Search and Politics:

The Uses and Impacts of Search in Britain, France, Germany, Italy, Poland, Spain, and the United States

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Table of Contents

Executive Summary

Global debate over the impact of algorithms and search on shaping political opinions has increased following 2016 election results in Europe and the US. Powerful images of the Internet enabling access to a global treasure trove of information have shifted to worries over whether those who use search engines and social media are being fed inaccurate, false, or politically targeted information that distorts public opinion. There are serious questions over whether biases embedded in the algorithms that drive search engines and social media have major political consequences, such as creating filter bubbles or echo chambers. For example, do search engines and social media provide people with information that aligns with their beliefs and opinions or do they challenge them to consider countervailing perspectives? Most generally, the predominant concern is do these media have a major impact on public opinion and political viewpoints, and if so, for the better or worse.

This study addresses these issues by asking Internet users how they use search, social media, and other important media to get information about political candidates, issues, and politics generally, as well as what difference it makes for individuals participating in democratic processes. We conducted an online survey of Internet users in seven nations: Britain, France, Germany, Italy, Poland, Spain, and the US.

Countering a Number of Prevailing Perspectives

The findings cast doubt on deterministic perspectives on search. We find that search does indeed play a major role in shaping opinion – but it is not deterministic. Specifically, the survey results indicate that:

1. The filter bubble argument is overstated, as Internet users expose themselves to a variety of opinions and viewpoints online and through a diversity of media. Search needs to be viewed in a context of multiple media.

Internet users perceive search engines to be accurate and reliable sources of information – one of the first places they go for information about politics. Nevertheless, they consult an average of 4.5 different media and encounter diverse information across multiple media, often intentionally, that challenges their viewpoints. Those most interested in politics consult an even greater range of media. Search engines are an important source of information, rivaling television, but they are only one among many media consulted by those interested in politics. Multiple sources of information tend to counter any potential filter bubbles created by search algorithms.

2. Concerns over echo chambers are also overstated, as Internet users are exposed to diverse viewpoints both online and offline. Most users are not silenced by contrasting views, nor do they silence those who disagree with them.

Echo chambers suggest that users tend to cocoon themselves with people who think like them. Our evidence contradicts this view as well. Most who search for political information expose themselves to different viewpoints. Cross-nationally, 36 percent of respondents say they often or very often read news they disagree with and an additional 43 percent do this at least sometimes. Less than 20 percent of people say they have unfriended or blocked someone because of differing political views or posting content they disagree with. Moreover,

in every country, one of the most common experiences people share in searching the Web and Internet is discovering something they had not known before. Almost half (48%) of all users across the seven nations say they ‘often’ learn something new when using search.

3. Fake news has attracted disproportionate levels of concern, in light of people’s actual practices. Internet users are generally skeptical of information across all media and know how to check the accuracy and validity of information found through search, on social media, or on the Internet in general.

Over 50 percent of users report they “often” or “very often” use search to check facts. The findings indicate that misinformation can fool some search engine users some of the time, but that most users (over 80%) are sufficiently skeptical of information to use search to check facts. Nevertheless, fact checking is limited by skills in the use of search. Many users could benefit from support and training in the use of search.

Reinforcing the Importance of Traditional Perspectives

The findings also point to patterns of search and online information seeking that should be given more attention:

4. Those interested in politics report using pluralistic sources of interpersonal and mediated information.

Those interested in politics report using an average of 2.4 offline and 2.1 online sources of information about politics as well as both online and offline social connections. For example, 72 percent of respondents report discussions with their friends and family are important for influencing how they vote. The findings demonstrate that those interested in politics expose themselves to a diversity of online and offline sources of information. The findings support traditional perspectives on the two-step flow of influence, which suggests that a proportion of the public follows politics more closely across a wide array of media, such as on television and through newspapers and online media. The knowledge they gain empowers them to become opinion leaders and wield interpersonal influence in their online networks and local neighborhoods.

5. Traditional patterns of content selection can be reinforced online.

For decades, scholars have been aware of commonalities in how people allocate their attention across competing sources of information. In everyday life offline and online, people often read, watch, or listen to the best books, movies, or music available. Likewise, as the Internet makes local and worldwide sources available anytime from anyplace, Internet users often select from the top results of their searches in ways that lead to the major celebrities, events, and political candidates garnering a disproportionate level of attention online. Awareness of this tendency could help Internet users expand their search and attention to encompass more diverse topics and sources, since the Internet and search also put the less well known candidates, issues, and events at the fingertips of users. Again, 48 percent of all Internet users across the seven nations say they ‘often’ learn something new when using search, indicating that search does not simply bring people to the most popular results.

6. The Internet is not a one-to-many mass medium like broadcasting, but can be many-to-many, one-to-many, and many-to-one, where Internet users are also producers of content.

It is important to remember that on the Internet, and social media in particular, individual users are often the sources of information, and not simply consumers of mass media and news. Internet users are more skeptical about the content of social media than any other medium included in our survey. For example, 15 percent of respondents find social media totally unreliable, while only 5 percent find it totally reliable. In contrast, 1.5 percent of respondents find search totally unreliable while 9 percent find it totally reliable. But the Internet and social media should not be viewed in the same ways and by the same standards as mass media, including broadcasters and online newspapers. The fact that an individual might get a fact wrong on a social media post should not create undue concern. Educational materials might well remind users that the Internet and social media incorporate many diverse media and sources, which require users to be alert to the veracity of sources, just as they are when conversing with a friend as compared with reading an encyclopedia.

The impact of search is important. It is one of the first places people go for trusted information on a variety of topics, including politics. However, its impact is not deterministic, and its role complements the diverse range of other media consulted by people, particularly if they are interested in politics. The findings of this study should caution governments, business and industry, and the public from overreacting to alarmist panics tied to potential distortions that filter bubbles, echo chambers and fake news might be creating in the arenas of political information and public opinion. Filter bubbles, echo chambers, and fake news are intuitively appealing, and might seem to apply to other people if not yourself. However, these fears are anecdote-driven, exaggerated, and not supported by the empirical evidence marshaled by this study of Internet users in seven countries.

Search in Shaping Political Opinion: An Overview

What part do Internet search engines play in shaping public opinion in politics and public affairs? Are they significant? Are they comparable to the role of other media, such as television and newspapers? What is the impact of search in shaping access to information about politics? These questions were at the heart of a multinational study of search and public opinion, entitled 'The Part Played by Search in Shaping Political Opinion.'

Global debate over the impact that algorithms, search, and online news – as well as fake news – can have on political opinion has been increasing in the aftermath of surprising election results in Europe and North America. Powerful images of the Internet enabling access to a global treasure trove of information have shifted to worries over the degree to which those who use social media, and online tools such as search engines, are being fed inaccurate or politically targeted information that will distort public opinion and feed political change.

There are serious questions over whether there are biases embedded in the algorithms that drive search engines and social media. For example, are search engines and social media providing people with information that aligns with their beliefs and opinions or challenging them to consider countervailing perspectives? Are people increasingly enabled to link directly with candidates, causes, and information, without the mediation or information gatekeeping provided by such traditional institutions as mainstream media, political parties, and interest groups (Noam 2017)? Most generally, the predominant concern is whether or not these media have a major impact on the political opinions and viewpoints of the public, and if so, for the better or worse.

Approach

This study addressed these issues by asking Internet users how they use search, social media, and other important media, for political information, and what difference it makes for them. Our questions were presented through an online Web-based survey to stratified random samples of Internet users in seven nations, including six countries (France, Germany, Italy, Poland, Spain, and the United Kingdom) of the European Union (EU), and the United States (US). In addition, we analyzed trace data on Internet search to bring in complementary information about what users do online.

Findings: Casting Doubt on Deterministic Perspectives on Search

A key theme of the report is that technology matters – as we find that search plays a major role in shaping opinion – but it is not deterministic. One consistent narrative about search is the potential impact algorithms might have on content provision – encapsulated by the idea of the filter bubble (Pariser 2011). Our findings suggest this hypothesis is overstated, as we describe a pattern of findings that counter it. Search engines are actually among an array of media consulted by those interested in politics.

Likewise, another and more sociotechnical determinism lies behind the concept of echo chambers (Sunstein 2007), where users enabled by increased media choice and social media tend to surround themselves with the viewpoints of likeminded people. Here again, a pattern

of evidence contradicts this view. Most of those who search for political information expose themselves to a variety of viewpoints.

While our findings question dominant narratives in the study of search as technologically deterministic, this study also points to the degree that research has tended to underestimate the social shaping of technology. People matter a great deal, as illustrated by the role of national cultures and media systems, as well as individual differences in political and Internet orientations. Such factors counter overly simplistic echo chamber models by drawing attention to the ways in which the use of search is shaped by individual attributes, cultural factors, and national media ecologies. This report shows how overestimating technical determinants while underestimating social influences has led to disproportionate levels of concern over the bias of search.

This overarching theme is reflected in a set of general findings arising from this study, including the following:

Search Matters in a Larger Ecology of Media

First, search engines are indeed significant for how Internet users obtain information. For example, they are one of the first places people go to for various types of information. However, the use of search takes place in a pluralistic media context in which those seeking information consult multiple sources and where television is still king. So some media can complement and correct other media, and search engines are themselves used frequently to check information, such as that seen on social media. In addition, the importance of search is reinforced by findings that the information found through search is perceived to have changed people's opinions and viewpoints on many issues, including how they vote.

Skills and Patterns of Internet Use Differentiate Individuals

However, there are major differences in how individuals use search and how skilled and confident they are in using search engines. The majority of Internet users are adept at using search, but many are not. Many Internet users perceive themselves to lack skills in the use of search, and many often feel frustrated when looking for information about politics. More training and support is required to ensure a more efficient and effective use of search across a wider proportion of the public.

Search is a Primary Gateway to Political Information, Moderated by Political Orientations

Secondly, search is often used to look for information about politics, although not as often as in many other more popular content areas, such as simply finding answers to specific questions. As a source of information about politics, online search is about as important as television. Again, political search is complemented by the use of multiple media, particularly among those with an interest in politics. Nevertheless, when going online specifically for information about politics, search is the major destination, albeit primarily as a gateway to the content being sought across local and global sites rather than as an end in itself.

Trace data of global longitudinal search behavior – looking at the most popular search terms – further confirms the degree to which politics trails many other content areas, such as sports and celebrities. Beyond very remarkable developments, such as the campaign and election of

Donald Trump, very few political issues rise to the top of Internet search trends. We found this to be the case over a period of five years, as well as by tracing search behavior during the short time our surveys were in the field. These long and short-term views enable us to better characterize the political contexts for our cross-national findings.

Search Perceived to Affect Political Behavior

Most importantly, despite the limits on search for political information, many people see search shaping their political behavior, including their votes and their viewpoints on issues. Also, Internet users often learn what others think about politics through search, although our respondents see interpersonal communication and mass media, such as television and newspapers, as more important than search for them to learn about what others think.

Fool Some of the People, Some of the Time

In politics, as in other content areas, people realize that they sometimes find questionable information, and search is one of a number of ways in which they try to confirm or verify the veracity of political information. Importantly, however, in contrast to the use of more traditional media, such as television and newspapers, many use the Internet, such as search and social media, to source their own information and distribute their own viewpoints and observations, such as reactions to a campaign event. This is what helps make search particularly attractive for those interested in politics, and also complementary to the mass media. This is not to dismiss the potential for individuals to be misled by fake news or misinformation, but in the spirit of Abraham Lincoln's famous quote, it is important not to exaggerate the degree that most users of the Internet are fooled most of the time. The evidence gathered through this study does not support such claims.

National Cultures and Media Systems Make a Difference

Cross-nationally, there are some relatively consistent patterns of media use, such as a greater reliance on television and the mass media in Germany, as well as in France and the UK. In contrast, the Internet occupies a more central role for individuals in Poland, as well as in Italy and Spain to a lesser extent. Internet users in the US are in some ways similar to those in Poland, Italy and Spain and in other ways similar to those in Germany, France and the UK, as described in the body of this report.

Individual Differences Across Internet Users Explain Most Variation in Search Practices

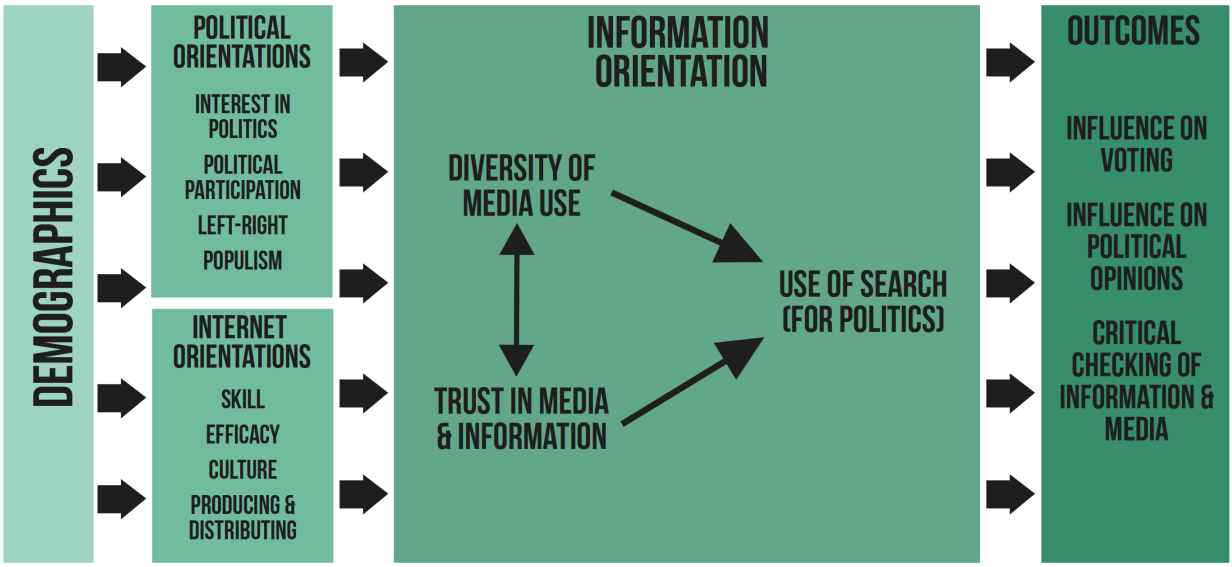
While national differences exist, the major differences in search behavior are across individuals rather than nations, and driven by their orientations to politics and the Internet (see Figure 1).

With respect to political orientations, those interested in politics and those who are more involved in political participation are the most frequent users of search for political information as well as of all other sources of political information. The fact that many people are not interested in politics accounts for the relatively lower level of search about politics in comparison with other content areas. That said, during the time of our survey, interest in politics appeared to be relatively high in all of our nations, due to the political issues

surrounding Europe and the European Union (EU), such as over the vote in Britain to leave the EU (Brexit), and the election of Donald Trump in the US.

Orientations to the Internet also explained different levels of search behavior. We only surveyed Internet users, but those with higher levels of skills in search and use of the Internet generally were more active in using search engines. Likewise, those most engaged with the Internet generally were more likely to be using the Internet for politics as well as in other areas of their lives. If you are a skilled user, it is possible to think everyone is proficient in using search, but many feel less capable and need more support and training if they are to use it effectively to find and check the accuracy and validity of information about politics.

Figure 1. Factors Shaping Search for Political Information and Its Outcomes.



Questioning Popular Deterministic Theories of Filter Bubbles and Echo Chambers

A growing array of theoretical perspectives are emerging about the political role of search, such as the notions of filter bubbles, echo chambers, the bias of algorithms, and more, many of which are reviewed in this report. While each is assessed, at a general level, there is more evidence in support of other theoretical perspectives, such as a modified version of the decades-old two-step flow model. Most generally, our findings suggest that most of the theoretical critiques of the dysfunctional role of search apply to some users, but not to most, and are exaggerated, for example by not taking into consideration the limited uses of search for political information, nor of the multiple media that define the context of search. This is one of the first studies to look at search in this larger context of multiple media.

Notably, studies examining the role of search and social media in the information seeking and sharing process have focused on the kinds of interactions individuals engage in within the context of specific platforms (Nikolov et al. 2015), such as Twitter. Little research has been done on the expectations of users of these Internet-based tools to learn about politics and

develop opinions. Further, political opinion formation is an ongoing social process that is not limited to a single platform or type of interaction at one point in time. Individuals seek and share information from and with a variety of sources and via a range of communication channels both online and offline (Chadwick 2013), and over an extended period of time.

One way to better understand the role of search as an intermediary in the political opinion formation process is to ask individuals about their preferences and practices, through a survey, which we do in this study. This allows us to consider search in the wider context of a person's social and informational networks and the wide range of media they use, such as online news, and opinion sites. Do offline social networks play an important role? What about online social media? During a general election, where do voters go for information on their political candidates? How broad is their search? Do they just look to Google, or do they also watch political ads on TV, read the local newspaper headlines? Do users look to Google to flesh out ideas they pick up elsewhere, e.g. searching for information about a candidate while seeing them make a speech on TV?

Limitations

This study brings systematic, cross-national evidence to bear on the actual role that search and online media in general are playing in shaping political opinion. However, it is anchored in an online survey that samples Internet users – not the general public – in seven nations. The sample therefore over represents some demographic segments, such as individuals with more schooling, compared to a random survey of the general population. It is also necessarily limited by a focus on the perceptions of Internet users, rather than the study of their actual behavior over time. However, in light of previous research, which has been primarily focused on trace behavior online, our study tends to reinforce and complement work that shows the limits of overly simplistic theoretical perspectives on the bias of search – ones that often underestimate the intelligence, ingenuity, and unpredictability of Internet users across different national contexts.

Implications for Policy and Practice

That said, misinformation can fool some search engine users some of the time, and there is evidence in our study to suggest that a sizeable group of users in all of our countries sampled could benefit from more support and training in the use of search engines. Unless Internet users have the skills and confidence to use search effectively, there will be continuing concerns over the public being misinformed, if not bamboozled, by fake news, bad news, or no news.

Most generally, our findings should caution governments, business, and industry from overreacting to panic over the potential bias of search in shaping political information and opinion. Basing policy and practice on exaggerated notions of filter bubbles and echo chambers could lead to disproportionate remedies that do not reinforce more targeted efforts to train and educate Internet users to better use search in the political realm and in the critical analysis of information that employs search as a tool for gathering and checking the facts.

Finally, you will find that the research for this study yields a valuable repository of detailed responses on all of the topics explored, within and across our seven-nation sample. These findings are described fully in the body of this report. However, this report cannot provide all

the detailed findings of our analysis, so we invite readers to contact the project for any data not reported or not shown in this report.

Highlights from the Seven Nations

The following report describes the full range of detailed findings across the seven nations included in this study. However, selected highlights for each of the nations are provided by country profiles in Appendix 5. Themes of these profiles are noted below:

France: Search Skeptics: In France, survey respondents are skeptical of search – as well as other media – and do not use it as often to get information. It doesn't play a large role in what they think and the decisions they make. For more information, see Appendix 6.1.

Germany: Traditionalists: For survey respondents in Germany, the traditional media are the go-to places for finding political information. Radio, television, and print are the mediums they trust. For more information, see Appendix 6.2.

Italy: A Penchant for Search? When it comes to the Web, survey respondents in Italy are big users of search. It's a tool they like to use and it's one that they trust. For more information, see Appendix 6.3.

Poland: The Online? In Poland, survey respondents like to use the Web. They trust search to help provide them with the information they need to stay informed and to make decisions. For more information, see Appendix 6.4.

Spain: Fact Seekers? In Spain, survey respondents are information seekers – reporting high use of search engines – and they like to check the facts. For more information, see Appendix 6.5.

United Kingdom (UK): Trust in Broadcasting? In the United Kingdom, a nation with a rich radio and television history, survey respondents display a strong trust in broadcast media. This may not be surprising in a nation synonymous with the BBC. For more information, see Appendix 6.6.

United States (US): Media Omnivores: When it comes to getting news and information, survey respondents in the United States are media omnivores – consuming a diverse range of media in an attempt to satisfy their needs. However, it tends not to be political information they're looking for. For more information, see Appendix 6.7.

Part 1. Introduction: Search in a Web of Media and Information

The ways in which search engines – their underlying algorithms and patterns of user behavior – may enhance or distort the information provided to citizens about politics has become a major issue over the last few years (Pariser 2011; Graham et al. 2013; Pasquale 2015; Epstein and Robertson 2015). The role of search in the political arena is of particular significance as it holds the potential to support or undermine democratic processes. For example, does online search enable citizens to obtain better information about candidates for political offices, and issues in elections and public affairs, or do the processes underlying search bias what citizens know in ways that could distort democratic choice?

Too often, answers to this question are anchored in deterministic perspectives on technology and overly simplistic models of the democratic process, as well as limited empirical research. They tend to be 'anecdote driven' rather than based on systematic empirical observations. For such reasons, there is a need for theoretically informed, empirical research focused on the actual role of search in political opinion formation in liberal democratic political systems of the digital age.

Before describing the approach taken by this research, this report begins with a set of research questions around the impact of search on political opinion. The report then reviews key theoretical perspectives on search and political communication that are necessary to interpret the significance of patterns of search behavior. This review is based on decades of research on the effect of media on public opinion as well as Internet studies that are relevant to the study of Internet search. We describe our approach to answering these questions through a review of relevant research, a comparative survey of EU and North American nations, and selected analyses of trace data on search behavior.

The analysis then moves to a study of individual versus cross-national differences, since these individual level differences appear to be more significant than the differences found cross-nationally. These analyses highlight the role of political and Internet orientations in explaining differences in search behavior. The report concludes with an overview of the issue, the key findings of this report, its limitations, and implications for policy and practice.

These empirical findings are complemented by a series of descriptions of country-specific findings that highlight unique tendencies of each nation when viewed in comparison with our other sample countries (see Appendix 5).

