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## Political Polarization in Social Media: A Meta-Analysis

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### Abstract

The problem of political polarization in social media is increasingly dynamic. Therefore, the contribution of this research is more to develop the concept of political polarization in social media by exploring the research that has been done related to this topic. This study uses the scoping review method. The findings in this study show that the development of research on political polarization in social media has become very rapid in the last twelve years in line with technological developments. Social media has the facility to allow people to express their opinions more easily on digital platforms. This is why social media has become a very effective tool for political polarization. Interestingly, Twitter and ideology are powerful keywords related to this topic. This indicates that Twitter is the most dominant place for political polarization, with the cause being ideological differences. Furthermore, keywords that can be investigated further in the future are political discourse, elections, democracy, and political participation in the big theme of political polarization.

### Keywords

Political Polarization, Social Media, Research Mapping, A Meta-Analysis, Scopus

## **Introduction**

Differences in views between political groups become a fundamental issue because they are related to the emergence of divisions and political problems. Political polarization hurts the functioning of political parties and the political system (Kopecký et al., 2022). There are ways to examine how polarised a nation's politics are. According to the comprehensive range view, polarization is a matter of differing policy supply; in this instance, the options available to citizens are as varied as the policy terrain covered by the political parties (Vegetti, 2019). Therefore, the contribution of this research is more to develop the concept of political polarization by exploring the research that has been done related to this topic. This will be useful for the general study of politics, including elections, political parties and others.

Objectively, the problem of political polarization in social media is increasingly dynamic. Moreover, since the surge of information technology has entered the world of politics, the issue of political polarization has increased. Even in the last ten years, with the increasing use of social media, the practice of political polarization has also increased. Academics need to study this phenomenon that the world is advancing with information technology. However, social media became a new facility for political polarization among political elites, especially during political competition. Scholars have shown that social media usage can increase societal polarization by reinforcing partisan political attitude (Hong & Kim, 2016; Ojala et al., 2021; Urman, 2019). There is a large body of study on the behavioural traits at the individual level that may be responsible for the rise in partisanship and, consequently, the polarization of society (Colleoni et al., 2014).

Several previous studies, such as research from Borah & Singh, (2022) which explains the level of viewpoint dispersion during political discourse and the use of Twitter to create communication linkages between parties. The inquiry analyses the social networks and the substance of the tweets sent by Indian politicians between 2019 and 2021 amid some significant events in India. Then, another study conducted by Cho et al., (2020) explains about uses of the real-world recommender algorithm of the hugely popular video-sharing platform YouTube to explore how algorithms affect user opinion. Using our proprietary code, we experimentally modify user search and viewing histories. The next step is undertaking a controlled lab experiment to see whether exposure to algorithmically advised content strengthens and polarizes political ideas. Then, research from Lang (2015) explains socio-economic and political responses to regional polarization and socio-spatial peripheralization in Central and Eastern Europe. This research focuses on the discussion of new interpretations of the terms peripherality and centrality, rural and urban, border and rural, core and periphery, and contributes to the development of new approaches to multi-level governance and ultimately to regional policy.

Furthermore, research from Stanig (2013) explains that retrospective economic assessments are politically biased: in a wide range of democracies, supporters of the ruling party consistently provide evaluations that are more favourable than those of the rest of the electorate; likewise, ideological distance from the ruling party predicts more unfavourable assessment. However, during economic downturns, people of all political and ideological stripes frequently concur that the situation is terrible. On the other hand, during recoveries, opinions tend to split along partisan and ideological lines. Because of the psychological condition known as negativity bias, retrospective assessments react more strongly to economic downturns than recoveries. Because of this, public opinion polarisation changes significantly between periods of strong and weak economic growth.

Furthermore, research from Lindqvist & Östling (2010) explains using the dispersion of self-reported political preferences as our indicator of polarization to examine the connection between political polarization and public spending. In democratic nations, political polarization is substantially correlated with smaller governments, but in non-democratic countries, there is no correlation between polarization and the size of government. The findings hold up well to a broad range of control factors, such as income inequality and gross domestic product per person. Other research from Yarchi et al. (2021) explains that Many democracies worldwide face a severe dilemma due to political division on the internet. Even though the topic has gotten some scholarly attention, the debate's conceptual clarity still needs to be improved. We can track political discussions in their natural environments, the world of interactive social media, in a precise manner by using computational communication science methodologies.

Based on this explanation, it is explained that several previous studies with topics relevant to this research focused more on discussing the causes of political polarization and political polarization in the socio-economic field. Therefore, the novelty contribution of this research is more focused on mapping the development of political polarization in social media through research publications indexed by Scopus. This research visualizes the data using the Vosviewers software application and analysis features in the Scopus database. VOSviewer has been used extensively for various research disciplines' bibliometric mapping investigations (Pan et al., 2018). Researchers can find themes or clusters of countries, institutions, and keywords used in the title and abstract of published publications due to citation links, bibliographic coupling, and cooccurrence analysis. These themes employ a single colour to represent how closely related various terms, writers, journals, organizations, or countries are in several research streams, enabling academics to analyse multiple angles of an overarching study topic (Noor et al., 2020).

