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Global Public Opinion Trends Bulletin

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Global Barometer

From Connectivity to Division

How Social Media Exacerbates Polarization

No. (9)

Global Public Opinion Trends Bulletin
The Most Important Issues Concerning Global " "Public Opinion

In an era marked by rapid social, political, and cultural transformations, the need for a deeper understanding of global public opinion has become more pressing than ever. To meet this need, the Global Barometer Department at TRENDS Research & Advisory is proud to present the Global Barometer Digital Bulletin, a data-based, objective publication designed to analyze and interpret the dynamics shaping societies around the world.

Published every three to four months, the Digital Bulletin serves as a platform for exploring the most pressing issues of our time. It leverages secondary data from reliable international studies and surveys, such as the World Values Survey, the European Social Survey, the Pew Research Center, Gallup, and the Arab Barometer, transforming complex datasets into actionable insights. Focusing on political, social, and cultural themes, this publication is a valuable resource for researchers, policymakers, and global observers alike.

Each edition of the Digital Bulletin focuses on a carefully selected topic, offering readers a deep and focused analysis of critical trends. These topics reflect the complexities of contemporary issues, such as trust in governance, the cultural impact of technology, youth priorities, and global responses to climate change. By linking local data to global narratives, the Bulletin bridges the gap between regional insights and global trends.

Standing out for its rigorous methodology and analytical depth, the Digital Bulletin relies on well-documented, credible secondary data, ensuring that its insights are grounded in empirical evidence. Advanced analytical tools are used to identify patterns and uncover the underlying drivers shaping public opinion, enabling readers to understand not just the "what" in the data, but also the "why."

In addition to data analysis, the Digital Bulletin aims to promote dialogue and inspire informed decision-making. It transforms raw data into clear, objective narratives that are accessible to a wide audience, from policymakers and academics to interested global citizens. By presenting information in an engaging and comprehensible way, the Bulletin enables deeper understanding and promotes critical engagement with the insights presented.

The Digital Bulletin also reflects TRENDS Research & Advisory's broader mission to serve as a bridge between data and action. In a connected world, public opinion does more than reflect societal trends; it serves as a tool for developing policies, addressing challenges, and enhancing global cooperation. Through its objective focus and commitment to evidence-based analysis, the Bulletin highlights the critical role public opinion plays in guiding governance and driving societal transformation.

As this ongoing project continues to evolve, it remains dedicated to delivering accurate, meaningful insights into the shifting values and attitudes of communities across the world. By inviting readers to explore its findings, the Global Barometer Digital Bulletin seeks to inspire critical thinking, support evidence-based solutions, and contribute to a more informed and engaged global society.

Whether you are a policymaker, researcher, or an individual with a global perspective, the Digital Bulletin offers an indispensable resource for understanding the complexities of public opinion in today's dynamic world. Join us as we explore the voices shaping the future and present the tools to understand the challenges and opportunities of our time.

✖ Introduction

The phenomenon of polarization is as old as human history. According to the Oxford Dictionary, polarization is defined as "the act of separating or making people separate into two groups with completely opposite opinions." [1] While political, ideological, and social factors have long shaped societal divisions, the rise of social media has dramatically intensified this process, accelerated the spread of partisan narratives, and reinforced ideological echo chambers. As of January 2024, social media has become one of the most influential forces shaping modern discourse, with over 5.04 billion users worldwide—accounting for 62.3% of the global population. [2] As these platforms evolve, they have also become hubs for misinformation, algorithm-driven biases, and deepening political divisions. The role and impact of social media remain a recurring subject of investigation. A 2022–2023 Pew Research Center survey of participants across 27 countries found that social media is generally viewed as beneficial to democracies rather than harmful. [3] Despite the majority believing that social media benefits democracy through increased access to information and engagement, concerns persist about its role in spreading misinformation and deepening divisions.

1   "Polarization Noun - Definition, Pictures, Pronunciation and Usage Notes," Oxford Advanced Learner's Dictionary (n.d.), https://www.oxfordlearnersdictionaries.com/definition/english/polarization.
2   Simon Kemp, "Digital 2024: Global Overview Report," DataReportal, January 31, 2024, https://datareportal.com/reports/digital-2024-global-overview-report.
3   Sneha Gubbala and Sarah Austin, "Majorities in Most Countries Surveyed Say Social Media Is Good for Democracy," Pew Research Center, February 23, 2024, https://www.pewresearch.org/short-reads/2024/02/23/majorities-in-most-countries-surveyed-say-social-media-is-good-for-democracy/.

What is an Algorithm?

An algorithm is a clear and precise computational method that takes one or more values as input and generates one or more values as output. Essentially, it is a series of computational steps that convert the input into the output. [4] Additionally, we can consider an algorithm as a mechanism for addressing a specific computational problem. The problem statement outlines, in broad terms, the desired relationship between the input and the output. The algorithm details a particular computational process to achieve that input/output relationship.