1.1. Questions Arising Around Research

The general questions addressed by this study fit well within contemporary research and policy issues surrounding the influence of media and the role of search. One concerns the role of various types of media in opinion formation. Others involve how Internet users combine information consumed via broadcast, print media and the Internet. This study is framed around six broad and multifaceted questions:

1. How important is search perceived to be by those who use the Internet?

Internet search engines were major innovations at the beginning of the twenty-first century. Early search services included Archie, one of the first in 1990, followed by such tools as

Excite, Infoseek, AltaVista, Yahoo! Directory, Hotbot, Lycos, and Ask Jeeves, followed by the launch of Google in 1998, and the Chinese search engine Baidu in 2000, along with many others. While search continues to be a site of technical advances and innovations, such as with voice search, the search services have become part of the everyday and often habitual use of the Internet. Therefore it is critical to anchor any discussion of the role of search in politics in a broader understanding of the use of the Internet and search in everyday life across our sample countries. How important is it? How often do people employ search, and do they perceive it to be a key part of their Internet use? What do they use it for – what are the purposes for which search is employed?

2. How do people consume various media to form political opinions or set political agendas?

Many people are interested in politics, but many are not, and many focus on politics only periodically, such as right before an election. What is the relative volume of search queries for political information gathering as compared to other forms of information discovery? If those volumes are higher or lower than other typical search queries, what does that tell us about individuals' expectations of search for political information? Is politics an important area of content compared to other kinds of information that people wish to find? Do most Internet users look to search to locate information about politics and public affairs? How frequently is search employed for understanding the political arena? Is it more or less important than other media, such as television or the newspaper, when it comes to politics? What are the major media that inform people about politics, and where does search sit within this larger ecology of multiple media?

3. How does search impact the individual's view of the results they receive?

Do individuals have different expectations of search results than they do from information received by other forms of media? Do individuals have an expectation of neutrality for search that differs from other forms of media? Do different individuals have different types of expectations compared to others? How has the explosion of smartphone usage changed individual behavior vis-à-vis opinion formation? Do users rely on smartphone apps for political information? As individuals integrate search and social media into their political information-seeking practices, there are genuinely new concerns about the potential for results to bias the opinion formation process.

4. Do search results play a big role in opinion formation or agenda setting? Does the personalization of search make its role decidedly different from the mass media in shaping opinions?

People choose their own search terms and follow their own search practices, making search inherently more personalized than choosing a newspaper or television channel. The potential for search to help people create their 'Daily Me' was once trumpeted as a key virtue of the Internet (Negroponte 1995), but is increasingly seen to pose the risk of being trapped in a filter bubble (Pariser 2011). Related to this question is what people search for online when looking for political information. To what degree is search used as a tool for navigation (finding a desired website), rather than as a way of searching for particular content?

5. What aspects of individuals, such as their locations or search histories, shape the results received from a search query?

The use of algorithms by search engines and social media to help ensure that users get the information they want, can also inadvertently steer them away from information they might need, such as information from sources with an opposing viewpoint. Do the existing political views of users impact the results they are served? Do other factors about users shape the results they are served (e.g.. gender, geography, race, or religion)? How does the behavior of other users impact the results another user might see?

6. What is the impact of populism on search and opinion formation?

Populism has become a focus of media and public discourse, but controversy surrounds the use of this term. To many it represents a rising tide of distrust in mainstream media and establishment politicians relative to the public at large. To others it is associated with support for particular issues, such as national identity politics. To others it is a growing movement in support of more direct democratic control over institutions of more representative democracies. How supportive of populism are the respondents across our seven nations? Do populist views help explain the use and impact of search for political information?

1.2. Perspectives on the Democracy of the Search Engine

Since the Second World War, the news media − as shapers of political opinion − have been a focus of concern in democracies across the world. The use of radio, first as a tool for propaganda during the war, and later, with television, as the primary means of communication and persuasion in modern political campaigns and elections, has been a major topic of academic research, beginning in sociology and political science, but leading to new and more multidisciplinary fields of communication and media studies. In that context, many worried that the mass media would be a tool for more autocratic versus democratic control since its use for propaganda could powerfully influence public opinion.

This concern stems from the centrality of information to democratic processes (Katz and Lazersfeld 1955). Representative democracy is based on the premise that citizens have access to the information necessary for them to develop political opinions and make informed choices at the polls. The use of the mass media in campaigns and elections has therefore been a prominent focus of research on whether the media provide the information voters require to make sound judgments. Threats to this process stem from risks to the fairness or balance of information, such as whether it is biased in favor of one or another candidate, political party, or particular side of an issue, and whether the media are too powerful in relation to other forms of political communication, such as face-to-face communication with friends, family, and members of one's community. The importance of political communication studies focused on the media rose as mass media became increasingly central to political campaigns and elections.

Early studies of the effect media had on the choices of voters largely allayed concerns over an overly powerful media. The mass news media were found to be relatively un-influential in changing the opinions of individual voters (e.g., Berelson et al. 1954; Campbell et al. 1964). More powerful influences countered the effects of the mass media, such as the political party affiliations of voters, which were often the product of socialization within the family. In line with this, much research refocused on the formation of party identification and political socialization within the family, rather than the impact of media content on political opinions.

However, new frameworks began to shift attention back to the effects of the media on agenda-setting rather than on opinion change (McCombs and Shaw 1972). Researchers argued that the media told people what issues to think about, rather than what or how to think about particular issues, for example that the media were shaping the issues considered most relevant to a given campaign or election, rather than changing whether people supported or opposed any particular issue.

In addition, more sophisticated models, such as the two-step flow model, argued that the media were more powerful than previously considered, because opinion leaders used the media extensively to get political information, and then used this information in face-to-face interaction with their family, friends, co-workers, and community (Katz and Lazersfeld 1955). Through these two steps, the media did have major consequences, even though the direct effects of the media seemed less powerful. Media influence flowed through the personal influence of opinion leaders.

Throughout this study of the effects of the media in the decades following the Second World War, until the 1990s, the research was based on the assumption that most citizens were exposed to the mass media, and hence, to major media campaigns. The major political parties and candidates could gain access to most voters via the major radio, and increasingly, national television channels or networks. What people saw on television was, therefore, relatively clear and discernible, and therefore its effects could be measured.

With the rise of newer media since the 1990s, and particularly the Internet, access to an audience became more problematic. Rather than a limited number of local and national television channels, those online could obtain access to literally millions of websites, blogs, videos, and social media from around the world. By 2016, it is problematic to assume that most people see any particular media content, since anyone is able to access any site from anywhere at any time in an increasingly ‘hybrid media’ environment (Chadwick 2013). Moreover, many among the public are becoming producers of information, not just consumers (Dutton 2009), and depend on the Internet and social media for their voices to be heard.

In such ways, technological innovations shifted the focus away from the effects of particular media messages, and towards who could gain access to the voter with any given media messages. Access could not be taken for granted. The major political issues of the digital age are increasingly centered on how technological adoption and design can ‘reconfigure access’ to information and people (Dutton 1999).

Not surprisingly, in this new media context, research on the effects of the media on public opinion has declined, as has political communication research on the mass media more generally. During the first decade of the twenty-first century, advances in search engines, along with the widespread adoption and diffusion of Google Search in particular, served to change this situation.

Studies in Britain, for example, found that Internet users from 2000 to 2013, followed two related trends (Dutton and Blank 2013). First, an increasing number did not go to particular content online, but increasingly went first to a search engine, primarily Google, to find the information they sought. Secondly, and at times in conflict with this first trend, since 2005, users began to spend more time on social media, primarily Facebook. Following from this

trend, an increasing number of users would go to information, such as news stories, from social media, that is, from the recommendations of their social media friends, and newsfeeds tied to their social media provider (Newman et al. 2012), and more recently to news feeds on social media. While traditional media, such as television, have remained the major media of political communication, search and social media have risen to become intermediaries between citizens and political information, even to the point of shaping what television content is watched, and how it is watched, such as when a household watches political debates on multiple screens (Coleman et al. 2015).

Some have been critical of the rising centrality of search, since it became so dominant as a gateway to sites that users would visit (Hindman 2009). But this concern is based on an equation of search engines with providers of original content, rather than as an intermediary between users and content providers. A search engine can enable any Internet user to find any piece of information or person across the world, and vice versa. In fact, they have empowered users to source their own information and locate their own networks of like-minded users (Dutton 2009). While issues arise when search engines move into a content provision role, becoming more 'vertically integrated', and creating potential conflicts of interest with competitive providers, their major role remains as an intermediary. The issue was and remains focused on the validity and objectivity of search results, rather than the popularity of the search engine per se.

Nevertheless, the growing significance of search engines and social media, along with the rise of data analytics and their associated personalization algorithms, has brought the role of search in reconfiguring access to information into the center of debate over the political consequences of what information citizens find about what candidates, parties, and issues. Rather than focus on whether a television news channel is biased toward a particular candidate, political party, or a particular side of an issue, questions are being raised increasingly about whether a search engine is biased – does it constrain or facilitate a user's access to political information in ways that might shape their political opinions (Pasquale 2015; Epstein and Robertson 2015).

Indeed, as individuals integrate search and social media into their routines tied to reading and seeking information about politics, there are new concerns about the potential for results to bias the opinion-formation process. For example, is search exposing Internet users to a more diverse array of information about an issue, from multiple points of view? Or, is it shutting users into a virtual 'echo chamber,' 'information cocoon,' or 'filter bubble' that reinforces a particular point of view (Sunstein 2007; Pariser 2011)? Some have found that, in the context of political information seeking and sharing, interaction tends to be polarized along partisan lines online (e.g., Conover et al. 2011). However, some studies of polarization have shown that search leads users to a more diverse set of information generally, and news specifically, than social media or offline news consumption (Nikolov et al. 2015, Fortunato et al. 2006).

These concerns have meant that the role of search in shaping political opinions has become one of the most important and timely issues in the field of political communication and technology. It raises issues for users, such as how they should use search to ensure they see a full range of views on any given issue or candidate, and also for regulators, such as over whether there is a need to protect citizens and individuals online from algorithms or practices that lack transparency or that bias the information users are able to access.

Notably, studies examining the role of search and social media in the information seeking and sharing process have focused on the kinds of interactions individuals engage in within the context of specific platforms (Nikolov et al. 2015). Little research has been done on the expectations of users when they use these Internet-based tools to learn about politics and develop opinions. Further, political opinion formation is an ongoing social process that is not limited to a single platform or type of interaction at one point in time. Individuals seek and share information from and with a variety of sources and via a range of communication channels both online and offline (Chadwick 2013). The only way to better understand the role of search as an intermediary in the political opinion formation process is to ask individuals about their preferences and practices through a survey. This allows us to consider search in the wider context of a person's social and informational networks and the wide range of media they include.

1.3. Technical and Social Theories on Media Effects, Information, and Search

Answers to many of these research questions are largely descriptive, but also inherently significant, enabling them to stand on their own. For example, questions such as how much individuals rely on search are relevant from a variety of perspectives. For instance, if reliance on search is minimal or rapidly declining, then any effects may be insignificant. However, in many cases, in order to evaluate the implications of these findings, it is important to place the answers to these descriptive questions into a larger theoretical framework about the role of citizens, audiences, users, and the media in democracy. For this purpose, the study will analyze the results of the research from the perspective of several alternative theoretical frameworks.

Technological Determinism and the Social Shaping of Technology

Strong notions of technological determinism view technology as the primary driving force behind social change, leading many to believe that they can rationally extrapolate the social implications of technical change from the features of a technology, such as the design of an algorithm (MacKenzie 1999). However, decades of research on information and communication technologies, like the Internet, have found that the implications of technical change are mitigated and reconfigured by a wide variety of other social factors, leading to often unanticipated and unintended consequences of any technological innovation. For example, few expected that texting would be one of the major uses of the mobile phone. This role of users and other actors in reinventing technologies has fostered a growing base of more multidisciplinary research on what some have called the 'social shaping of technology' (MacKenzie and Wajcman 1985). As a consequence, any forecasts of the impact of a technology are highly problematic in the absence of empirical research on its actual uses and implications.

Perspectives on the social shaping of technology (SST) assume that the way people use it is not determined by technical designs and affordances, but are shaped by an array of factors, including economic, psychological, cultural, law and policy, technical, and other social factors. Technologies, like search, matter but must be viewed in conjunction with this larger array of forces shaping their use and implications in different social settings. Perspectives on the dynamics of social and technical factors shaping opinion have emerged from empirical research on actual behavior within different political systems over time. Several technologically deterministic perspectives of relevance to this study include the notion of a

filter bubble, but also the dominance of a winner-takes-all power law. In contrast, more socially shaped perspectives include the ideas of an echo chamber and classic notions of the spiral of silence. Each of these perspectives is briefly discussed below, and revisited in discussing the findings of this research.

Technological Shaping of Behavior: Internet-Enabled Dynamics

A Filter Bubble

One of the most popular, critical perspectives on the role of search was captured by Eli Pariser's (2011) notion of a filter bubble. This is the idea that the algorithms designed to support search – by ensuring that Internet users get what they are looking for – tend to personalize search results too well. Internet users are fed results that reflect their interests, location, or what they have searched for before. Of course, if a person is looking for information on climate change, they may not want to get information about air conditioners. So personalization is a valuable service. But personalization based on past search behavior might result in less diversity in the information sources fed to users, resulting in reinforcing their existing view of an issue, candidate, or political movement, by not exposing them to countervailing information. In such ways, search engines and the algorithms that support search could be overly determining what people see and believe about politics, and without those who use search engines being fully aware of the distortion of their search results. The potential implications of filter bubbles are as big as what one article in *Wired* entitled 'Your Filter Bubble is Destroying Democracy" (El-Bermawy 2016).

Winner-Takes-All Effects: Power Laws

The Internet enables networking that can be subject to what Albert-László Barabási and Réka Albert (1999; 2014) have called power laws that lead new members of a network to follow or link to the most prominent nodes of a network. This has been called the 'winner-takes-all' effect (Frank and Cook 1995), and was widely recognized by social scientists such as Robert Merton (1968) in the disproportionate allocation of credit and rewards to scientists for scientific discoveries (also, see Ackland 2010). It can be seen in the tendency for the Internet to reinforce hierarchies rather than democratize recognition of expertise online (Caldas et al. 2008). In such ways, power laws could have effects similar to the dynamics of a spiral of silence, but also reinforce the most commonly cited sites, ideas, and political views, over the most relevant. However, some research challenges this popularity bias, suggesting that search enhances the range of selections open to Internet users (Fortunato et al. 2006; Menczer et al. 2006). In politics, this potential has been a major argument for new media because on the Internet there is no news hole, such as a limit on column inches devoted to a story. This should free online news to cover more candidates, parties, and issues, and not be limited to a small number of the most dominant – democratizing coverage of politics.

Fifth Estate

However, Internet users are not simply an audience or only viewers. They choose what to search for, and many take an increasingly active role in sourcing their own information, and creating information, such as through mobile phone videos that they post online, and networks of like-minded individuals that they attract or cultivate in social media and through search. The degree to which networking has empowered Internet users through their greater

ability to independently source their own information and social–political networks in ways that can be used to hold other institutions, such as politicians, the police, and the media, more accountable, has been captured by the concept of the Fifth Estate (Dutton 1999, 2011; Dubois and Dutton 2014). By eliciting patterns of search and social networking, it is possible to estimate the potential base of users who are capable of playing a Fifth Estate role in society.

Social Shaping of Technology Perspectives

An Echo Chamber

The notion of an echo chamber is primarily associated with the influence of social media, but like power laws, rather than democratize access to information, an echo chamber might restrict access to a diverse array of views and other political information if social networks are more homogeneous groups of like-minded individuals than one might otherwise communicate with, either online or offline (Sunstein 2007). That is, social filtering − not just algorithmic filtering − can diminish the diversity of viewpoints – creating a homogeneity bias – to which Internet users are exposed (Nikolov et al. 2015). Online, this represents a social process sometimes referred to as a 'confirmation bias' that attracts people to information that confirms rather than challenges their preexisting views. This bias has been linked to scientists who might ignore findings that counter their hypotheses, for example, and is likely to find expression in how people read a newspaper or search the Internet.

Spiral of Silence

The spiral of silence is a theoretical perspective, developed by Elisabeth Noelle-Neumann (1984), which was used to explain how a large proportion of the general public in Germany did not oppose the rise of the Nazi Party preceding the Second World War. While this notion is controversial, it posits that individuals perceived this ideology to be more widely accepted than it actually was, and therefore were pressured to remain silent rather than isolate themselves socially and politically. From this perspective, search can provide individuals with evidence of alternative viewpoints, and might well counter social processes behind a spiral of silence. In fact, there is concern about public intellectuals fostering fragmentation and political movements on the Internet because people can find like-minded people and views online. Alternatively, the tendency for page ranks to be reinforced over time might lead some individuals to perceive a dominant idea as so popular that their own views, perhaps less prominent online, falling in the long-tail, are silenced.

Informational Perspectives on Politics and Public Opinion

The Rational Voter

Not only is discussion of the implications of search most often tied to a technologically deterministic perspective, but also it is embedded in classical models of the rational voter in an ideal democracy. For example, in the ideal case, democracy is composed of citizens who inform themselves about the candidates and issues in an election and vote for the candidate or issue that best represents their view of the public interest. Trust in the majority opinion of informed voters is at the root of most discussion of democratic processes. Thus, efforts to

enhance democracy are often tied to innovations in electronic polling and voting as means to enable more direct democracy, even though political communication scholars are often critical of this perspective for diminishing the role of crucial intermediary institutions, such as the media (Coleman and Blumler 2009). Yet most of the general public are not very interested in politics, and seldom actively search for political information about candidates, issues, or policies. This leads to a need to consider a variety of social factors shaping the ways people use or do not use search, and with what consequences.

Just as social processes shape the use and impact of technology, so does technology shape social and political institutions such as democracy. Technology matters, even if it is one of a set of driving forces shaping social behavior. From this perspective, more realistic theories of political influence veer away from more ideal models of democratic processes. As noted above, the rise of mass media generated notions of it being a powerful influence on citizens in liberal democratic, as well as authoritarian states, since politicians and journalists would be able to communicate directly with voters and the general public. The potential for the mass media to be a source of overwhelming influence was a fear in reaction to the perceived role of propaganda in events leading to the Second World War, which as noted above was largely responsible for the rise of media studies. In analogous ways, the potential of the Internet and social media to be a source of overwhelming influence on some individuals, such as in processes of (self-)radicalization, has driven the growth of research in this area in the twenty-first century.

While powerful mass media effects were not validated through systematic empirical research, researchers were able to reframe conceptions of media effects to align with patterns of behavior discovered through empirical research, such as by looking at agenda-setting, more pluralist forms of democracy, and the two-step flow of political communication. New technologies, such as search engines, could reinforce or undermine these processes, but also create new forms of influence, such as the rise of the Fifth Estate.

Pluralist Cue Taking

It is not necessarily rational for a voter to spend time learning about all the candidates and issues in a campaign. Many have argued that a more realistic perspective on politics is that of a pluralist society in which individuals are members of, or identify with, different groups and interests, such as a political party, a trade union, or a profession, and it is rational for them to take cues from those groups about whom to vote for, or what issues to support. Finding out how particular groups, such as one's political party or labor union, view an issue, provides cues to a voter, which then helps them simplify their decision-making. Even legislators, expected to form their own opinions on thousands of issues, often rely on following the cues provided by others, such as the ranking member of their party in a committee that reports on a given issue.

Agenda-Setting

While the mass media might shape what people think about (McCombs and Shaw 1972, 1993), there are many studies of the role of the Internet, search, and social media in shaping the mass media agenda and vice versa (e.g., Neuman et al. 2014). Trends in search are increasingly reported in the media, and popular media stories and celebrities clearly shape search. The interaction and dynamics of search and the media in agenda-setting is therefore

one important way in which search could have direct and indirect effects on political opinion formation.

Two-Step Flow

The two-step flow model takes account of the fact that not all citizens are equally engaged in politics and political issues. Those who are engaged tend to follow the mass media and relay what they learn through interpersonal communication with family and friends and can therefore become opinion leaders in what has been called a two-step flow (Katz and Lazersfeld 1955). In fact, in remains the case that only a small proportion of the general public is actively involved in politics. A substantial proportion of the voting-age population in many democracies is apathetic, not at all interested in politics, except perhaps close to an important election. Participation in politics can be explained by a wide variety of factors, such as social factors, like age, education, gender, the household makeup (with children); psychological dispositions, such as one's sense of political efficacy, and interest in politics; and the political environment, ranging from the nature of the party system to the dynamics of a particular candidate, campaign, issues, and ideologies at play.

Among those actively participating in politics, a sizeable proportion are actively seeking information about candidates and issues, and using this information to inform and influence others. These individuals are opinion leaders, and their use of the media to inform themselves, and to influence others through interpersonal communication, is the focus of study from this perspective. The new media, such as the Internet, search, and social media, could undermine the two-step flow process, or become new tools for opinion leaders and even foster the rise of a new set of opinion leaders who use the new media, such as blogs, rather than face-to-face interpersonal communication to reach those less engaged in politics (Dubois 2015).

Werther Effects

Most theoretical perspectives on the impact of search and other media are based on a tradition of mass media research that focuses on statistically significant effects across a large proportion of the population. Is the public at large better informed as a consequence of broadcast news, for example? Sometimes the media are very limited in their effects. For example, there is a constant worry about reporting an airline hijacking, school shooting, or other violent act as the message might be intended only to inform the public about an event, but lead someone to copy the act. This arose in the study of the reporting of suicides, where it was possible to discern a statistically significant rise in deaths that might have been spurred by the suggestion of committing suicide, such as a person driving their car into a pier of a bridge when approaching an underpass. This unintended impact on a small number of people has been called the 'Werther Effect', which was coined following an increase in suicides that was observed after highly publicized instances of suicide in the media (Phillips 1974).

Fake News

Finally, over the course of this research, debate over the prominence and impact of deliberately faked news has continued to grow. Inaccurate stories and misinformation have long been problems online as well as offline, and were largely addressed by the development of search engines that could help users find more reliable and valid information amongst mountains of less authentic or authoritative data. But fake news is being used to take

advantage of a perceived rise in the practice of deliberate sharing of hoaxes and disinformation, such as around the Pope supporting a political candidate, mainly to trick users into clicking on links to stories that generate advertising revenue for the hoaxers. However, the term ‘fake news’ is becoming more ill defined as it is used more loosely by politicians and journalists to criticize stories they find misleading or politically motivated. This study addresses this problem with empirical data on issues, such as fact checking by Internet users and their perceptions of the accuracy and validity of information.

Summary

In short, the many questions posed by this project are interesting on their own terms, but also they become more significant and relevant if linked to major theories related to the technology and social shaping of search and the processes of media in democratic politics. The review of literature for this project has refined and built on the preceding questions and discussion of theories in ways that the empirical data gathered for this study can throw some light on their relative value in explaining the role of search in shaping political opinions.