## **Theoretical Perspective**

### ***Political Polarization***

The majority of theories on polarization consider it to be a system-emergent characteristic. Accordingly, political parties' unique features and their interactions with one another as system components determine how polarized a society is (i.e., their ideological similarity or differences). Accordingly, it is thought that this concept's elements and overall systemic nature have an impact on how individual parties believe and act (for instance, by helping to predict the types of coalitions that will emerge) as well as the systemic outcomes of these calculations (such as political stability) (Maoz & Somer-Topcu, 2010). The extent of political polarization in any given country can be understood through either of two perspectives. The broad perspective maintains that polarization results from the differentiation of the policy supply; in this instance, the range of options available to citizens is equal to the policy areas covered by the political parties. According to this perspective, polarization has advantages such as enhanced electoral competition and mobilization (Vegetti, 2019). However, another viewpoint contends that polarization means the policy supply is concentrated around two poles, leaving little possibility for a moderate ground (McCoy et al., 2018). According to this theory, voters in polarized democracies tend to be more partisan, less inclined to transfer parties over time, and more biased in assessing political issues (Druckman et al., 2013).

Despite the diversity of definitions, most measures of polarization share several problems. First, existing measures include the relationship and organization of the units/groups and their qualities (Fisher et al., 2012). Second, most current measurements assume the system is divided into distinct blocks. Unit membership in these blocks is predetermined. For instance, several studies have discussed the above-predetermined polarization based on the quantity, nature, and characteristics of the parties that make up the coalition or by labelling parties as "extreme right" or "extreme left." However, the system's split into coalition and opposition is endogenous; it results from the calculations made by political parties and the connections between them. A political system's polarization may depend on several proto-coalition/opposition configurations that must be defined endogenously, in addition to the system's actual divide into coalition and opposition (Hwang et al., 2014).

Third, most polarization measurements presuppose distinct groups (such as coalition and opposition). Political parties, however, cannot be categorized as a single entity in a specific group in reality. We miss intricate potential relationships in the system through an arbitrary unit-to-group assignment. This suggests that a particular political party may be eligible to join various proto-coalitions based on pre-established criteria such as philosophy, seat shares, or a mix of the two. A genuine bargaining process determines whether a party enters a given coalition. Theoretically, rather than ex-post-political developments, a measure

of political polarization should be based on ex-ante characteristics and theoretically defined processes (Maoz & Somer-Topcu, 2010). Fourth, the maximum and minimum levels of polarization, representing the borders of polarization, are only sometimes well defined. A well-defined continuum in terms of its endpoints is a requirement for a measure of polarization that enables the comparison of political systems across time and location. This suggests that theoretically correct intuitive interpretations should be possible for the properties of situations that define maximum and minimum polarization. The terms "maximum polarization" and "minimum polarization" in the context of party systems should mean what we recognize as a maximally (or minimally) polarized system intuitively (Bulut & Yörük, 2017).

### **Literature Review: Political Polarization in Social Media**

The issue of political polarization on social media demonstrates how the polarization on Twitter varies dramatically depending on the nation. An exploratory study reveals that polarization is lowest in multiparty systems with proportional voting and highest in two-party systems with plurality election procedures (Urman, 2019). The actors follow and retweet members of other groups of actors even if there is polarization in both followership and retweet networks. Polarization did not appear in the mentioned network. The blocks were distinct, with the right-wingers being closer and much more active while simultaneously being further away from the other followers in the network (Gunnarsson Lorentzen, 2014).

During the political campaign for Italy's 2016 constitutional referendum, there was polarization on social media. 25% of Twitter users leaned toward yes, 48% toward no, and 27% were neutral. Most users who were classified as supporters of no or yes kept their opinions the same in the weeks leading up to the vote. In contrast, a consistent portion of the neutral users had consistently shifted toward no (20%) and toward yes (10%) (Marozzo & Bessi, 2017). Likewise, in the case of the 2016 elections in the Netherlands, massive political campaigns were carried out using social media and caused polarization. Many political parties and candidates compete in multiparty election campaigns for media coverage, voters, and a majority in the government. Negative campaigning, which frequently generates exciting stories, is a compelling tactic in the fight for media attention. However, political backing for a different party presents a different tactic because it denotes desired governing alliances (De Nooy & Kleinnijenhuis, 2013).

