Examining Polarization on Facebook: Using Misinformation Acceptance and News Judgment

Abstract

There is growing concerned that social media platforms are contributing to political polarization by forming echo chambers environments that shield users from opposing viewpoints on current events. Extremist political viewpoint groups are accused of spreading misinformation, anti-scientific claims, and conspiracy theories. This research is intended to investigate the relationship between Facebook usage, misinformation acceptance, overconfidence in news judgments, and political polarization in society. Specifically, this paper examines whether increased use of social media can increase political polarization. We analyze data from the ANES Social Media Study 2020. The findings are discussed in relation to the existing literature as well as their theoretical and practical implications.

Introduction

Social media platforms are frequently chastised for fostering "echo chamber" environments that contribute to political polarization and isolate people from opposing viewpoints (Cinelli et al., 2021). Social media users have a tendency to friend or follow people whose opinions they already agree with, while unfriending and unfollowing those who hold opposing viewpoints (Aiello et al., 2012). As a consequence, people who might offer a different opinion or alternative perspective are cut off from an individual's social network. This phenomenon, described as the group polarization theory (Sunstein, 1999), results in user experiences that do not reflect society as a whole. Users who are in echo chambers tend to avoid thoughtful debate and only validate each other's existing beliefs. As a result, their own beliefs become increasingly extreme over time (Cinelli et al., 2021).

Polarization is not the same as policy disagreement, which is normal and healthy in a democratic society, and it is more than just having opposing viewpoints with your neighbors. Polarization is a phenomenon in which a disagreement becomes extreme and leads us to, for example, refuse to live next to someone who holds opposing political beliefs. With polarization, we divide ourselves into groups that compete against each other and perceive the opposite side as an enemy. In the United States in recent years, polarization has been affecting families, schools, religious organizations, and our social fabric. Weber et al. (2021) states, “Ultimately, polarization harms mental and physical health, financial welfare, relationships and societal interests through its impact on psychology, marketing and public policy outcomes” (p. 184). Understanding the cost of polarization may motivate us to reduce it before irreparable damage is done.

Political polarization is increasing in part as a result of fragmentation in the news media and the spread of misinformation via social media (Kubin & Von Sikorski, 2021). Allowing people to seek and receive information is one of the keys to democracy. The fact that social media is relatively new means that we do not fully understand the extent to which it influences its audience or the direction of that influence (Zhuravskaya et al., 2019). Researchers are just beginning to understand some of the ways that social media influences audiences. Weber et al. (2021) shows that political polarization has a negative impact on not only elections and governance systems, but also on mental and physical health, financial well-being, interpersonal relationships, and societal interests as a whole.

For example, an increase in social media usage has been positively associated with an increase in COVID-19 misinformation acceptance (Su, 2021). This is important because misinformation is critical to increasing COVID-19 vaccination rates and, as a result, saving lives and lessening the effects of the pandemic. By finding ways to curb misinformation and prevent echo chambers, people may be less likely to become polarized and contribute to societal problems like vaccine hesitancy.

This research paper proposes a comparative analysis of the relationship between social media usage and its effect on political polarization through misinformation acceptance or overconfidence in identifying misinformation. Although several studies have found evidence of this trend, few have utilized the data from the 2020 American National Elections Studies (ANES) Social Media Study dataset. This research will utilize this dataset to determine whether a relationship exists between extremist views and the ability to identify misinformation.

Literature Review

Selective Exposure and Polarization

Sunstein (1999) suggests that people will develop more extreme and polarized attitudes toward the media when they are exposed to viewpoints that are similar to their own. This study of like-minded interpersonal groups provides important support for the hypothesis that there is a link between congenital media consumption and political polarization. Mutz (2006) notes that partisan selective exposure would lead partisans to ‘‘polarize further in the direction of their original views” and mentions that “this consequence is not yet well documented’’ (p. 227). An examination of the media's trustworthiness could be useful in mediating this debate. After all, the media is the primary conduit through which elite viewpoints are disseminated to the general public. Those who choose media outlets that align with their political beliefs are more likely to adopt polarized attitudes (Stroud, 2010).