1.4. The Empirical Approaches of this Research

This project empirically examines the role of search in an evolving mix of media shaping political opinions. The study is based on a review of relevant research and literature, a cross-national survey of seven nations, and a study of trace data, which are described in the following sections.

Our approaches followed for both the survey and trace data collection and analysis in this project are in line with standard ethical guidelines. The survey data was given to the research team in anonymized form. The Google Trends data was only aggregated data that is publicly available. We made public only aggregate statistical summaries. And the research methods were reviewed by Michigan State University’s Institutional Review Board for conformity with ethical principles relevant to this study.

The Seven National Surveys of Internet Users

In any discussion of political opinion formation or agenda-setting, the political context is central. Political information gathering practices are sporadic, often peaking near elections, and they change depending on the political context as well as personal factors (Dutton et al. 1999). In addition, perceptions of what different media are for, tolerance for bias within media, trust in media and media corporations, and how people choose to access information vary across political contexts, cross-nationally, and over time. Furthermore, regulation of technology companies, particularly including search engines and social media varies. For example, regulation in North America is more light touch than regulation in the EU. These kinds of variations in contexts led us to field a cross-national comparative study.

Ideally, we would have gathered data from all 28 European Union (EU) member states, plus the US and Canada. To be financially viable, this study focused on survey research of six of the larger nations of the EU (Britain, France, Germany, Italy, Poland, and Spain) and the US. In each nation, responses were received from approximately 2,000 adult individuals, yielding a total sample size of about 14,000 respondents. The survey was designed in the fall of 2016 and fielded online in January 2017.

We followed best current practices to obtain random probability samples and used post-stratification weights to weight the results to known population proportions in each country (see Appendix 1). The post-stratification weights make the survey of Internet users fully representative of the non-institutional population of each country aged 18 years of age and older. The weights are based on gender, age, and region within each nation. The exact classification will differ from country to country, for example, the US region weighting is by state, the UK's uses regions, and Germany's uses Bundesländer.

During the field research, there were different political contexts in each region and state that might have influenced the survey results. The US was in the midst of the inauguration of a new President, Donald Trump, after defeating the Democratic candidate, Hillary Clinton. Given the drama of the US election campaign, we expected relatively high levels of political engagement both online and offline. We expected more people than usual to use digital media and discuss political topics with their social circles online and offline. However, the EU member states also had major political events occurring, such as the aftershocks of Brexit across the EU. Likewise, Italy had a constitutional referendum in December 2016 and a change of Prime Minister during this period. Later sections of this report, along with the country profiles, provide more on the specific political context in each country and worldwide.

These variations in the political and cultural contexts across the EU and US make the comparative approach of this study valuable. For example, it makes it possible to know whether the findings are specific to individual countries, or more general patterns.
The questions guiding this study required that the research gather information on different types of citizens/individuals/users in terms of their demographics as well as their political interests and their Internet activity. They also required knowledge of the offline behavior of Internet users. For these reasons we conducted a random probability survey of Internet users. With a survey we were able to ask questions about offline activities and social networks as well as online activities including search and social media use.

The Survey Questionnaire

Our questionnaire was designed by the study team to specifically address the initial study questions. The full questionnaire is available online at http://quello.msu.edu/research/the-part-played-by-search-in-shaping-political-opinion-the-quello-search-project/

The questionnaire built on existing survey research, such as the Oxford Internet Survey (OxIS) [http://oxis.oii.ox.ac.uk], Pew Internet and American Life Project [http://www.pewinternet.org], YouGov surveys for the Reuters Institute (2016) [http://reuters.politics.ox.ac.uk], and Canada's Young Voters Survey (Dubois and Clarke 2015). We incorporated questions about where voters go for information on political candidates and other political information. We asked about perceptions of search results in comparison to other online and offline sources of information. We asked questions about neutrality, trust, and completeness of information among other issues.

Demographic questions allowed us to break down this information by gender, race, education, and other standard demographic variables. The 2013 OxIS survey, based on a random probability sample of the adult population, indicated that only about 30 percent of the population in Britain say they are 'interested' or 'very interested' in politics (Dutton and Blank

2013), so we expected political interest to be an important factor limiting search for political information among the population as a whole.

Trace Data on Search

Survey data alone was not sufficient to address all of our research questions. We therefore incorporated a trace-data approach, making use of Google Trends to complement the survey research. Trace data are left behind as users navigate the Web. In the context of this study, we were most concerned with search history. Evaluating search history can be done at two levels. First, we made use of Google Trends to examine patterns in search at the aggregate level. This enabled us to look at both global and nationally specific patterns in the kinds of terms that are most often searched for and differences in types of political searches, by focusing on the most popular search terms at the time of study, and relative to current affairs, and specific national political contexts.

Individual level analysis of search history has additional value but was more challenging to do in the time period of this project and was beyond the time and resource constraints of this study. However, we did conduct one limited experiment with search that is described in Appendix 4, and discussed in relation to some of the issues discussed in this report. In the end, two different kinds of aggregated trace data were collected and analyzed. First, trends in the most common search terms from 2010 to 2016 were examined. Second, the most popular search terms per day were analyzed over two weeks in each country. This trace data was paired with an experiment that examined the effect of partisanship on search results and autocomplete suggestions.

Trends Over Time (Global)

Each year Google produces lists of the most frequently searched terms. On January 8, 2017 we collected the top ten most commonly searched general terms, news/events, and people for the years 2010 to 2016 (Google Trends: Year in Search, 2016; Google Trends: Top Charts, 2010–2015). In total, 208 items were identified (the news/events list in 2014 contained only eight items instead of ten).

Two researchers independently analyzed each item according to a predetermined coding schedule (see Appendix 3). Items were coded first as to whether they were political, possibly political, or not political. Second, each item in the news/events list was categorized into one of nine types of news. Inter-coder reliability between the two coders was calculated. For the first level of coding the percent agreement was 94%, while Cohen's Kappa was 0.85, both of which indicate a high level of agreement between the two coders. For the second level of coding the percent agreement was 91.2%, while Cohen's Kappa was 0.90, once again suggesting a high level of agreement between coders. The analyses in this report are based on one set of codes (selected randomly).

Hot Trends (per Country)

The Hot Trends website hosted by Google provides a list of the "hottest" issues, events and topics Google users are searching for. Though we do not know the exact operational definition of "hot," we do know that items, which are suddenly being searched much more

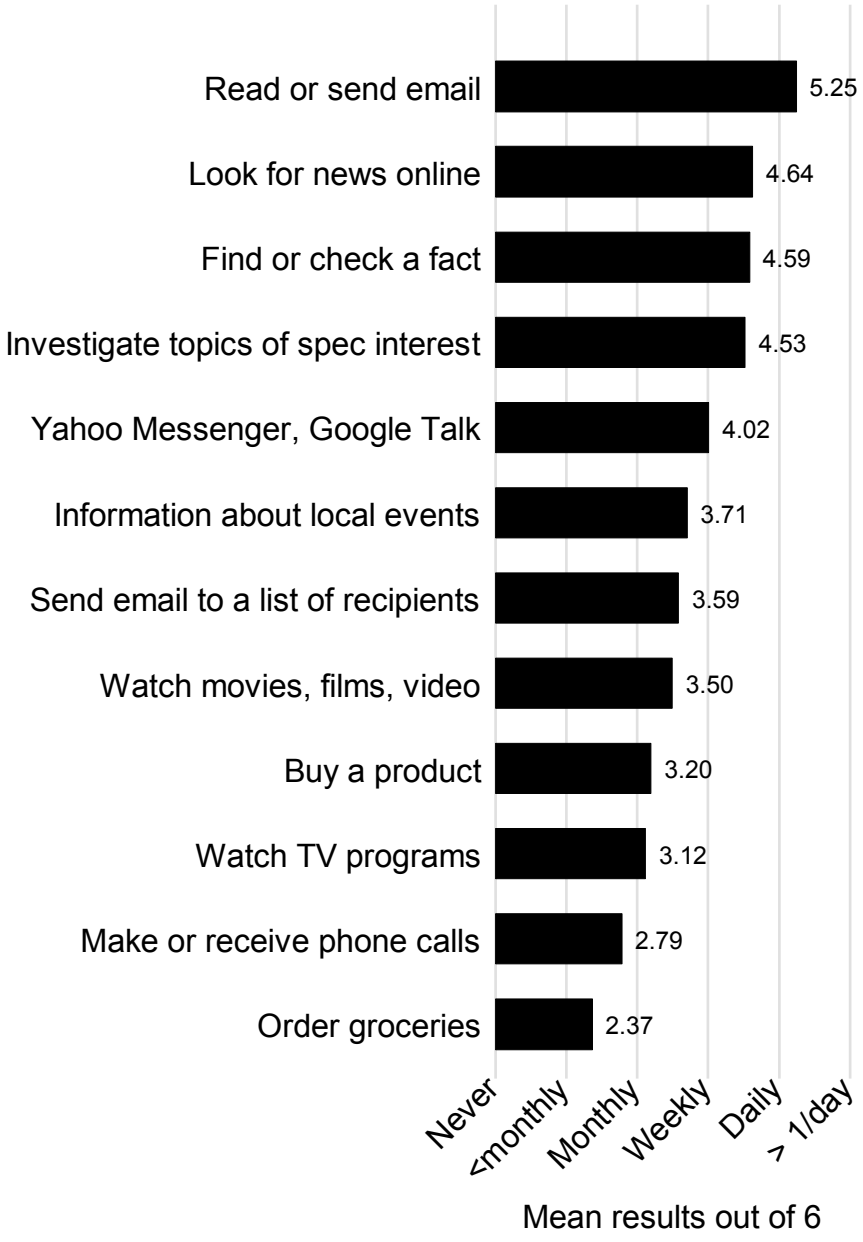
than other items, make up this list. These trends provide insight into what people in different countries are most commonly searching for on a day-to-day basis (Cobb, 2015).

Our dataset of Hot Trends consists of 1,145 items collected from seven different countries. On January 31, 2017 one researcher archived the top ten trending items for each day in our sampling period (January 4–20, 2017, when our survey was in the field). Some countries did not have 10 items for each day, resulting in slightly fewer results. This is because there is a minimum search volume Google applies for Hot Trends, though that is not made public. The lowest volume we observed was 2,000 searches.

Part 2. Patterns of Internet Use and Search Across Seven Nations

This section is the first of several which describe the results of our survey of seven nations, providing detailed cross-national comparisons of how Internet users employ and perceive search in general and for information about politics. Before focusing on the use of search across the seven nations, it is useful to gain a general comparative perspective on how often Internet users participate in a selected set of online activities, from reading email to ordering groceries online (Figure 2.1). This part of the report addresses such general questions as: How do people use the Internet across our seven nations? This will be followed by sections that then focus on search for political information, and its implications.

Figure 2.1. Average Frequency of Using the Internet to …



2.1. What Users Do Online: Relative Prominence of Different Activities

Respondents were asked how often they did each of a set of activities, with the option to say never (1), less than once a month, monthly, weekly, daily, or more than once a day (6). The most frequent activity was reading or sending email, where the average across all users was 5.25, or more than daily (Figure 2.1). After sending or receiving email, the next most frequent set of activities included looking for news online, finding or checking a fact, or investigating topics of special interest. These are activities, like email, that do not necessarily consume a great deal of time, but which are frequently done.

These are followed by the use of messaging within an online platform, such as Facebook or Yahoo Messenger or Google Talk. This is less frequent than email, but it is clear that communication is a basic activity, particularly if email and messaging are considered together. Emailing a list of recipients was also a frequent activity. Watching movies, films and videos, as well as watching TV programs were not as frequently done, but are likely to consume considerably more time. Finally, online shopping averaged less than monthly, considering two indicators, buying a product online or ordering groceries (Figure 2.1).

The following sections look at a selected set of these activities to provide a more concrete sense of the levels and cross-national differences that emerged from our survey.

Email

Even though the use of email is the most common activity cross-nationally, there are important national differences. Respondents in Germany say they do this less than anyone else (38% send email more than once a day) compared to 57 percent of respondents in Poland (Table 2.1). Internet users in Spain and France are also relatively low in their use of email, compared to the UK, Italy, the US, and Poland, which had the greatest level of use.

Table 2.1. Frequency of Reading or Sending Email

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	1	0.6	0.5	0.3	0.8	0.8	0.6	0.7
Less than monthly	1.5	1.6	1.4	1.5	1.3	1.8	1.6	1.5
Monthly	3.4	3.2	2	2.7	2.7	2.9	1.8	2.7
Weekly	9.9	13.8	8.6	6.6	10.1	9	8.3	9.5
Daily	36.8	42.9	40.2	32	45.1	36.6	36.2	38.5
Greater than once per day	47.5	38	47.4	56.9	40.1	48.9	51.6	47.2
Total N	1,973	1,979	1,981	1,987	1,992	1,963	1,994	13,869
Total percent	100	100	100	100	100	100	100	100

Looking for News Online

There are notable cross-national differences in the frequency of Internet users looking for online news. Moreover, this is an important activity in shaping opinion, and provides a sense of the extent to which Internet users across these nations follow the news online. Nearly two-thirds (65%) of all users say they look for news online at least daily or more than once a day. Up to 45 percent of users in Poland say they look for online news more than once a day, compared to only 17 percent of users in France (Table 2.2). Users in France, Germany and the UK are less often online for news, than are users in the US, Spain, Italy, or Poland.

Table 2.2. Frequency of Looking for News Online

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	4.7	4.4	1	0.9	1.6	6.6	4.9	3.4
Less than monthly	8	6.9	2.5	2.6	4.4	8.8	6.5	5.7
Monthly	10.4	7.4	5.5	3.9	5.6	6.7	5.5	6.4
Weekly	25.9	21.6	18.1	11.1	18.7	19.6	20.9	19.4
Daily	33.8	38.9	44.8	36.1	44	36	37.7	38.8
Greater than once per day	17.2	21	28.1	45.5	26.1	22.5	24.6	26.4
Total N	1,966	1,966	1,982	1,973	1,977	1,952	1,985	13,802
Total percent	100	100	100	100	100	100	100	100

Find or Check a Fact

Fact checking has been a popular focus of American news programs, but Internet users also fact-check online relatively often. Looking for and checking facts are among the most common things people do online and through search. Well over a majority (59%) of Internet users say they check facts online daily or more than once a day. But there is also cross-national variance, with respondents in Germany doing this the least, with only 15 percent doing this more than once daily, while respondents in Poland do this most often, with 40 percent saying they do this more than once a day (Table 2.3). The other countries are closer to Germany, ranging from 18–27 percent checking facts more than once a day.

At the other extreme, very few (less than 2%) respondents say they never find or check facts online. Just over six percent (6.4%) say they find or check a fact less than monthly. More than a third of respondents (36%) say they check facts daily. At the low end of this scale, there are few cross-national differences, but the data raise questions about who the people are who say they hardly ever check or find a fact online.

Table 2.3. Frequency of Fact Checking Online

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	1.3	3.3	1.2	0.8	0.95	2.01	2.8	1.8
Less than monthly	5.04	5.9	3.4	2.3	2.8	6.8	6.4	4.6

Monthly	9.8	10	6.4	4.8	4.8	8.9	8.4	7.6
Weekly	30.2	35.8	27.4	16.4	21.2	31.6	28.9	27.3
Daily	34.1	30.5	42.6	35.8	43.8	33.1	32.6	36.1
Greater than once per day	19.6	14.6	19.04	39.9	26.5	17.7	21	22.6
Total N	1,968	1,961	1,975	1,970	1,985	1,944	1,982	13,785
Total percent	100	100	100	100	100	100	100	100

Getting Information about Local Events

Another category of information access of particular relevance to this study is looking online for information about local events. While a global medium, the Internet is increasingly valuable for local information as more individuals, companies and organizations go online. This is not as frequent as many of the other activities, but just over 30 percent (31%) say they do this daily or more than once a day (Table 2.4). Also, it is worth noting that there are large cross-national differences. Respondents in Germany do this the least (only 3% do it more than once a day), compared to 27 percent of respondents in Poland. Other than Poland, all countries are in single digits. Many in Germany (11%) and France (14%) say they never get information online about local events (Table 2.4).

Table 2.4. Frequency of Getting Information Online About Local Events

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	13.6	10.7	4.1	1.3	4.8	8.8	6.6	7.1
Less than monthly	21.4	24.1	8.3	3.7	13.5	20.6	15.5	15.3
Monthly	20.8	25.1	11.4	8.1	18.04	22.2	16.6	17.5
Weekly	27.2	28.6	33.3	21.7	34.7	30.5	30.4	29.5
Daily	12.2	8.3	31.9	38.4	20.8	13	21.9	20.9
Greater than once per day	4.8	3.2	11	26.8	8.1	5	9.1	9.7
Total N	1,960	1,960	1,969	1,968	1,963	1,948	1,983	13,750
Total percent	100	100	100	100	100	100	100	100

Similar data exists for all 12 of the Internet activities we asked about as a means of gauging the general levels of Internet use across the sample nations. Beyond those noted above, there are other details worth noting. Most generally, respondents in Poland and in Germany are at opposite ends of the spectrum of use. Those in Poland participate in almost every activity more often than those in the other nations, and the respondents in Germany tend to participate in these activities least often.

For example, those in Poland send more instant messages with 37 percent doing this more than daily. Respondents in other countries range from 21 to 28 percent, with over 20 percent of respondents in France, Germany, the UK, and US saying they ‘never’ do this. Likewise, with respect to sending an email to a recipient list, such as a listserv, 25 percent of respondents in Poland say they do this more than daily, compared to only 9 percent of

respondents in Germany and Britain. Respondents in all other countries are 12–14 percent. Also, for investigating topics of personal interest, only 11 percent of respondents in France, and 16 percent in Britain, do this more than daily, compared to 38 percent in Poland. Finally, 44 percent of respondents in Germany and 40 percent in France, Britain and the US say they 'never' make or receive phone calls online, compared to 20 percent of respondents in Poland.

For online shopping, there are few differences in buying a product online, but on ordering groceries, a more local activity, respondents in France are the most likely to order groceries, with only 15 percent saying they never do this, compared to respondents in the US, where 50 percent say they never order groceries. This is a very wide difference of 35 percentage points.

For entertainment, activities are less frequent, but consume more time. So it is understandable that people say they watch television and films less frequently than they check facts, for example, but many do both relatively often (Figure 2.1). Cross-nationally, there are sizeable differences. A smaller percentage of respondents (18%) in Poland say they never watch TV programs online, compared to 34 percent of respondents in France, and 33 percent in Germany. With respect to watching movies, films or videos online, only 6 percent of respondents in Poland say they 'never' watch videos online, compared to 28 percent of respondents in Britain, a difference of 22 percentage points.

2.2. The Use of Search Engines

This section focuses on describing the use of search engines specifically, rather than the Internet more generally, but also how significant search is to the user.

Table 2.5 shows the responses of individuals within each country on how often they say they use a search engine to find information. Remembering that all respondents are Internet users, it is nevertheless remarkable that nearly two-thirds (64%) of respondents across all seven nations say they use a search engine more than once a day, with most others saying they use search about once a day. Comparatively, respondents in Germany are somewhat less likely to use a search engine at least daily, but there is clear evidence that most people in all seven nations are using search at least once a day. And generally, you will see that Internet users in Poland seem to use more media, more frequently.

Table 2.5. Frequency of Using a Search Engine

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	1.4	0.14	0.2	0.2	0.2	0.5	1.1	0.54
Less than monthly	1.4	2.02	0.8	0.1	0.6	2.5	3	1.5
Monthly	1.8	2.4	0.8	0.2	1.4	2.4	2.4	1.62
Weekly	12.1	17.5	6.9	2.7	6.5	14.2	11.3	10.1
Daily	22.5	28.9	19.3	21.8	19.8	24.3	20	22.4
Greater than once per day	60.9	49.0	72.1	75	71.4	56.2	62.3	63.85
Total N	1,972	1,972	1,979	1,992	1,989	1,961	1,995	13,859
Total percent	100	100	100	100	100	100	100	100

2.3. The Importance of Search

One perspective on the importance of search is the priority users place on it as a source of information. To compare search with other sources of information, we asked respondents where they go first when they need particular kinds of information. If people first go to the Internet or to a neighbor, then it suggests that they expect they will be able to find what they want relatively easily from this source. But for whatever reason an individual chooses where to look first, that position privileges that particular source over others. Of course, the best source of information is likely to vary by the kind of information one is looking for, so we have asked where people would go first for various kinds of information as described below. Across each type of information, we asked whether an individual would first make a personal visit, use the phone to call or text someone, get on social media, go to a specific website, or use a search engine.

Natural Disasters

Natural disasters, such as a tsunami, earthquake, or fire, are often such dramatic causes of concern that people want to learn more about as soon as possible. Clearly, the responses suggest that most people (54%) would go to a search engine first in order to find information about the disaster (Table 2.6). Moreover, the Internet is also the second-most frequent first port of call, with about one in five respondents (22%) saying they would go to a specific website, such as a major news site.

Table 2.6. Where Would You Go First for Information about a Natural Disaster?

	Percentages							
	Germany	Spain	France	Italy	Poland	US	UK	Total
Personal visit	5.9	5.9	7.3	6.3	4.4	7.3	4.7	6
Phone/Text message	6.5	6.3	6.4	7.8	6.7	5.5	4.6	6.3
Social media	10.3	14.9	10.7	12.3	16.4	13.01	9.4	12.5
Search engine	55.5	55	52	56.8	45.8	54.8	56.3	53.7
Specific website	21.8	18.01	23.6	16.9	26.7	19.3	25.1	21.6
Total N	1,742	1,898	1,798	1,901	1,870	1,858	1,765	12,832
Total percent	100	100	100	100	100	100	100	100

Planning a Journey

When asked where you would go to plan a journey, a somewhat smaller proportion of Internet users (46%) say they would use a search engine first (Table 2.7). But the Internet remains prominent, as nearly a third say they would go to a specific website, which in this case is likely to be a map or page for directions that can involve using a search engine. In this case, a search engine is somewhat less likely to be the first place to go for respondents in France or Italy, as compared with the respondents in the US or UK.

Table 2.7. Where Would You Go First for Information to Plan a Journey?