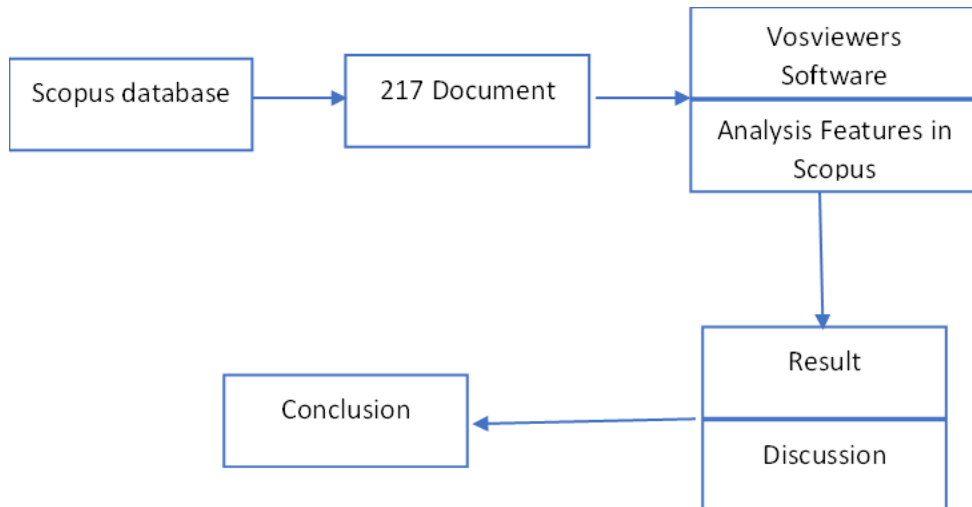
Bargaining theory predicts that as a political system's polarization increases, parties have fewer opportunities to form coalitions without resorting to elections, inducing constraints on managing political crises (Maoz & Somer-Topcu, 2010). In democratic nations, political polarization is substantially correlated with smaller governments, but in non-democratic countries, there is no correlation between polarization and the size of government (Lindqvist & Östling, 2010). The exposure to uncivil internet comments affects people's expectations about public discourse, perceived political polarization of the public, and attitude polarization

along party lines. Although exposure to uncivil internet discourse has little effect on attitude polarization, it significantly impacts how the public is perceived to be divided (Hwang et al., 2014).

## **Research Methods**

This study uses the scoping review method. A scoping review is a rigorous and transparent method to identify and comprehensively analyse all relevant literature related to the research question. A scoping study aims to map the body of literature on a topic area. Scoping reviews seek to present an overview of a potentially large and diverse body of literature relating to a broad topic, whereas systematic reviews attempt to compile empirical evidence from a relatively small number of studies relating to the focus of the research question (Pham et al., 2014). This study uses a meta-analysis approach. Meta-analysis is often defined as a study that reviews a particular topic descriptively; the purpose of meta-analysis is to analyse the test results of previous studies through qualitative and quantitative methods to summarize the findings (Smets & van Ham, 2013).

Sources of data in this study came from articles in the Scopus database. Scopus was used because it is the most prominent index in the world, is recognized and has an excellent academic reputation (Thelwall, 2018). Documents retrieved from Scopus were from 2010-2022. This is because, during that period, cases of political polarization around the world increased; this is inseparable from many aspects of the world that are developing very quickly, starting from the internet, social media, elections, the COVID-19 pandemic and others. The number of article documents obtained was 217. Research strategies for retrieving data in the form of records in the Scopus database were as follows. TITLE ( political AND polarization AND Social AND Media ) AND PUBYEAR > 2009 AND ( LIMIT-TO ( DOCTYPE , "ar" ) OR LIMIT-TO ( DOCTYPE , "cp" ) ) AND ( LIMIT-TO ( SUBJAREA , "SOCI" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) ).



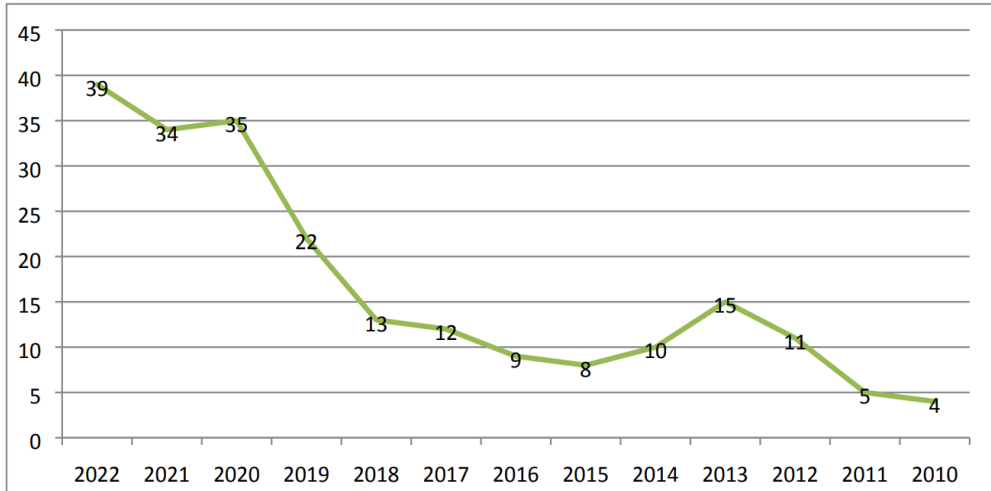
**Figure 1** Research stage

In analysing and displaying data, this study uses two features. First, the analysis feature in Scopus aims to show the bibliometrics of the articles that have been obtained, such as the number of document citations, the number of publications each year, author, publication source, affiliation and country. Second, Vosviewers is a software used in analyses and displays data about network and topic density from the theme of political polarization issues. Figure 1 shows the flow carried out in this study.