In the wake of the 2016 U.S. Presidential election, concerns emerged about social media's impact on democracy and how platforms like Facebook and Instagram shape political beliefs. Questions arose about these networks' influence and algorithms on people's views of candidates and important issues.

In collaboration with Meta, a multi-university academic team has investigated these questions through a groundbreaking research project co-led by Professor Talia Stroud from Moody College Communication Studies. The team had unprecedented access to Meta's data and could modify consenting participants' Facebook and Instagram feeds to observe how changes in content affected their political beliefs.

4 Thomas H. Cormen, Charles E Leiserson, Ronald L Rivest, and Clifford Stein, Introduction to Algorithms (Third Edition), Internet Archive, 2009, .https://archive.org/details/introduction-to-algorithms-third-edition-2009/page/n25/mode/2up

In the summer of 2023, the researchers published their initial findings in Nature and Science journals. They discovered that while algorithms significantly influence what people see on their feeds, altering these algorithms does not necessarily change people's political attitudes. Additionally, platform-wide data from U.S. adults revealed that political news URLs were predominantly viewed and engaged with by either conservatives or liberals but not both. To reach these conclusions, the researchers conducted three experimental studies during the 2020 election, where participants allowed the team to monitor their platform behavior and modify their news feeds. They also analyzed aggregated platform-wide data to understand exposure and engagement with political news and like-minded sources. The study found that while social media algorithms significantly affect the content people see, changing algorithms do not necessarily alter political attitudes. Political news tends to be consumed by individuals with similar political leanings, highlighting the echo chamber effect on social media platforms. [5]

5 Thomas H. Cormen, Charles E Leiserson, Ronald L Rivest, and Clifford Stein, Introduction to Algorithms (Third Edition), Internet Archive, 2009, .https://archive.org/details/introduction-to-algorithms-third-edition-2009/page/n25/mode/2up

A report from the Center for Business and Human Rights at New York University's Stern School of Business highlights the relationship between tech platforms and extreme polarization, which can erode democratic values and lead to partisan violence. Despite Facebook's denial of contributing to divisiveness, research and leaked documents suggest that there is a substantial correlation. The report concludes that while platforms like Facebook, YouTube, and Twitter are not the root causes of political polarization, they do exacerbate it. This point is particularly significant as the country grapples with the aftermath of the January 6, 2021, insurrection at the U.S. Capitol, an event in which social media played a pivotal role in spreading misinformation, mobilizing extremists, and amplifying election-related falsehoods. Understanding these dynamics is critical as the nation assesses the impact of digital platforms on electoral events and prepares for future elections. [6]

Although social media contributes to partisan animosity, Meta's Mark Zuckerberg dismisses claims that his company stokes divisiveness, pointing to the political and media environment instead. [7] Even though social media is not the primary driver of polarization, it is often a key facilitator. [8] While social media platforms contribute significantly to political polarization and partisan animosity, despite their claims to the contrary, understanding their influence is crucial to addressing the challenges they pose in U.S. politics. [9]

6 Paul M. Barrett, Justin Hendrix, and J. Grant Sims, Fueling the Fire: How social media intensifies U.S. political polarization – and what can be done about it, NYU Stern Center for Business & Human Rights, September 2021, https://bhr.stern.nyu.edu/publication/fueling-the-fire-how-social-media-intensifies-u-s-political-polarization-and-what-can-be-done-about-it/.

7 "Mark Zuckerberg Opening Statement Transcript: House Hearing on Misinformation," Rev (n.d.), https://www.rev.com/transcripts/mark-zuckerberg-opening-statement-transcript-house-hearing-on-misinformation.

8 Ibid.

9 Paul Barrett, Justin Hendrix, and Grant Sims, "How Tech Platforms Fuel U.S. Political Polarization and What Government Can Do About It," Brookings, September 27, 2021, https://www.brookings.edu/articles/how-tech-platforms-fuel-u-s-political-polarization-and-what-government-can-do-about-it/.

## Political Situation: U.S. Presidential Elections (2016, 2020, 2024)

The 2016, 2020, and 2024 U.S. presidential elections reflect how social media influences voter behavior and disseminates false information, fueling political polarization. Social media was a significant but not dominating news source during the 2016 election, with a survey conducted in the post-2016 election finding that only 14 percent of an estimated 1,200 Americans surveyed said that social media was their most important source of information. [10] During this period, 30 million people shared false news reports supporting Donald Trump on Facebook, while eight million shared similar content favoring Hillary Clinton. Among typical American viewers, those who recalled an average of 0.92 pro-Trump false news articles and 0.23 pro-Clinton false stories largely believed the information to be accurate. [11]

