European countries are more epistemically resilient while the United States, Spain, and Eastern European countries are more epistemically vulnerable. These results are highly consistent with previous efforts to typologize media systems. The study finds that public television viewership and the size of party systems are strongly and inversely related to epistemic vulnerability. Additionally, empirical evidence suggests that political parallelism, ideological polarization, and populism are associated with higher levels of epistemic vulnerability.

Methods

At the end of the previous chapter, I introduced five hypotheses on the relationship between epistemic vulnerability and key structural characteristics of political and media systems. Testing these hypotheses requires developing a multi-country data set containing individual-level measures from several surveys in each country, along with a range of country-level indicators drawn from multiple sources. Country selection was motivated by comparability and availability of data. I originally intended to study epistemic vulnerability in the US and across all EU states. However, comprehensive

surveys of media attitudes that include perceptions of exposure to disinformation are still relatively rare. I encountered similar difficulties in locating the data needed to construct all the necessary explanatory variables for all the intended countries. Data limitations have thus led me to restrict the analysis to all of 20 Western democracies described in existing typologies of Western media systems (see Hallin and Mancini 2004; Brüggemann et al. 2014; Humprecht et al. 2020; Humprecht et al. 2022): Austria, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal, Romania, Spain, Sweden, the UK, and the US. Following is an overview of how each measure is built.

The Epistemic Vulnerability Index

The proposed Epistemic Vulnerability (EV) index captures the three theorized manifestations of the concept at the system level: widespread distrust in professional news media, heightened perceptions of exposure to falsehoods, and widespread inability to discern facts from falsehoods. In terms of levels of analysis, the most intuitive way to understand the EV index is as hybrid. By initially examining individual-level measures of the three manifestations of epistemic vulnerability, one can compute country-level averages on each, and then combine these additively into a single country-level metric. This allows theorizing and analyzing the relationship between country-level epistemic vulnerability and many important comparative measures, without being hindered by individual-level factors that may introduce heterogeneity. The EV index is calculated from questions about respondents' perceived frequency of exposure to falsehoods, respondents trust in the news media (reversed), and respondents' feelings of disorientation, drawing on three survey datasets: Flash Eurobarometer 464, and American Trends Panels (ATP) W45 and W91 (combined N= 36,775). The three dimensions of the EV index are well correlated at the aggregate level. Pearson's correlation coefficients are displayed in Figure 1. Cronbach's alpha was .81, indicating good internal consistency and suggesting that the dimensions are tapping into the same construct.

Predictors

Affective Polarization.

Affective polarization is measured as the average affective distance of out-parties from one's in-party, using survey data from CSES modules III-V. For each respondent in each country, I sum up the distances between respondents' in-party evaluation and evaluations for all the out-parties, and weight them by the share of the vote won by each party after discounting the vote share of the in-party. Country scores are in the online appendix (see Appendix 6).

Ideological Polarization.

My measure of ideological polarization also relies on CSES modules III-V. For every country, I calculate the ideological center of gravity by taking the average position of all the parties on the left-right scale, weighted by the electoral size of each party. Then, for each party, I calculate its distance from the center of gravity by subtracting its left-right score from the latter. Squared distances are then summed up and weighted again by the electoral size of each party. I use parliamentary elections for most countries and presidential elections (first round when applicable) for presidential systems. Country scores and additional details regarding the measure are in the online appendix (see Appendix 7).

Effective Number of Parties.

This measure was originally proposed by Laakso and Taagepera (1979) and reflects the number of parties in a given election, weighted by their relative electoral size. Data for this variable come from the National-Level Party Systems dataset for the US, and WhoGoverns.eu for EU countries.

Strength of Populism

I estimate the strength, or relative electoral size, of left and right-wing populist organizations in a given country, operationalized as the vote share won by all populist parties on the left and on the

right respectively, in the election closest to 2018. The data come primarily from the Timbro Authoritarian Populism (TAP) index.

The TAP index only offers data from legislative elections. Populist movements being often highly personalized, one can expect populist movements to perform better in more candidate-centered elections, e.g., presidential elections. Comparatively, party-centered elections might demobilize populist voters. For this reason, I calculate observations for presidential and semi-presidential systems (FR, PL, PT, RO) using presidential election results.[1]

The US case requires lengthier consideration. US elections are inconsistent in their use of party primaries, and the participation of a populist candidate in one of the two parties' primaries does not guarantee a place on the presidential ticket. The 2016 and 2020 elections are particularly difficult to treat. There are two evident alternatives. The first: calculating the strength of left and right-wing populist candidates as the share of the vote they earned out of all the votes cast in the general election. The second: calculating the strength of left and right-wing populist candidates as the share of the vote they earned out of all the votes cast in both party primaries combined.[2] Obviously, this approach is only possible for election cycles where both parties held primaries.

I propose a hybrid approach. For left-wing populism, my US 2016 observation relies on the share of the votes won by Bernie Sanders out of all the votes cast in primaries of both parties. This is a very conservative estimate of the minimum share of the vote Bernie Sanders would have won in the general election had he clinched the nomination. This method most certainly underestimates his electoral size in this hypothetical scenario, as the overwhelming majority of Clinton voters would have likely rallied behind him had she conceded the race.

As for right-wing populism, I rely on the share of the vote won by Donald Trump in the general

---

[1] Source for Portugal: Comissão Nacional de Eleições. Source for France: Ministère de l'Intérieur. Source for Romania: Biroul Electoral Central. Source for Poland: Pánstwowa Komisja Wyborcza. Source for US: The Green Papers.

[2] There were 61,286,139 votes cast in both primaries combined—30,238,826 in the Democratic primaries, and 31,047,313 in the GOP primaries. For comparison, 136,669,276 votes were cast in the general election.

election. Since Donald Trump's leadership style and personality is so commonly associated with the spread of disinformation, relying on primary results could gravely underestimate his influence on the outcome variable—and by extension, the influence of right-wing populism.

The hybrid approach I propose is admittedly approximative. It ignores factors that bias presidential nomination contests, such as path dependence and rules around the allocation of (super)delegates. It also assumes that primary electorates present a reasonable degree of representativeness compared to the general electorate.[3] That being said, using a combination of general and primary election results is the best compromise between assuming all Democrats would have turned out for Sanders had he won the nomination, and pretending that left-wing populism is nonexistent in the US simply because no left-wing populist made it to the top of the Democratic ticket.

Note that this variable is meant to capture the strength of openly populist organizations on my outcome variable. This variable is not trying to capture the prevalence of populist attitudes in the population. Hence, the country scores for both left and right-wing populism are remarkably low in the UK. That is not to say that British voters are less vulnerable to populist messages than in other countries, or that there are no prominent populist voices in the UK. Rather, these figures mean that populist voices do not have clear organizations that they can use as vectors for expressing populist messages in British elections. All left and right-wing populism country scores are in Appendix 8.

Daily PBS Viewership.

Measures of daily PBS viewership come from the European Audiovisual Observatory Yearbook 2019/20. For the US, the data come from a survey I conducted with collaborators from the ReCitCom project,

---

[3]Concerning the representativeness of primary voters, studies conducted prior to the current era of vast ideological and affective polarization suggest that primary electorates are far more representative than V. O. Key once suggested when he said primary voters were "especially responsive to certain styles of political leadership or shades of ideology." More recent studies also support these earlier findings. A smaller number of recent studies report more inconclusive or inconsistent findings, but these usually deal with the effect of open, closed, or semi-closed primaries on legislator ideology, or focus on the representativeness of congressional primary election voters (for more on this topic, see Abramowitz 2008; Geer 1988; Gerber and Morton 1998; Hirano et al. 2010; Ranney 1968; Sides et al. 2020).

in which respondents were asked to say how often they use each of a list of news sources.

Media-Party Parallelism.

The data for this variable come from Humprecht et al. (2022), who report values for their political parallelism index in their appendix. The index itself has a Cronbach's alpha of .86. The index measures the role played by political advocacy in journalism across countries, and is built from 5 dimensions, originally described by Brüggeman et al. (2014). The first is partisan influence on news businesses, and the extent to which the latter engage in policy advocacy. The second dimension captures the extent to which the political orientation of journalists is known to the public. The third, called media-party parallelism, reflects ideological news selection by the public, and the fourth, political bias, measures bias and lack of pluralism in the coverage of public affairs. Lastly, the fifth dimension captures PBS dependence on the state, which is reflected in the rate of CEO turnovers associated with changes in government, and the degree of politicization of public broadcasters (see Brüggeman et al. 2014; Humprecht et al. 2022 for further discussion on the measure).

Results

Starting with the first research question, the radar charts in Figure 4 show EV index country scores, ranked in ascending order, as well as the three constituent parts for each country. Northern European countries are generally more epistemically resilient, while the US, Spain, and Eastern European countries are more epistemically vulnerable.

How consistent are these results with previous media system taxonomies? I performed Kruskal-Wallis tests to compare the country rankings produced from the EV index with the classifications of Hallin and Mancini (2004), Brüggeman et al. (2014), and Humprecht and colleagues (2022). An overview of these classifications is available in the online appendix (see Appendices 12 and 13). The test results showed a Kruskal-Wallis chi-squared statistic of 11.777 (p=.008) for Hallin and Mancini's

Figure 4: Internal Consistency and EV Index Scores in Ascending Order.
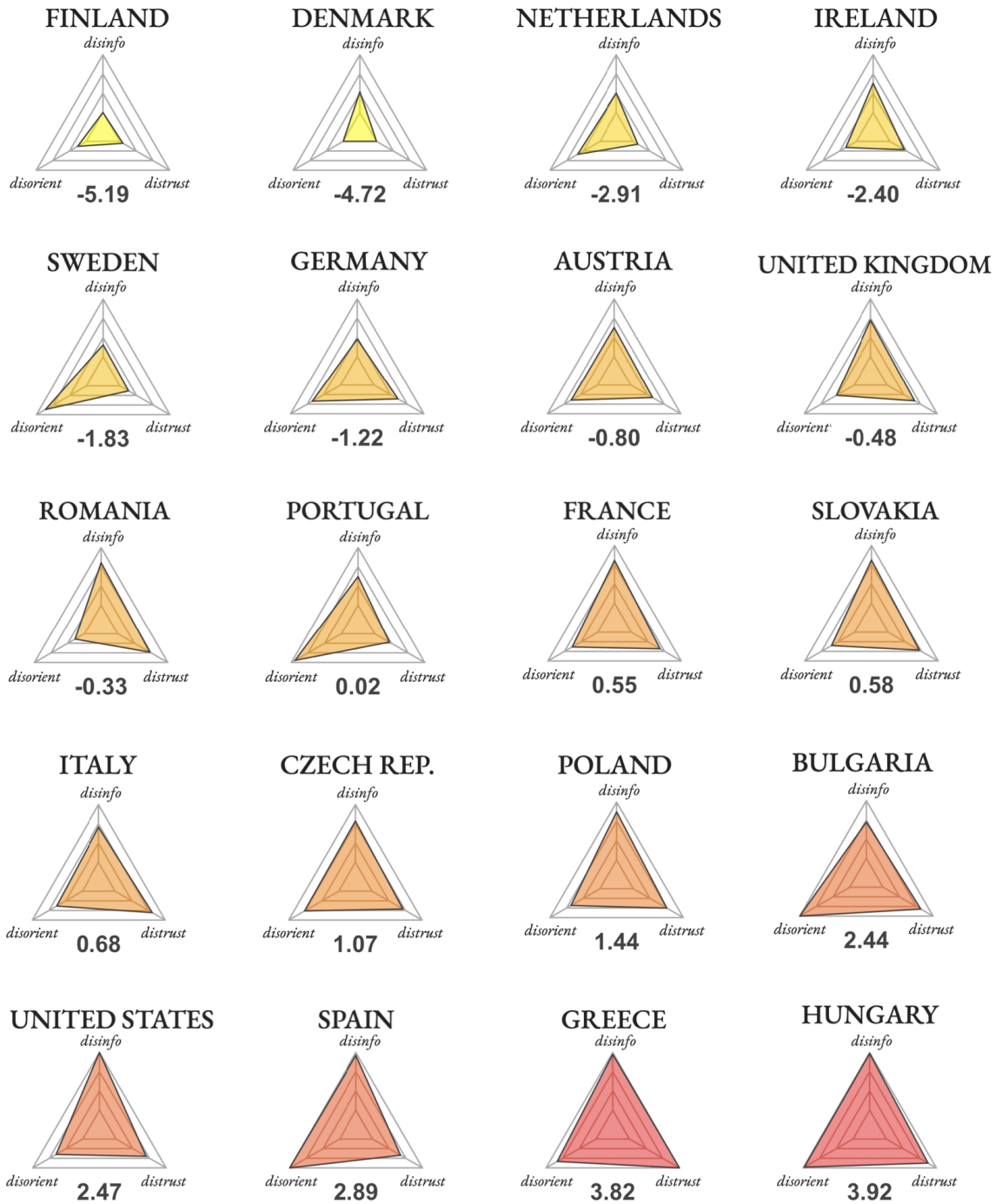
disinfo = perceived disinformation (average) ; disorient = disorientation (average) ; distrust = distrust in news media (average)
Cronbach's alpha = .811 ; disinfo-distrust = .814** ; disinfo-disorient = disinfo-disorient = .463* ; disorient-distrust = .489*

classification. For Brüggeman and colleagues, the statistic was 10.021 (p=.040). The taxonomy of Humprecht and colleagues resulted in a Kruskal-Wallis chi-squared value of 11.376 (p=.003). These tests suggest that the EV index is not only consistent with established classifications of media systems but also adds valuable new insights. Turning to the comparison with Humprecht et al.'s (2020) study of resilience to online disinformation. I calculated Spearman's correlation coefficient to determine the degree of association between the ordered rankings (r=.916, p=2.2e-16). The two methodologies appear reliable and consistent, resulting in a similar relative evaluation of the countries considered.