Facebook Usage and Polarization

Social media are designed to be addictive by providing elements that keep users engaged (Cinelli et al., 2021). Algorithms are commonly used to retain users by feeding them content they like and giving them the option to avoid content they don’t like or find interesting (Cinelli et al., 2021). Given such options, social media users tend to select information that adheres to their system of beliefs (Jiang et al., 2021). Such behavior tends to solidify pre-existing beliefs and encourages the emergence of like-minded user groups, in which acceptable

content is shared, promoted, and circulated while any alternative perspectives are excluded (Kitchens et al., 2020).

According to group polarization theory (Sunstein, 1999), an echo chamber can establish confidence in existing opinions because members share and endorse the same beliefs and, as a result, this process makes the entire group overconfident in those beliefs. This same process occurs in groups with diametrically opposed views, and the result is that echo chambers on social media platforms can increase polarization (Cinelli et al., 2021). Social media platforms, such as Facebook, that deliver content based on what users like and encourage a “friends’ culture” appears to foster the echo chamber environment (Cinelli et al., 2021). Several researchers have found some evidence that increased Facebook usage is correlated with an increase in political polarization (Kansco, 2020; Kim et al., 2020; Lee et al., 2014). In addition, research conducted by Iyengar and Hahn (2009) found that people are more likely to choose information sources that align with their partisan political preferences. Moreover, Kim (2009) discovered that individuals purposefully seek out information about public affairs issues that matter to them. If people are increasingly exposed to only like-minded information sources, society will become more fragmented and polarized into two extreme positions (Nie et al., 2010).

In contrast to these findings, Wojcieszak and Mutz (2009) stated that people still encounter political differences even if they do not seek political information. Furthermore, according to Beam et al. (2018), exposure to news on Facebook does not result in increased affective polarization amongst users, and people who get their news from Facebook on a regular basis are more likely to see both pro-and anti-attitudinal stories, which overall results in a depolarization of the political divide.

The question of whether people will be exposed to more diverse communication networks has serious implications for democracy's future. As such, research to further clarify the

effects of social media on extremism is extremely important. Therefore, this paper aims to further investigate this relationship using the American National Election Studies (ANES) 2020 Social Media Study dataset, which is specifically aimed at understanding the usage of social media and political views.

RQ1: Is Facebook usage positively associated with polarization?

Misinformation and Polarization

Social media platforms provide unprecedented direct access to a massive amount of content. Platforms that were originally intended for user entertainment have altered the way information spreads. Feed algorithms mediate and influence the promotion of specific content based on the preferences and attitudes of users (Su, 2021). Current research shows that in general, social media users prefer information that supports their views and tends to ignore opposing views (Lee et al., 2014). The resulting polarized groups are based on shared narratives (Su, 2021). During the COVID-19 pandemic, for example, the World Health Organization (WHO) raised concerns about the spread of misinformation that discourages preventive care and appropriate medical interventions (Naeem et al., 2020). Su (2021) found that social media use had a positive correlation with misinformation beliefs, while a preference for discussion heterogeneity was negatively correlated with misinformation beliefs.

According to Tucker et al. (2018), there has been an apparent rise in partisan misinformation and conspiracy theories over the past few years, along with an increase in ideological polarization among the elite and widespread affective polarization among the general public. Partisanship and ideology frequently skew public perception of these unsubstantiated claims (Tucker et al., 2018). Many studies have attempted to determine why false information spreads so easily on social media platforms like Facebook and Twitter. For example, Chen et al. (2015) found that people shared misinformation because “the information is new and a good topic of conversation” (p. 5) and because the misinformation seemed more

"interesting" and "eye-catching" than genuine information (p. 5). Additionally, they suggested that when it came to sharing information on social media, people did not place a high value on accuracy and/or authenticity. Cinelli et al. (2021) found that when polarization is high, misinformation spreads more quickly. However, selective exposure and content consumption on Facebook may impact users differently depending on a variety of very different dynamics, such as Individuals who believe in specific conspiracy theories and misinformation are likely to have psychological predispositions that lead them to seek out and accept such information (Enders et al., 2021). Furthermore, scholars also have found that excessive use of social media can result in social media fatigue, making users less likely to verify news before sharing (Ravindran et al., 2014).

More research is still needed in this area to elucidate how digital media can contribute to polarization and the spread of mis-and disinformation (Tucker et al., 2018). Therefore, this study also will investigate the relationship between polarization and acceptance of misinformation.

RQ2: What are the effects of exposure to information and disinformation via social media on individual beliefs and behavior?