10 Hunt Allcott and Matthew Gentzkow, "Social media and fake news in the 2016 election," Journal of economic perspectives 31, no. 2 (2017): 211-236.
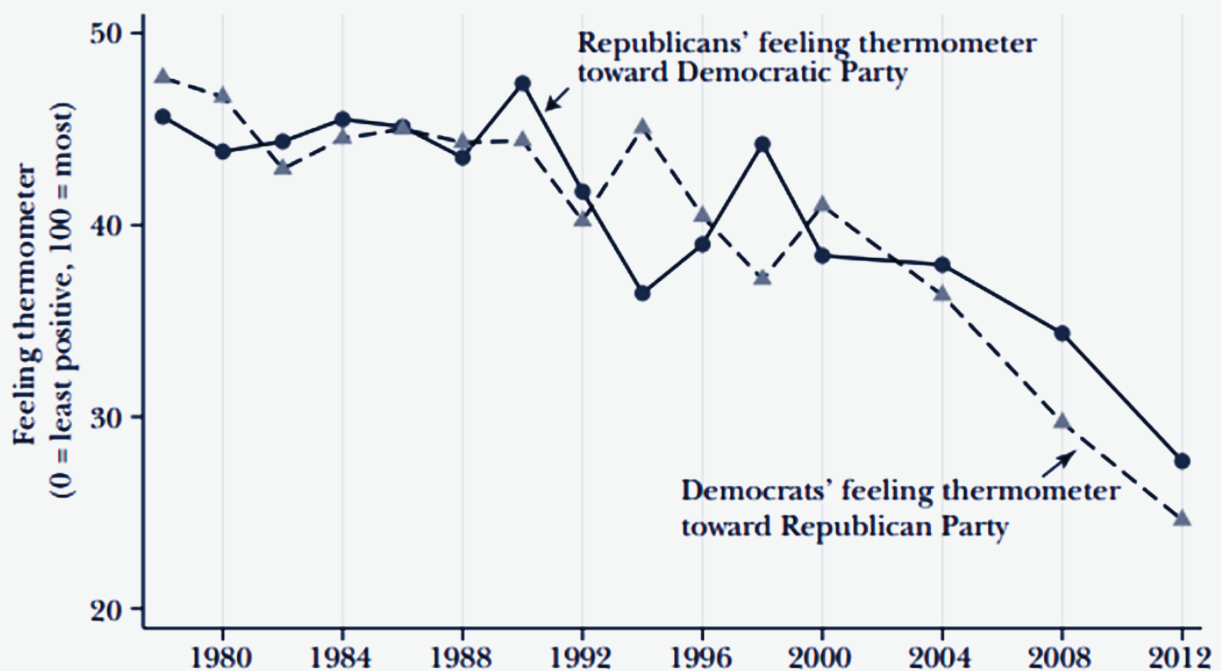11 Ibid.

Trends Related to Fake News

A: Trust in Mainstream Media
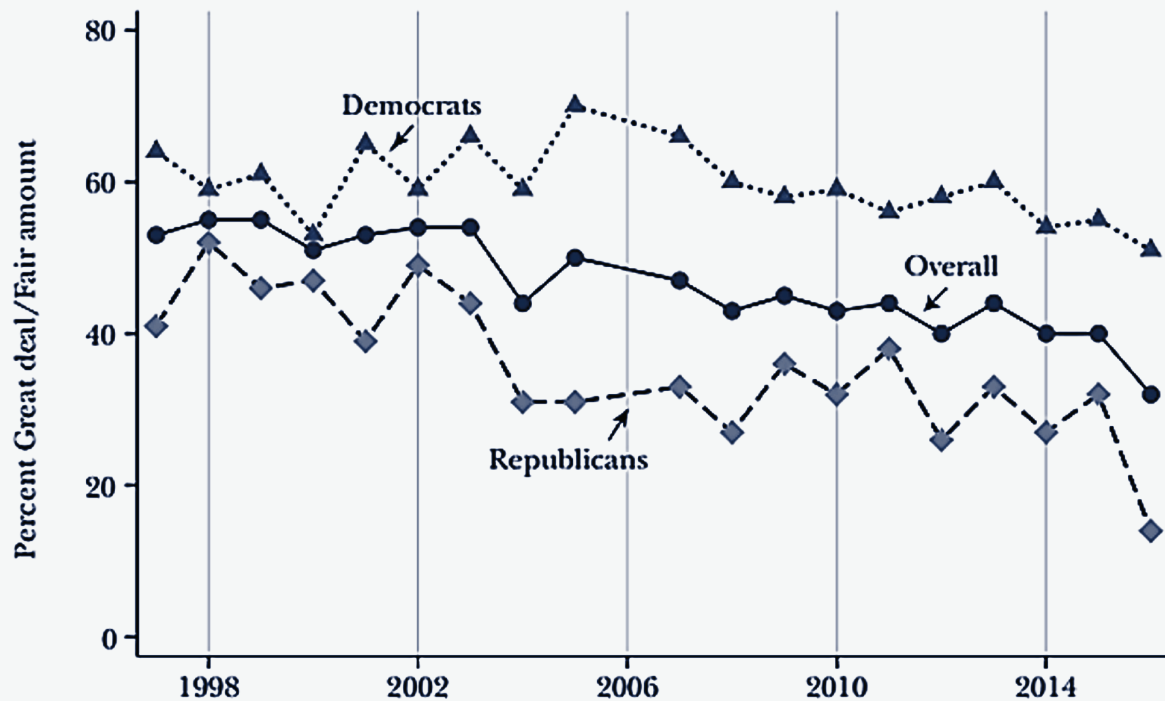
B: Feeling Thermometer toward Other Political Party