OLS was used to test the relationship between epistemic vulnerability and the structures of political and media systems at the country level. Because populism can reasonably be conceptualized as a single concept or as distinct right-wing and left-wing versions, two separate models using each approach were specified. Thorough model diagnostics confirmed both models to be BLUE (best linear unbiased estimator). Goodness-of-fit statistics indicate that the models explain a remarkable proportion of the variance, between 76 percent for Model 2 and 77 percent for Model 1. Because interpreting coefficients in a substantive manner can be difficult, each predictor is discussed in terms of its effect on the EV country rankings, under certain hypotheticals. Scaled estimates from the two models are displayed in Figure 5. Regression tables are available in the online appendix (see Appendices 21 and 22), along with alternative models that use different measures as robustness checks (see Appendices 23 through 25). Readers should note that alternative models including measures of cross-platform audience polarization and audience duplication were also specified. However, empirical evidence did not support the inclusion of these variables, and the findings of the more complex models were consistent with the simplified models. For transparency, these alternative models are also included in the online appendix (see Appendix 28), along with country scores (Appendices 9 and 10) and the outlets used in the calculation of audience duplication (Appendices 11 through 20).

Hypothesis 1 postulated that countries with high ideological polarization would experience higher levels of epistemic vulnerability. Both models support the hypothesis, with equivalent positive coefficients (0.364 and 0.378) and p-values (.04 and .034). Consider the UK, which experiences very

Model 1: LWP and RWP disaggregated. Model 2: Populism collapsed.
Note: Green areas show hypothesized direction.
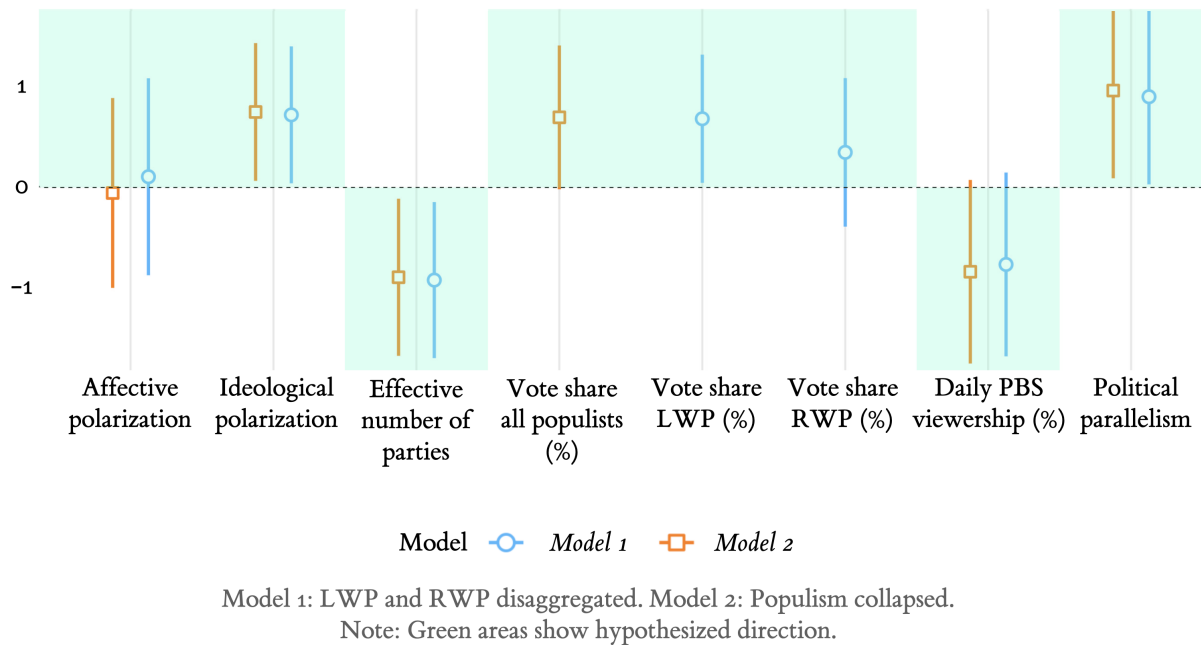
Figure 5: Comparison of Scaled Estimates From Model 1 and Model 2.

high levels of ideological polarization (ideopol=8.09). Model 2 predicts that, everything else constant, the UK would drop to fourth least vulnerable country (predicted EV=-2.50) as opposed to its current eighth position (actual EV=-0.48) if it had the same level of ideological polarization as Ireland (ideopol=2.76). If its level of ideological polarization dropped down to Poland's very low levels (ideopol=1.65), the UK would actually overtake the Netherlands as third least vulnerable country (predicted EV=-2.92). The finding holds irrespective of whether populism is collapsed or disaggregated.

Hypothesis 2 proposed that countries with higher levels of affective polarization would exhibit increased epistemic vulnerability. While the hypothesis receives tentative support from alternative models that rely on older data for political parallelism (see Appendices 25 and 28), Model 1 and Model 2 find no evidence to support the hypothesis. I performed a robustness checks on both models by substituting my measure of affective polarization with data from the V-DEM dataset (see Appendix 23). The change in measure did not significantly affect the findings of either base models. Consequently,

hypothesis 2 must be rejected.

Hypothesis 3 stated that levels of epistemic vulnerability would be inversely correlated with the effective number of parties in a given country. Both models support the hypothesis, with equivalent coefficients (-0.499 and -0.483) and p-values (.024 and .029). Large party systems are associated with lower EV scores, smaller party systems are associated with higher scores. Consider the US, which currently ranks as the fourth most epistemically vulnerable country (actual EV=2.47). If the US had the same number of parties as the Netherlands (8.5) instead of its majoritarian two-party system, model 1 predicts that, *ceteris paribus*, the US would recede to a more enviable eleventh position (predicted EV=-0.32) in the country rankings, just between Romania (EV=-0.33) and Portugal (EV=0.02).

Hypothesis 4 proposed that epistemic vulnerability would be higher in countries where populists are electorally stronger. The hypothesis is generally supported by both models, though with nuances. Model 1 finds a substantial, positive effect of left-wing populism on epistemic vulnerability (0.055, p=.038), but no significant effect for right-wing populism. Model 2, which collapses left- and right-wing populism into one variable, shows that for every additional percentage point of the vote earned by populists in a given country, its EV score increases by 0.034 (p=.055). Consider the following illustrations. The EU average vote share for populists in individual countries stands at 27.98%. In terms of election results, Romania has the weakest populist organizations (0.36%) and currently is the twelfth most epistemically vulnerable country (actual EV=-0.33). Model 2 predicts that if Romania's populist organizations had the average electoral strength of EU populists, Romania would move up to eighth most vulnerable country in the rankings (predicted EV=0.6), *ceteris paribus*. Hungary is another pertinent case. In Hungary, populists won 68.9% of the vote in 2018. If the vote share of Hungarian populists fell to EU average levels, Hungary would go from most epistemically vulnerable country (actual EV=3.92) to third place (predicted EV=2.54). Consider this last example. In Greece, left-wing populists won 45.1% of the vote in 2015, making it a good case to interpret the effect of left-wing populism on the EV index. If instead they had only won 10% of the vote, Model 1 predicts that Greece would recede to fifth most vulnerable country (predicted EV=1.90) instead of second (actual

EV=3.82). Maps comparing the geographical distribution of EV scores and populist strongholds are displayed in Figures 6 and 7. Overall, hypothesis 4 is supported by the models, though the findings are nuanced when left- and right-wing populism are distinguished.

Hypothesis 5 predicted that countries with larger PBS viewership would be less epistemically vulnerable. Both models find a large negative effect of PBS viewership on epistemic vulnerability approaching significance at the 0.1 level (p-values of .094 and .069). Note that the finding is even stronger and statistically significant at the 0.05 level in almost all of the alternative models reported in the online appendix (Appendices 26 through 28). The finding is robust to the use of alternative measures for populism, media-party parallelism, and affective polarization (see Appendices 23 through 25). With an N of only 20, I interpret this as strong evidence that daily viewership of PBS and epistemic vulnerability move together. Italy is currently the eighth most vulnerable country in the rankings (actual EV=0.68). The daily audience of Italian PBS amounts to 36.2% of the population. Model 2 predicts that if the daily audience of Italian PBS dropped to US levels (9.6%), Italy would move up to sixth most epistemically vulnerable country (predicted EV=1.96). The UK serves as an ideal case for examining the relationship between PBS viewership and the EV index. With a hypothetical reduction in PBS viewership, from current levels (46.3%) to US levels, the UK would escalate from twelfth most vulnerable country (actual EV= -0.48) to sixth (predicted EV=1.28).

While political parallelism was generally anticipated to affect EV scores, no formal hypothesis was proposed on the matter. Both Model 1 and Model 2 find a large effect for media-party parallelism (1.275 and 1.365), significant at the 0.05 level (p-values of .036 and .026). Denmark, currently the second least epistemically vulnerable country in the sample (actual EV=-4.72), has the lowest score on the political parallelism index (-1.27). According to Model 2, if its parallelism score was equivalent to that of Spain (0.97), Denmark would recede to being only the fifth least vulnerable country in the rankings (predicted EV=-1.68).

Comparing different measures of political parallelism added fascinating nuance to the models' findings. The European Media Systems Survey (EMSS) 2010 included independent measures for

Epistemic vulnerability scores
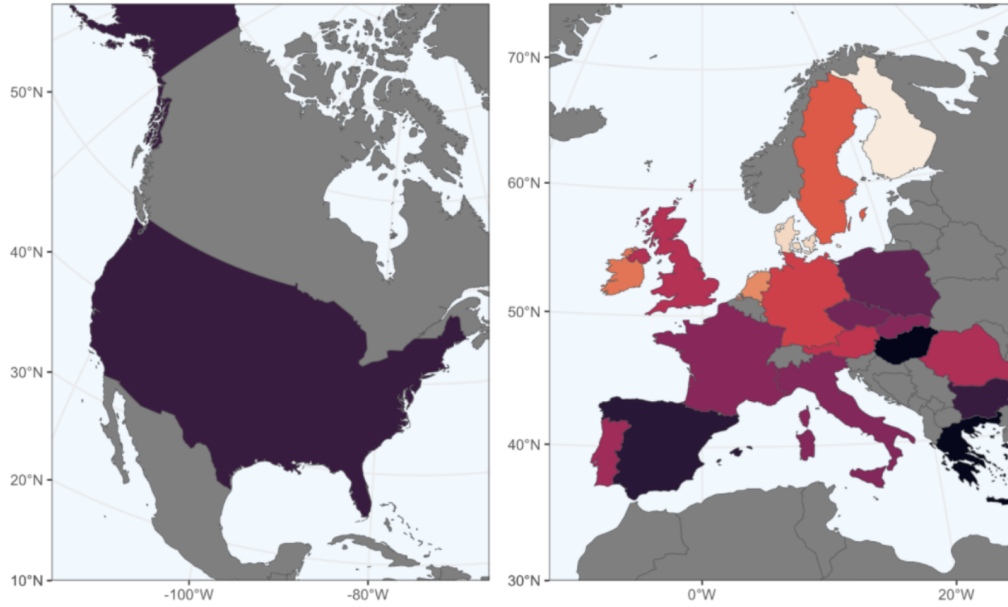
Populist strongholds
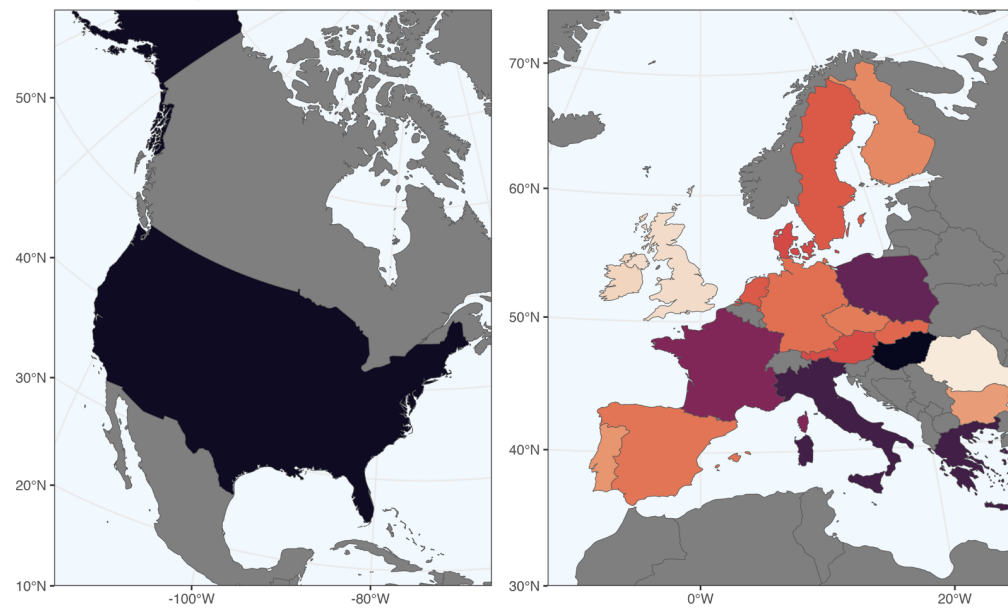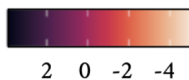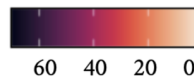
Figure 6: Maps of Epistemic Vulnerability and Populist Strongholds.