## **Result**

### ***Bibliometric Analysis of Research Around the World***

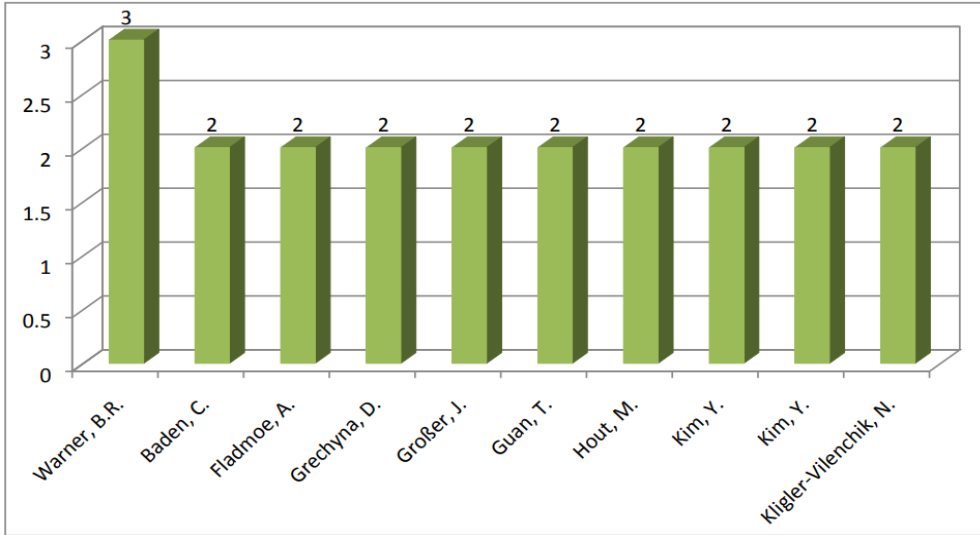
This study obtained 217 documents related to political polarization in social media from 2010-2022 from Scopus. This study used the analysis feature in Scopus to display bibliometric data from the 217 documents. The information provided by this feature included the number of publications each year, publication sources, authors, countries and affiliations that contribute to publishing research on political polarization. It aims to see academic developments on the topic of political polarization around the world. More than that, this bibliometric analysis is also essential because it is an effort to build a way for academics interested in this topic to find out their research opportunities can be published. This bibliometric analysis also has the benefit of seeing which documents on the issue of political polarization in social media have a significant impact in the academic world, in this case, based on the number of citations.



**Figure 2** The number of publications from 2010-2022

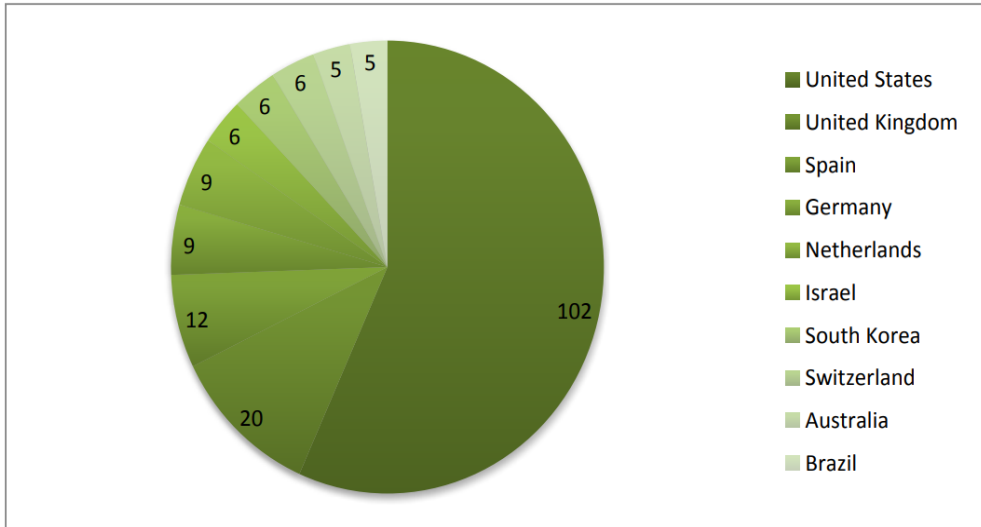
Figure 2 shows the number of research publications on political polarization in social media from 2010-2022. Based on these data, it shows that research publications on the topic of political polarization have experienced very significant developments over the last twelve years. This is indicated by each year the publication has an increasing trend in terms of its number. Interestingly, the most striking development in publications has occurred in the last four years. Publications reached the 20s starting in 2019; until the last year, 2022, advanced 29 documents. This illustrates that the issue of this topic is of great concern and interest to academics who are experts in this field, along with the increasingly massive use of technology and its impact on human life.