Methods

Sample and Data

This study will use the American National Election Study (ANES), a quantitative, nationally representative collection of surveys of US voters. The surveys have been conducted before and after every presidential election since 1948 (American National Election Studies, 2019). ANES data sets are collected via voluntary participation with informed consent, and the confidentiality of respondents is ensured. In 2020, due to the COVID-19 pandemic, no face-to-face interviews were conducted, but rather the survey used video calls and telephone interviews. All respondents had the option to participate in either English or Spanish. All questions were read aloud to the participants, who replied orally. The pre-election survey was conducted between

August 18 and November 3, 2020. The same respondents who had previously participated would then be re-interviewed after Election Day, between November 8, 2020, and January 4, 2021. Respondents were a cross-section of eligible voters in the United States. ANES used probability samples with oversampling of key population groups such as Hispanics and Blacks. In this paper, the researcher will analyze the post-election dataset because it is the most recent. SPSS is used to process the data.

Measurement: Polarization

The first research question is whether Facebook usage is positively associated with the level of individual political polarization. For this question, the independent variable is the frequency of Facebook usage, which is measured by analyzing the answers to the question: How often do you visit or use Facebook? Respondents chose one of seven answers, ranging from “less than once a month” to “many times every day.” Only responses from individuals who chose one of these seven answers were included in the analysis.

The dependent variable is affective polarization, measured using the respondents’ ratings of their feelings about the Democratic and the Republican Parties. Respondents indicated their ratings of the two parties using “feeling thermometers” to show their liking for each party. We calculated affective polarization as the absolute value of the difference between an individual's ratings of the Democratic and Republican parties.

Measurement: Misinformation

The second research question asks how acceptance of misinformation is related to respondents’ confidence in their ability to identify misinformation. The ANES social media study contains four questions related to misinformation. Misinformation acceptance was measured by combining a respondent’s incorrect answers to the following questions:

Which of these do you think is most likely to be true about the presidential election held four years ago?

1. Russia tried to interfere in the 2016 presidential election
2. Russia did not try to interfere in the 2016 presidential election (misinformation)

and

1. Millions of people voted illegally in the 2016 election (misinformation)
2. Very few people voted illegally in the 2016 election

Whose administration deported more unauthorized immigrants during the first three years?

1. Donald Trump's administration (misinformation)
2. Barack Obama's administration

Which of these two statements do you think is most likely to be true about the Affordable Care Act of 2010 (ACA), also known as Obamacare?

1. The ACA increased the number of people with health insurance
2. The ACA did not increase the number of people with health insurance (misinformation)

For these four variables, only individuals who actually chose one of the two answer options were included in the analysis. Those who refused to answer or did not complete the post-election interview were not included.

We developed the misinformation confidence score using respondents' answers to the follow-up questions about each of the preceding four questions. The follow-up question asked respondents to indicate how confident they were about the answer they had given, using a scale from 1 (not at all confident) to 5 (completely confident). Thus, for each incorrect answer an individual gave, he would receive a score from 1, indicating low misinformation acceptance, to 5, indicating high misinformation acceptance. These scores were then summed to create an overall misinformation confidence score, which could range from 0 (for individuals who

answered every question correctly) to 20 (for individuals who expressed complete confidence in all four incorrect answers).

Misinformation overconfidence scores will be tested for regression with respondents' answers to a question that asked about their ability to distinguish between true and false information in the news: *How confident are you that you can tell if information in the news is true or not true?* (1 = not at all confident, 5 = extremely confident).

Measurement: Controls

The analysis described in this study controls for the following variables: education levels, political affiliation, and perception of media trustworthiness. Two control variables are particularly important to mention: education and political affiliation. It is possible that those with higher levels of education will also be better able to counter-argue information, which will result in polarization even in the face of contradictory information. For political affiliation, it is easier for those with strong partisan allegiance to choose political media, to process information in a way that supports their preconceived viewpoints, and to hold their views with certainty. This study will provide a relationship between partisan selective exposure and polarization/certainty by examining people's trustworthiness of media sources (e.g., Fox News, MSNBC, New York Times, USA Today, Facebook posts, Twitter posts). For these reasons, all models include both education and political affiliation as controls. All the control variables that will be used in the analysis are listed in Appendix I.

Statistical Analysis

To test the proposed hypotheses and research questions, we will run a linear regression to assess the conditional relationships between Facebook usage and affective polarization in question one, and belief in misinformation and confidence in identifying the misinformation in question two.

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