Electoral strength of left-wing populists
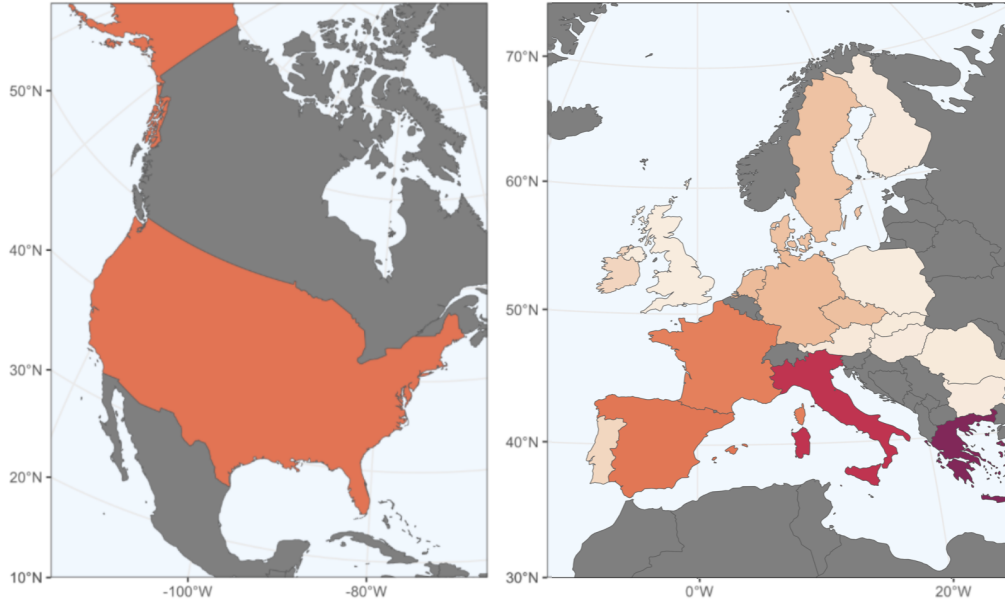
Electoral strength of right-wing populists

Vote share (%)

60   40   20   0
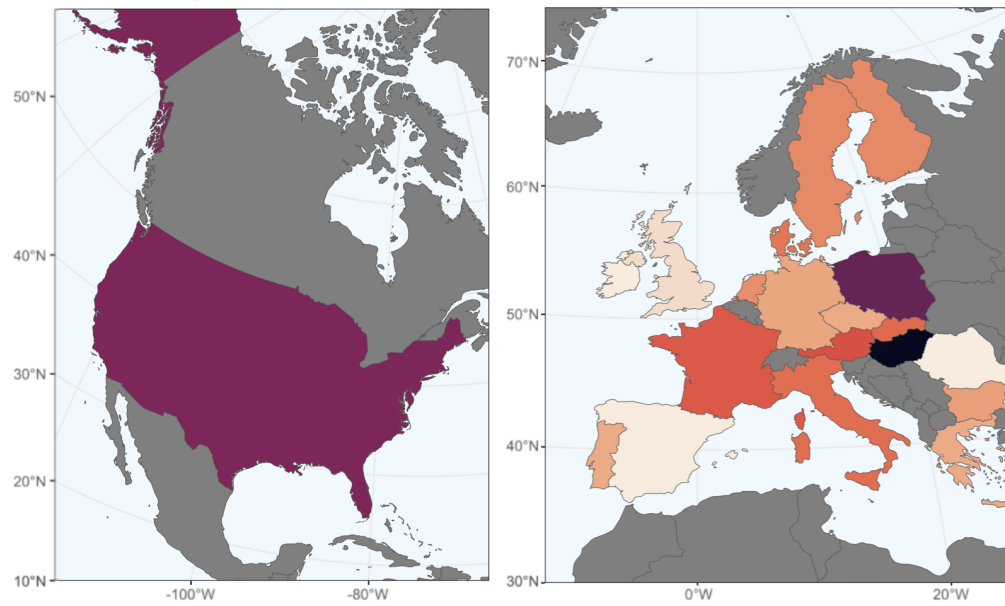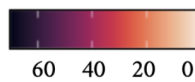
Figure 7: Geographical Distribution of Left- and Right-Wing Populism.

newspaper and television parallelism. The post-hoc analysis conducted using these two variables instead of Humprecht and colleagues' (2022) political parallelism index suggests that the observed effect may primarily be the result of newspaper parallelism, and not television parallelism. One of the alternative models predicts that if the UK – which exhibits the highest level of newspaper parallelism (15.20) in the EMSS data – had the same levels of newspaper parallelism as Slovakia (7.32), the UK would rank as the second least epistemically vulnerable country of all (predicted EV=-5.13), *ceteris paribus*. Granted that the measures are older, the finding calls for further inquiry into the impact that partisan newspapers and tabloids have on epistemic vulnerability.

Conclusion

While the political and institutional symptomatology of the decline of democracies is well documented, the literature on epistemic threats remains less integrated. Most research has examined epistemic problems in isolation, overlooking what they collectively say about the state of the public, the health of democracy, and the fragility of its epistemic foundations. Recent scholarship showing that epistemic problems may arise even in the absence of falsehoods has led to growing pains for our field, and called for a more expansive framework. In this study, I discussed how to integrate the literature on epistemic problems and proposed a broadly encompassing framework that goes beyond the traditional focus on falsehoods: epistemic vulnerability. This framework is an attempt to more fully capture the erosion of the authority and value of political information, which has exerted considerable strain on the public spheres of many Western democracies. The EV index proposed alongside the new construct is used to quantify epistemic vulnerability at the system level and in a comparative manner.

The study sought to answer the following questions. How do levels of epistemic vulnerability vary across Western democracies? What is the degree of correspondence between the EV index and previous classifications of media systems? What is the relationship between the structure of politi-

cal and media systems and epistemic vulnerability? Results show a remarkable correspondence with previous typologies of media systems. Northern European countries are more epistemically resilient while the US, Spain, and Eastern European countries are more epistemically vulnerable. The study also finds that daily viewership of public television and the size of party systems are strongly and inversely related to epistemic vulnerability. On the other hand, political parallelism, ideological polarization, and populism are associated with higher levels of epistemic vulnerability.

Naturally, this study is not devoid of limitations. First, the cross-sectional data precludes definitive causal conclusions, despite reasonable theoretical expectations regarding the relationships between system-level predictors and the EV index. Relatedly, the data used in this study do not permit assessing the longitudinal stability of the index. Since the metric is built from country averages of public attitudes, the EV index is likely to respond to variations in factors that can be expected to have an effect on epistemic vulnerability. Future studies should address this limitation and assess the sensitivity of the EV index to events known to influence its three constituent dimensions, such as elections, or changes in government.

Another limitation of the study concerns potential heterogeneity introduced at the individual level by traits and behaviors such as ideology, partisanship, personality, selective exposure, and cognitive biases like the Dunning-Kruger effect, among others. Future research, especially at the individual-level, should account for both systemic and individual factors and should explore different ways that the three dimensions captured by the index might move together.

The geographical scope of the study represents another limitation. Future efforts should try to expand beyond the Global North. However, the theoretical assumptions behind the inclusion of important predictors, like PBS and political parallelism, coupled with concerns about the cross-national validity of instruments used to build important measures, like the left-right scale for polarization, further complicate this endeavor.

More generally, the study raises important questions regarding the role of the press in maintaining epistemic resilience. Countries where more people report using public media every day are associated

with lower EV index scores. This corroborates the notion of needing to treat information as a public service. It is still unclear whether the effect is a result of the decoupling of journalistic revenues from readership, the greater regulations imposed on PBS, or media ownership itself. Future studies should distinguish between the effects of license fees, journalistic norms, media regulations and full state ownership, partial ownership or private ownership. Without further evidence, the present study still suggests that decoupling revenues of journalism from readership, sound regulations, and making sure that the news media are in the hands of actors more concerned with providing information than entertainment are healthy democratic objectives.

The potential role played by newspapers in epistemic vulnerability is another important finding of this study, though the evidence is not as strong. Alternative models included in this study pinpoint newspaper parallelism as a prominent predictor of the EV index. This insight contrasts with the dominant narrative that paints newspapers as bastions of higher-quality news compared to broadcast or digital media. This narrative is highly US-centric and reveals what one could call the "Pulitzer Prize Syndrome" of journalism research, i.e., focusing on investigative journalism, highest journalistic norms, and a history of unearthing important political scandals such as Watergate. The British newspaper industry is for instance much more partisan, more frequently engaged in policy advocacy, and is far less authoritative than print press is in the US context. Granted that the data behind this finding are older and the empirical evidence thus weaker, future comparative research should certainly follow efforts by Chadwick and colleagues (2018) and consider the contribution of partisan newspapers and tabloids to epistemic problems.

The theoretical framework and empirical findings of this study hold crucial implications for democratic health. Epistemic vulnerability should be understood as a pathology of democracy in its own right, on the same level as institutional stress or the erosion of democratic norms. Theoretically, epistemic vulnerability may be a catalyst for various democratic dysfunctions and produce a plethora of negative outcomes, both at the individual and system level. In its most extreme form, epistemic vulnerability might possibly be an antecedent of challenges to the legitimacy of democratic

institutions and governance. One avenue for future research is to look at the influence of epistemic vulnerability on behavior and non-behavior, possibly through internal self-inefficacy. For whom is epistemic vulnerability an impediment to political action, and for whom is it not? Another is to study the effect epistemic vulnerability may have on various forms of political polarization, and also attitudes that are corrosive to democracy.

References

Abramowitz, Alan. 2008. "Don't Blame Primary Voters for Polarization." *The Forum* 5(4). doi: 10.2202/1540-8884.1210.

Brüggeman, Michael, Sven Engesser, Florin Büchel, Edda Humprecht,and Laia Castro. 2014. "Hallin and Mancini Revisited: Four Empirical Types of Western Media Systems." *Journal of Communication* 64(6): 1037-1065. doi:10.1111/jcom.12127.

Chadwick, Andrew, Cristian Vaccari, and Ben O'Loughlin. 2018. "Do tabloids poison the well of social media? Explaining democratically dysfunctional news sharing." *New Media & Society* 20(11): 4255-4274. doi: 10.1177/1461444818769689.

Geer, John G. 1988. "Assessing the Representativeness of Electorates in Presidential Primaries." *American Journal of Political Science* 32(4): 929-945. doi:10.2307/2111195.

Gerber, Elisabeth R., and Rebecca B. Morton. 1998. "Primary Election Systems and Representation." *Journal of Law, Economics, & Organization* 14(2): 304-324.

Hallin, Daniel C., and Paolo Mancini. 2004. *Comparing Media Systems.* Cambridge, MA: Cambridge University Press.

Hirano, Shigeo, James M. Snyder, Jr., Stephen Ansolabehere, and John Mark Hansen. 2010. "Primary Elections and Partisan Polarization in the U.S. Congress." *Quarterly Journal of Political Science* 5: 169-191. doi:10.1561/100.00008052.

Humprecht, Edda, Laia Castro Herrero, Sina Blassnig, Michael Brüggeman, and Sven Engesser. 2022. "Media Systems in the Digital Age: An Empirical Comparison of 30 Countries." *Journal of Communication* 00: 1-20. doi:10.1093/joc/jqab054.

Humprecht, Edda, Frank Esser, and Peter Van Aelst. 2020. "Resilience to Online Disinformation: A Framework for Cross-National Comparative Research." *The International Journal of Press/Politics*: 1-24. doi:10.1177/1940161219900126.

Laakso, Markku, and Rein Taagepera. 1979. "The 'Effective' number of parties: a measure with application to West Europe." *Comparative Political Studies* 12(1): 3-27. doi:10.1177/001041407901200101.

Norrander, Barbara. 1989. "Ideological Representativeness of Presidential Primary Voters." *American Journal of Political Science* 33(3): 580-587. doi:10.2307/2111063.

Ranney, Austin. 1968. "The Representativeness of Primary Electorates." *Midwest Journal of Political*

Science 12(2): 224-238. doi:10.2307/2110334.