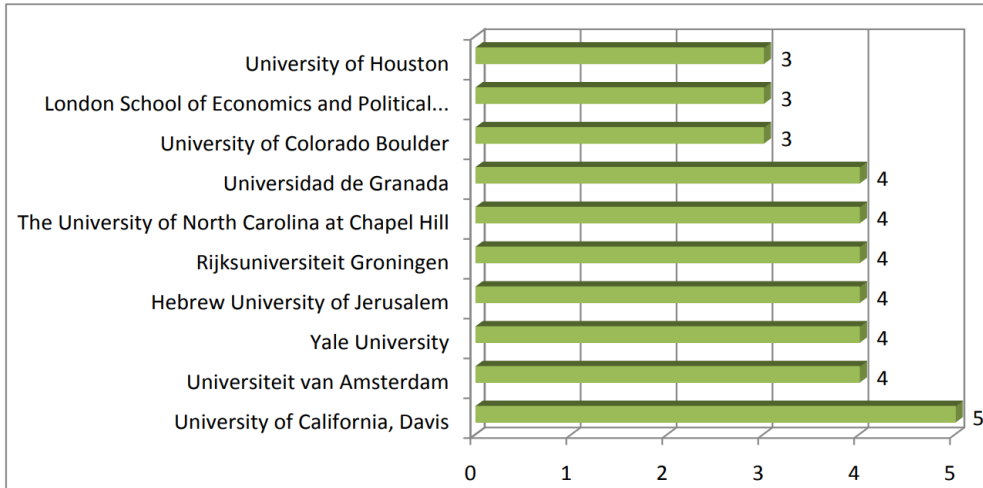
**Figure 3** Document publication by author

Figure 3 shows the authors of published documents on political polarization in social media from 2010-2022. These data indicate that Ben Warner is the author who contributed the most in publishing research on this topic, namely with three documents. Later, Christian Baden, Audun Fladmoe, Daryna Grechyna, Grober, each have two documents and Hout, Son Hyoung Kim and Neta Kligler-Vilenchik which has two publication documents. The findings in this data show that no author has dominance in conducting research and publishing it in a Scopus-indexed journal. The average has only 2-3 documents over the past twelve years. This indicates that some authors who have researched this topic are still limited to case-based.



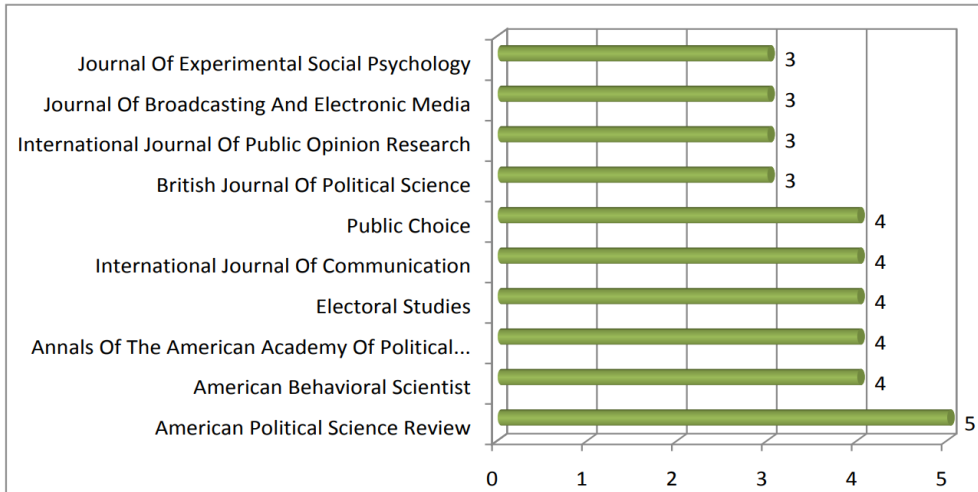
**Figure 4** Document Publication by Country

Figure 4 shows data on the ten countries that contributed the most to publishing research on political polarization in social media from 2010-2022. The data shows that the United States is the country that contributes the most to research publications on this topic, which has 102 documents. This finding shows the dominance of the United States in the world of academic research, especially on the issue of political polarization in social media. As a country that adheres to a democratic system, has the most prominent use of technology in the world, and has a very high level of risk of polarization on social media, apparently to be directly proportional to academic researchers who are concerned about this issue to be researched and the results published in Scopus indexed journals. More broadly, the United States is a developed country in education and academic research, so it has adequate facilities to support its researchers in researching specific issues, including this topic.



**Figure 5** Document publication by affiliate

Figure 5 shows the top 10 affiliates with the highest contribution to publishing research on political polarization in social media from 2010 to 2022. The University of California, Davis, is the most contributing affiliate in research publications with five documents. Followed by Universiteit van Amsterdam, Yale University, Hebrew University of Jerusalem, Rijksuniversiteit Groningen, and The University of North Carolina at Chapel Hill, each have four published documents. Then, the University of Colorado Boulder, the London School of Economic and Political Science and the University of Houston each have three published documents. This data confirms that the trend is indeed that the United States is the highest contributor, with one of them represented by the University of California. Moreover, most of the universities in the top ten with the highest contribution to research publications on this topic come from European countries.