	Percentages							
	Germany	Spain	France	Italy	Poland	US	UK	Total
Personal visit	14.7	11.9	7.2	10.6	6.7	8.9	6	9.4
Phone/Text message	3.9	6.1	6.5	6.2	9.1	8	6.2	6.6
Social media	3.8	6	5.7	6.9	6.8	6.6	5.1	5.9
Search engine	47.8	43.3	42.6	42.1	46.8	51.01	52.4	46.53
Specific website	29.8	32.7	38	34.3	30.6	25.5	30.3	31.6
Total N	1,810	1,914	1,809	1,903	1,898	1,841	1,821	12,995
Total percent	100	100	100	100	100	100	100	100

Information about Politics

When looking for information about politics, such as about a political candidate, search engines are again the most frequent first place to go. A full 56 percent of the respondents would go to a search engine first (Table 2.8). Respondents in the UK, US, and Germany were the most likely to go first to a search engine, and in this case, Poland was relatively low. In Poland, however, more respondents were likely to go to social media than respondents in the other nations.

Table 2.8

	Percentages							
	Germany	Spain	France	Italy	Poland	US	UK	Total
Personal visit	8.7	7.7	8.5	10.2	4.7	7.1	6.3	7.6
Phone/Text message	4.8	6.2	5.8	7.4	5.02	5.4	4.9	5.7
Social media	8.2	14	8.6	11.6	17.2	9.8	7.7	11
Search engine	60	54.2	54.4	53.2	48.9	61.3	63.1	56.4
Specific website	18.3	17.9	22.8	17.6	24.2	16.5	18	19.3
Total N	1,618	1,762	1,650	1,719	1,724	1,814	1,667	11,953
Total percent	100	100	100	100	100	100	100	100

Neighborhood or Community Issues

With respect to local neighborhood or community issues, search engines are not likely to be the best source. Here you might expect more informal, interpersonal media to be more valuable, and it is the case that the most frequently mentioned first stop would be visiting with someone such as a neighbor. However, even here, while almost a third (31%) say they would make a personal visit, going to a search engine is not far behind – the second most likely place to go first, with 26 percent of respondents saying they would go there first (Table 2.9). Respondents in Germany were the most likely to make a personal visit and the least likely to go to a search engine for this purpose.

Table 2.9. Where Would You Go First for Information about an Important Issue in Your Neighborhood or Community?

	Percentages							
	Germany	Spain	France	Italy	Poland	US	UK	Total
Personal visit	56	48.4	28.7	31.2	12.2	21.1	19.4	30.8
Phone/Text message	11.7	14	12.5	12.9	9.8	13.7	9.2	11.97
Social media	6.4	9.6	10.5	16	21.8	18.2	16.3	14.3
Search engine	19.2	17.4	29.1	23.8	25.9	29.8	35.1	25.7
Specific website	6.7	10.6	19.2	16	30.3	17.2	20	17.3
Total N	1,723	1,825	1,732	1,850	1,908	1,806	1,735	12,579
Total percent	100	100	100	100	100	100	100	100

National or International Issues

Moving from local to national or international issues, search engines become more prominent. The majority of respondents (53%) say they would go first to a search engine for information about an important national or international issue (Table 2.10). Less than 10 percent (7%) would make a personal visit as a first way to learn more. Again, respondents in Poland were somewhat less likely to go to a search engine, but more likely to go to social media.

Table 2.10. Where Would You Go First For Information about a National or International Issue?

	Percentages							
	Germany	Spain	France	Italy	Poland	US	UK	Total
Personal visit	9.4	7.3	8.1	7.7	4.7	6.9	5.4	7.03
Phone/Text message	5.2	7.1	6	6.1	5.8	6.4	5.1	5.97
Social media	8.7	14.1	9.1	9.6	18.7	10.1	8.5	11.4
Search engine	56.8	50.7	52.1	55.8	41.1	58.3	58.2	53.2
Specific website	20	20.8	24.7	20.8	29.8	18.4	22.7	22.5
Total N	1,724	1,870	1,742	1,852	1,873	1,819	1,730	12,610
Total percent	100	100	100	100	100	100	100	100

Information for a Project

If a person needs information for a professional, school or work project, a search engine again becomes the most likely first place to consult. Almost half of the respondents (47%) say they would first go to a search engine (Table 2.11). Going to a specific website comes in second at 20 percent.

Table 2.11. Where Would You Go First For Information for a Professional, School, or Work Project?

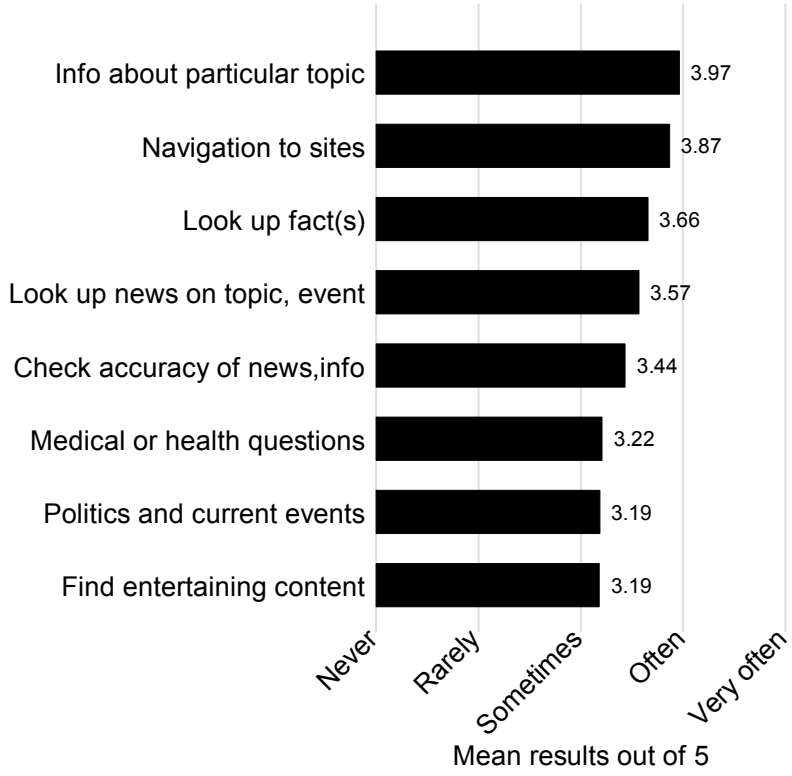
	Percentages							
	Germany	Spain	France	Italy	Poland	US	UK	Total
Personal visit	19.1	23	15.1	20.7	11.3	10.3	9.1	15.6
Phone/Text message	8.3	12.6	9.9	11.1	12	9.3	7.2	10.1
Social media	5.4	6.5	5	8.5	11.2	8	6.8	7.4
Search engine	54.7	37.4	47.3	38.5	40.3	56.2	58.2	47.2
Specific website	12.4	20.6	22.7	21.2	25.3	16.3	18.7	19.7
Total N	1,688	1,849	1,711	1,812	1,820	1,779	1,650	12,310
Total percent	100	100	100	100	100	100	100	100

2.4. The Purpose of Search: What Do People Search For Online?

What role does search play in the lives of Internet users? What do they use search for? In order to discern the relative importance of search for political information, we asked Internet users across our sample nations about how often they use search for different kinds of information, including politics. Their responses underscored the very general value of search engines as respondents indicated they use search relatively frequently for all kinds of information that we asked about (Figure 2.2).

However, there was a rough order in the relative frequency of different kinds of information. The most frequent use of search engines was for information about a particular topic, followed closely by using search to navigate to a particular website. Nearly as frequent was the use of search to look up news on a particular topic or to look up facts, and to check the accuracy of news or information, reinforcing the previous findings about use of the Internet in general. Once we asked about particular topics of search, the frequency was somewhat lower, but nevertheless, the activities are still frequent: specific topics we asked about included looking for information about health or medical information, finding entertaining content online, or getting information about politics or current events.

Figure 2.2. The Purpose of Search



Specific Topic

Among the tasks we asked about, looking for information about a particular topic was the most frequent use of search for the entire sample of respondents (Figure 2.2). Nearly three-quarters (74%) of Internet users in all the countries said they often, or very often, used search for this purpose (Table 2.12). However, the frequency of this use was somewhat higher in some countries, such as the percent saying they used search very often: 38 percent in Poland, 34 percent in Spain, and 32 percent in the US, compared with somewhat fewer in the UK (23%) and France (22%) saying 'very often'.

Table 2.12. Frequency of Searching for Information about a Particular Topic

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	1.9	1.3	0.9	0.4	0.4	1.9	1.3	1.1
Rarely	5	5	2.5	3	2.4	4.9	4	3.8
Sometimes	25	24.3	18.6	12.7	15.9	29.2	22.07	21.1
Often	46.5	42.7	49.1	45.8	47.4	40.8	40.5	44.7
Very often	21.6	26.7	29	38.1	33.9	23.2	32.1	29.3
Total N	1,932	1,949	1,971	1,981	1,977	1,946	1,967	13,723
Total percent	100	100	100	100	100	100	100	100

Navigation

In the early days of the Web, users would often type the URL of a website into their browser, and share their favorite sites with others. Increasingly, as search has progressed and the Internet has become more complex, users tend to type the name of a site into their search bar to navigate to the site more easily and eliminate the need for a URL. In fact, the second-most common use of search is simply to find or navigate to a particular site, such as a newspaper or entertainment site. Here again, a clear majority of users say they use search often or very often for this purpose. However, respondents in Germany, the UK, and France were somewhat less likely to say they used search 'very often' for this purpose (Table 2.13). That said, less than 10 percent in each nation said they 'never' or 'rarely' used search for the purpose of navigating to a particular site.

Table 2.13. Frequency of Navigating to a Particular Site

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	2.1	2.6	2.2	1.3	1.1	2.7	2.8	2.1
Rarely	6.6	8.3	4.9	5.2	3.3	7.6	6.5	6.1
Sometimes	23.4	27.1	20.9	18.3	16.6	27.2	25.2	22.6
Often	41.6	37.9	44.2	43.5	43.8	37.7	36.7	40.8
Very often	26.3	24	27.8	31.9	35.1	25	28.7	28.4
Total N	1,933	1,945	1,960	1,976	1,976	1,935	1,960	13,685
Total percent	100	100	100	100	100	100	100	100

News on a Topic, Event or Person

Another common use of search is to find more information on a particular person, event or topic. Who is Donald Trump? When did the Titanic sink? What is popular culture? It is as though search is being used as an encyclopedia. This is somewhat less common than navigation or getting information on a particular topic, but most users say they do this sometimes or often (Table 2.14). Respondents in Italy, Poland, Spain and the US tend to do this 'often' or 'very often', and more than respondents from Germany, France or the UK (Table 2.14).

Table 2.14. Frequency of Searching for News on a Topic, Event, or Person

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	3.2	4.4	1.7	1.2	1.7	5.6	4.2	3.1
Rarely	10.6	13.5	6.7	7.2	8.2	13.5	9.9	9.9
Sometimes	33.9	33.8	29.8	28.9	27.8	34.4	33	31.6
Often	37.5	33.6	42.2	41	41.3	31.8	32.9	37.2
Very often	14.8	14.8	19.6	21.7	21	14.8	20.1	18.1
Total N	1,931	1,941	1,966	1,971	1,974	1,944	1,960	13,687
Total percent	100	100	100	100	100	100	100	100

Get the Facts

Another very common use of search is to look up facts, such as to answer a factual question. Who was the first President of the French Republic? Only about 10 percent of all respondents say they never or rarely use search for this kind of fact checking (Table 2.15). Respondents in Germany, France and Poland are least likely to do this 'very often'.

Table 2.15. Frequency of Searching for Facts, Answering Factual Questions

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	4.6	3.3	1.9	2.7	1.9	2.5	2.2	2.7
Rarely	11.7	8.4	5.6	10.8	6.1	6.2	6.1	7.8
Sometimes	33.2	34.2	27	31.3	27.8	31.2	26.7	30.2
Often	36	36.2	45.5	38	42	37.3	39.4	39.2
Very often	14.7	17.9	20.1	17.1	22.3	22.8	25.6	20.1
Total N	1,913	1,946	1,956	1,954	1,964	1,939	1,964	13,638
Total percent	100	100	100	100	100	100	100	100

Check Accuracy

Closely related to looking up a fact is checking the accuracy of news or information one has seen or read. Only 5 percent of users say they never do this, while a majority (50%) of our respondents say they do this often or very often (Table 2.16). Clearly, search is a key tool for checking the accuracy of news or other information, making search central to guarding against or at least discerning 'fake news' stories. In Germany, nearly 10 percent (9.8%) of respondents say they never do this, while only just over 10 percent say they do this 'very often,' compared to 17 percent in the US, and 18 percent in Italy and Spain.

Table 2.16. Frequency of Checking the Accuracy of News or Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	3.9	9.8	2.3	1.4	3.3	9.1	5	5
Rarely	9.7	19.4	6.6	9.5	9.6	16.2	12.6	11.9
Sometimes	32.9	35.5	29.9	31.9	28.3	35.6	33.3	32.5
Often	39	24.6	42.5	41.2	40.7	26.9	31.7	35.2
Very often	14.6	10.7	18.8	16	18.1	12.3	17.4	15.4
Total N	1,929	1,944	1,960	1,959	1,973	1,934	1,957	13,656
Total percent	100	100	100	100	100	100	100	100

Medical and Health

We asked about searching for or looking up medical and health information, which is a more specific kind of inquiry. Nearly a quarter (24%) of our respondents said they never or rarely use search for this purpose (Table 2.17). So while this is somewhat less common than more general searches, over a third (38%) said they look for medical or health information often or very often. As health and medical problems are most often occasional problems for most households, the most common response in all nations is ‘sometimes’ (Table 12.17).

Table 2.17. Frequency of Searching for Medical or Health Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	7.7	6	4.5	1.9	5.3	7.2	5.1	5.4
Rarely	18.7	23.4	15.1	13.9	20.4	21.9	15.1	18.4
Sometimes	38.4	38.5	37.6	36.8	35.9	40.4	36.6	37.7
Often	26.1	22.6	30.1	33.1	26	20.1	27	26.5
Very often	9.2	9.5	12.7	14.3	12.5	10	16.4	12.1
Total N	1,931	1,948	1,964	1,977	1,977	1,940	1,953	13,700
Total percent	100	100	100	100	100	100	100	100

Find Entertaining Content

Search is generally an information tool, but many view entertainment online, such as movies or short videos, and search is often used to find entertaining content, such as jokes or cat videos. Users vary more with respect to entertainment, with 10 percent saying they never use search in this way, and 15 percent saying they very often use search in this way (Table 2.18). The German respondents were the least likely to report using search to find entertainment.

Table 2.18. Frequency of Searching for Entertaining Content

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	9.9	18.7	8.4	3.1	5.4	15.7	9	10
Rarely	17.2	24.1	20.1	16.5	15.8	18.7	17.5	18.6
Sometimes	29.8	29.2.	31.3	30.7	27.8	30.2	27.8	29.5
Often	28.9	18.6	27.1	31.2	30.1	21.8	26.7	26.5
Very often	14.3	9.4	13.2	18.5	20.2	13.6	19	15.5
Total N	1,932	1,945	1,961	1,977	1,977	1,932	1,965	13,689
Total percent	100	100	100	100	100	100	100	100

Politics

Comparatively, the topic we asked about for which search was used least often was information about politics or current events, although this is essentially tied with searching for

entertainment content. Here again, respondents vary widely on this activity. About a quarter (26%) say they never or rarely use search for this purpose (Table 2.19). Fully 40 percent say they use search often or very often to find information about politics. Larger percentages responded in this way in France (33%), and the UK (34%), and smaller percentages in respondents in Poland (23%), Spain (21%), Italy (23%) and the US (24%). Respondents in Germany were close to the average with 27 percent. This is not surprising in that only a fraction of the public is deeply interested or engaged in politics.

Table 2.19. Frequency of Searching for Information about Politics or Current Events

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	14	8.4	6.9	4.9	6	12	7.2	8.5
Rarely	19.4	19.2	16.2	17.7	15.3	21.6	17.3	18.1
Sometimes	31.1	33	32.9	28	31.2	35.2	32.6	32
Often	26.3	27.5	31.7	32.2	32.8	21.7	27.7	28.6
Very often	9.2	12	12.3	17.1	14.7	9.5	15.2	12.9
Total N	1,922	1,941	1,962	1,963	1,965	1,943	1,966	13,661
Total percent	100	100	100	100	100	100	100	100

Double Check Social Media

Much debate has circled around the potential for people to be misinformed on social media, such as by believing information that is not true or authentic. We asked whether Internet users went to search to check facts or information they run across on social media. While not a regular activity, most respondents indicated that they check information they find on social media ‘occasionally’ (53%) or ‘anytime that they question information’ (21%). Less than 10 percent (9%) indicated that they ‘do not check’ information they question on social media (Table 2.20). Respondents in Germany and Britain are least likely to report using search to check social media.

Table 2.20. Use of Search to Check Information on Social Media

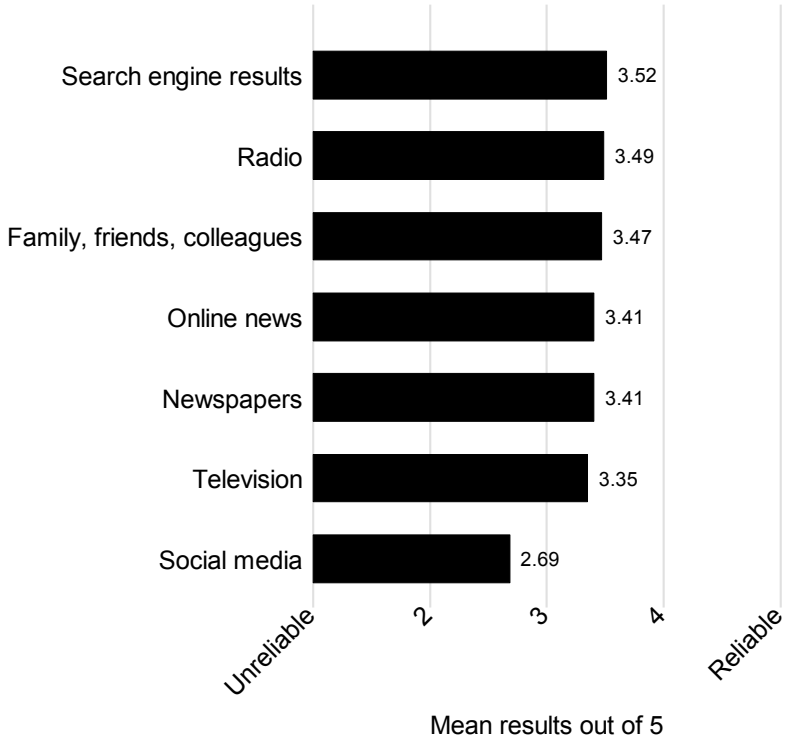
	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Don’t check	11.8	13.9	5.1	7.6	6.1	13.2	7	9.2
Never use search	5.1	6.4	3	3.8	4.6	12.2	6.5	5.9
Hardly ever	8.5	15.3	6.8	8.6	10	13.9	10.9	10.5
Occasionally	51.2	52.8	58.2	62.4	54.4	45	49.6	53.4
Check anytime they question	23.5	11.7	26.9	17.6	25	15.7	26.1	21
Total N	1,891	1,884	1,952	1,950	1,937	1,902	1,942	13,458
Total percent	100	100	100	100	100	100	100	100

2.5. Trust in Search and Other Sources of Information

How trustworthy is search in relation to other sources of information, from mass media to friends and neighbors? Where people go for information is likely to be related to a wide variety of factors, from entertainment value to convenience, but also to where they believe they can find accurate and reliable information. Building on decades of research on trust in different sources, including our own work on trust in the Internet, we asked respondents in all of the sample countries to indicate how reliable and accurate they believe different sources of information generally are (Dutton and Shepherd 2006; Blank and Dutton 2011). Each source is unique and difficult to compare, but these are places people go for information about a wide variety of topics.

Figure 2.3 shows the rating of the average reliability by country. The two most important points illustrated by Figure 2.3 are that first, people are not overly trusting of any single source of information. The average rating on a five-point scale from totally unreliable (1) to totally reliable (5) is generally below 3.5. Secondly, there is virtually no difference across these major sources of information: all are rated around 3.5. The one exception from among the media we asked about was social media, which were rated significantly less reliable.

Figure 2.3. The Reliability of Different Sources of Information



The Results of Search Engines

Among the most reliable media overall are search engine results, but this varies by nation. They are perceived to be less reliable by respondents in Germany, France, and the UK, and

more reliable by respondents in the US (Table 2.21). For example, the mean rating of reliability for the samples is: Germany (3.37), France (3.46), and the UK (3.49), compared to Italy (3.56), Spain (3.56), Poland (3.58), and the US (3.57). These differences are not great, but are linked to the lower use of search found in Germany and some of the other European nations.

Table 2.21. The Reliability of Search Engine Results

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
1 Total unreliable	2.6	2.6	1.7	0.7	0.7	1.5	1.1	1.5
2	7.9	8.3	5.6	6.1	7.5	6.9	5.7	6.8
3	39.9	44.8	37	36.6	36.9	40.7	39	39.2
4	40.7	38.1	46.9	46.8	44.8	42.6	42.8	43.3
5 Total reliable	9	6.3	8.9	9.8	10.1	8.3	11.4	9.1
Total N	1,910	1,920	1,938	1,958	1,966	1,895	1,950	13,537
Total percent	100	100	100	100	100	100	100	100

The Information Provided on Television

Given the marginal differences across most media, and marginal cross-national differences, we will focus only on two other media that were rated somewhat lower on average – television and social media. In this case, television was surprisingly lower than many of the other media (Figure 2.3). You can see from Table 2.22 that this is primarily a function of lower ratings in some countries, such as Poland. Seven percent of respondents in Poland rated television as 'totally unreliable.' The mean rating overall is 3.35, and the mean in each country, from lowest to highest, is 3.07 in Poland, 3.20 in Italy, 3.33 in Spain, 3.35 in France, 3.41 in the US, 3.51 in Germany, and 3.58 in the UK, the highest rating. Television is one of the media for which the perceived reliability varies more across national contexts.