Sides, John, Chris Tausanovitch, Lynn Vavreck, and Christopher Warshaw. 2020. "On the Representativeness of Primary Electorates." *British Journal of Political Science* 50(2): 677-685. doi: 10.1017/S000712341700062X.

Wagner, Markus. 2021. "Affective polarization in multiparty systems." *Electoral Studies* 69: 102199.

Chapter 5

Policy Implications & New Questions

How can we differentiate hyper-partisan news outlets from moderately partisan or responsible "mainstream" news? How do levels of epistemic vulnerability vary across Western democracies? What is the relationship between the structure of political and media systems and levels of epistemic vulnerability? These were the questions that motivated the writing of this dissertation.

Chapter 2 attempted to answer the first question. By detecting abnormal audience behavior, whether in the form of ideological lean or voting bias, researchers can establish preliminary evidence that a news channel is producing partisan, propagandistic, or otherwise anti-pluralistic content. I introduced new audience-level metrics of audience partisanship and tested it on the French media ecosystem and produced empirical indicators suggesting abnormalities with the audience of CNEWS in terms of ideological lean and partisanship. The comparison with Fox News corroborates parallels between the two channels. In fact, the voting bias indicator actually shows that CNEWS is more electorally biased towards the far right compared to the French national sample than the audience of Fox News is in the US. Beyond the comparative study of rogue television channels, this now-tested approach could be repurposed to evaluate other platforms, e.g. studying the consequences of membership in marginal online groups.

Chapter 4 provided strong empirical answers to the other questions this dissertation opened with. A clear pattern emerges from the data. On the one hand, Northern European countries are less epistemically vulnerable. On the other hand, the US, Spain, and Eastern European countries appear more exposed to epistemic threats. While polarization is often thought of as a comorbidity of the decline in informational quality, and as a corollary of media polarization, my findings are more nuanced. My base models only corroborate the relationship between ideological polarization and epistemic vulnerability. More decisively however, political parallelism and populism are strongly associated with the overall degradation of news environments, and public broadcasting viewership and the size of party systems are both inversely related to epistemic vulnerability.

New questions rise from this dissertation regarding the role of the press in maintaining a healthy news environment, along with potential policy implications. Daily public media viewership is one of the strongest predictors of epistemic vulnerability. Countries where more people use public media more often are more epistemically resilient. This corroborates the notion of needing to treat information as a public service rather than as a business. My analyses cannot separate the effects of mere viewership, the amount paid in license fees, journalistic norms, media regulations and full state ownership, partial ownership, or private ownership. However, the fact that daily public broadcasting viewership is strongly, inversely correlated with epistemic vulnerability suggests that decoupling the revenues of journalism from readership, encouraging sound regulations, and making sure that the news media are in the hands of actors more concerned with providing information than providing entertainment are healthy democratic objectives.

In that respect, future studies could investigate the relationship between PBS license fees and epistemic vulnerability. The models used in chapter 4 suggest that more generous funding should lead to more epistemically resilient news environments. That being said, a better funded public broadcasting system could generate more suspicions of partisanship in countries where history has planted deep seeds of political cynicism and skepticism towards national governments, such as in post-soviet European systems. In Poland and Hungary, public television does not enjoy the same rep-

Table 4: Total and Public Funding of Public Broadcasting (USD Per Capita, 2018).

Country	Public Funding	Total Funding
Austria	85.16	135.27
Bulgaria	9.45	10.54
Czech Republic	34.90	38.50
Denmark	102.83	198.60
Finland	98.91	101.59
France	66.54	81.18
Germany	116.09	134.53
Greece	19.97	24.41
Hungary	28.39	37.49
Ireland	54.33	91.73
Italy	34.36	50.39
Netherlands	46.63	61.39
Poland	9.19	18.80
Portugal	20.58	27.59
Romania	9.73	10.77
Slovakia	24.22	25.96
Spain	44.78	49.06
Sweden	88.43	92.94
United Kingdom	82.60	119.80
United States	1.36	1.51

utation as in most other democracies, as their national governments have progressively seized power

of the media apparatus and drifted toward illiberal governance. Nonetheless, countries that are most

epistemically resilient tend to be those where public newscasters are better funded, and vice versa.

Perhaps, one avenue of research is to look at the source of funding, though it is probable that citizens

do not have immediate knowledge of the magnitude or sources of the funds. Table 4 shows public

and total funding for public broadcasting in all the countries considered in this study as of 2018. Note

that the epistemic vulnerability index is strongly, inversely correlated with public and total funding

(see Figure 8). Additionally, note that daily public broadcasting viewership is almost perfectly corre-

lated with funding, especially total funding (see Figure 9). I obtained these data from the European

Audiovisual Observatory Yearbook 2018/19 and financial statements from the US Corporation for

Public Broadcasting and Affiliates.

Another important discovery of this dissertation concerns the role that newspapers can play in

undermining the health of the overall news environment. Studies have hitherto tended to overlook

the role of print journalism, which makes the literature on the role of newspaper parallelism in the

three dimensions of epistemic vulnerability excessively limited. However, alternative models reported

in the appendix suggest that newspaper parallelism has a very strong and significant effect on epis-

temic vulnerability.

If any finding echoes forth from this dissertation, let it be that focusing primarily on the role

of social media or partisan television to explain epistemic vulnerability is far too narrow and fails to

capture epistemic threats that are much more pervasive than originally thought. Truly brilliant stud-

ies showcase the role of partisan television and social media in the spread of disinformation, such as

Benkler, Faris and Roberts' (2018) *Network Propaganda*. Other remarkable studies show the posi-

tive effects of reading newspapers on individual levels of political knowledge, political reasoning and

cross-cutting exposure. The evidence is particularly strong at the local level (for a complete review,

see Liu et al. 2013). Note that earlier studies highlighted what Tichenor, Donohue and Olien (1970)

called the 'knowledge gap hypothesis,' i.e. education or SES-related gap in knowledge, which many
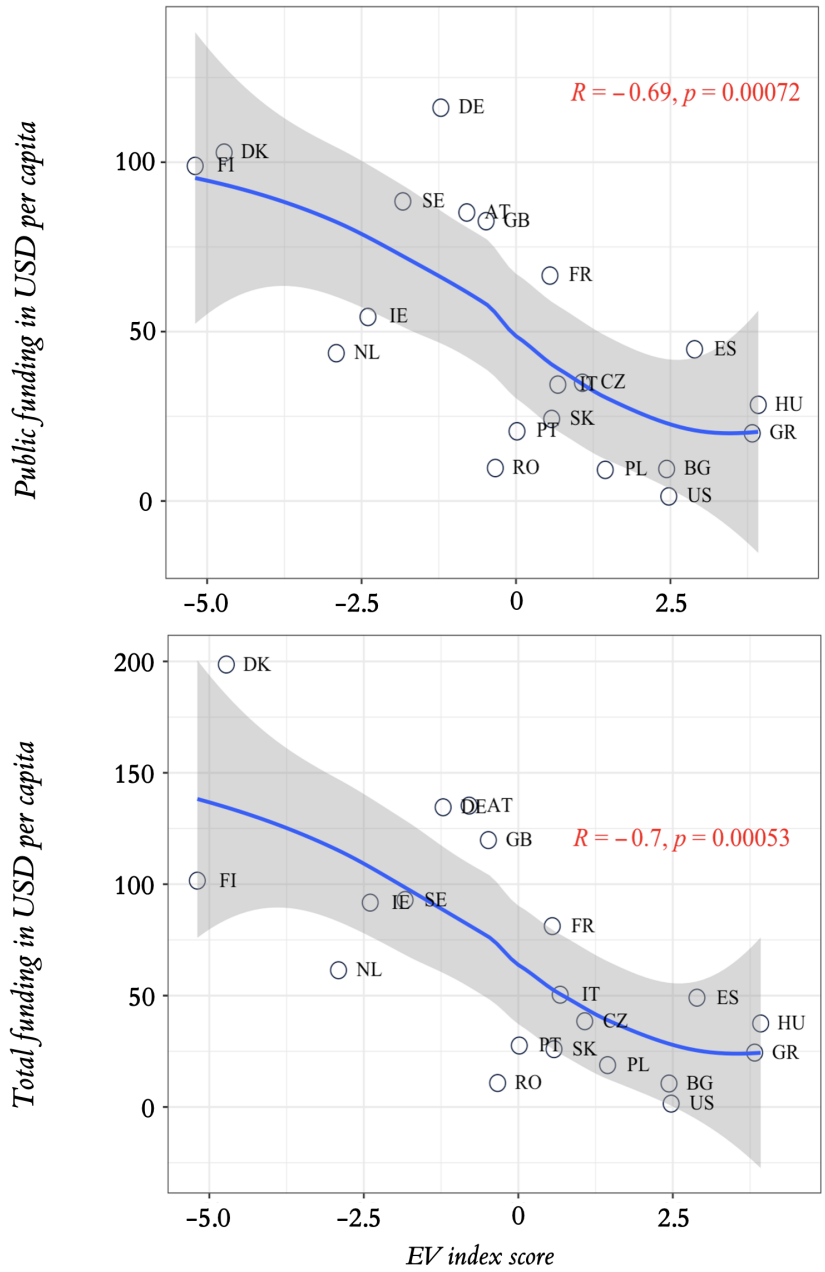
Figure 8: Scatterplots of Epistemic Vulnerability and Funding for Public Media

at the time believed was quite large for newspapers and could be levelled by television news (Chaffee, Zao and Leshner 1994; Clarke and Freddin 1976; Culbertson and Stempel, III 1986; De Waal and Schoenbach 2008; Eveland and Scheufele 1998; Kaufhold, Valenzuela and Gil de Zuñiga 2010; Kwak 1990; Moy et al. 2005; Smith, III 1986; Tewksbury and Althaus 2000).

Yet, this narrative is highly US-centric and shines a bright light on what I call the "Pulitzer Prize Syndrome" of journalism research. Newspapers do not only produce investigative journalism. They do not always uphold the highest of journalistic norms. Their history is not just one of unearthing important political scandals such as Watergate. This narrative is a romanticized reconstruction of the role of the print press that resulted from the dramatic collapse of the newspaper industry and local papers fifteen years ago. Their history is also one of party papers, yellow journalism and, more recently, the tabloidization of public affairs news (for a thorough review of the early stages of the US newspaper industry, see Bimber 2003). This Pulitzer Prize Syndrome of American research overlooks important variations in national contexts and path dependency. Various Northern European newspapers, still commit to firm ideological standpoints such as The Sun and The Mirror in the UK, or the Frankfurter Allgemeine and the Süddeutsche Zeitung in Germany (Lelkes 2016). The British newspaper industry particularly stands out for largely engaging in policy advocacy, and for being notoriously plagued by the tabloidization of news. While some studies looked at the impact of newspaper type (e.g. local vs. national) on political knowledge (Johnson et al. 1995), this strand of the literature has largely rescinded and focused almost exclusively on education and SES-based knowledge gaps across news sources types. Future research must reevaluate the role and influence of partisan newspapers in the spread of disinformation, its effects on media literacy and perceptions of news quality, its effects on public attitudes towards the media and institutions, and its effects on knowledge of public affairs—including feelings of disorientation. Meta-analytic work in that area would be welcome.