## Graphs 1 & 2: Fake news-related trends[12]

The trends reflected in graphs 1 and 2 indicate the growing political divide within the United States. Over the last few decades, trust in mass media has declined significantly among both Democrats and Republicans, with a widening gap between the two parties. This erosion of trust has coincided with increasing partisan hostility, further deepening political polarization.

During the 2020 U.S. presidential election, researchers examined the effects of modifying feed-ranking algorithms on Facebook and Instagram. They discovered that when users were given a reverse chronological feed, they spent less time on the platforms and saw a wider range of ideological content, which meant they saw less rude and hateful content. Still, these modifications had no appreciable impact on political knowledge, emotional polarization, or issue polarization. The research found that although algorithmic systems alter the user experience, they have little effect on off-platform political opinions.[13]

13 Tom Durso, "Social Media, Polarization, and the 2020 Presidential Election," Princeton School of Public and International Affairs, July 27, 2023, https://spia.princeton.edu/news/social-media-polarization-and-2020-presidential-election.

Following the 2024 U.S. presidential election, misleading narratives about immigration, crime, and the economy proliferated across social media, contributing to the widespread dissemination of disinformation. Public perceptions of the Biden Administration's handling of border security and crime—a policy that former Vice President Kamala Harris was intrinsically tied to—were significantly influenced by false claims about immigrant criminality, claims refuted by data showing that native-born Americans commit crimes at three times the rate of immigrants.[14] Though official crime figures contradict Trump's repeated assertions of immigration problems and crime surges, their broad dissemination on social media channels helped them gain momentum.
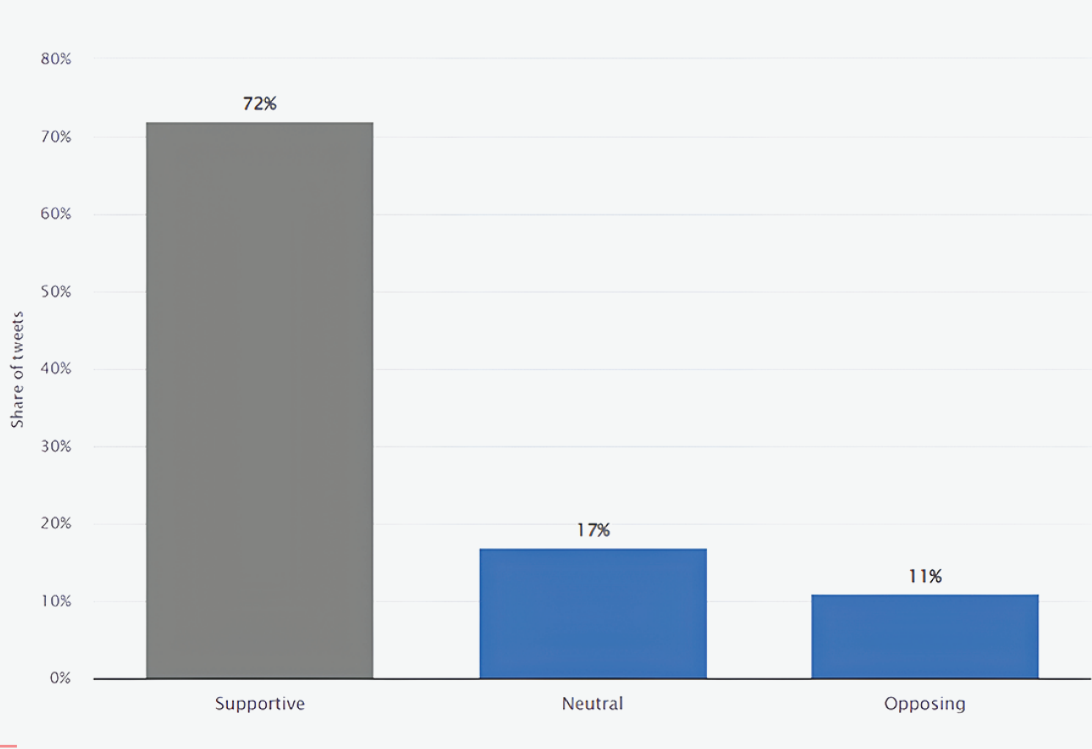
Graph 3: Share of public tweets using the #BlackLivesMatter hashtag from July 2013 to March 2023, by stance [15]

15 "Tweets Using #BlackLivesMatter by Stance 2023," Statista,
   https://www.statista.com/statistics/1402978/tweets-including-blacklivesmatter-by-stance/., accessed March 7, 2025.
14 Darrell M. West, "How Disinformation Defined the 2024 Election Narrative," Brookings, November 7, 2024,
   https://www.brookings.edu/articles/how-disinformation-defined-the-2024-election-narrative/

Furthermore, viral hashtags like #BlackLivesMatter have played a significant role in shaping political discourse. Between 2013 and 2023, 72% of tweets using the hashtag expressed support for the movement, while 11% opposed it.[16] The widespread use of hashtags to amplify political statements and social movements enables both supporters and opponents to reinforce their perspectives, further deepening societal divisions.