Table 2.22. The Reliability of Information Provided on Television

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	U	Total
1 Total unreliable	5.7	4.6	5.4	7	5.4	2.3	3.7	4.9
2	11.6	8.7	14	18.5	13	7.7	11.9	12.2
3	35.5	31	41.8	40.7	35.9	31.4	36.7	36.2
4	37	42.8	31.7	27.4	33.9	46.6	34.9	36.3
5 Total reliable	10.3	13	7.1	6.4	11.8	12	12.8	10.5
Total N	1,916	1,930	1,944	1,942	1,958	1,906	1,963	13,559
Total percent	100	100	100	100	100	100	100	100

The Reliability of Social Media

Across the media we asked respondents to rate, social media were rated the least reliable. Nearly 15 percent (14.5%) rated them as 'totally unreliable,' and in Germany and France, over one in five respondents (both 22%) said they were totally unreliable (Table 2.23). Overall, respondents in Germany and France were the least confident in social media, with the mean ratings in each country being 2.45 in Germany, 2.46 in France, 2.61 in the UK, 2.68 in the US, 2.70 in Italy, 2.82 in Spain, and 3.05 in Poland, which is always the country in which respondents are most often focused on the Internet.

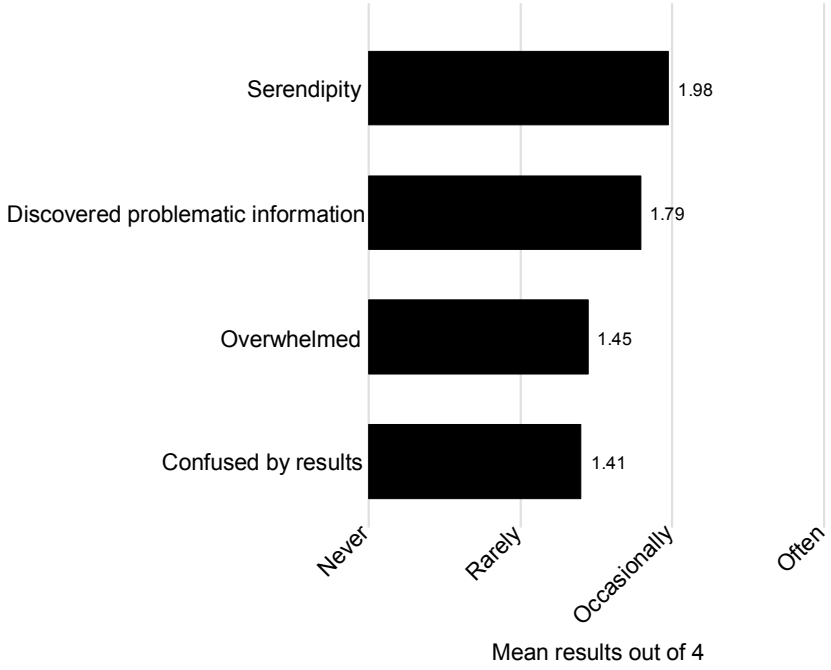
Table 2.23. The Reliability of Information Received on Social Media

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
1 Total unreliable	21.8	22.1	11.8	4.8	12.3	15.5	14.5	14.7
2	31.3	30.8	29.7	20.6	23	30.7	30.7	28.1
3	30.8	31	37.8	43.7	41.2	36.6	34.7	36.6
4	11.4	12.3	17.2	24.3	17.9	12.2	12.17	15.4
5 Total reliable	4.7	3.9	3.6	6.7	5.6	5	7.9	5.3
Total N	1,881	1,875	1,913	1,915	1,944	1,817	1,908	13,253
Total percent	100	100	100	100	100	100	100	100

This relative lack of reliability of social media does not fit well with findings from other studies that have shown social media sending users to news sites. One possibility is that respondents tend to associate social media with their use of communication within one's personal network, and not with outside news sources, some of which have become available through news feeds on social media. It is arguable that most use of most social media is for sociality and entertainment and that this focus shapes its perceived trustworthiness.

2.6. Efficacy in the Use of Search

Figure 2.4. Self-Efficacy of Search



How do people feel about using search? Are they confident? Do they have a strong sense of personal efficacy? Do they feel empowered or helpless with search? Generally, while most users in our samples had a strong sense of personal efficacy in using search, there was considerable variation across individuals. Most positively, users said they tended to find things online that they were not actually looking for, suggesting search has many aspects of the serendipity that is associated with walking through the stacks of a library (Figure 2.4). Similarly, they frequently noted that they found information that they did not think they would find. How often do you hear people exclaim when finding some obscure fact or other information through search? Nevertheless, a surprising proportion of users sometimes feel overwhelmed or confused by the sheer quantity of information or conflicting nature of search results (Figure 2.4). Each of these aspects is discussed below.

Serendipity in Search

Only 5 percent of the users in our sample said they had never found information that they weren't actually looking for. Yet most (76%) users experienced some level of serendipity, saying they occasionally or often found information they weren't looking for. There are no major cross-national differences, although users in Spain, Italy, Poland and the US, were somewhat more likely to experience this serendipity, than were users in Germany, France and the UK (Table 2.24).

Table 2.24. Frequency of Finding Information You Weren't Looking For

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	6.8	7.6	3.4	2.7	3	6.5	4.8	5
Rarely	20.5	24.9	16	19.4	16.1	17.7	16.02	18.6
Occasionally	49.5	46.2	50.4	50.4	50.4	52.1	51.1	50
Often	23.2	21.4	30.3	27.4	30.5	23.7	28	26.4
Total N	1,897	1,909	1,949	1,915	1,941	1,888	1,944	13,442
Total percent	100	100	100	100	100	100	100	100

Finding Information that Users Thought Difficult to Locate

People often search online for information that they doubt they will find, but then are surprised when they actually find what they were seeking. This pleasant surprise at finding what seemed obscure or so esoteric that it would not be retrievable leads many to use search more often for more questions. Nearly half (49%) of users say they occasionally find information that they did not think they could find, while almost 20 percent say this happens often. Most surprisingly, less than 10 percent (7%) said they have never found information they did not think they could find (Table 2.25). In line with other indicators of personal search efficacy, users in Germany were somewhat less likely to say they found things they didn't believe they could find, followed by users in the UK. For example, 10 percent of users in Germany and the UK said they never found information they didn't think they'd find, compared to half this proportion (5–6%) of users in Italy, Spain or the US. France was somewhat closer to Germany and the UK, with 8 percent saying they never experienced this.

Table 2.25. Frequency of Finding Information You Didn't Think You Could Find

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	7.9	10	4.7	3.6	4.9	10.2	5.7	6.7
Rarely	22.9	30.1	21.9	27.2	24.1	26.5	27	25.7
Occasionally	51.5	47.8	46.3	52.3	50.4	47.9	49	49.3
Often	17.7	12.1	27.1	16.9	20.6	15.4	18.3	18.3
Total N	1,885	1,884	1,926	1,894	1,923	1,854	1,925	13,291
Total percent	100	100	100	100	100	100	100	100

Feeling Lucky

There is a search on function on Google that says 'Feeling Lucky?', and some people indeed often feel lucky when they find what they are looking for through the use of a search engine. We asked if people agreed or disagreed with the statement: "If I am successful, it is probably because I was lucky." The responses ranged widely, but most disagreed or strongly disagreed (41%). Most expect to find what they are looking for on search. However, a minority (24%) indicated they agreed or agreed strongly. Users in Germany are more likely to have

disagreed, and less likely to have agreed, but otherwise there are few major cross-national differences (Table 2.26).

Table 2.26. Feeling Lucky

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Disagree Strongly	15.2	22.3	17.3	8.9	9	9.4	12.4	13.5
Disagree	27.3	34.3	24.7	26.1	25.2	27.5	29.9	27.9
Neither Agree/Dis	33.6	29	35	40	38.4	38.2	30.7	35
Agree	18.8	11.4	18.4	20.8	20	18.9	19.1	18.2
Agree Strongly	5.1	3.1	4.7	4.3	7.5	6	8	5.5
Total N	1,802	1,846	1,864	1,852	1,877	1,807	1,921	12,967
Total percent	100	100	100	100	100	100	100	100

Information Overload

Just over half (51%) of all users in our sample felt they were never or rarely overwhelmed by the results of search. With sometimes thousands of results, it's likely that most users tend to focus on the top results and not feel otherwise compelled to digest too much information. (This is discussed more fully in our trace data analysis and discussion of the power law.) However, a bit over a third (35%) of users indicated they only occasionally felt overwhelmed, but 15 percent said they 'often' were overwhelmed by how much information they found (Table 2.27). This was not dramatically different across countries, although the German sample was less likely to have felt overwhelmed or overloaded: 30 percent said they were never overwhelmed, compared to, for example, the Spanish sample at 14 percent, and only 8 percent said they were often overwhelmed, compared to 20 percent in Italy (Table 2.27).

Table 2.27. Frequency of Feeling Overwhelmed by How Much Information You Found

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	18.4	29.9	18.5	14.7	13.9	21.9	20.8	19.7
Rarely	29.6	34.3	28.7	32.8	30.2	28.9	31.1	30.8
Occasionally	38.4	28	32.9	37.7	39.2	34.3	32.4	34.7
Often	13.7	7.8	20	14.8	16.8	14.8	15.8	14.8
Total N	1,879	1,920	1,948	1,932	1,946	1,904	1,942	13,470
Total percent	100	100	100	100	100	100	100	100

Confused by Results

As with information overload, relatively few users were confused by conflicting results from search, but some were. On many occasions, conflicting results help people determine whether some sources are more or less trustworthy, but some users are confused by

contradictory information. Over a majority (54%) of users said they never or rarely feel confused by conflicting results, but then about 10 percent (11%) said they are often confused. Again, however, this does not vary in major ways across the seven nations, except that Internet users in Germany less often say they are confused. Nearly a quarter said they were 'never' confused, and only 7 percent say they were 'often' confused (Table 2.28).

Table 2.28. Frequency of Becoming Confused by Conflicting Results

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	14.9	24.3	16.4	11.9	11	19.2	16	16.2
Rarely	33.7	39.5	38	39.4	37.3	37.6	38.1	37.6
Occasionally	40.2	29.3	33.6	38.2	39	34	34.6	35.5
Often	11.3	7	12.1	10.6	12.8	9.3	11.2	10.6
Total N	1,880	1,897	1,922	1,909	1,914	1,886	1,932	13,339
Total percent	100	100	100	100	100	100	100	100

Finding What Users Want

A different approach to assessing the value of search to individual users is through asking whether they were able to find the information they were looking for. We asked: When using a search engine, how often do you find the information you are looking for? The answers to this question are in Table 2.29. Most remarkably, almost no one said 'never.' Less than 1 percent said 'never' or 'hardly ever.' Well over half of the users (57%) in our sample said that they 'nearly always' find what they are looking for, and 16 percent said they 'always' did. Cross-national differences for this question are too small to mention.

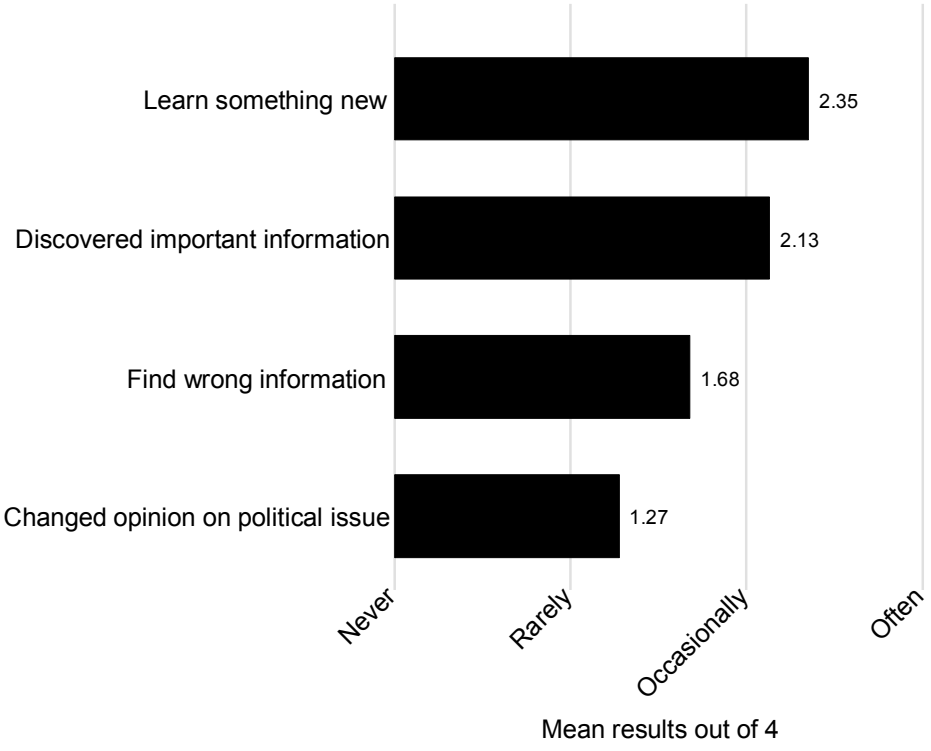
Table 2.29. Frequency of Finding the Information You Were Looking For

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	0.1	0.2	0	0.1	0.1	0.1	0	0.1
Hardly ever	0.4	0.2	0.1	0.2	0.2	0.5	0.4	0.3
Sometimes	3.7	2.5	2.1	1.4	3.3	3.2	3.2	2.8
Mostly	27.4	23.7	20.7	22.8	25.6	25.4	26	24.5
Nearly always	53.1	59.4	59.5	60.9	55.8	54.4	53.5	57
Always	15.4	14.2	17.5	14.8	14.9	16.4	16.9	15.7
Total N	1,953	1,979	1,986	1,992	1,993	1,963	1,980	13,845
Total percent	100	100	100	100	100	100	100	100

2.7. The Implications of Search

What are the implications of using search? Closely related to the kinds of information people search for online are the related roles that search plays in the process of finding information. In many respects, the following outcomes of search help explain why so many people rely on search as often as they indicate. The most common role of search is in learning something new about a topic, followed by finding information considered important by the user (Figure 2.5). Less frequently, users indicate finding information they thought was wrong, or that changed their opinion on a political issue (Figure 2.5).

Figure 2.5. The Results of Search



Learning Something New

One of the most common experiences people share in searching the Web and Internet is discovering something they had not known before. Research from the Oxford Internet Surveys (OxIS) frequently found that curiosity is one of the most critical factors shaping use of the Internet, and this is observed in the value people place on learning something new (Table 2.30). Almost half (48%) of all users across the seven nations say they ‘often’ learn something new when using search. Only 2 percent of respondents say they ‘never’ learn something new when using search. Poland is the highest in this regard, with 59 percent saying they often learn something new, while respondents in Germany are remarkably lower than any other country, with less than one-third (32%) saying they often learn something new (Table 2.30).

Table 2.30. Frequency of Learning Something New

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	2.3	4.3	1.2	1	1.3	2	2.1	2
Rarely	9	14.4	7.6	5.6	6.2	8.2	6.5	8.2
Occasionally	46.7	48.9	35.8	33.9	41.5	45.1	43.3	42.1
Often	42.1	32.5	55.4	59.4	51	44.7	48.2	47.7
Total N	1,912	1,924	1,963	1,950	1,958	1,921	1,961	13,589
Total percent	100	100	100	100	100	100	100	100

Discovering Important Information

People who use search often discover information that is important to them – not just novel. As noted above in search for information about medical and health matters, it is possible to discover information that is very important to an individual or a household. Politics and other topics are also not simply matters of entertainment, but often regarded as critical to one's life. The responses illustrate that discovering important information is one of the key experiences for users of search (Table 2.31). Just over a third say they often discover important information, and fewer than 5 percent (4%) say they never do. Like many other assessments, these vary by nation. Poland is, noticeably, the highest, with 57 percent saying they find important information through search, while users in France and the UK are the least likely to say they find important information via search, with less than a quarter (23–24%) saying they often find information of importance, and 6 percent in France and the UK saying they never do (Table 2.31).

Table 2.31. Frequency of Discovering Important Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	6.1	3.1	3.7	1.3	2.8	5.9	2.9	3.7
Rarely	17.9	14.5	15.5	7	12.2	19.5	14.4	14.4
Occasionally	52.7	45.4	45.6	34.9	50.5	50.6	48.7	46.9
Often	23.3	37	35.2	56.8	34.5	24.1	34	35.1
Total N	1,895	1,921	1,941	1,953	1,945	1,897	1,951	13,502
Total percent	100	100	100	100	100	100	100	100

Finding Incorrect Information

In the early days of the Internet and Web, the Web was compared with a garbage dump, with people arguing that it was as difficult to find anything of value on the Web as it was to find a treasure in a heap of garbage. Search has transformed this perception, since it has been so

successful in directing people to the information they are looking for, and that other people find valuable as well, which makes search less likely to direct people to incorrect information. However, some users continue to find things through search that they believe to be wrong (Table 2.32). Almost half say this happens occasionally (47%), but only about 15 percent believe this happens often. Users in Germany are the least likely to say they find the wrong information, with just less than 10 percent saying this happens often, and fully 14 percent saying this never happens. Users in Italy are the most likely, but only by a small margin, to find information they believe to be wrong (20%) (Table 2.32).

Table 2.32. Frequency of Finding Things You Thought Were Wrong

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	7.5	14	5.1	5.6	5.1	13.3	7.5	8.2
Rarely	25.9	38.5	26.1	32.1	28.3	32.7	27	30
Occasionally	51.5	37.9	49.2	47.4	50.7	42.5	50.1	47.1
Often	15.1	9.6	19.6	14.9	15.9	11.5	15.3	14.6
Total N	1,831	1,790	1,907	1,874	1,891	1,796	1,881	12,969
Total percent	100	100	100	100	100	100	100	100

2.8. Mobile Use of the Internet and Search

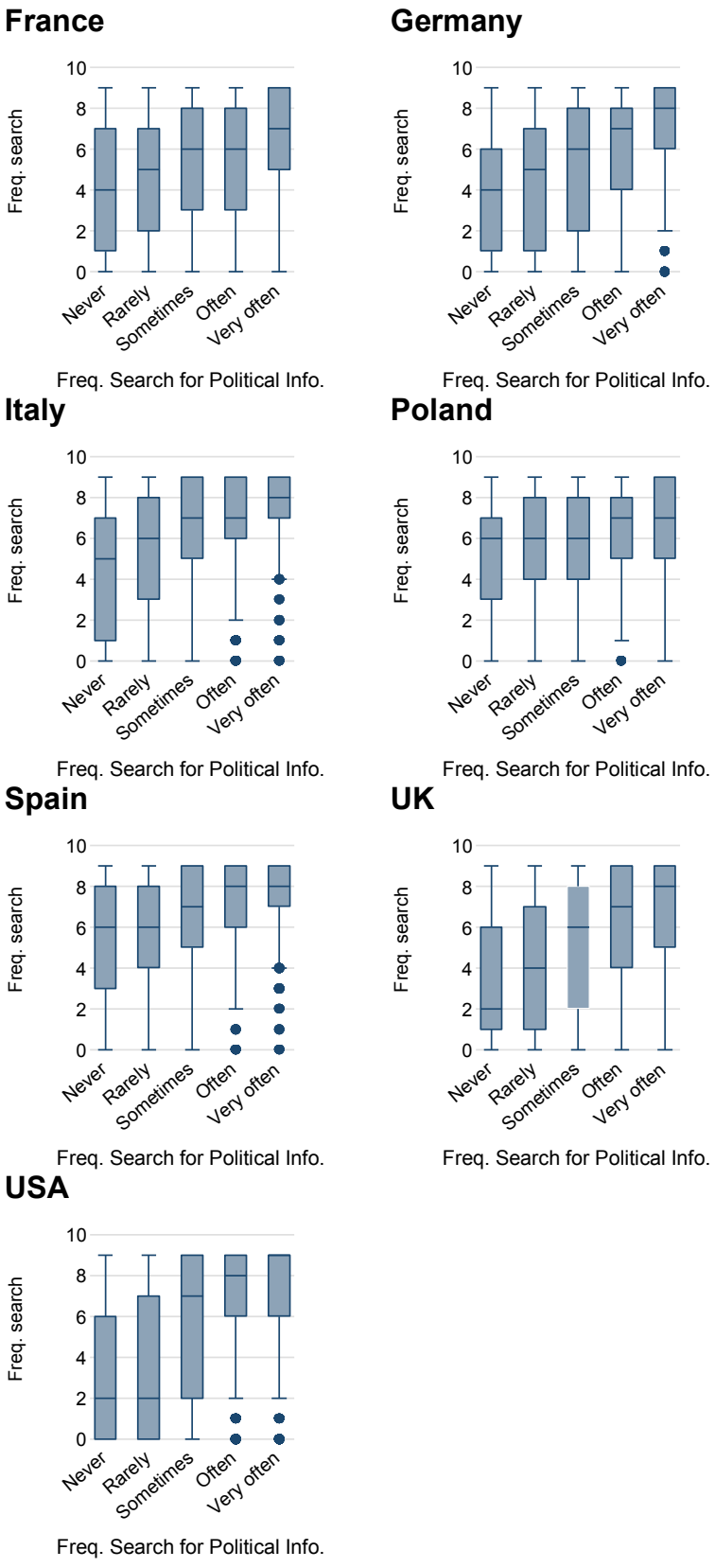
Many expect the rise of mobile Internet use, and its reliance on mobile applications (apps) to reduce reliance on Internet search. Articles have been written about how the rise of mobile will result in the decline of the Web, although observers have since seen this forecast to have been wrong, at least so far. *Wired Magazine* published “The Web is Dead” in 2010, and followed four years later with “The Web is not Dead” (Matuska 2014). In most developed nations, the mobile Internet complements other devices, as those who have a mobile phone tend to have three or more other computing devices, some of which are mobile or portable. These users have been called ‘Next Generation Users’ and they tend to use all aspects of the Internet, Web, and social media more extensively as they have access anytime from nearly any place (Dutton and Blank 2014).

In the present study, respondents were asked about their use of mobile devices for nine activities: email, texting, games, posting photos or videos, sending photos, listening to music, finding directions, browsing the Internet or Web, and posting or checking social media. The number of these activities they indicated doing online created a scale of their level of online mobile use. Generally, mobile use for these activities is strongly associated with the use of the Internet and Internet search (Figure 2.6). This reinforces other research that finds an increasing number of households in the US and UK to have more devices, some of which are mobile, that enable individuals to use the Internet from any location with Internet access at any time (Dutton and Blank 2011, 2014). Therefore, the rise of mobile Internet use is increasing the importance of search and search for political information in particular, while also enhancing the role of individuals in creating and sourcing information about politics, such as posting photos or videos from political events.