The introduction of the EV index paves the way for future inquiry into new empirical questions. One of them especially piques my interest. Since the metric is built from country averages of public attitudes, the EV index is likely to respond to variations in factors that can be expected to have an ef-
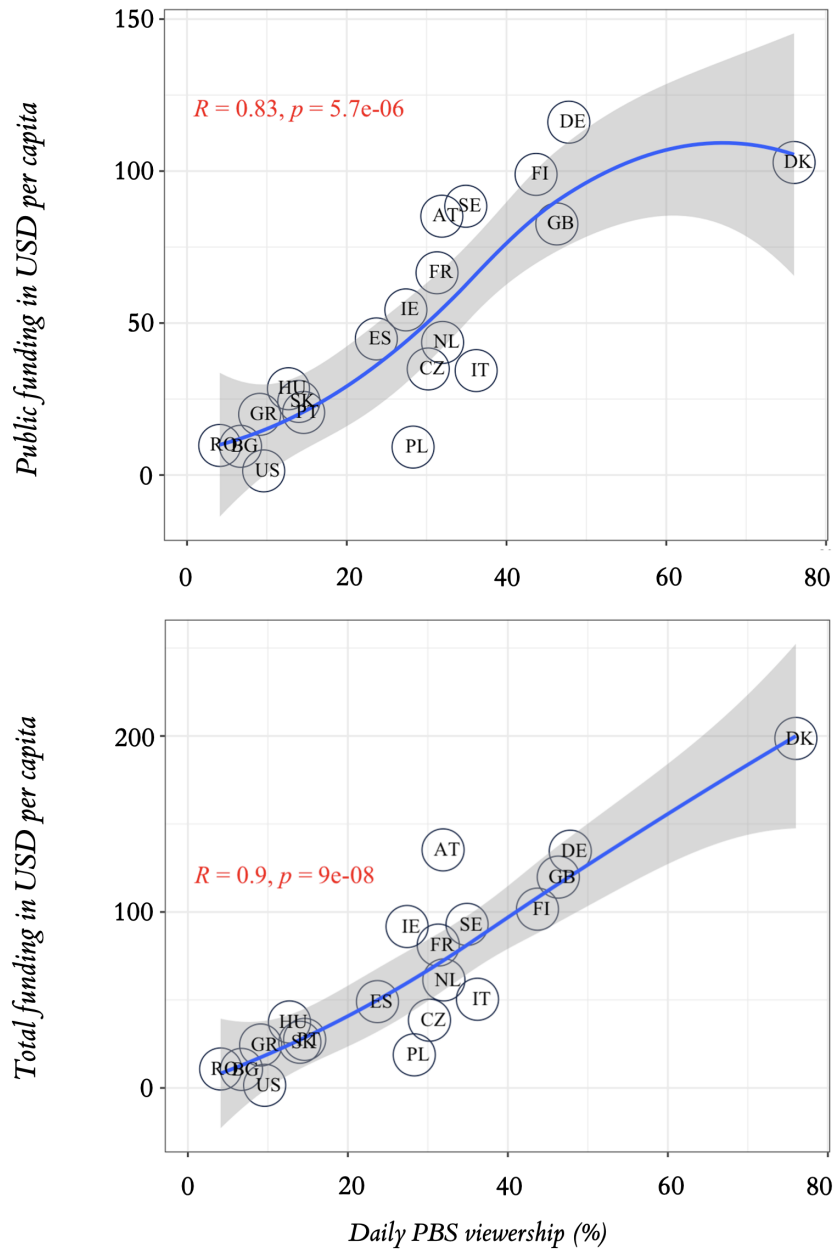
Figure 9: Scatterplots of Public Media Funding and Daily Viewership.

fect on epistemic vulnerability. Future studies should address this limitation and assess the sensitivity of the EV index to events known to influence epistemic attitudes. Two of the best documented environmental factors supposed to explain variations in the amount of disinformation circulating online are political and economic crises, and a country's electoral schedule (Metaxas and Mustafaraj 2012; Marchal et al. 2019). A report from the ACGOM (Autorità per le Garanzie nelle Comunicazioni) showed that the level of false news circulating in Italy peaked as the elections of 2018 were imminent (AGCOM 2018, vii). Similarly, a disinformation campaign against Emmanuel Macron, which had remained largely dormant throughout the election cycle, and which suggested that Emmanuel Macron owned an off-shore bank account and was secretly in a same-sex relationship, practically overtook the total amount of professional news stories produced shortly before the second round of the 2017 election (Ferrara 2017). The traffic originating from Twitter bots even doubled between the two rounds of the election (Desigaud et al. 2017, 4). In Sweden, the ratio of hard news to junk news reached 2:1 in the last days of the 2018 elections (Hedman et al. 2018). That same ratio reverted back to 8:1 in 2019 (Marchal et al. 2019). This begs the following questions: Does epistemic vulnerability fluctuate in predictable manners due to circumstances? Is the effect consistent cross-nationally, and what is the lifecycle of that effect? To speak more bluntly, do elections render news environments more epistemically vulnerable—due to greater exposure to disinformation, increased partisan messaging, greater mistrust in the media, the hostile media phenomenon, and motivated reasoning?

Overall, this dissertation presents a critical theoretical framework and empirical analysis that enhances our understanding of democracy's health. Epistemic vulnerability should be considered as a pathology of democracy in its own right, comparable in severity to institutional stress or the erosion of democratic norms. The theory suggests that epistemic vulnerability could act as a catalyst for various democratic dysfunctions, both at the macro and micro levels. As suggested in Chapter 3, epistemic vulnerability in its most advanced form might precede challenges to the legitimacy of democratic institutions and governance. Future research directions could include investigating how epistemic vulnerability affects attitudes detrimental to democratic values, and fuels other dysfunc-

tions of liberal democracy.

Bimber (2003) elegantly speaks of the role of information in democratic governance:

> [I]nformation becomes vital to democracy in myriad ways: in the processes by which citizen preferences
> are formed and aggregated, in the behavior of citizens and elites, in formal procedures of representation,
> in acts of governmental decision making, in the administration of laws and regulations, and in the mech-
> anisms of accountability that freshen democracy and sustain its legitimacy. None of these elements of the
> democratic process can operate apart from the exchange and flow of information among citizens and their
> associations and organizations, among citizens and government, and within government itself (11-12).

In a time where hard-right and populist movements grow from and contribute to epistemic chal-
lenges, a comprehensive examination of threats posed by our information-saturated world is neces-
sary. I believe that the theoretical framework and metrics proposed in this dissertation will help in this
endeavor. Democratic governance assumes the existence of a healthy public sphere, where disagree-
ments are settled on the basis of shared facts and norms. To the maintenance of that public sphere,
epistemic resilience instrumental. This dissertation is only the first block of what I hope will become
a rich, thriving literature on epistemic vulnerability.

References

AGCOM. 2018. "News vs Fake nel sistema dell'informazione." Report available at: https://wwwagc
    omit/documents/10179/12791486/Pubblicazione+23-11-2018/93869b4f-0a8d-4380-aad2-c10a0
    e426d83?version=10.

Benkler, Yochai, Robert Faris, and Hal Roberts. 2018. *Network propaganda: Manipulation, dis-
    information, and radicalization in American politics*. Oxford, UK: Oxford University Press.
    doi:10.1017/S1537592719001816.

Bimber, Bruce. 2003. *Information and American Democracy: Technology in the Evolution of Political Power*. Cambridge: Cambridge University Press.

Chaffee, Steven H., Xinshu Zhao, and Glenn Leshner. 1994. "Political Knowledge and the Campaign Media of 1992." *Communication Research* 21: 305-324. doi:10.1177/009365094021003004.

Clarke, Peter, and Eric Fredin. 1978. "Newspapers, Television and Political Reasoning." *The Public Opinion Quarterly* 42(2): 143-160. doi:10.1086/268439.

Culbertson, Hugh M., and Guido H. Stempel, III. 1986. "How Media Use and Reliance Affect Knowledge Level." *Communication Research* 13(4): 579-602. doi:10.1177/009365086013004004.

De Waal, Ester, and Klaus Schoenbach. 2008. "Presentation Style and Beyond: How Print Newspapers and Online News Expand Awareness of Public Affairs Issues." *Mass Communication and Society* 11: 1-16. doi:10.1080/15205430701668113.

Desigaud, Clementine, Philip N. Howard, Samantha Bradshaw, Bence Kollanyi, and Gillian Bolsolver. 2017. "Junk News and Bots during the French Presidential Election: What Are French Voters Sharing Over Twitter in Round Two?" *Data Memo 2017.4.* Oxford, UK: Project on Computational Propaganda. Available at: comprop.oii.ox.ac.uk.

Eveland, William P., and Dietram A. Scheufele. 2000. "Connecting News Media Use With Gaps in Knowledge and Participation." *Political Communication* 17(3): 215-237. doi:10.1080/105846000414250.

Ferrara, Emilio. 2017. "Disinformation and social bot operations in the run up to the 2017 French

presidential election." *First Monday* 22(8). Available at: doi:10.5210/fm.v22i8.8005.

Johnson, Michele, Keith Stamm, Joanne Lisosky, and Jeannette James. 2005. "Differences Among Newspapers in Contributions to Knowledge of National Public Affairs." *Newspaper Research Journal* 16(3): 82-95. doi:0.1177/073953299501600308.

Kaufhold, Kelly, Sebastian Valenzuela, and Homero Gil de Zuñiga. 2010. "Citizen Journalism and Democracy: How User-Generated News Use Relates to Political Knowledge and Participation." *Journalism & Mass Communication Quarterly* 87(3-4): 515-529. doi:10.1177/107769901008700305.

Kwak, Nojin. 1990. "Revisiting the Knowledge Gap Hypothesis: Education, Motivation, and Media Use." *Communication Research* 26(4): 385-413. doi:10.1177/009365099026004002.

Lelkes, Yphtach. 2016. "Winners, losers, and the press: The relationship between political parallelism and the legitimacy gap." *Political Communication* 33: 523–543. doi:10.1080/10584609.2015.1117031.

Liu, Yung-I, Fei Shen, William P. Eveland, and Ivan Dylko. 2013. "The Impact of News Use and News Content Characteristics on Political Knowledge and Participation." *Mass Communication and Society* 16: 713-737. doi:10.1080/15205436.2013.778285.

Marchal, Nahema, Bence Kollanyi, Lisa-Maria Neudert, and Philip N. How-ard. 2019. "Junk News During the EU Parliamentary Elections: Lessons from a Seven-Language Study of Twitter and Facebook." *Data Memo 2019.3.*

Metaxas, Panagiotis T., and Eni Mustafaraj. 2012. "Science and Society: Social Media and the Elections." *Science* 338(6106): 472-473. doi:10.1126/science.1230456.

Moy, Patricia, Michael R. McCluskey, Kelley McCoy, and Margaret A. Spratt. 2005. "Political Correlates of Local News Media Use." *Journal of Communication* 54(3): 532-546. doi:10.1111/j.1460-2466.2004.tb02643.x.

Smith, Hampden H., III. 1986. "Newspaper Readership as a Determinant of Political Knowledge and Activity." *Newspaper Research Journal* (7)2: 47-54. doi:10.1177/073953298600700206.

Tewksbury, David, and Scott L. Althaus. 2000. "Differences in Knowledge Acquisition Among Readers of the Paper and Online Versions of a National Newspaper." *Journalism & Mass Communication Quarterly* 77(3): 457-479. doi:10.1177/107769900007700301.

Tichenor, Phillip J., George A. Donohue, and Clarice N. Olien. 1970. "Mass Media Flow and Differential Growth in Knowledge." *Public Opinion Quarterly* 34(2): 159-170. doi:10.1086/267786.

Appendix A

Supplemental Material

Appendix 1: Pearson's Correlations For 3 Dimensions of Ideology.

United States – all respondents

	Political issues	Economic issues	Cultural and social issues
Political issues	1	.833**	.810**
Economic issues	.833**	1	.771**
Cultural and social issues	.810**	.771**	1

** Correlation is significant at the 0.01 level (2-tailed)

France – all respondents

	Political issues	Economic issues	Cultural and social issues
Political issues	1	.763**	.720**
Economic issues	.763**	1	.774**
Cultural and social issues	.720**	.774**	1

** Correlation is significant at the 0.01 level (2-tailed)

Appendix 2: Dispersion Analysis of Left-Right Scores of News Audiences.

	Usage	Mean	Std. Deviation
	Multi-daily	7.2667	2.07612
CNEWS	Daily+	6.5214	2.3348
	Weekly	6.1206	2.38772
	Multi-daily	5.9602	2.29791
TF1	Daily+	5.8983	2.42455
	Weekly	5.6215	2.48015
	Multi-daily	6.0324	1.928
M6	Daily+	5.6282	2.30561
	Weekly	5.5438	2.47754
	Multi-daily	6.0813	2.29231
BFMTV	Daily+	5.9114	2.39249
	Weekly	5.7195	2.45332
	Multi-daily	6.408	2.19992
LCI	Daily+	6.0461	2.38585
	Weekly	5.5822	2.41687
	Multi-daily	6.408	2.19992
FranceTV	Daily+	6.0461	2.38585
	Weekly	5.5822	2.41687
	Multi-daily	6.408	2.19992
Fox News	Daily+	6.0461	2.38585
	Weekly	5.5822	2.41687

Appendix 3: Density Plots of Left-Right Scores Per News Source.