During the 2024 U.S. elections, disinformation was deliberately spread to erode public trust in the voting process. A viral video in Georgia falsely claimed that an individual had voted twice; later investigations suggested that the footage had been fabricated in Russia.[17] The increasing ease with which generative artificial intelligence can produce deceptive images and videos further contributed to spreading false information, making it more challenging for voters to distinguish reality from fiction.

Social Situation: COVID-19

16 Ibid.
17 Darrell M. West, "How Disinformation Defined the 2024 Election Narrative," op. cit.

Globally, the COVID-19 pandemic has profoundly impacted the lives of billions of people. Given the scale of the pandemic, it inevitably took center stage in both public and private discourse, controlling and fundamentally altering 2020 social media use patterns. The amount of time that U.S. users spent on these platforms increased significantly from 54 minutes a day in 2019 to 65 minutes a day in 2020.[18]

Average Daily Time Spent on Social Media by U.S. Users (2018-2020)
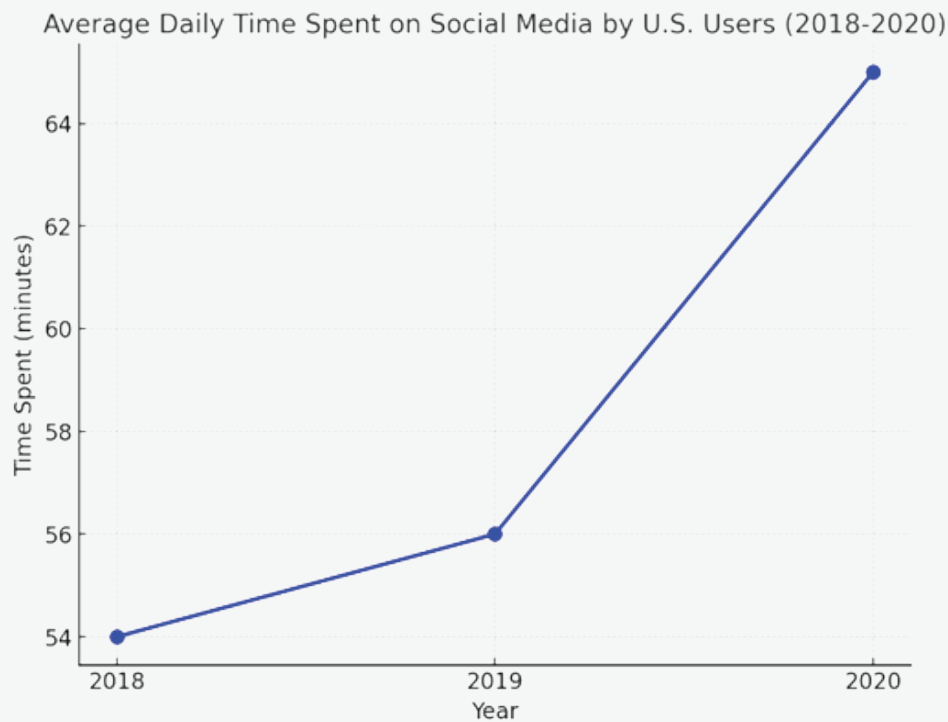
Graph 4: Average amount of time spent on social media each day by U.S. users (2018-2020) [19]

18 Stacy Jo Dixon, "Topic: Social Media Use During Coronavirus (COVID-19) Worldwide," Statista, December 18, 2023, https://www.statista.com/topics/7863/social-media-use-during-coronavirus-covid-19-worldwide/#editorsPicks.
19 Ibid.