**Figure 6** Document publication by source

Figure 6 displays data from the Scopus database related to the sources of research publications with the theme of political polarization in social media from 2010- 2022. American Political Science Review is the publication source with the most documents, namely, 5. Followed by American Behavioral Scientist, Annals of The American Academy of Political and Social Science, Electoral Studies, International Journal of Communication, and Public Choice, each having four documents publication. Then, the British Journal of Political Science, International Journal of Public Opinion Research, Journal of Broadcasting and Electronic Media, and Journal of Experimental Social Psychology have three publication documents. These top ten most contributing publication sources have high standards in Scopus. These journals have an average Scopus index of Q2-Q1, the highest in Scopus indexation.

**Table 1** Identification of Document Publication

<b>No</b>	<b>Title</b>	<b>Author</b>	<b>Publisher</b>	<b>Cited</b>
1	Political Polarization on support for government spending on environmental protection in the USA 1974-2012	(McCright et al., 2014)	Social Science Research	182
2	Does Media Coverage of Partisan Polarization Affect Political Attitudes?	(Levendusky & Malhotra, 2016)	Political Communication	126
3	The Unbearable Lightness of Politics: Climate Change Denial and Political Polarization	(Antonio & Brulle, 2011)	The Sociological Quarterly	105
4	Where Does Political Polarization Come From? Locating Polarization Within the U.S. Climate Change Debate	(Fisher et al., 2012)	American Behavioral Scientist	102
5	Political polarization on twitter: Implications for the use of social media in digital governments	(Hong & Kim, 2016)	Government Information Quarterly	101
6	Political Polarization along the Rural-Urban Continuum? The Geography of the Presidential Vote, 2000–2016	(Scala & Johnson, 2017)	Annals of the American Academy of Political and Social Science	97
7	Classroom Deliberation in an Era of Political Polarization	(McAvoy & Hess, 2013)	Curriculum Inquiry	94
8	Seeing is Believing: Effects of Uncivil Online Debate on Political Polarization and Expectations of Deliberation	(Hwang et al., 2014)	Journal of Broadcasting and Electronic Media	80

**Table 1** Identification of Document Publication (Continued)

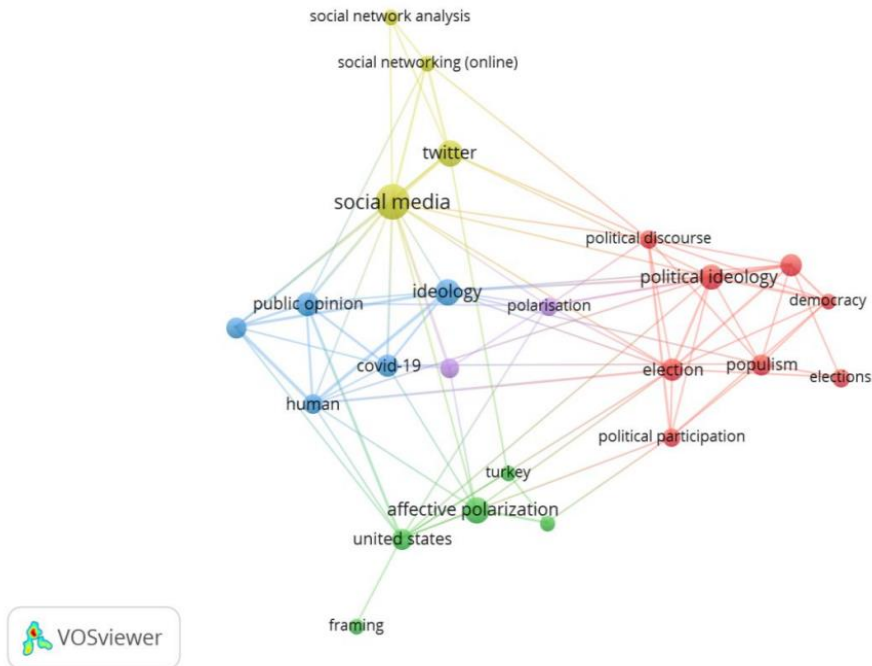
No	Title	Author	Publisher	Cited
9	Misinformation and Polarization in a High-Choice Media Environment: How Effective Are Political Fact-Checkers?	(Hameleers & van der Meer, 2020)	Communication Research	77
10	Political polarization projection: Social projection of partisan attitude extremity and attitudinal processes	(Van Boven et al., 2012)	Journal of Personality and Social Psychology	71

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Table 1 displays documents published by citation. The document “Political Polarization on Support for government spending on environmental protection in the USA 1974-2012” was cited most with 182 citations. This was followed by a document entitled “Does Media Coverage of Partisan Polarization Affect Political Attitudes?” which had 126 citations. Then the paper entitled “The Unbearable Lightness of Politics: Climate Change Denial and Political Polarization” had 105 citations.