France Télévisions   WEEKLY+   DAILY+   MULTI-DAILY

LCI

BFMTV

M6

TF1

CNEWS

Fox News
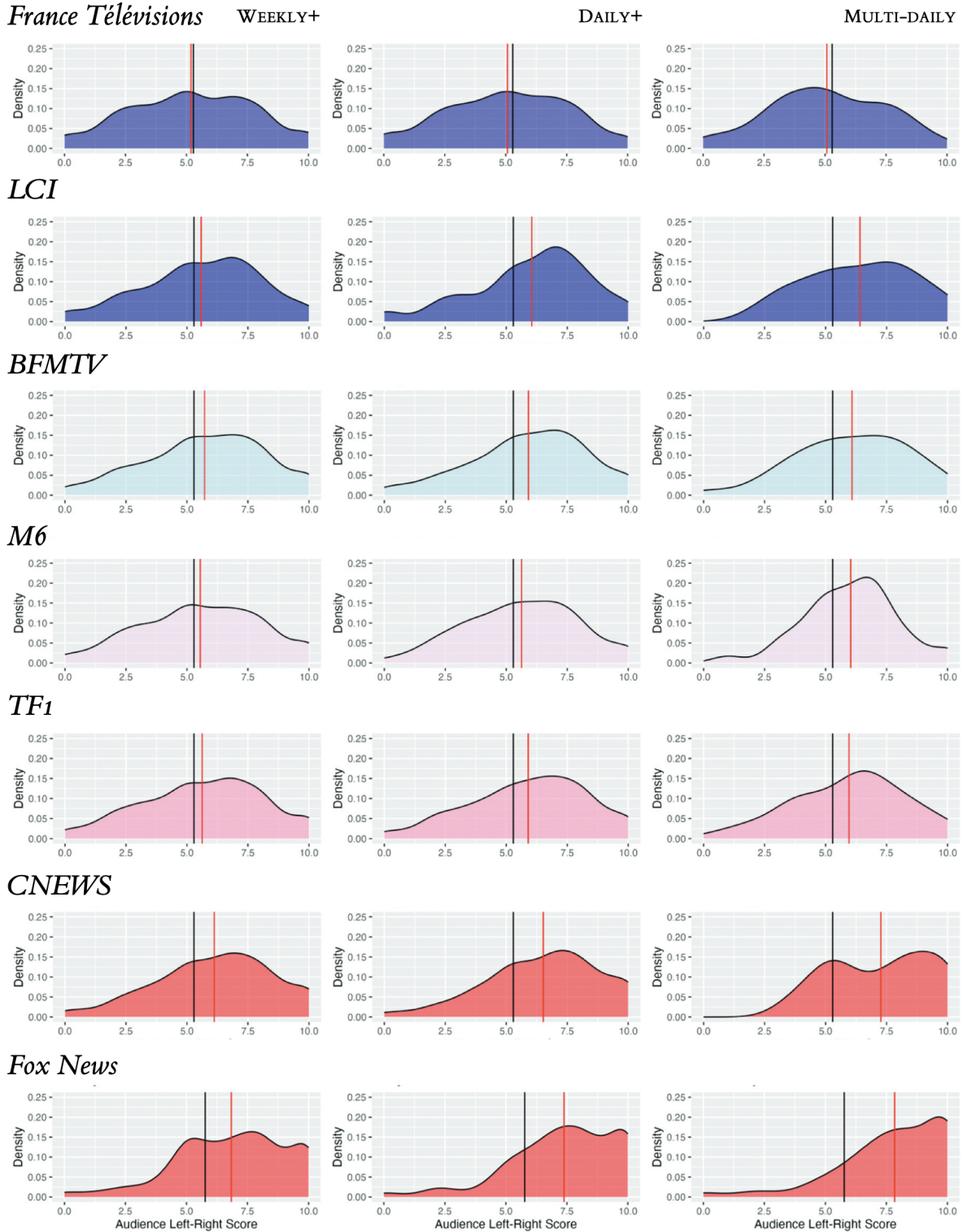
Appendix 4: Size of News Audiences Relative to National Samples.

	Usage	N	%
	Multi-daily	61	3.04
CNEWS	Daily+	242	12.08
	Weekly	691	34.48
	Multi-daily	80	3.99
TF1	Daily+	508	25.35
	Weekly	1186	59.18
	Multi-daily	45	2.25
M6	Daily+	290	14.47
	Weekly	1007	50.25
	Multi-daily	94	4.69
BFMTV	Daily+	376	18.76
	Weekly	930	46.41
	Multi-daily	34	1.70
LCI	Daily+	174	8.68
	Weekly	639	31.89
	Multi-daily	88	4.39
FranceTV	Daily+	541	27.00
	Weekly	1288	64.27
	Multi-daily	111	5.56
Fox News	Daily+	347	17.37
	Weekly	875	43.79

Appendix 5: Data Sources Used to Build Custom Dataset.

Variables	Sources
Perceived exposure to disinformation	Flash Eurobarometer 464, American Trends Panel W45
Trust in the news media	Fl. Eurobarometer 464, ATP W91
Disorientation	Fl. Eurobarometer 464, ATP W45
Ideological polarization	Calculated from CSES III-V
Affective polarization	Calculated from CSES III-V
Effective number of parties	National-level Party Systems dataset, WhoGoverns.eu
Strength of populists	Timbro Authoritarian Populism Index, Portugal's *Comissão Nacional de Eleições*, France's *Ministère de l'Intérieur*, Romania's *Biroul Electoral Central*, Poland's *Pánstwowa Komisja Wyborcza*, The Green Papers.
Daily PBS viewership	European Audiovisual Observatory Yearbook 2018-2019, ReCitCom Project Wave 2022
Audience polarization	Calculated from Reuters DNR survey
Audience duplication	Calculated from Reuters DNR survey
Media-party parallelism	European Media Systems survey 2010, Humprecht et al. 2022

Appendix 6: Affective Polarization Country Scores.

	Election Year	AP Score
Bulgaria	2014	6.920
United States	2020	6.902
Hungary	2018	6.739
Slovakia	2020	5.938
Romania	2014	5.538
Italy	2018	5.345
Poland	2011	5.320
Greece	2015	5.304
Czech Republic	2013	5.278
Sweden	2018	5.165
France	2017	5.096
Spain	2008	5.055
Finland	2019	4.759
Ireland	2016	4.707
Denmark	2019	4.704
Portugal	2019	4.568
Austria	2017	4.480
United Kingdom	2017	4.293
Germany	2017	3.881
Netherlands	2017	3.514

Appendix 7: Ideological Polarization Country Scores.

	Election	IP Score	Fixes Performed
Bulgaria	2017	8.486	
United Kingdom	2017	8.088	
France	2017	7.714	
Slovakia	2020	7.714	
Denmark	2019	6.607	
Czech Republic	2013	6.588	Updated size of parties with 2017 results.
Portugal	2016	6.402	Presidential election data missing. Estimated the L-R position of candidates using ratings of their current or former party for the 2019 elections.
Hungary	2018	6.351	
Spain	2019	5.278	Data entirely missing. Estimated the L-R position of parties using a *SocioMétrica* poll of Spanish voters and 2019 election results for weights.
Greece	2015	5.165	
Sweden	2018	5.096	
Austria	2017	5.055	
Italy	2018	4.759	
United States	2016	4.707	
Bulgaria	2014	4.704	Updated size of parties with 2017 results.
Finland	2019	4.568	
Germany	2017	4.480	
Ireland	2016	4.293	
Romania	2019	3.881	Presidential election data missing. Estimated L-R position of candidates using ratings of their current or former party in the legislative elections
Poland	2015	3.514	Presidential election data missing. Estimated L-R position of candidates using ratings of their current or former party in the legislative elections.

Appendix 8: Electoral Size of Populist Organizations.

	Total LWP	Total RWP	Total Populism
	(%)	(%)	(%)
Austria 2017	0.7	27.6	28.3
Bulgaria 2018	0.3	14.4	14.7
Czech Republic 2017	8.2	12	20.2
Denmark 2015	7.8	21.1	28.9
Finland 2015	0.3	17.9	18.2
France 2017	19.6	26	45.6
Germany 2017	9.3	13	22.3
Greece 2015	45.1	11.9	57
Hungary 2018	0.3	68.6	68.9
Ireland 2016	4.1	0	4.1
Italy 2018	33.9	22.8	56.7
Netherlands 9.1	2017	16.9	26
Poland 2020	0.1	50.5	50.6
Portugal 2021	4	11.9	15.9
Romania 2019	0.4	0	0.4
Slovakia 2016	0.6	23.2	23.8
Spain 2016	21.2	0.2	21.4
Sweden 2018	8	17.8	25.8
United Kingdom 2017	0	1.8	1.8
United States 2016	21.5	46.1	67.65

Appendix 9: Audience Polarization Country Scores.

Country	Audience Polarization
United States	0.690
United Kingdom	0.440
Italy	0.377
France	0.376
Poland	0.343
Spain	0.340
Hungary	0.281
Sweden	0.259
Greece	0.247
Denmark	0.247
Romania	0.245
Austria	0.239
Finland	0.231
Germany	0.187
Netherlands	0.185
Czech Republic	0.173
Ireland	0.140
Slovakia	0.131
Bulgaria	0.115
Portugal	0.109

Appendix 10: Audience Duplication Country Scores.

Country	Audience Polarization
Bulgaria	0.934
United States	0.857
Poland	0.854
Portugal	0.802
Romania	0.790
Slovakia	0.754
Spain	0.749
Austria	0.741
Greece	0.741
Sweden	0.712
Ireland	0.698
Denmark	0.683
Czech Republic	0.677
Hungary	0.656
Netherlands	0.653
Finland	0.648
Germany	0.643
Italy	0.638
France	0.495
United Kingdom	0.444

Appendix 11: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
AT	ORF 2 △	ORF.at
	Ö3 ○	krone.at - Kronen Zeitung Online
	ORF Eins △	GMX
	Kronen Zeitung □	derstandard.at - Der Standard Online
	Servus TV △	kurier.at - Kurier Online
	Puls 4 △	heute.at - Heute Online
	Heute □	meinbezirk.at - woche.at.
	Österreich □	oe24.at
	ZDF △	diepresse.com - Die Presse Online
	Bezirksblätter □	kronehit.at news
	KronHit O	kleinezeitung.at - Kleine Zeitung Online
	ATV △	MSN News
	RTL ○	puls4.com news
	ARD ○	nachrichten.at - ÖÖ Nachrichten
BG	NovaTV △	Nova TV online
	BTV △	BTV online
	BNT △	abv.bg
	24 Chasa □	novini.bg
	Bulgaria On Air △	24 Chasa (24chasa.bg)
	TV Evropa △	dir.bg
	BNR ○	BNT online
	Kanal 3 △	Blitz.bg
	Telegraf O	Dnevnik (Dnevnik.bg)
	Darik (Radio) ○	Bivol.bg
	Trud □	Petel.bg
	Capital □	Capital (Capital.bg)
	CNN △	Trud (Trud.bg)
	Monitor □	BNR online

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 12: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
CZ	Ceska Televize △	iDnes.cz
	Nova News △	Seznamzpravy.cz
	Prima News △	Novinky.cz
	Mlada Fronta DNES □	Aktualne.cz
	Cesky Rozhlas Zpravy ○	Ct24.cz
	Televize Seznam △	TN.cz
	Radio Impuls News ○	iPrima.cz
	Blesk □	Blesk.cz
	Metro □	Denik.cz
	Frekvence 1 News ○	Super.cz
	TV Barrandov News △	Lidovky.cz
	Evropa 2 News ○	iHned.cz
	Denik □	Reflex.cz
	Reflex □	Extra.cz
DK	DR Nyheder △	Dr.dk nyheder
	TV2 Nyhederne △	Nyhederne.tv2.dk
	TV2 News △	Ekstra-Bladet.dk
	Regional news on TV2 △	Bt.dk
	P4 (DR) ○	Politiken.dk
	P3 (DR) ○	Jyllandsposten.dk
	BT □	B.dk (Berlingske)
	Ekstrabladet □	Borden.dk (Borsen)
	JyllandsPosten □	Dagens.dk
	Politiken □	Altinget.dk
	Berlingske □	Information.dk
	BBC News △	Avisen.dk
	Borsen □	Btmetro
		CNN.com

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 13: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
FI	Yle Tv-Uutiset △	Ita-Sanomat v.
	MTV3 Tv-Uutiset △	Iltalehti v.
	Yle-Radiouutiset ○	Yle-uutiset v.
	IIta-Sanomat □	Helsingin Sanomat v.
	Helsingin Sanomat □	MTV-uutiset v.
	Iltalehti □	Kauppalehti v.
	Talouselämä □	Taloussanomat.fi
	Suomen Kuvalehti □	Uusisuomi.fi
	Kauppalehti □	Talouselama v.
	BBC News △	MSN News
	CNN △	Suomen Kuvalehti v.
	Maaseudun Tulevaisuus □	BBC News online
	Alfa TV: Uutiset △	Maaseudun Tulevaisuus v.
	Hufvudstadsbladet □	CNN.com
FR	France TV △	20minutes.fr
	BFMTV △	lemonde.fr
	TF1 △	Franceinfo.fr
	M6 △	lefigaro.fr
	CNEWS △	tf1.fr
	20 Minutes □	HuffPost (Huffington Post)
	Ouest France □	Yahoo! News
	Le Monde □	Bfmtv.com
	Le Parisien/Aujourd'hui en France □	mediapart.fr
	Le Figaro □	M6.fr
	France 24 △	Lepoint.fr
	Canal+ △	lexpress.fr
	La Voix du Nord □	Liberation.fr
	L'Express □	MSN News

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 14: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
DE	ARD Tagesschau △	Spiegel Online
	ZDF Heute △	Tagesschau.de
	ZDF Heute-Journal △	t-online
	ARD Tagesthemen △	Bild.de
	RTL Aktuell △	Focus Online
	N-TV △	Web.de
	N24 △	Gmx.de
	ZDF Heute+ △	ZEIT Online
	Sat. 1 Nachrichten △	n-tv.de
	Der Spiegel □	Welt.online
	Bild/Bild am Sonntag □	Sueddeutsche.de
	Focus □	N24.de
	Stern □	Heute.de
	ProSieben Newstime △	Stern.de
GR	Skai △	Newsbomb.gr
	ANT1 △	Dikaioilogitika.gr
	Alpha △	Proto Thema online
	Star △	News247.gr
	ERT1 △	In.gr
	Open △	Kathimerini online
	Kathimerini □	Skai online (skai.gr)
	Proto Thema □	Newsit.gr
	Skai 100.3 FM ○	CNN Greece (CNN.gr) online
	Ta Nea □	Newsbeast.gr
	To Vima □	mixanitouxronou.gr
	Real 97.8 FM O	Lifo.gr
	ERT3 △	Zougla.gr
	Real News □	Iefimerida.gr