The rise in social media use during the COVID-19 pandemic significantly intensified political polarization, particularly as political affiliations strongly influenced individuals' perceptions of the virus. As with other political issues, many users found themselves trapped in echo chambers, where they were primarily exposed to content that reinforced their pre-existing beliefs, further deepening confirmation bias. The pandemic also fueled a surge of misinformation and disinformation, as social media's ability to disseminate messages to vast audiences allowed false narratives to shape public opinion in an increasingly fragmented digital landscape. This phenomenon led the World Health Organization to describe the situation as an "infodemic." [20]

Social media platforms, particularly Twitter, became key arenas for contentious debates over COVID-19. In a study conducted by Jiang, Ren, and Ferrara, they found that echo chambers were seen in both political extremes. The study used the Retweet-BERT model—an end-to-end model that estimates user polarity from their profiles and retweets on a spectrum from left to right-leaning—to examine the COVID-19 debate and discovered that users leaning to the right were more involved and vocal in both producing and consuming COVID-19 content. [21] Still, they were especially noticeable in right-leaning societies, where users were more cut off from other points of view. This produced a more closely linked network that supported limited exposure to several points of view and reinforced preconceptions. [22]

[20] World Health Organization, "Infodemic," December 22, 2020, https://www.who.int/health-topics/infodemic#tab=tab_1.
[21] Julie Jiang, Xiang Ren, and Emilio Ferrara, "Social Media Polarization and Echo Chambers in the Context of COVID-19: Case Study." JMIRx Med 2, no. 3 (2021): e29570, https://doi.org/10.2196/29570.
[22] Ibid.

Polarization is primarily driven by social media algorithms that curate and prioritize content. Based on users' past behavior, algorithms generate customized material that creates filter bubbles, separating people from different points of view and reinforcing their current opinions. This technique not only helps ideological bubbles to grow but also aggravates systematic prejudices in online environments.[23] This personalization of content throughout the pandemic caused users to interact primarily with content that supported their political opinions, whether over COVID-19, mask rules, or false vaccination information.

Throughout the pandemic, public health messaging was significantly undermined by the division fueled by social media. As echo chambers and political players dominated the debate on platforms including Twitter, governments and public health authorities struggled to share accurate information. A study sampled around 1.51 million German-language tweets from 184,406 accounts in 2021 alone and found that discussions on COVID-19 were dominated by two polarized communities: one supporting containment measures and vaccines and the other opposing them—e.g., anti-vaxxers.[24] The study found that pandemic-related "social media elites" regularly held conversations on their platforms, shaping public sentiment and disseminating false information during this period about the cases of COVID-19, safety precautions, treatments, and widening the social gap.

23 Sachin Modgil, Rohit Kumar Singh, Shivam Gupta, and Denis Dennehy. 2024. "A Confirmation Bias View on Social Media Induced Polarisation During Covid-19," Information Systems Frontiers 26 (2024): 417–441, https://doi.org/10.1007/s10796-021-10222-9.
24 Giacomo De Nicola, Victor H Tuekam Mambou, and Göran Kauermann. 2023. "COVID-19 and Social Media: Beyond Polarization," PNAS Nexus 2, no. 8 (2023), https://doi.org/10.1093/pnasnexus/pgad246.
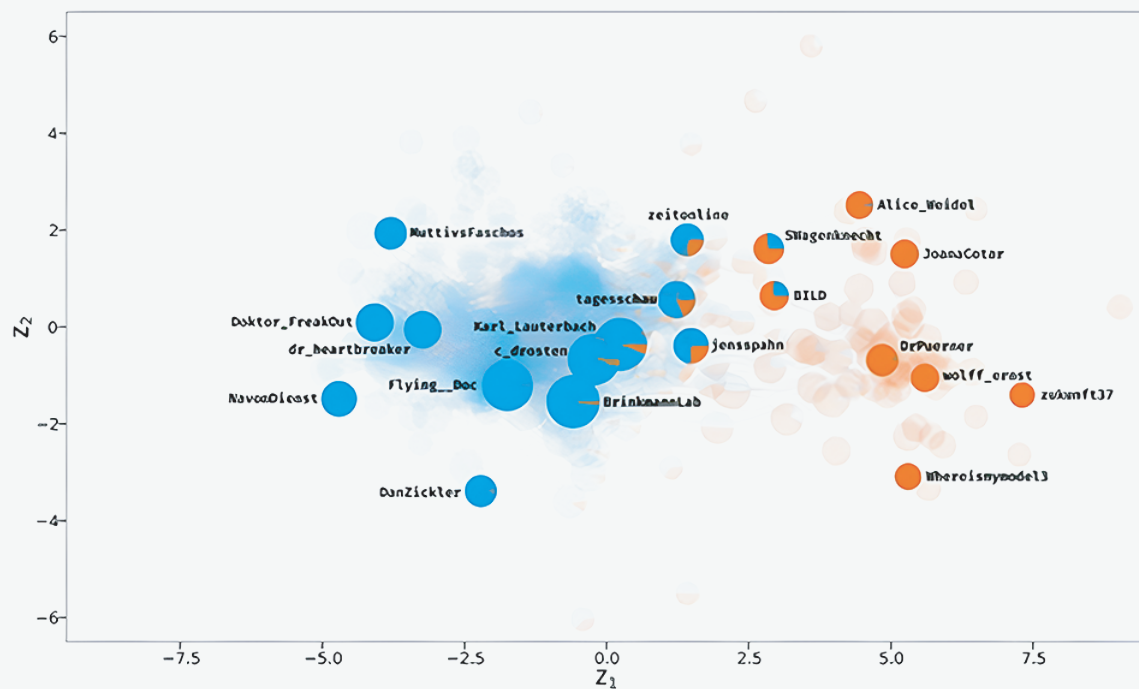
Graph 5: Representation of COVID-19 Twitter Elites and probabilities of each user belonging to the "pro-vaccine mandates" (blue) or "anti-compulsory vaccination" (orange) clusters [25]

The diagram illustrated in Graph 5 indicates a split, revealing two clusters with little cross-group contact, suggesting that Twitter was mainly used to reinforce established opinions rather than generate constructive debate. Primarily, right-leaning echo chambers were more successful in disseminating false information. Therefore, public health authorities found refuting these stories with accurate information challenging.