Figure 2.6 shows, for example, that those who use mobile Internet for more activities are also more likely to say they search for political information. This is most evident in the tendency for those doing more on mobile to say they search for political information “very often” (Figure 2.6). This is the case in every nation within our study.

In Figure 2.6, the top and bottom lines of the box plots indicate the 25th and 75th percentiles of each variable. That is, the boxes contain 50 percent of the respondents. The distance between the 25th and 75th percentiles is called the "interquartile range". The lines in the middle of the boxes are the medians, or the 50th percentile. The length of the lines that extend above and below each box is up to either 1.5 times the interquartile range, or to the maximum (or minimum) value of the data, whichever is less. Any data points beyond that are plotted with asterisks.

Figure 2.6. Plot of Number of Mobile Uses vs Frequency of Searching for Political Information



Part 3. Search in the Political Realm

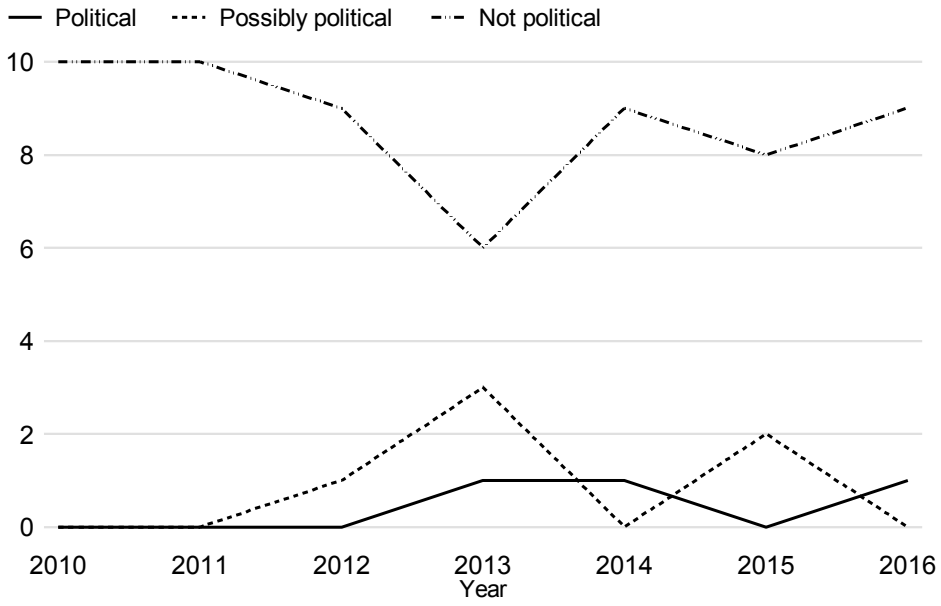
How often do people use search for political information? How does search for political information compare with other content areas? When people are interested in obtaining information about politics such as campaigns and elections, where do they go? Where do search engines fall among the many other possible sources of information about politics? This section describes the sources people find useful for obtaining information about politics, and in those cases where people look online, we sought to understand where they look. We also focus here on a less obviously political question: How do people find out about what other people in their community or nation believe about politics or political issues?

3.1. How Important is Politics in the World of Search?

This question is addressed through the use of trace data to explore the relative importance of search in the political realm. Analysis of the most popular search terms over a six-year period globally as well as by country during the time our cross-national survey was in the field allows us to describe the types of content individuals tend to search for. Next, the cross-national survey enables us to provide a description of search for political information, such as about candidates and campaign issues.

Global Trends in Search: 2010 to 2016

Figure 3.1. Top General Searches

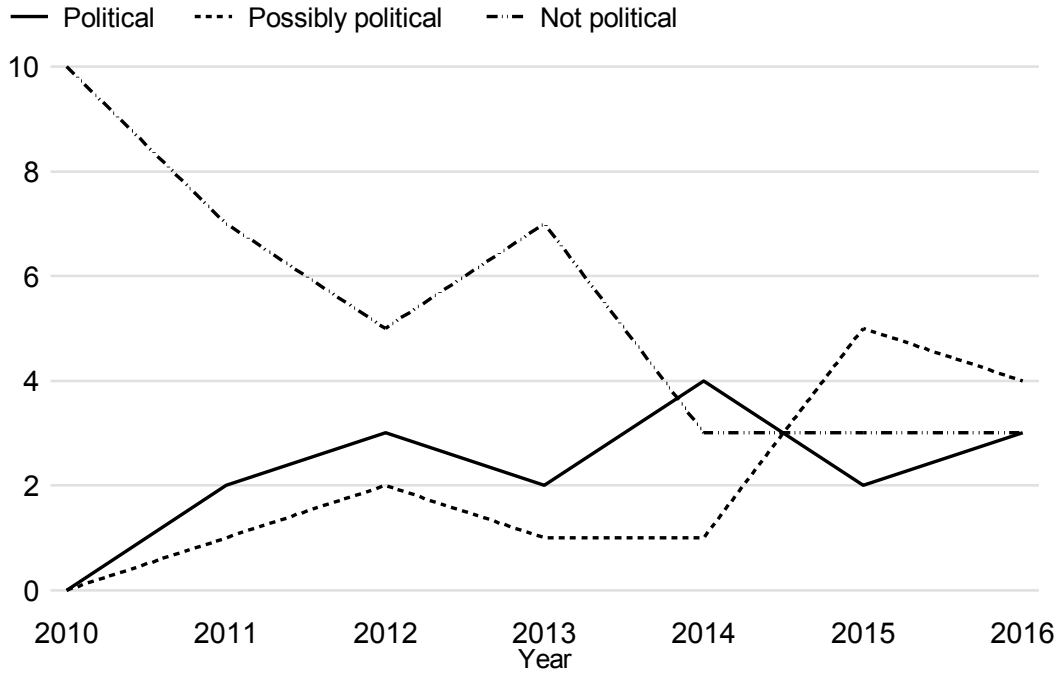


The top ten most commonly searched general terms, news/events, and people for the years 2010 to 2016 were collected and analyzed using data retrieved from Google's annual "Zeitgeist" and Year in Review features. The first level of analysis examines whether popular search terms are political, possibly political, or not political. Overall, search terms across each

of the three types of terms (general, news/events, and people) are rarely political. Considering the 10 most popular search terms generally, terms have become slightly more political over time; however, the difference is small, with no political terms identified in 2010 and 2011, and at least one possibly political term identified in every subsequent year. Political search terms include “Donald Trump” in 2016 and “ISIS” in 2014. Possibly political terms include “Charlie Hebdo” in 2015 and “North Korea” in 2013.

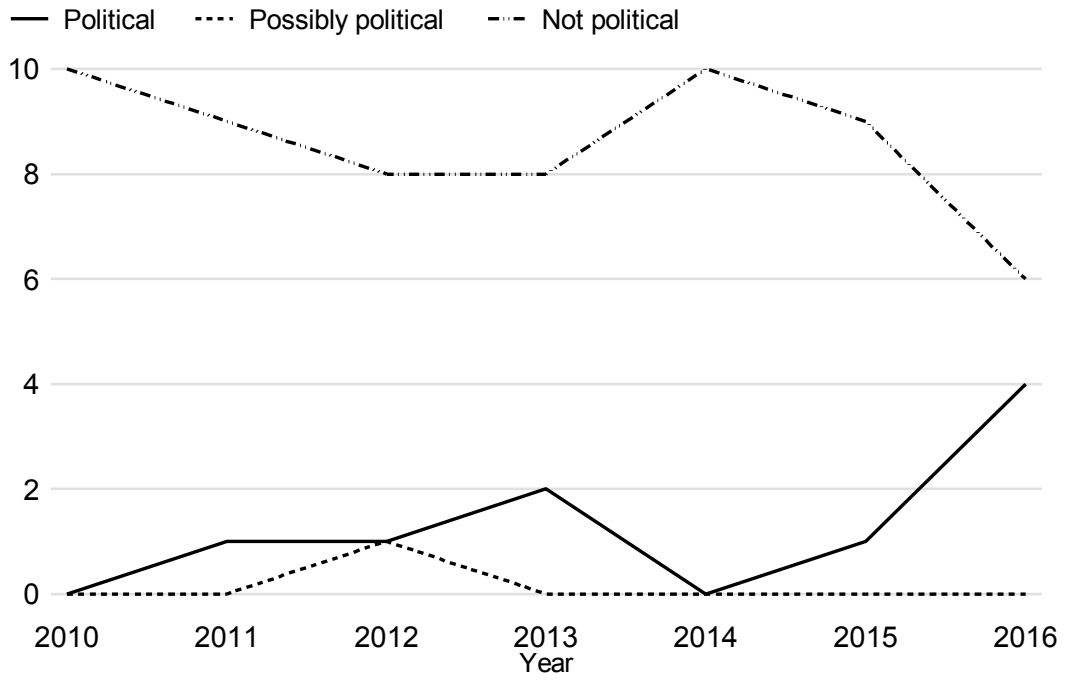
Not surprisingly, the news/events list of top ten search terms is more likely to be political than the general terms category (Figure 3.1). The number of news/events search terms that are political or possibly political has increased over time from none in 2010 to seven of 10 in both 2015 and 2016. This increase in the number of political search queries may be attributed to interest in what have been global political news stories, including the US election, the Panama Papers, Brexit, the annexation of Crimea, Greece’s economic troubles, and the Scottish independence referendum which all occupied top ten slots in this list in recent years.

Figure 3.2. Top News/Events Searches



The top ten most searched people over time have also become slightly more political, with none of the top ten people searched in 2010 being political, and four of the top ten being political in 2016 (Figure 3.2). That said, the trend over time is inconsistent. The majority of the most searched people are celebrities, such as Jennifer Lawrence, Miley Cyrus, and Morgan Freeman. An increase in political searching in 2016 may be attributed to global interest in the US presidential election, with Donald Trump, Hillary Clinton, Bernie Sanders, and Melania Trump all appearing among the most searched for people globally. Notably, four years earlier during the preceding US election no presidential candidates were among the top ten searched people.

Figure 3.3. Top People Searches



Considering all three lists of top searches together, the most popular searches do seem to be more political over time, with a high of 40 percent of top searches being political in 2016 (Figure 3.4).

The second level of analysis was applied only to the top ten news/events searches per year, in order to generate a more nuanced understanding of the type of news for which people are commonly searching. While celebrity/media news was common in 2010 and 2011, interestingly, by 2014, none made the top ten lists. Concurrently, political news was not present on the top ten lists for 2010 but relatively frequent (two to four items of ten per year) in subsequent years. An increase in the number of terrorism/attack news searches appearing among the top ten can be attributed to the occurrence of major events such as the attacks in Paris, Nice, and Brussels, as well as the shootings in Orlando, San Bernardino, and at Charlie Hebdo (Figure 3.5).

Figure 3.4. All Top Searches

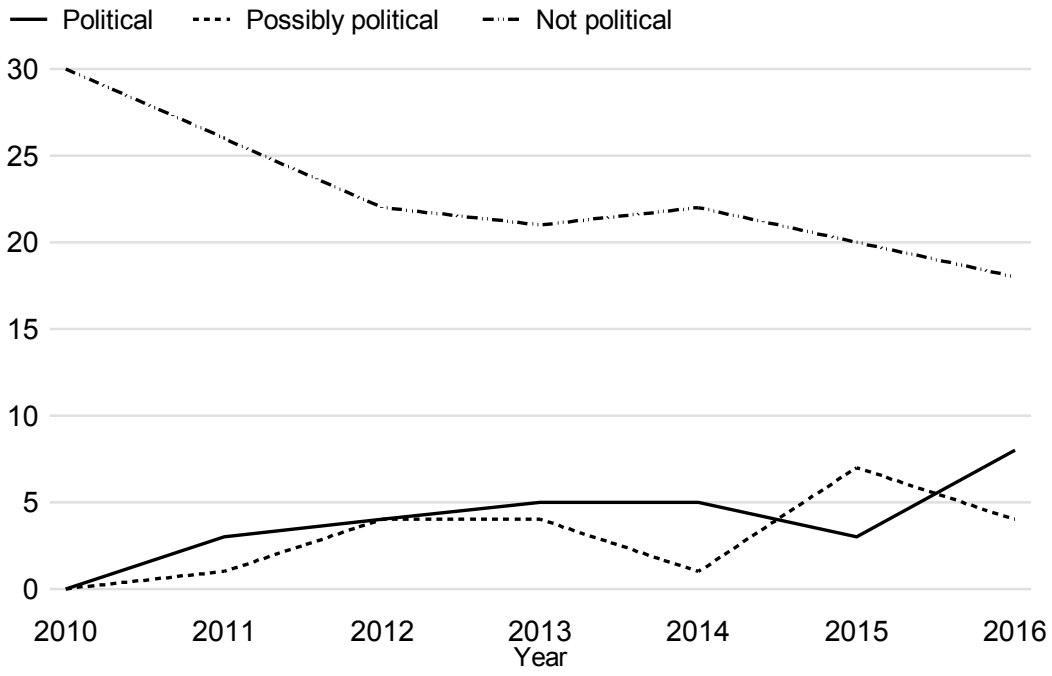
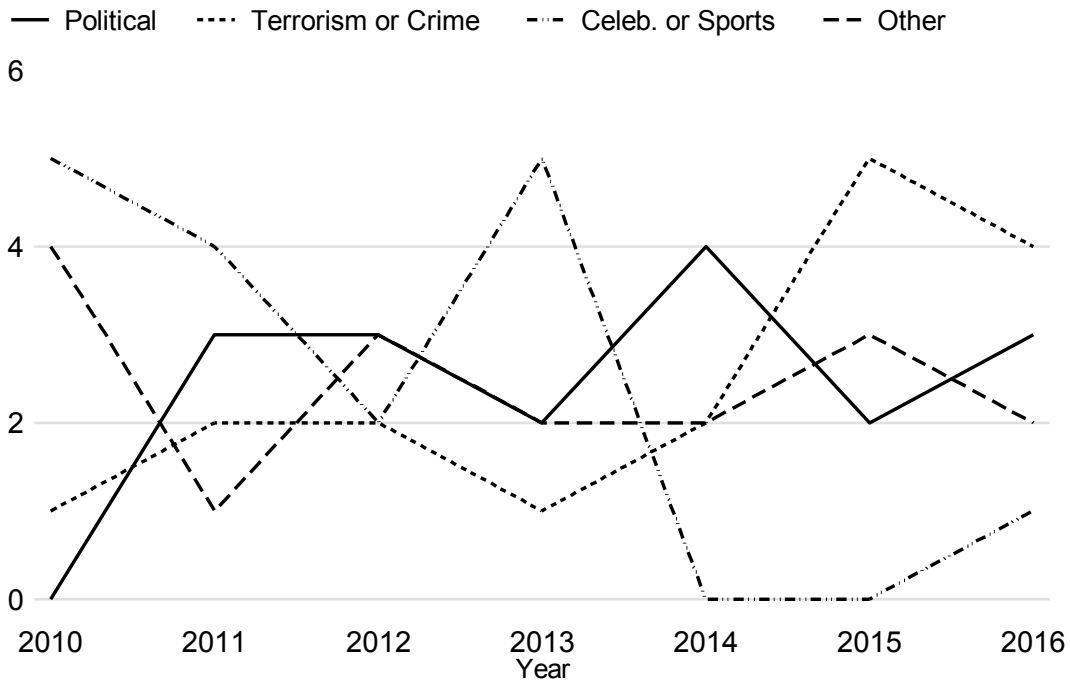


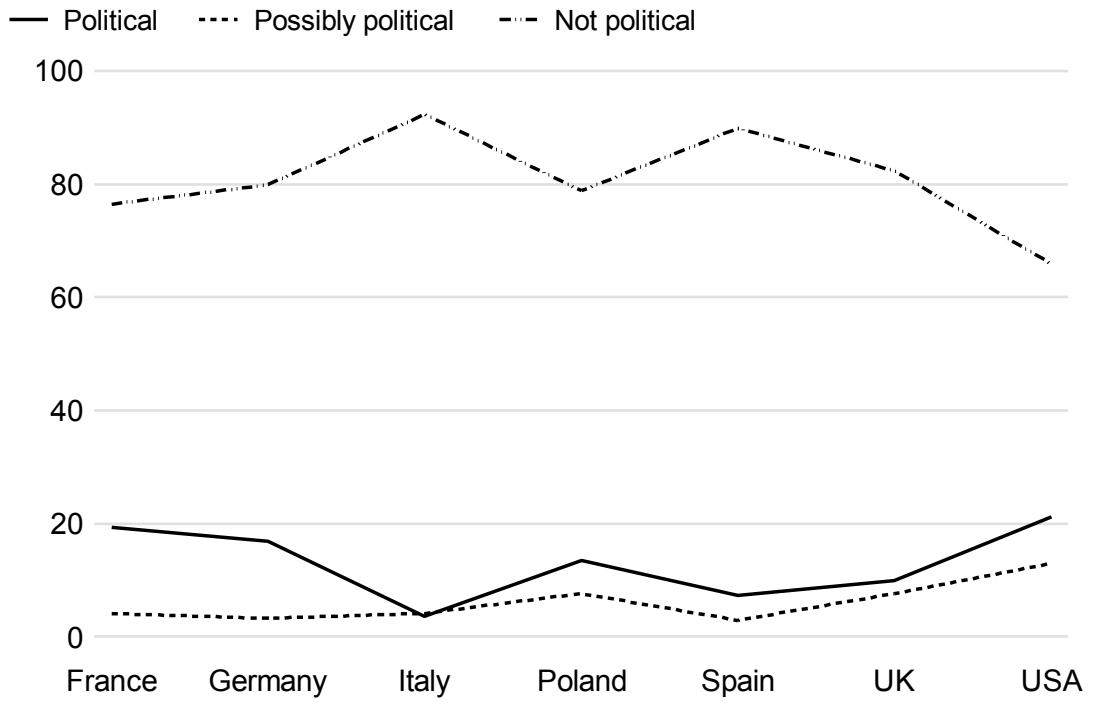
Figure 3.5. Top News/Events Searches: Types of News



National Trends in Search from January 4-20, 2017

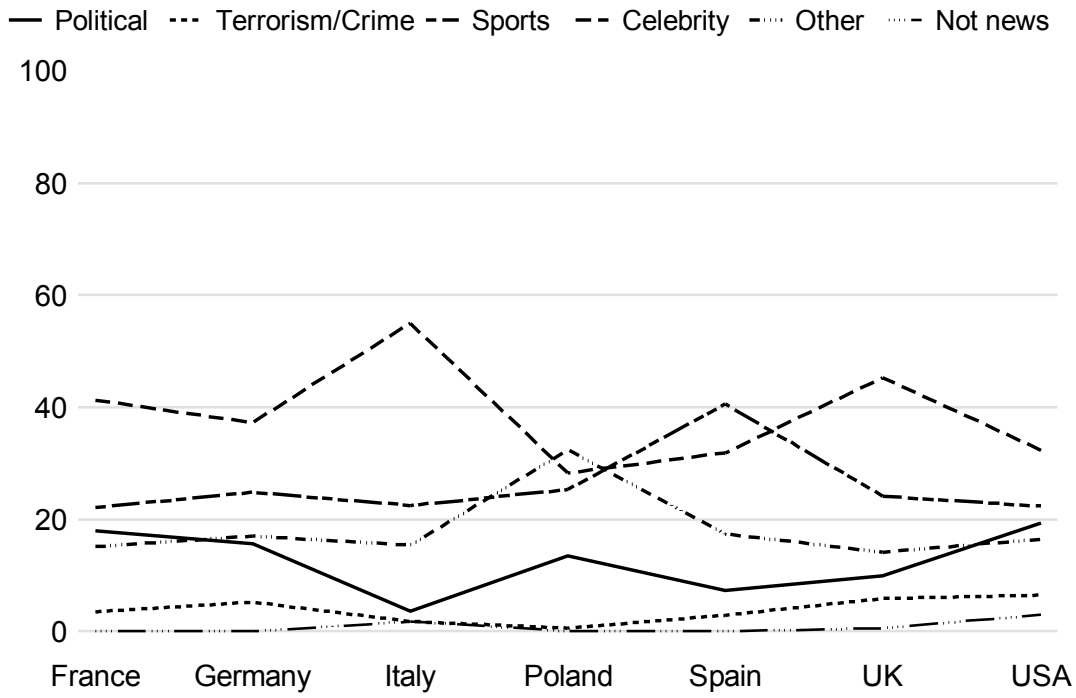
For this analysis we examined Google Hot Trends data and first examined the proportion of political, possibly political, and non-political items. Hot Trends items in Italy are the least political (3.6% of terms are political and an additional 4.1% are potentially political) compared to the six other countries in our study. Hot Trends in the US are most political at 21.2 percent being political, and an additional 12.9 percent being possibly political (Figure 3.6). This is not surprising since the Inauguration for President Trump took place during our sampling period. Notably, Hot Trends in France, where there is an ongoing election, were second most political at 19.4 percent political and 4.1 percent possibly political. Despite these differences, the most popular trends are not normally political across all seven countries. Overall, non-political Hot Trends range from 65.9 percent in the US to 92.3 percent in Italy.

Figure 3.6. Proportion of Hot Trends: Political by Country and Total



Of all Hot Trends analyzed during the sampling period, 99.2 percent were related to events happening in the news. The most common types of news were celebrity and media (39.0%) and sports (26.1%) In particular, celebrity and media search centered around popular films, television shows, and musical artists. In terms of sports, there was a strong focus on football (soccer) results across Europe, with high interest in popular teams. Handball and ski jumping also featured strongly. Politics was the third most common category (12.6%). Interestingly, across all seven countries there was a notable interest in US politics. The Trump family – including Donald Trump, Melania Trump, and Ivanka Trump – appeared among the top search terms in all seven countries. The general trends across countries in terms of how political Hot Trends items are, are roughly the same despite a more nuanced assessment.