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 15: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
HU	RTL Klub △	index.hu
	TV2 △	24.hu
	ATV △	origo.hu
	HirTV △	hvg.hu
	MTV △	444.hu
	Duna TV △	rtlklub.hu
	HVG □	blikk.hu
	Blikk □	atv.hu
	Magyar Radio ○	tv2.hu
	Radio 1 ○	168ora.hu
	Bors □	hirado.hu
	Nemzeti Sport □	hirtv.hu
	168 ora □	mapi.hu
	Magyar Nemzet □	portfolio.hu
IE	RTE TV News △	RTE News Online
	Sky News △	TheJournal.ie
	RTE Radio News ○	independent.ie
	BBC News △	BreakingNews.ie
	Irish Independent □	BBC News online
	Today FM ○	irishtimes.com
	The Irish Times □	Sky News online
	Newstalk ○	Her.ie/Joe.ie
	Virgin Media TV News △	Irish Examiner online
	Sunday Independent □	Irish Mirror online
	ITV or Channel 4 News △	BuzzFeed News
	CNN △	The Times (Ireland) online
	Irish Mirror □	Guardian online
	Irish Daily Mail □	Yahoo! News

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 16: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
IT	Telegiornali RAI △	TgCom24 online
	Telegiornali Mediaset △	SkyTg24 online
	Sky Tg24 △	La Repubblica online
	TgCom24 △	ANSA online
	Tg La7 △	Fanpage
	RaiNews 24 △	Il Corriere della Sera online
	Porta a Porta △	RaiNews online
	La Repubblica □	Il Fatto Quotidiano online
	Il Corriere della Sera □	HuffPost
	Piazza Pulita △	Notizie.Libero.it
	Non è l'Arena △	Yahoo! News
	Radiogiornali RAI ○	Il Sole 24 ore online
	Dritto e Rovescio △	TgLa7 online
	Il Sole 24 Ore □	La Stampa online
NL	NOS Journaal △ ○	NU.nl
	RTL (incl. RTL Z & EditieNL) △	NOS Nieuws online
	SBS (Hart van Nederland) △	AD online
	De Telegraaf □	De Telegraaf online
	Algemeen Dagblad □	RTL Nieuws online
	Metro □	de Volkskrant online
	de Volkskrant □	SBS Nieuws (Hart van NL)
	BBC News △	MSN News
	CNN △	GeenStijl
	BNR Nieuwsradio ○	BBC News online
	Trouw □	NRC online
	Nederlands Dagblad □	Linda nieuws
	NRC Handelsblad □	Trouw online
	Het Financieele Dagblad □	Metro online

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 17: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
PL	TVN △	Onet.pl
	RMF FM ○	WP.pl
	Polsat △	TVN24.pl
	Radio Zet ○	Interia.pl
	TVP △	Wyborcza.pl
	Gazeta Wyborcza □	RMF24.pl
	Fakt □	Fakt.pl
	Eska ○	TVP.info
	Super Express □	Gazeta.pl
	TTV △	Polsatnews.pl
	Rzeczpospolita □	Radiozet.pl
	Newsweek Polska □	Newsweek.pl
	Polityka □	NaszeMiasto.pl
	Angora □	Polityka.pl
PT	SIC Noticias △	Noticias ao Minuto
	SIC △	Sapo
	TVI 24 △	Creio da Manha
	TVI △	SIC Noticias
	RTP (e.g. RTP 1, 2) △	Jornal de Noticias
	Correio da Manha □	Correio da Manha TV
	RTP 3 △	Observador
	Correio da Manha TV △	TVI 24
	Jornal de Noticias □	SIC
	Radio Comercial ○	Publico
	RFM ○	Expresso
	Publico □	RTP Noticias
	Expresso □	Diario de Noticias
	TSF ○	MSN News

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 18: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
RO	Pro TV △	Ziare.com
	Digi24 △	Stirile ProTV online
	Antena 1 △	Digi24
	Antena 3 △	www.stiripesurse.ro
	Romania TV △	www.hotnews.ro
	TVR △	Adevarul online
	B1 TV △	Yahoo! News
	Radio Europa FM ○	Libertatea online
	Realitatea Plus △	Cancan.ro
	Kanal D △	Mediafax online
	Libertatea □	Evenimentul Zilei Online
	Adevarul □	Ziarul Financiar Online
	Radio Romania Actualitati ○	Antena 3 online
	Prima TV △	Click online
SK	TV Markiza △	aktuality.sk
	TV JOJ △	topky.sk
	TA3 △	sme.sk
	RTVS (Jednotka/Dvojka) △	tvnoviny.sk
	Radio Expres O	cas.sk
	RTVS (Radio Slovensko/Regina) O	pravda.sk
	Novy Cas □	pluska.sk
	SME □	ta3.com
	Plus 7 dni □	noviny.sk
	Pravda □	dennikn.sk
	Fun Radio ○	hnonline.sk
	Radio Europa 2 ○	hlavnespravy.sk
	Radio Viva ○	dnes24.sk
	Plus Jeden Den □	refresher.sk

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 19: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
ES	Antena 3 △	El Pais online
	LaSexta △	El Mundo online
	TVE △	20 Minutos online
	Telecinco △	ElDiario.es
	El País □	ElConfidencial.com
	Cuatro △	Antena 3 online
	El Mundo □	OKDiario.com
	Cadena SER ○	Marca online
	20 Minutos □	La Vanguardia online
	Marca □	LaSexta online
	COPE ○	RTVE online
	ABC □	ABC online
	La Vanguardia □	Telecinco online
	El Periódico □	Cadena SER online
SE	Sveriges Television (SVT) △	Aftonbladet online
	TV4 △	SVT Nyheter Online
	Sveriges Radio (SR) ○	Expressen online
	Aftonbladet □	TV4 Nyheter Online
	Expressen □	Dagens Nyheter Online
	Dagens Nyheter □	Svenska Dagbladet Online
	Svenska Dagbladet □	SR Nyheter Online
	BBC News △	Nyheter 24
	CNN △	Goteborgs-Posten online
	Göteborgs-Posten □	Dagens Industri Online
	Dagens Industri □	BBC News online
	Sydsvenska Dagbladet □	CNN.com
	Metro □	Sydsvenska Dagbladet online
	Uppsala Nya Tidning □	MSN News

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 20: Media Considered For Cross-Platform Duplication Scores.

	Offline Outlets	Online Outlets
GB	BBC TV News △	BBC News online
	ITV News △	Guardian online
	BBC Radio News ○	Mail online
	Sky News △	Sky News online
	Daily Mail/Mail on Sunday □	Telegraph online
	Metro □	Huffpost
	C4 News △	Independent/i100 online
	The Sun/Sun on Sunday □	Buzzfeed news
	The Times/Sunday Times □	Yahoo! News
	The Guardian/Observer □	MSN News
	The Daily/Sunday Telegraph □	The Sun online
	The Daily/Sunday Mirror/People □	Metro online
	'i' □	Times online
	London Evening Standard □	Mirror online
US	Fox News △	CNN.com
	CNN △	Yahoo! News
	NBC/MSNBC News △	New York Times online
	CBS News △	Fox News online
	ABC News △	HuffPost
	New York Times □	Washington Post online
	NPR News ○	NBC/MSNBC News
	BBC News △	Buzzfeed News
	PBS News △	BBC News online
	USA Today □	NPR News online
	Washington Post □	MSN News
	Wall Street Journal □	CBS News online
	National Geographic △	ABC News online
	New Yorker □	USA Today online

△ = TV Broadcast ○ = Radio Broadcast □ = Print

Appendix 21: Model 1.

	Dependent variable:
	Epistemic Vulnerability Index
Affective Polarization	0.118 (0.492)
	p = 0.816
Ideological Polarization	0.364 (0.157)
	p = 0.040*
Effective Number of Parties	−0.499 (0.193)
	p = 0.024*
Left–Wing Populism	0.055 (0.023)
	p = 0.038*
Right–Wing Populism	0.020 (0.019)
	p = 0.323
Daily Viewership of PBS	−0.044 (0.024)
	p = 0.094$^{.}$
Political Parallelism	1.266 (0.561)
	p = 0.044*
Constant	0.404 (3.154)
	p = 0.901
Observations	20
R^2	0.853
Adjusted R^2	0.766
Residual Std. Error	1.235 (df = 12)
F Statistic	9.910*** (df = 7; 12)
Note:	. p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Appendix 22: Model 2.