25 Ibid.

Driven by political and ideological divisions, a fractured society could inadvertently affect industries, including supply chain management, as polarizing actors and biased information affect essential decision-making procedures. Especially given the uncertainty generated by the pandemic, the ingrained belief systems inside echo chambers made it more difficult for companies to make objective judgments.

The COVID-19 pandemic demonstrated how social media, via algorithms that prioritize engagement over exposure to many points of view, may magnify polarization and support echo chambers. Particularly, right-leaning populations showed a greater degree of isolation inside their echo chambers, which resulted in the dissemination of false information and a lack of agreement on public health policies. This polarization emphasizes the need to create plans to counteract the dire consequences of social media on public health communication and decision-making procedures in future pandemics.

2. The AI Factor in Social Media Polarization

Artificial intelligence (AI) plays a significant role in social media polarization. AI algorithms, designed to capture and maintain users' attention, often create "filter bubbles" by showing users content that aligns with their existing beliefs. This reinforcement of pre-existing views can lead to increased political extremism and polarization. While social media platforms like Facebook, YouTube, and Twitter are not the primary causes of polarization, they can significantly amplify political and social divisions. The algorithms used by these platforms contribute to the creation of echo chambers, where users are exposed only to like-minded opinions, isolating them from opposing viewpoints. This phenomenon intensifies partisan animosity and can distort perceptions of reality. [26]

Understanding the impact of AI on social media polarization is crucial for addressing the challenges posed by these platforms in modern politics. Efforts to mitigate polarization should focus on promoting diverse perspectives and reducing the influence of algorithm-driven content recommendations. [27]

26 Ermelinda Rodilosso, "Filter Bubbles and the Unfeeling: How AI for Social Media Can Foster Extremism and Polarization." Philosophy & Technology 37 (2024), https://doi.org/10.1007/s13347-024-00758-4.
27 Dennis Jacob and Sven Banisch, "Polarization in Social Media: A Virtual Worlds-Based Approach," Journal of Artificial Societies and Social Simulation 26, no. 3 (2023), https://doi.org/10.18564/jasss.5170.

Key statistics on bots and automated accounts on social media:

1. Twitter Bots: An estimated two-thirds (66%) of tweeted links to popular websites are posted by automated accounts rather than human users.[28]

2. Prevalence: Social media bots are becoming more prevalent and sophisticated, with their activity levels often surpassing those of human users.[29]

3. Generative AI Impact: The volume of simple bots increased to 40% in 2023, up from 33% in 2022.[30]

The role of social media "bots"—automated accounts that can post content or interact with users without human intervention—has come under intense scrutiny in recent years. These bots can be beneficial by providing real-time answers to various questions or delivering automated updates on news and events. However, they can also be used to influence political discourse, spread misinformation, or manipulate online ratings and reviews. As social media has become more central to news and information, bots have become part of the broader debate about changing news habits, online discourse, and the prevalence of "fake news."

28 Stefan Wojcik, Solomon Messing, Aaron Smith, Lee Rainie, and Paul Hitlin, "Bots in the Twittersphere," Pew Research Center, April 9, 2018, https://www.pewresearch.org/internet/2018/04/09/bots-in-the-twittersphere/.
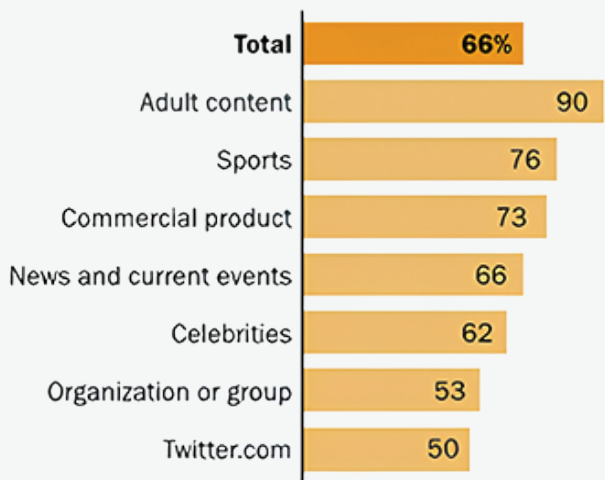29 Homeland Security, "Social Media Bots Overview," National Initiative for Cybersecurity Careers and Studies, 2018, https://niccs.cisa.gov/sites/default/files/documents/pdf/ncsam_socialmediabotsoverview_508.pdf?trackDocs=ncsam_socialmediabotsoverview_508.pdf.
30 Emma Woollacott, "Yes, the Bots Really Are Taking Over the Internet," Forbes, April 16, 2024, https://www.forbes.com/sites/emmawoollacott/2024/04/16/yes-the-bots-really-are-taking-over-the-internet/.