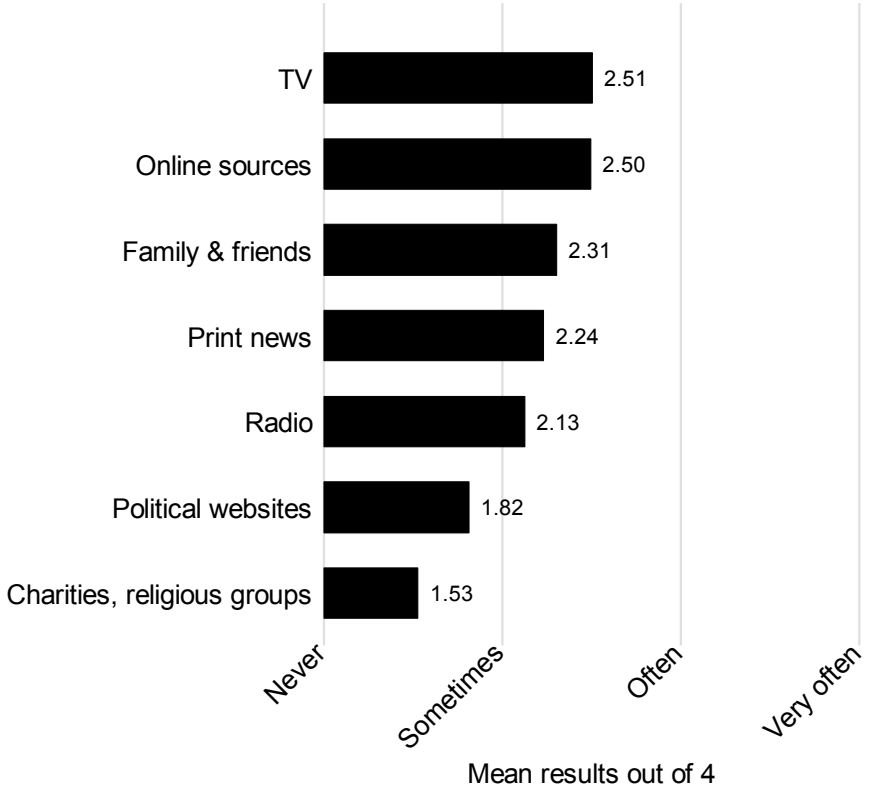
Figure 3.7. Proportion of Hot Trends: News Type by Country and Total



3.2. Search as a Source of Information about Politics

We asked respondents about an array of possible sources of information about politics in order to see whether search is more or less frequently used as a source of political information. Using the mean for all seven countries across the seven sources we included in the survey underscored the multiple places people go to for information about politics. No source we inquired about was irrelevant, and the differences across sources were not great. Nevertheless, it is possible to rank them by the mean responses, suggesting that the most important sources were online sources and television, followed by family and friends and radio, then by political websites such as campaign or party websites and charities and religious groups (Figure 3.8).

Figure 3.8. Search as a Source of Information About Politics



Television and Radio

The traditional media remain among the most important sources of political information. Nearly half of all respondents said they rely on TV ‘often’ or ‘very often’ for political information;, however, the most common (modal) response, was ‘sometimes’ (Table 3.1). Respondents in Germany were most likely to respond ‘very often’ (21%), with respondents in Poland being the least likely to say ‘very often’ (9%). Overall, television appears important in all seven nations.

Table 3.1. Reliance on Television for Political Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	17.3	10.4	12.6	15.1	12.3	13.2	12.7	13.4
Sometimes	37.5	29.8	39.5	46.4	34.4	36.2	38.6	37.5
Often	33.3	39	35.8	29.1	37.7	33.1	30.8	34.1
Very often	12	20.8	12.1	9.4	15.6	17.6	17.9	15.1
Total N	1,929	1,945	1,951	1,934	1,959	1,908	1,966	13,592
Total percent	100	100	100	100	100	100	100	100

Across the seven nations, radio is a less common source of political information than television (Table 3.2). As with television, respondents in Germany were somewhat more likely to say they relied on radio as a source, with only 21 percent saying they never did, which was only matched by respondents (19%) in Poland. Thirteen percent of respondents in Germany said they relied on radio 'very often,' which was more than in any other nation.

Table 3.2. Reliance on Radio for Political Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	31.3	20.6	28.7	19.2	26	32.6	33.4	27.4
Sometimes	38.5	37.7	43.5	47.8	37.4	40.2	41.5	40.9
Often	22.6	28.3	21.5	26.1	26	19.2	16.8	22.9
Very often	7.7	13.4	6.3	6.9	10.6	8.2	8.4	8.8
Total N	1,930	1,943	1,931	1,922	1,951	1,901	1,964	13,541
Total percent	100	100	100	100	100	100	100	100

Newspapers

Newspapers represent another traditional source of information about politics and a sizeable proportion of respondents indicated that they relied on newspapers 'sometimes' – the modal category (Table 3.3). That said, a quarter or more of respondents in three nations said they never rely on a newspaper for information about politics: France, the UK and the US. At the same time, nearly a quarter or more of respondents in each country said they relied 'often' on newspapers. In this case, and others, there is a great deal of variation across individuals.

Table 3.3. Reliance on Newspapers as a Source of Information about Politics

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	25.2	16.7	18.2	19.3	18.8	26.5	27	21.7
Sometimes	42.9	40.8	43.9	52.8	39.1	38	39.8	42.5
Often	23.6	28.8	29.5	22.7	31.8	24.7	23.3	26.3
Very often	8.3	13.8	8.4	5.3	10.3	10.8	9.9	9.5
Total N	1,930	1,939	1,944	1,921	1,962	1,905	1,961	13,561
Total percent	100	100	100	100	100	100	100	100

Family and Friends

Table 3.4 displays responses to how often respondents say they rely on family and friends for political information. The dominant pattern in this table is the similarity across countries. Most respondents in all seven nations say they sometimes (the modal category) rely on family and friends, with the next most common response being 'often.' There are a few exceptions, such as one-fifth of respondents in France (22%) and the UK (21%) saying they never rely on

family and friends for information about politics. Respondents in Spain, Poland, and Germany were the most reliant on family and friends, but only slightly and not to a degree that is statistically significant.

Table 3.4. Reliance on Family and Friends for Information about Politics

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	21.8	12.1	15.5	11	14.6	21.3	16.7	16.1
Sometimes	46.8	46.6	47.3	49.3	43.7	47	45.6	46.6
Often	23.6	30.9	29	31.1	29.3	23.1	25.3	27.5
Very often	7.9	10.4	8.3	8.6	12.5	8.7	12.3	9.8
Total N	1,929	1,940	1,942	1,930	1,958	1,904	1,962	13,566
Total percent	100	100	100	100	100	100	100	100

Candidate and Party Websites

Fewer respondents in the seven nations rely on the websites of political candidates, politicians, and political parties (Table 3.5). Nearly half of the respondents in most of the nations say they never rely on them, with most others saying they seldom do. In this category, respondents in the US say they use such sites somewhat more frequently. For example, just over one-fourth (26%) of US respondents say they use these sites often or very often. This might reflect the aftermath of the 2016 Presidential Election in which candidates frequently referred people to their websites, such as during the televised debates, and frequently pushed links to voters via campaign email platforms.

Table 3.5. Reliance on Politician, Candidate, and Political Party Websites for Political News

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	49.8	43.6	45.5	33.3	45.2	47.2	36.8	43.1
Sometimes	32.8	40.4	35.6	46.1	33.3	35.5	37.2	37.3
Often	13.4	12	14.7	16.1	15.8	12.2	18.3	14.7
Very often	4	4	4.3	4.5	5.6	5.2	7.7	5.1
Total N	1,931	1,928	1,931	1,908	1,951	1,899	1,961	13,508
Total percent	100	100	100	100	100	100	100	100

Charities and Religious Groups

The least likely source of political information was from charities and religious groups, with only just over 10 percent of respondents across the seven nations saying they relied on these sources often or very often (Table 3.6). Fully two-thirds or more of the respondents never rely

on charities or religious groups for information about politics. However, Poland stands out here, with respondents indicating somewhat more reliance on charities or religious groups.

Table 3.6. Reliance on Charities or Religious Groups for Information about Politics

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	70.2	63.1	63.8	51.6	66.2	68.8	60	63.4
Sometimes	19	26.2	22.3	35.1	19.6	20.5	23.4	23.7
Often	7.4	7.8	10.5	9.9	10.3	7.1	10.2	9
Very often	3.4	2.9	3.4	3.5	3.9	3.6	6.3	3.9
Total N	1,924	1,927	1,926	1,894	1,952	1,897	1,941	13,462
Total percent	100	100	100	100	100	100	100	100

Online Sources

Respondents indicated that they relied on online sources for information about politics as much as television. While many perceive online sources to have eclipsed TV, this is not the case. The arrival of online sources is new, but TV remains as important as online sources. Like other sources, the reliance on online sources varies by country and across individuals. Respondents in France were most markedly the least reliant on online sources, with 27 percent saying they never rely on online sources for information about politics. In contrast, less than 10 percent of respondents in Italy and Poland said they never relied on online sources, but the differences cross-nationally are not dramatic (Table 3.7). Most respondents in all the countries said they relied on online sources sometimes or often.

Table 3.7. Online Sources of Information about Politics

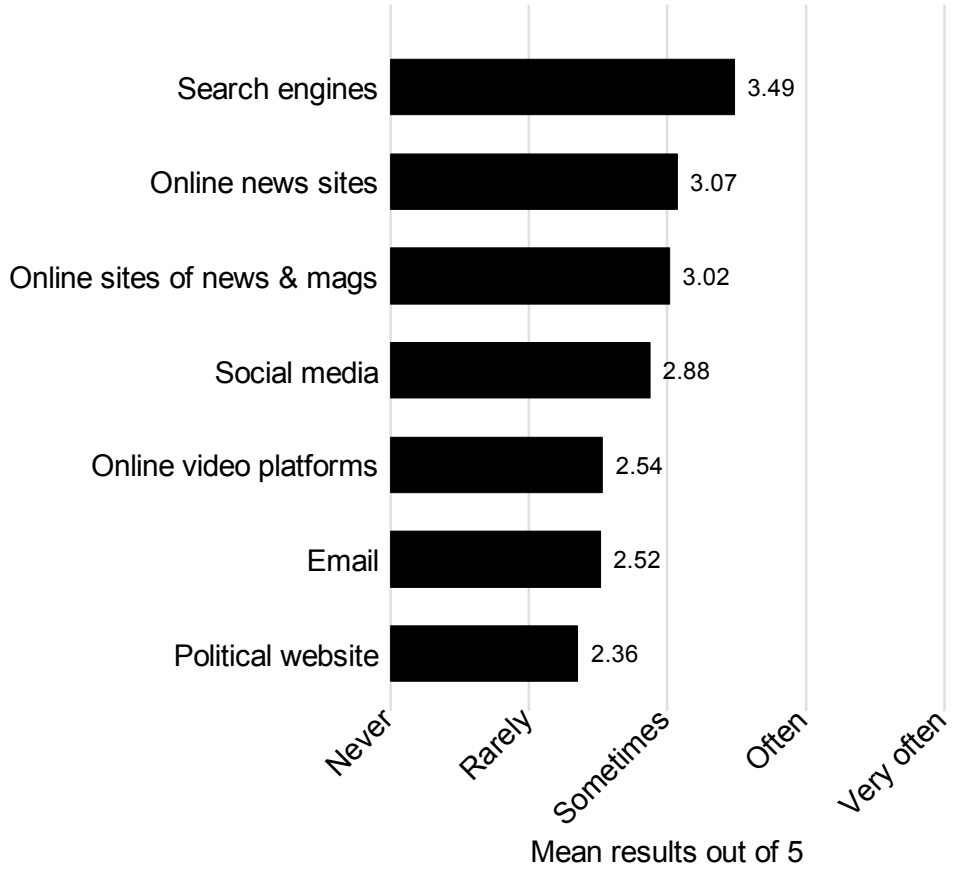
	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	26.6	15.6	9.4	7.8	12.3	16.7	13.3	14.5
Sometimes	36.4	40.1	32.8	37.6	32.7	39.1	35.6	36.3
Often	26.9	30.9	40.4	39.2	36.2	29.5	33	33.7
Very often	10.1	13.4	17.4	15.5	18.8	14.7	18.1	15.5
Total N	1,936	1,934	1,947	1,928	1,960	1,911	1,968	13,583
Total percent	100	100	100	100	100	100	100	100

Frequency of Using Various Online Sources

When people do go online for information about politics, where do they go? Figure 3.9 shows that they go primarily to search engines, followed by online news sites, online sites of

newspapers and magazines, social media, online video platforms, email, and, last, political websites (Figure 3.9). The following sections discuss the use of each of these online sources.

Figure 3.9. Sources of Political Information



Search

Search is the first place people go online for information about politics. Over 80 percent of users in all sample nations go to a search engine at least sometimes, and about one-fifth say they go ‘very often’ with a third saying ‘often.’ So when users do not just run across political information in the course of everyday life and work, and actually look online for specific political information, a search engine is the first and most frequent place for individuals to go. Respondents in a number of European countries are less likely to go to search engines as often as respondents in other countries (Table 3.8). Respondents saying they go ‘very often’ to search engines are relatively lower in the UK (17%), France (18%), Germany (18%) and Italy (19%), than in Poland (25%) and Spain (29%).

Table 3.8. The Frequency of Using Search Engines for Information about Politics

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	10.2	8.2	6.1	4.2	6.8	12.2	8.5	8
Rarely	11.3	10.9	9.2	10.1	7.3	11.8	8.5	9.9
Sometimes	29.8	29.8	27.1	26.2	23.9	31.7	29.6	28.3
Often	30.7	33	38.4	34.9	33.1	27.4	30.8	32.6
Very often	18.1	18.1	19.3	24.5	28.8	16.9	22.7	21.2
Total N	1,939	1,942	1,960	1,950	1,967	1,923	1,975	13,657
Total percent	100	100	100	100	100	100	100	100

Online-Only News Sites

However, there are many popular places people go online other than to a search engine, and many users go first to a search engine to navigate easily to their favorite website, such as an online news site like the *Huffington Post* in the US, *or BBC Online* in the UK. Respondents to our survey indicated that they go to an online news site about as often as they use search (Table 3.9). A third (33%) go 'sometimes,' 28 percent go 'often.', and 11 percent say they go 'very often' to an online news site. Cross-national differences are minor in the use of this source, except that users in France (20%), the UK (17%), Germany (15%), and the US (14%) are somewhat more likely to say they never go to online news sites (Table 3.9).

Table 3.9. Frequency of Going to Online News Sites for Political Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	20.4	15.1	11.1	6.1	8.4	17.4	14.1	13.2
Rarely	18.5	17.6	15.5	13.1	10.1	16.4	14.5	15.1
Sometimes	31.9	32.1	35.8	33.9	30.6	32.7	36.4	33.3
Often	22.6	25.1	28.5	35.7	36.1	23.3	23.3	27.8
Very often	6.6	10.1	9.1	11.3	14.9	10.3	11.7	10.6
Total N	1,922	1,933	1,951	1,944	1,962	1,916	1,969	13,597
Total percent	100	100	100	100	100	100	100	100

Online Sites of Newspapers and Magazines

Respondents indicate that they are about as likely to go to online news sites of major newspapers and magazines as to online-only sites (Table 3.10). Here again, slightly larger proportions of users in the UK (22%), France (18%), the US (18%), and Germany (17%) say they 'never' go to these online sites. Nevertheless, across all the countries, over a third (38%) of the respondents indicated they go to these sites 'often' or 'very often' for political information.

Table 3.10. Frequency of Going to Online Sites of Newspapers or Magazines for Political Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	17.7	16.7	9.3	9.2	10.2	21.5	17.7	14.6
Rarely	16.2	18	13.7	18.4	11.1	16.6	15.7	15.7
Sometimes	32.4	32.3	33.9	36.3	29	31.8	33.1	32.7
Often	24.8	23	32.1	27.2	35.4	20.1	23.1	26.6
Very often	8.8	9.9	11.1	8.9	14.4	10	10.4	10.5
Total N	1,933	1,939	1,956	1,952	1,966	1,926	1,972	13,644
Total percent	100	100	100	100	100	100	100	100

Social Media

Our cross-national sample is less likely to go to social media for political information than to online news sources (Table 3.11). Social media are principally focused on social interaction and entertainment − the proverbial sharing of cat videos captures the fun of communication among family and friends. Not surprisingly, sharing political information is somewhat less common. Over a fourth (28%) of respondents say they ‘never’ use social media to get political information, and these figures are over a third in some countries, such as in France (38%), and the UK (38%). Nevertheless, there are wide variations across individuals, and almost 10 percent (9%) of respondents say they use social media ‘very often’ for political information, with this being highest in the US (11%), and Poland (12%).

Table 3.11. Frequency of Use of Social Media for Political Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	37.5	36.9	20.4	14.6	19.1	38.2	28.4	27.8
Rarely	19	19.2	21.6	19.7	18.3	16.8	18.3	19
Sometimes	22.6	24.3	29.4	28.5	28	25.1	25.6	26.2
Often	13.8	13.7	20	25.6	22	13	16.4	17.8
Very often	7.2	5.9	8.5	11.6	12.6	6.9	11.3	9.2
Total N	1,940	1,942	1,954	1,950	1,962	1,927	1,970	13,644
Total percent	100	100	100	100	100	100	100	100

Online Video Platforms

Many online video platforms have been developed over the years, and they are continuing to thrive. These include Wochit, Liverail, and Kaltura, as well as YouTube, and more targeted professional video-sharing platforms, such as Vimeo. Video is becoming increasingly important in the provision of news, with some people using video platforms as their search

engine, and live streaming of debates, speeches, campaign events, and political ads. Online video platforms are also becoming the go-to site for accessing political gaffes and humor, with some videos going viral, such as the 'Dean Scream' video and Hillary Clinton's 'deplorables' speech, or many videos of Donald Trump that went viral during the 2016 election campaign in the US. By capturing a defining moment or a funny gaffe, short videos can be influential in shaping or reinforcing opinion. Nevertheless, half (50%) of our respondents say they 'never' or 'rarely' go to online video platforms for political information (Table 3.12). Still, nearly a quarter (24%) of all respondents say they go to online video platforms 'often' or 'very often' for political information, and this is somewhat higher in Poland (31%) and Spain (32%).

Table 3.12. Frequency of Going to Online Video Platforms for Political Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	36	33.8	21.7	13.6	21.5	38.5	30.2	27.9
Rarely	21.4	23	22.7	22.6	20.6	20.3	24.1	22.1
Sometimes	22.6	25.5	31.5	32.6	26.4	23.5	23.4	26.5
Often	14	11.4	16.7	21.4	20.9	11.7	13	15.6
Very often	6.1	6.4	7.4	9.9	10.6	6	9.3	8
Total N	1,939	1,936	1,950	1,951	1,962	1,922	1,970	13,631
Total percent	100	100	100	100	100	100	100	100

Email

Many share political views and information via email, and about as many of our respondents across the seven nations go to email for political information (26%) 'often' or 'very often' as they go to online video platforms (Table 3.13). For example, US Senator Bernie Sanders and other candidates in the 2016 campaign for President made frequent use of email platforms to solicit donations. In addition to solicitations, many emails on politics often embed links to videos. However, nearly a third (30%) of respondents say they 'never' share political information via email, and this proportion is highest in the UK (37%), Germany (36%), and France (34%).

Table 3.13. Frequency of Going to Email for Political Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	34	36	30.4	20.1	26.6	37.3	28.5	30.4
Rarely	20.5	20.6	22	20.9	20.2	22.8	25.4	21.8
Sometimes	22	22.1	23.8	24.9	21.3	22.4	22.7	22.7
Often	15.5	14.3	15.7	20.4	19	10.4	13.2	15.5
Very often	8	7	8.2	13.8	13.1	7.1	10.2	9.6
Total N	1,937	1,930	1,949	1,943	1,961	1,928	1,972	13,620
Total percent	100	100	100	100	100	100	100	100

Political Websites

Ironically, of the sources people go to for political information, respondents rated political websites of candidates or parties the least likely to be consulted (Table 3.14). Nearly a third (32%) of respondents said they 'never' go to political websites for political information. Only 5 percent say they go 'very often' and this is despite constant publicity about the websites of candidates and parties in and between campaigns and elections. Again, there are variations across nations, with respondents in the US and Poland being somewhat more likely to say they go to a political website.

Table 3.14. Frequency of Going to a Political Website

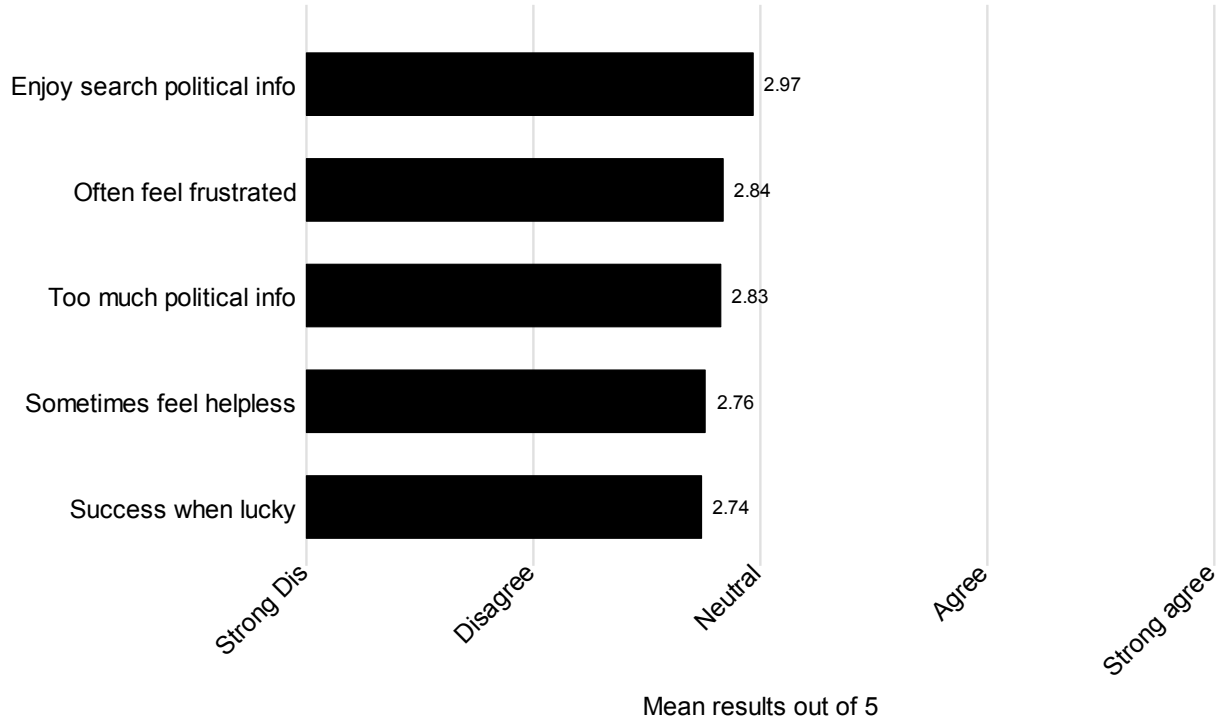
	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	40.8	36.7	34.1	15	33.4	38.4	27.8	32.3
Rarely	21.3	24.3	24.8	24.4	22.7	23.1	21.3	23.1
Sometimes	22.4	25.5	25	34.1	23.5	23.7	28.5	26.1
Often	11.7	9.9	11.9	20.2	14.6	10.3	15.2	13.4
Very often	3.8	3.6	4.2	6.3	5.9	4.5	7.2	5.1
Total N	1,933	1,937	1,952	1,951	1,965	1,923	1,968	13,629
Total percent	100	100	100	100	100	100	100	100

3.3. Efficacy in the Use of Search for Political Information

To understand the variation in the use of search for politics, it is useful to examine the perspectives of individuals in this survey on their sense of self-efficacy in the use of search for political information. How do they feel about their ability to use search engines to find the information about politics that they want?