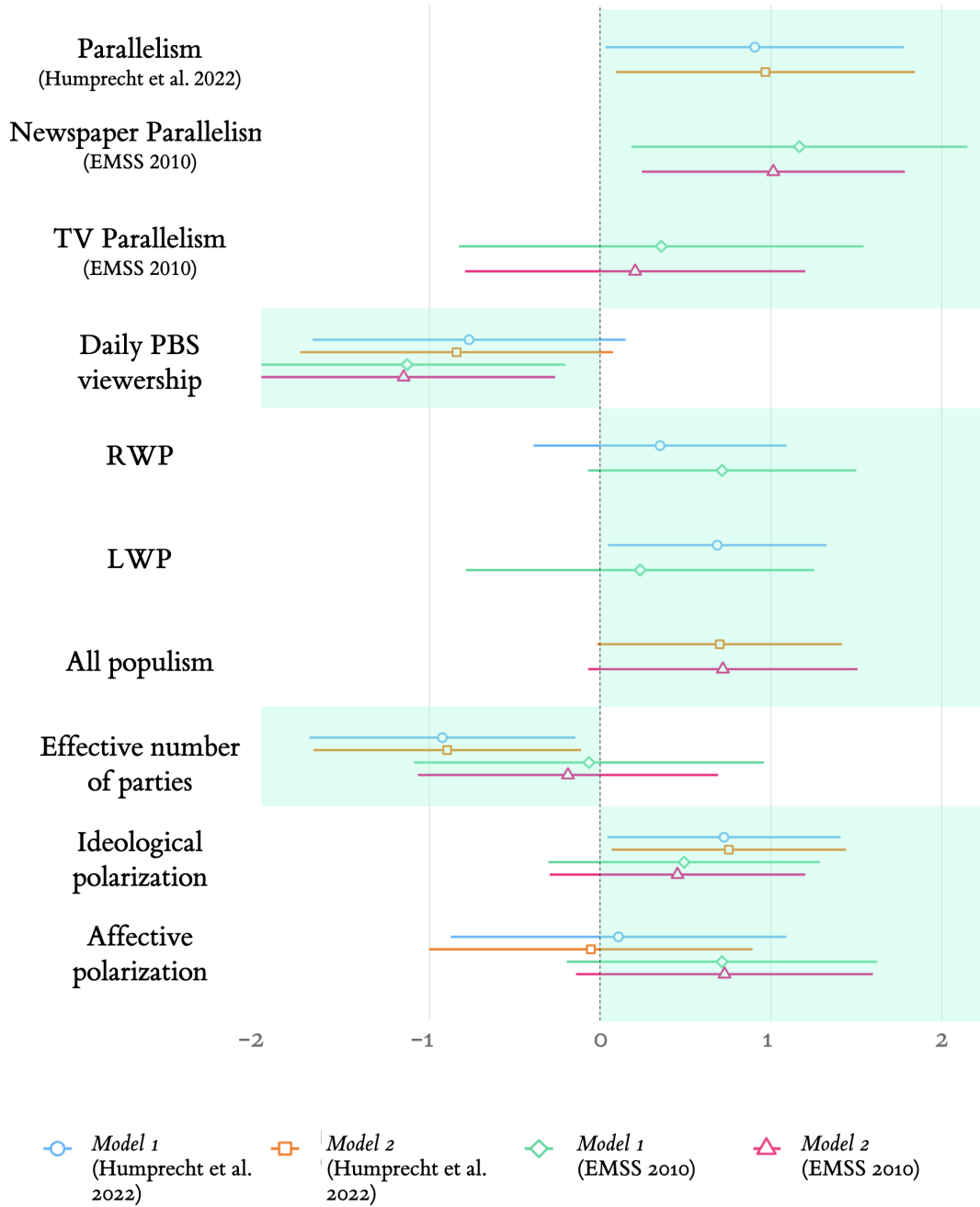|	*Dependent variable:*
	Epistemic Vulnerability Index
Affective Polarization	–0.059 (0.478)
	p = 0.904
Ideological Polarization	0.378 (0.160)
	p = 0.034[*]
Effective Number of Parties	–0.483 (0.196)
	p = 0.029[*]
All Populism	0.034 (0.016)
	p = 0.055.
Daily Viewership of PBS	–0.048 (0.024)
	p = 0.069.
Political Parallelism	1.353 (0.566)
	p = 0.033[*]
Constant	1.212 (3.137)
	p = 0.706
Observations	20
R^2	0.834
Adjusted R^2	0.758
Residual Std. Error	1.257 (df = 13)
F Statistic	10.925[***] (df = 6; 13)
Note:	. p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Appendix 23: Models Comparing Measures of Affective Polarization.
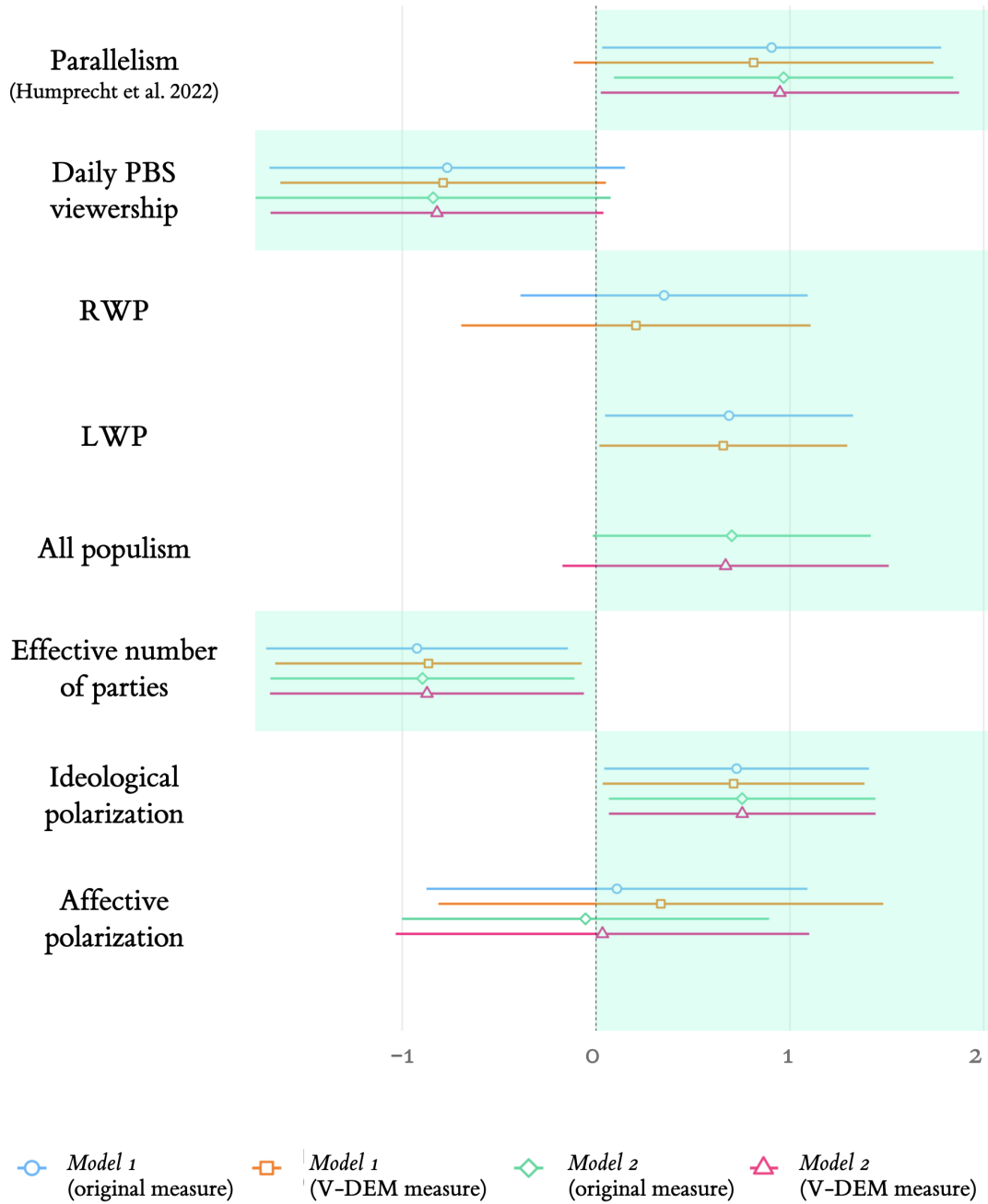
Appendix 24: Models Comparing Measures of Ideological Polarization.
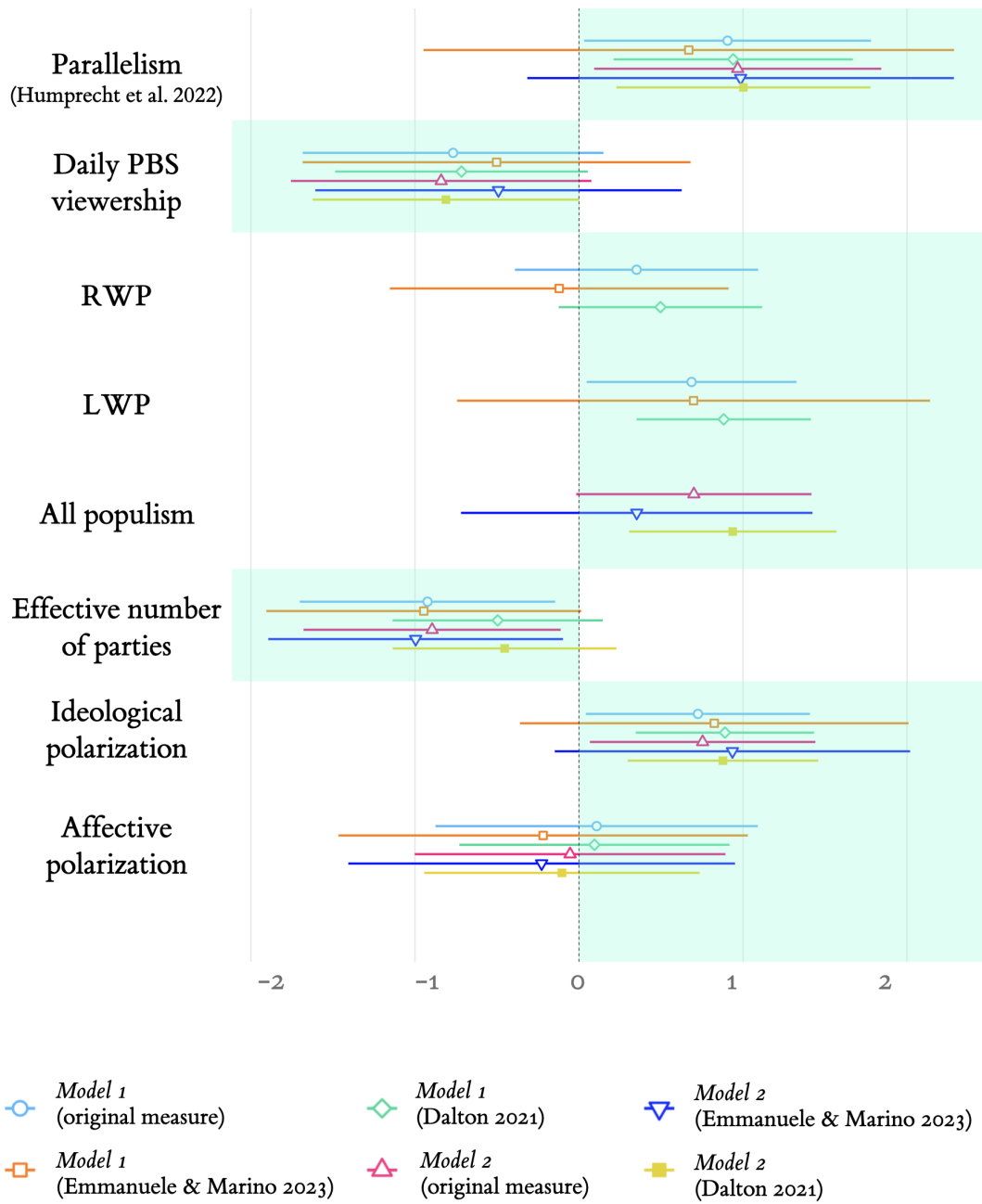
Appendix 25: Models Comparing Measures of Political Parallelism.

Appendix 26: Alternative Models Using Parallelism From EMSS (2010).

	Dependent variable:	
	Epistemic Vulnerability Index	
	(1)	(2)
Affective Polarization	0.846 (0.483)	0.863 (0.468)
	p = 0.111	p = 0.093·
Ideological Polarization	0.242 (0.176)	0.223 (0.167)
	p = 0.198	p = 0.210
Effective Number of Parties	−0.036 (0.253)	−0.103 (0.219)
	p = 0.890	p = 0.647
Left–Wing Populism	0.019 (0.036)	
	p = 0.620	
Right–Wing Populism	0.042 (0.021)	
	p = 0.071·	
All Populism		0.037 (0.019)
		p = 0.070·
Daily Viewership of PBS	−0.065 (0.024)	−0.066 (0.023)
	p = 0.022*	p = 0.016*
Newspaper Parallelism (EMSS 2010)	0.590 (0.223)	0.513 (0.177)
	p = 0.025*	p = 0.015*
Television Parallelism (EMSS 2010)	0.116 (0.173)	0.067 (0.147)
	p = 0.517	p = 0.659
Constant	−12.276 (5.367)	−10.614 (4.456)
	p = 0.046*	p = 0.037*
Observations	19	19
R^{2}	0.888	0.884
Adjusted R^{2}	0.798	0.810
Residual Std. Error	1.150 (df = 10)	1.116 (df = 11)
F Statistic	9.876*** (df = 8; 10)	11.933*** (df = 7; 11)
Note:	. p<0.1; * p<0.05; ** p<0.01; *** p<0.001	

Appendix 27: Alternative Models Using Affective Polarization From V-DEM (2018).

	Dependent variable:	
	Epistemic Vulnerability Index	
	(1)	(2)
Affective Polarization (V–DEM)	0.205 (0.322)	0.020 (0.302)
	p = 0.538	p = 0.948
Ideological Polarization	0.356 (0.155)	0.378 (0.160)
	p = 0.041*	p = 0.034*
Effective Number of Parties	−0.467 (0.196)	−0.471 (0.202)
	p = 0.035*	p = 0.037*
Left–Wing Populism	0.052 (0.023)	
	p = 0.046*	
Right–Wing Populism	0.012 (0.024)	
	p = 0.628	
All Populism		0.032 (0.019)
		p = 0.110
Daily Viewership of PBS	−0.045 (0.022)	−0.047 (0.023)
	p = 0.064·	p = 0.060·
Political Paralellism	1.136 (0.595)	1.326 (0.598)
	p = 0.081·	p = 0.045*
Constant	1.186 (1.240)	0.859 (1.256)
	p = 0.358	p = 0.507
Observations	20	20
R²	0.857	0.834
Adjusted R²	0.773	0.758
Residual Std. Error	1.218 (df = 12)	1.257 (df = 13)
F Statistic	10.244*** (df = 7; 12)	10.914*** (df = 6; 13)
Note:	. p<0.1; * p<0.05; ** p<0.01; *** p<0.001	

Appendix 28: Alternative Models Using Audience Polarization and Duplication, and Parallelism From EMSS (2010)

	Dependent variable:		
	Epistemic Vulnerability Index		
	(1)	(2)	(3)
Affective Polarization	0.426 (0.619)	0.832 (0.508)	0.844 (0.495)
	p = 0.506	p = 0.140	p = 0.123
Ideological Polarization	0.247 (0.216)	0.302 (0.192)	0.275 (0.184)
	p = 0.279	p = 0.155	p = 0.170
Effective Number of Parties	−0.532 (0.254)	0.047 (0.277)	−0.039 (0.245)
	p = 0.061.	p = 0.869	p = 0.877
Left–Wing Populism	0.070 (0.032)	0.019 (0.038)	
	p = 0.051.	p = 0.637	
Right–Wing Populism	0.024 (0.025)	0.050 (0.024)	
	p = 0.351	p = 0.066.	
All Populism			0.042 (0.021)
			p = 0.069.
Audience Polarization	−1.669 (3.540)	−0.970 (5.570)	0.013 (5.278)
	p = 0.647	p = 0.867	p = 0.999
Audience Duplication	−1.749 (4.624)	3.890 (4.763)	3.943 (4.645)
	p = 0.713	p = 0.438	p = 0.418
Daily Viewership of PBS	−0.068 (0.029)	−0.057 (0.028)	−0.061 (0.027)
	p = 0.038*	p = 0.075.	p = 0.049*
ParallelismNewspapers		0.738 (0.283)	0.610 (0.219)
		p = 0.032*	p = 0.022*
ParallelismTelevision		0.096 (0.192)	0.026 (0.163)
		p = 0.632	p = 0.878
Constant	1.674 (5.283)	−17.289 (7.356)	−14.877 (6.447)
	p = 0.758	p = 0.047*	p = 0.047*
Observations	20	19	19
R^2	0.795	0.903	0.896
Adjusted R^2	0.646	0.781	0.792
Residual Std. Error	1.520 (df = 11)	1.196 (df = 8)	1.166 (df = 9)
F Statistic	5.336** (df = 8; 11)	7.425** (df = 10; 8)	8.609** (df = 9; 9)
Note:		. p<0.1; * p<0.05; ** p<0.01; *** p<0.001	