To better understand bots' impact, the Pew Research Center investigated how many links shared on Twitter are promoted by bots rather than humans. They analyzed approximately 1.2 million tweets containing links to 2,315 popular websites over six weeks in the summer of 2017. The findings highlight the significant role automated accounts play in sharing links to prominent websites on Twitter. [31]

Automated accounts post the majority of tweeted links to popular websites across a range of domains

Share of tweeted links to popular websites in the following domains that are posted by automated accounts

Domain	Share
Total	66%
Adult content	90
Sports	76
Commercial product	73
News and current events	66
Celebrities	62
Organization or group	53
Twitter.com	50

Based on an analysis of 1,220,015 tweeted links to 2,315 popular websites collected over the time period of July 27 to Sept. 11, 2017. For comparison, links that redirect internally to Twitter.com are shown as a separate category.
"Bots in the Twittersphere"

PEW RESEARCH CENTER

Graph 6: Automated account posting majority of tweets across a range of domains

31 Stefan Wojcik, Solomon Messing, Aaron Smith, and Paul Hitlin, "Bots in the Twittersphere," op. cit.

Social media platforms like Facebook and X (formerly Twitter) have faced increased scrutiny for facilitating the spread of conspiracy theories and misinformation, prompting their parent companies to acknowledge the potential dangers these platforms pose. For example, an internal Facebook report found that 64% of users in extremist groups were directed there by recommendation algorithms. Additionally, social media companies have acknowledged that AI-driven algorithms contributed to the 2016 Myanmar genocide.[32] Although companies have taken steps to address these issues, such as Facebook's creation of the Responsible AI team, these groups focus on AI bias rather than the potential polarization caused by such software. Investigative work suggests that this focus may be intentional. In the 2020 Netflix documentary The Social Dilemma, software engineers, ethics specialists, and critics shared their views on social media and polarization, with many agreeing that corporations find polarization profitable.[33] Therefore, investigating the specific factors that contribute most to polarization is crucial.

32 J. ORLOWSKI, The Social Dilemma, 2020, Available at: https://www.thesocialdilemma.com/the-dilemma/
33 Ibid.

Analyzing social media algorithms directly is challenging because they are proprietary to their respective companies. Occasionally, relevant studies are made publicly available; for example, Facebook documented the "WES" simulation platform, which simulates interactions among [34] AI-driven Facebook bots to identify potential issues with the platform. However, these sources are often sanitized through corporate approval, potentially omitting crucial details and social concerns. Therefore, it is important to use general modeling techniques as proxies for analyzing these issues independently of the commercial algorithms. This approach also allows for the investigation of the evolution of different types of polarization over time in a standardized way. Combining computational opinion dynamics, agent-based modeling (ABM), and social analysis offers a promising path forward. [35]

34 J. AHLGREN, M. E. Berezin, K. Bojarczuk, E. Dulskyte, I. Dvortsova, J. George, N. Gucevska, M. Harman, R. Lämmel, E. Meijer, S. Sapora, and J. Spahr-Summers, "WES: Agent-based User Interaction Simulation on Real Infrastructure," Proceedings of the IEEE/ACM 42nd International Conference on Software Engineering Workshops, 2020, [doi:10.1145/3387940.3392089].
35 Dennis Jacob and Sven Banisch, "Polarization in Social Media: A Virtual Worlds-Based Approach," op. cit.

Conclusion

Social media has undeniably transformed global communication, yet its role in fostering divisiveness remains a significant concern. The case studies included in this report, ranging from the COVID-19 pandemic to the U.S. elections, indicate how digital platforms may strengthen ideological differences, spread false information, and produce echo chambers that support preconceived notions. These challenges are worsened by the growing use of AI-driven algorithms, which favor interaction over exposure to other viewpoints, creating an online atmosphere where polarization flourishes.

Moreover, generative AI and social media bots have made sustaining unbiased and knowledgeable discussions more challenging. Automated accounts continue to influence public narratives by disseminating inaccurate or misleading information that affects public trust and political beliefs. Online polarization is deeply ingrained, and research on the algorithmic effect indicates that although social media platforms greatly influence content visibility, altering these systems does not always change political sentiments.

To address this problem, a multifaceted strategy, including governmental control, media literacy programs, and platform openness, is needed. With over 5 billion people using social media worldwide, policies promoting positive discourse and slowing the spread of contentious information are crucial. If nothing is done, the digital environment will continue to escalate social and political division.