### **Mapping of Network and Density: Political Polarization Topic**

This study displays the network and density of research publications on political polarization in social media from 2010-2022. The analysis shows the network aims to find out what keywords have a strong relationship with the topic of political polarization in social media. This will help us understand the phenomena that occurs in the academic world, reflected in the publication of scientific research on this topic. This analysis will also help understand the study of political polarization in social media related to what keywords. Then, the density analysis aims to find out what keywords have a significant enough opportunity to be investigated further by researchers with the topic of study on political polarization in social media. Density analysis is used to see which keywords have been discussed a lot or which have yet to be widely discussed related to this topic.



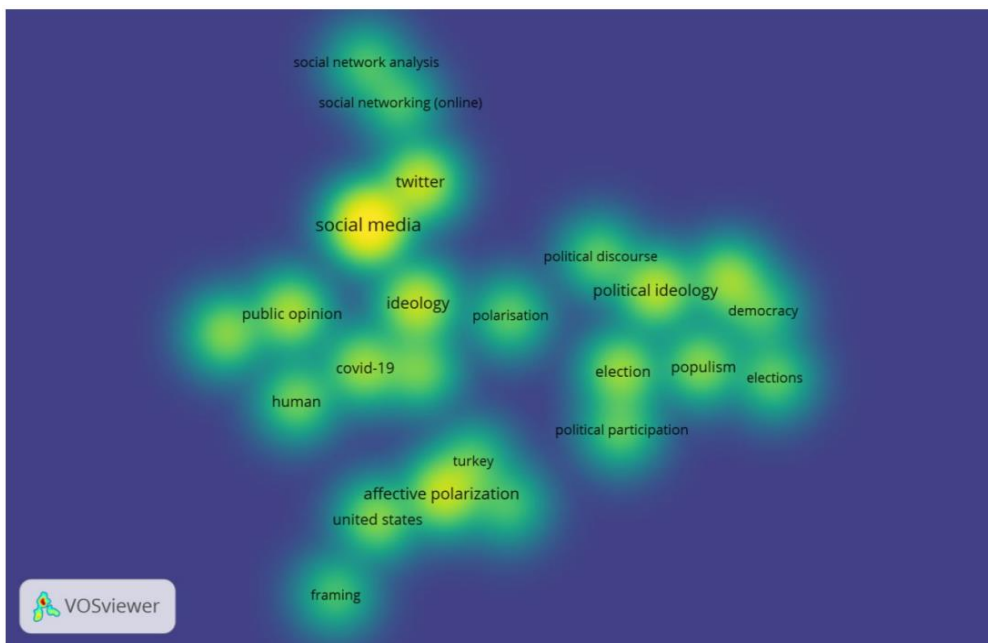
**Figure 7** Network of Political Polarization in Social Media Topic Based Keyword

Figure 7 shows a network of Political Polarization in social media topics based on keywords. The analysis in Figure 7 was generated using Vosviwers. The results of the study resulted in 5 clusters marked with different colours. Cluster 1, with red, consists of the keywords democracy, election, party politics, political discourse, political ideology, political participation and populism. Then, cluster 2 is marked with green consisting of the keywords affective polarization, framing, political knowledge, turkey, and United States. Furthermore, cluster 3 is marked in blue with the keywords covid-19, human, ideology, politics, and public opinions. Moreover, cluster 4 is marked with yellow, which consists of the keywords social media, social network analysis, social networking (online), and Twitter. Finally, cluster 5 is marked in purple with selective exposure and polarization keywords.

**Table 2** Keywords and Occurrences

No	Keywords	Occurrences	Total Link Strength
1	Twitter	23	43
2	Ideology	13	24
3	Political Ideology	11	24
4	Social Media	12	23
5	Public Opinion	10	22
6	Election	9	19
7	Politics	8	19
8	Covid-19	9	18
9	Party Politics	9	17
10	Democracy	5	10

Table 2 displays keyword network data related to the topic of study on political polarization. These data show that Twitter is the most potent keyword in the network with the issue of political polarization, with 43 total link strengths. Followed by the ideology and political ideology keyword, which has a power of 24. Then, the social media keyword also has a capacity of 23.



**Figure 8** Density of topic base keyword



Figure 8 displays the density based on keywords from the research topic on political polarization published from 2010-2022 and indexed by Scopus. Density analysis from Vosviewer can show keywords that have been discussed and those that have not. Keyword density can be identified based on words being highlighted in yellow; the more these keywords are surrounded by yellow, the more keywords have been discussed. Conversely, if the yellow is not too dense on these keywords, then it means these keywords have not been addressed too much in research. Therefore, this keywords can be used as a novelty in future research.

Figure 8 shows that the keywords social media, Twitter, Ideology, and affective polarization have a very dense density. So the topic of study on political polarization from the point of view of these keywords has been widely discussed or researched. At the same time, the keywords that can be investigated further in the future based on the findings in this study are political discourse, election, democracy, and political participation. This is because yellow does not overcrowd these keywords.

## **Discussion**

Due to its detrimental effects on democratic countries, political polarization has been a hot topic of discussion. A polarized population is frequently separated into groups with opposing polarity or ideas of the same size (Borah & Singh, 2022). The findings in this study explain that research publications on political polarisation have been growing in the last ten years. This illustrates that, indeed, the topic of political polarization has become a hot topic of discussion for academics. Moreover, with the rapid development of new media in recent years, the issue of political polarization has become increasingly widespread in countries around the world. New media is another facility that makes individuals or groups sharper in different thoughts or political views. Due to social media's rising popularity and usage among politicians, parties, and the general public, there has been an ongoing discussion on the existence of political polarization on it (De Nooy & Kleinnijenhuis, 2013).

This study found that Warner B.R. has become an expert writer in research focusing on studies on political polarization. This finding is significant because, in academia, which focuses on studies in the social sciences, researchers know that this person's writing can be used as a reference in other writings. Dr Benjamin (Ben) R. Warner (PhD, University of Kansas) is an Associate Professor in the

Department of Communication, University of Missouri and co-director of the Political Communication Institute. He is interested in the effects of partisan media, presidential debates, campaign ads, social media, and political humour. Much of Dr Warner's research explores the antecedents, consequences, and remedies of political polarization. In pursuit of these objectives, he draws on theories of persuasion, intergroup processes, and media psychology (Communication.missouri.edu, 2022).

Furthermore, this study also finds that the United States is the country that contributes the most to research publications on the topic of political polarization. This means that academics in the United States are very interested in writing research on the issue of political polarization. The reason that drives this is the political polarization in the country, which is also very dynamic and quantitatively significant. Research from Ojala et al., (2021) discusses how each US Congress member uses Parlemen and contrasts that with how they use Twitter. Even at its peak, just a few Twitter users were using Parler, but its use has had an influence. It was explicitly connected to the preparation for the attack on the US Capitol building on January 6, 2021. Parler itself may have a small impact in the future. Still, it provides valuable insights into the connections between political polarization, platform migration, the actual political effects of platform governance choices, and the fragmentation of our media ecosystem.

Furthermore, this study finds that social media and ideology are powerful keywords related to political polarization. This illustrates that political polarization often occurs with social media platform. In today's world of technology, with new media that is increasing, it is directly proportional to the problem of political polarization for groups with different views. Therefore, can be analyzed that political polarization can be influenced by the Internet and related technologies. Since widespread Internet use only started after polarization had already begun, it is evident that the Internet and social media cannot fully account for the growing polarization of American politics (Farrell, 2012). Thus, it is debatable to what extent the Internet and related technologies fuel political polarization. The findings suggest that social media's ability to personalize information may contribute to increased levels of extremism, furthering the polarization of politics online (Hong & Kim, 2016).

Twitter has recently attracted considerable attention regarding its potential for contributing to increasing polarization of views on the Internet as it creates

networks among those sharing similar beliefs. One culprit for this ideological polarization is the ideological fragmentation of those outlets; providing audiences with an "echo chamber" for their ideas potentially contributes to the polarization of public opinion (Kim & Hong, 2015). According to academic research, the use of social media can exacerbate polarization in countries by fostering partisan political beliefs. There is a large body of study on the behavioural traits at the individual level that may be responsible for the rise in partisanship and, consequently, the polarization of society (Colleoni et al., 2014). They include homophily, the tendency for people to associate with others who share their gender, socioeconomic class, and political preferences, and selective exposure, the propensity to choose news sources and information that support their beliefs (Urman, 2019). Thus, it is debatable to what extent the Internet and related technologies fuel political polarization. The findings suggest that Twitter's ability to personalize information may contribute to increased levels of extremism, furthering the polarization of politics online (Hong & Kim, 2016).

Average political polarization, often known as "ideological polarization," is a significant difference in viewpoints between opposing political actors or social groupings. This is typically contrasted with a situation with broad agreement among these groups. The sharpened awareness of contrasts between opposing parties on programmatic or policy concerns is the essence of this polarization (Kopecký et al., 2022). Political polarization happens when groups within a population acquire increasingly divergent views toward political parties and their representatives (also known as affective polarization) as well as toward ideologies and public policies (also known as ideological polarization) (Heltzel & Laurin, 2020).

## **Conclusion**

This study concludes that the development of research on the topic of political polarization on social media has become very rapid in the last twelve years due to the rapid growth of technology used by the public. Moreover, social media has facilities that allow people to express their opinions more easily on digital platforms. Thus, there is a high risk of creating differences in views between individuals and groups on social media. So, social media is a potential tool for causing political polarization. Thus, the emergence of digital technology has become a new means of political polarization in society. Furthermore, this study

also finds that the United States is the country that contributes the most to research publications on the topic of political polarization. This study finds that Twitter and ideology are powerful keywords related to the issue of political polarization. This indicates that Twitter is the most dominant place for political polarization, with the cause being ideological differences. Furthermore, keywords that can be investigated further in the future based on the findings in this study are political discourse, election, democracy, and political participation.

This research finding implies that the issue of political polarization in social media worldwide is growing along with humans' use of digital media. So, currently, social media, especially Twitter, is a fundamental means of severe political polarization. The limitation of this research is that it only used one data source, namely the Scopus database. Therefore, recommendations for further research can use other sources, such as the Web of Science, to make the data obtained more comprehensive.

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