We asked the respondents how they felt about their experience with search. We found a mix of feelings; most importantly, users enjoy using search for political information (Figure 3.10), but there are also surprisingly large proportions of users who often feel frustrated, overwhelmed, or helpless with search, and many feel lucky if they found what they were looking for (Figure 3.10).

Figure 3.10. Perceived Efficacy Related to Search



Enjoyment of Searching for Political Information

Search, like the Internet itself, has been called an 'experience technology' (Dutton and Shepherd 2006). It is often only when people experience using search that they understand its potential. They also see its game-like qualities in seeing whether they can find what they are looking for. So it is not surprising that people seem to enjoy searching for things, including information about politics (Table 3.15). When asked if they agree or disagree with the statement "I enjoy searching online for political information", 33 percent disagreed or disagreed strongly, while 35 percent said they agreed or agreed strongly. Many (33%) were neutral, neither tending to agree nor disagree. Again, this division reflects the importance of individual differences, which we will explore in later sections of this report.

Table 3.15. Enjoy Searching for Information about Politics

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Disagree Strongly	17.7	14.9	12.6	10.7	14.4	14.4	10.7	13.6
Disagree	17.3	19.6	16.1	18.8	20.6	20.6	18.5	18.8
Neither Agree/Dis	32.1	35.8	30.1	31.5	33.2	33.5	31.5	32.5
Agree	25	23.2	33	31.6	23.4	24	28.6	27
Agree Strongly	8	6.5	8.3	7.4	8.4	7.6	10.7	8.2
Total N	1,839	1,872	1,888	1,902	1,908	1,854	1,931	13,193
Total percent	100	100	100	100	100	100	100	100

Feelings of Frustration When Searching for Political Information

Over a quarter (29%) of the sample either agreed or strongly agreed that they often felt frustrated when searching online for political information (Table 3.16). More (38%) disagreed or disagreed strongly, but this still leaves a surprisingly large percentage of users who are experiencing frustration when searching online. The cross-national variations are not sizeable, but individual variations appear valuable to consider when thinking about how these differences shape actual search behavior.

Table 3.16. Often Feel Frustrated When Searching for Political Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Disagree Strongly	12.8	21.7	21.5	7.5	9.3	11.1	9	13.2
Disagree	20	31.3	22.2	24.3	23.8	27.5	25.4	24.9
Neither Agree/Dis	33.7	30.5	32.2	32.8	34.9	35.5	32.95	33.2
Agree	25.5	13.2	18.7	28.3	23.7	19.9	24.7	22
Agree Strongly	8	3.4	5.4	7.1	8.3	6.1	8	6.6
Total N	1,796	1,841	1,869	1,879	1,881	1,798	1,906	12,969
Total percent	100	100	100	100	100	100	100	100

Overload

Many believe that there should be more and better information online about politics, but we found that a sizeable proportion of users (26%) agree or strongly agree that there is already ‘too much’ online (Table 3.17). Again, the cross-national variations do not appear important.

Table 3.17. Too Much Information about Politics Online

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Disagree Strongly	11.6	15.6	14.1	8.3	6.8	8.6	8.8	10.5
Disagree	24.9	31.1	25	33.9	24.6	27.5	28.2	27.9
Neither Agree/Dis	35.7	34.4	34.8	36.1	38.9	37.4	34	35.9
Agree	21.7	15.1	19.9	16.7	22	20.1	21.1	19.5
Agree Strongly	6.2	3.8	6.2	5.1	7.6	6.4	7.8	6.2
Total N	1,803	1,837	1,870	1,868	1,880	1,788	1,907	12,954
Total percent	100	100	100	100	100	100	100	100

Helplessness

We asked if people “sometimes feel helpless trying to find information about politics.” If you use search often, you might think that everyone feels comfortable with search, and no one

feels helpless, but over a quarter of the Internet users surveyed (27%) said they ‘agree’ or ‘strongly agree’ that they sometimes feel helpless when searching for information about politics (Table 3.18).

Table 3.18. Feeling Helpless Trying to Find Information about Politics

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Disagree Strongly	15.9	22.6	23	7.6	10.2	11.4	11.3	14.5
Disagree	25.7	30.4	25.2	26.8	24.5	28.7	27.5	27
Neither Agree/Dis	31.7	29.2	29.3	33.6	34.3	34.2	30.8	31.9
Agree	21.4	14.4	18	26.1	23.8	19.9	22.2	20.9
Agree Strongly	5.5	3.3	4.5	5.9	7.2	5.7	8.3	5.8
Total N	1,787	1,844	1,870	1,871	1,888	1,807	1,903	12,971
Total percent	100	100	100	100	100	100	100	100

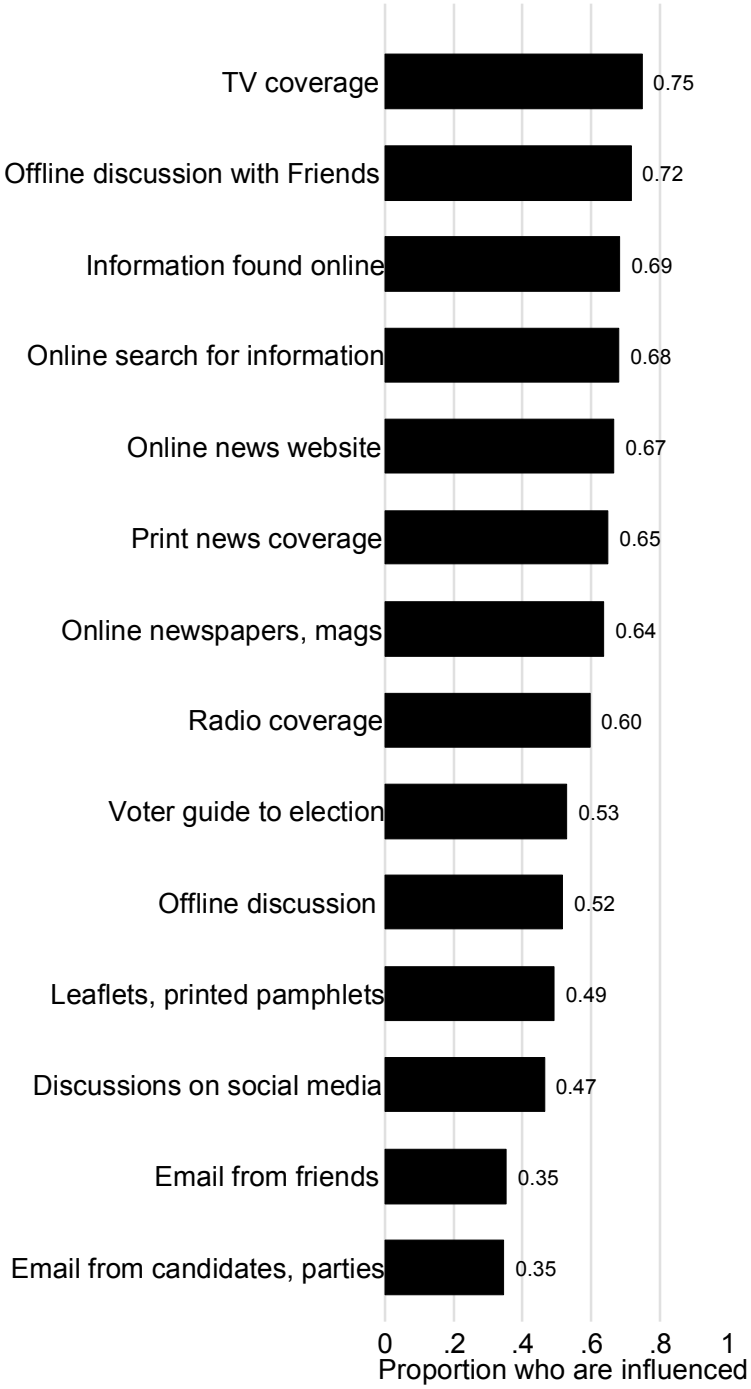
It is reasonable to wonder if those who feel helpless in trying to find political information are less likely to search for political information. Surprisingly, there is no meaningful correlation between feeling helpless and actually looking for political information (Tables not shown). For example, in the US, of those who strongly agreed that they ‘sometimes feel helpless trying to find information about politics’, 54 percent said they search for online political information ‘very often.’ Generally, people do not regularly look for political information, and therefore, when there are serious questions, they will use search whether they feel helpless or not.

Part 4. The Implications of Search

Beyond the use of search for finding information about politics, the survey addressed the potential implications of search on political beliefs, attitudes and behavior.

4.1. Influencing How People Vote?

Figure 4.1. The Importance of Search to Voting Decisions



One of the most important implications could be influence on how people vote, such as in choosing which party or candidate for whom to vote. We asked those who voted in the last election whether a variety of media were 'not important' or 'important' in shaping their voting behavior. These are self-reports of the influence of different media, and on only a binary scale, but given the different proportions of individuals overall and in each nation that cite each medium, it is possible to provide a rough ranking of the media and the place of search in this context (Figure 4.1).

As Table 4.1 illustrates, television news media are most widely perceived to have influenced the votes of those who voted in the last election. Television is followed closely by offline discussions with friends. The joint importance of TV and discussion with friends raises the concept of a two-step flow of information in which the direct influence of the media is enhanced by interpersonal communication with friends who are opinion leaders within their respective communities.

However, these two most common sources of influence are followed closely by online news sources, including online websites, information found online, and online search for information. Newspapers, offline and online, come close behind, followed by radio and voter guides, which could be in print or online format. Offline discussion and printed leaflets and pamphlets come next, but they are judged more widely important than are social media, email from candidates or parties, and email from friends (Figure 4.1).

Television Coverage

Not surprisingly, perhaps, the survey responses to this set of questions indicate that television remains the single most common source of information of importance to voters. Three-fourths (75%) of all voters in the last election across these seven countries name television coverage as important to their voting decisions. However, in the case of television, as with other sources, there are important cross-national variations. TV is most commonly referenced in the US, with 84 percent of voters, followed by Germany (81%). The UK and Poland are also high, with 79 percent and 77 percent respectively (Table 4.1), while Spain (72%), France (67%) and Italy (67%) are relatively less likely to have rated TV as important.

Table 4.1. Importance of Television Coverage to Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	32.9	19	32.8	23.5	28	21.5	16	24.9
Important	67.1	81	67.2	76.5	72	78.5	84	75.1
Total N	1,514	1,496	1,674	1,134	1,620	1,579	1,573	10,588
Total percent	100	100	100	100	100	100	100	100

Offline Discussions with Friends

Next to television, "offline discussions with friends" is the most common source of influence cited across the entire set of countries (Table 4.2). Nearly three-fourths (72%) of all respondents who voted in the last election cite this source of interpersonal influence. But this is highest in Poland (80%), the US (77%), and Germany (76%), compared with the UK (65%), France (68%), and Italy and Spain (70%).

Table 4.2. Importance of Offline Discussions with Friends on Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	31.8	24.4	30.3	20.5	29.7	34.9	23.3	28.2
Important	68.2	75.7	70	79.6	70.3	65.1	76.7	71.8
Total N	1,518	1,492	1,670	1,136	1,629	1,560	1,573	10,578
Total percent	100	100	100	100	100	100	100	100

Online News Website

Across all countries, two-thirds (67%) of voters in the last election cite an online news website as important to their voting (Table 4.3). However, just over a majority (51%) of voters in France cite an online news site as important, while over three-fourths of voters in Poland (77%) and the US (78%) cite this source as being of importance.

Table 4.3. The Importance of an Online News Website to Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	49.5	34.4	29.4	22.9	34.6	37	22.2	33.1
Important	50.5	65.6	70.6	77.1	65.4	63	77.8	66.9
Total N	1,498	1,487	1,666	1,122	1,620	1,560	1,576	10,528
Total percent	100	100	100	100	100	100	100	100

Information Found Online

Closely following the use of online news sites was the more general category of ‘information found online’ (Table 4.4). Both are of equal significance, and it is not clear whether respondents could distinguish between these two, although there are distinct differences between an online news site, and other information found online. Over two-thirds of voters (69%) indicated that information found online was important to their vote. Again, however, there were differences cross-nationally, with the US and Poland being highest with about 80 percent, followed by Italy (70%), Germany (67%), and Spain and the UK with 64 percent, and then by the France, which was the lowest with 56 percent.

Table 4.4. The Importance of Information Found Online

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	43.7	32.9	30.4	20.2	33.6	36.3	19.9	31.3
Important	56.3	67.1	69.6	79.8	66.4	63.7	80.1	68.7
Total N	1,509	1,480	1,670	1,132	1,618	1,555	1,573	10,536
Total percent	100	100	100	100	100	100	100	100

Online Search for Information

Online search is virtually equivalent in importance to online news sites and finding information online. Sixty-eight percent of all respondents who voted in the last election rated online search as important to their voting decisions (Table 4.5). The importance of online search was greater in the US (79%) and Poland (79%) than in Italy (73%), or in Spain (67%) or Germany (66%). Its importance was rated the lowest in the UK (60%) and France (58%). Despite this variation across nations, a large proportion of voters rated online search as important.

Table 4.5. The Importance of Online Search to Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	41.7	34.5	27.4	21.1	33.3	40.5	21	31.7
Important	58.3	65.5	72.6	78.9	66.7	59.5	79	68.3
Total N	1,496	1,486	1,666	1,129	1,617	1,559	1,568	10,520
Total percent	100	100	100	100	100	100	100	100

Print News Coverage and Voting

Whatever might be argued about the decline of the newspaper, print news continues to wield a major influence on elections. Just under two-thirds (65%) of voters in the last election cite the print newspaper as important to their voting (Table 4.6). The print news is cited by larger proportions of the voters in Germany (76%) and the US (71%), than in Poland (67%) the UK (66%), Spain (64%), and is lowest in Italy (59%) and France (54%). Nevertheless, even in France, a clear majority of voters perceived the print news as important to their vote.

Table 4.6. The Importance of Print News Coverage to Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	45.8	24.1	41.2	32.6	36	33.5	29.1	34.8
Important	54.2	75.9	58.8	67.4	64	66.6	70.9	65.2
Total N	1,504	1,491	1,665	1,126	1,619	1,570	1,567	10,541
Total percent	100	100	100	100	100	100	100	100

Online Newspapers and Magazines

Most print newspapers and magazines have online news sites, in contrast to online-only news sites, and these are perceived as being important by virtually the same proportion of voters as are the print papers, with 64 percent citing online news versus 65 percent citing print news as important (Table 4.7). With 64 percent across all countries citing the online news sites, there was a considerably higher proportion in Poland (70%), the US (69%), Italy (67%), and Spain (66%), as compared with the UK (57%), France (58%), and Germany (60%), which had the lowest percentages.

Table 4.7. Importance of Online Newspapers and Magazines for Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	41.7	39.6	33	29.9	33.7	42.7	31.2	36.1
Important	58.3	60.4	67	70.1	66.3	57.3	68.8	63.9
Total N	1,506	1,481	1,674	1,131	1,616	1,551	1,568	10,528
Total percent	100	100	100	100	100	100	100	100

Radio Coverage

Radio, a traditionally important broadcast media in elections, fell close behind online and print news coverage in the proportion of voters citing it as important to their vote (Table 4.8). Almost two-thirds (60%) of voters noted radio coverage as important, with it being most widely cited in Germany (69%), followed by the US (64%), Poland (62%), Spain (61%), and least often mentioned as important in the UK (59%), France (54%) and Italy (51%), where a bare majority noted radio.

Table 4.8. Importance of Radio Coverage on Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	45.6	31.2	48.9	37.7	38.9	41.5	35.8	40.1
Important	54.4	68.8	51.1	62.3	61.1	58.5	64.2	59.9
Total N	1,504	1,490	1,641	1,122	1,615	1,550	1,558	10,481
Total percent	100	100	100	100	100	100	100	100

Voter Guide to Election

Voter guides are often a source of information on the candidates and measures on the ballot, which voters often consult close to an election, if not in the days or hours before voting. In the US, for example, voter guides have been one of the few ways that not-for-profit organizations can inform voters without their work being considered as a gift to a candidate. But to be a valid voter guide, this information needs to be neutral and nonpartisan. Surprisingly, voter

guides are noted by a majority (53%) of voters in the last election as being important to their voting (Table 4.9). Perhaps due to campaign finance laws, they are cited most frequently in the US (68% of voters). This could be due to the long ballots in many US elections, given that many vote for individual candidates and ballot measures rather than a political party, making voter guides more valuable. However, these sites were nevertheless important to a majority of voters in Germany (57%), Poland (55%), Italy (53%), and the UK (52%). France stood out in that only 41 percent of voters cited a voter guide as important.

Table 4.9. Importance of Voter Guides for an Election to Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	59.1	42.7	46.9	44.8	54.2	48.1	32	46.9
Important	40.9	57.3	53.2	55.2	45.8	51.9	68	53.1
Total N	1,491	1,478	1,661	1,115	1,600	1,551	1,546	10,441
Total percent	100	100	100	100	100	100	100	100

Offline Discussion

Voters are split on the importance of offline discussions, one of the most traditional forms of political discussion – romanticized by the concept of the public sphere (Habermas 1984). Interestingly, France and the UK are relatively low in citing the importance of discussions offline, with 46 percent saying it is important, compared to each of the other nations where a majority of voters cited this as important (Table 4.10). Poland had the highest mention of offline discussion (59%), followed by the US with 55 percent.

Table 4.10. The Importance of Offline Discussion to Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	54.2	47.4	49.4	41.2	45.2	54.4	43.5	48.2
Important	45.8	52.6	50.6	58.9	54.8	45.6	56.5	51.9
Total N	1,451	1,461	1,651	1,075	1,594	1,538	1,536	10,306
Total percent	100	100	100	100	100	100	100	100

Leaflets and Printed Pamphlets

Just barely a majority (50%) of voters in the last election said that printed leaflets or pamphlets were important to their voting. However, there were cross-national differences, with these printed materials being perceived important by larger proportions of the voters in the UK (60%) and France (57%), as compared with Italy, where only 38 percent perceived them to be important (Table 4.11).

Table 4.11. Importance of Leaflets and Printed Pamphlets to Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	43.5	55.2	61.5	49.2	51.8	40.4	51.2	50.5
Important	56.5	44.8	38.5	50.8	48.2	59.6	48.8	49.5
Total N	1,517	1,480	1,669	1,131	1,621	1,569	1,558	10,544
Total percent	100	100	100	100	100	100	100	100

Discussions on Social Media

Given the major focus of concern on the influence of social media on elections, it is notable that a relatively smaller proportion of voters, less than a majority (46%) in the last election in their country, rated discussion on social media as important to their voting (Table 4.12). And in some nations, such as France (32%) and Germany (36%), only about a third of voters rated discussions on social media as important. On the other side, a majority of voters in several nations rated discussions on social media as important, including the US (54%), Spain (54%), and Poland (60%). This might reflect the degree that social media, like Facebook, tend to be used primarily for social and entertainment purposes, rather than work and political debate. Promoting political causes on a social network can fracture friendships, representing what some have termed a ‘context collapse’ when a social network is used as a political network (boyd 2014).

Table 4.12. Importance of Social Media to Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	67.7	64	50.1	40.1	45.5	59	46	53.5
Important	32.4	36	49.9	59.9	54.5	41	54	46.5
Total N	1,472	1,468	1,654	1,118	1,615	1,542	1,557	10,426
Total percent	100	100	100	100	100	100	100	100

Email from Candidates or Parties

Campaigns increasingly send email to voters, but this appears to be one of the lesser sources of influence on the vote. Just over a third (35%) of voters in the last election cite this as an important source of influence (Table 4.13). It was mentioned most frequently in the US, by 44 percent of voters, as major candidates used email extensively for raising small campaign contributions, such as for the Bernie Sanders’ primary campaign, and nearly all candidates emulated this practice in the general election. But this source was substantially lower in importance in other countries, such as in Germany (28%), Italy (28%), and France (30%), where under a third of voters noted this source as important.

Table 4.13. Importance of Email from Candidates or Parties to Voting

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	70.5	72.4	71.7	60	64.1	61.1	55.7	65.2
Important	29.5	27.6	28.3	40	35.9	38.9	44.4	34.8
Total N	1,462	1,458	1,645	1,107	1,601	1,542	1,553	10,368
Total percent	100	100	100	100	100	100	100	100

Email from Friends

Family and friends sometimes send emails, often as part of a list, advocating for or against particular candidates or items on a ballot. One might expect such communication to be frequent and influential, but this was the least widely cited source of importance in shaping voting decisions. Just over one-third (35%) of voters in the last election cited email from friends as important (Table 4.14). However, this was higher in Poland (45%) and the US (44%), where the most voters cited offline discussion as influential (noted above). Perhaps those in Poland and the US are less reluctant to discuss and email friends and families about politics. However, emails from candidates or political parties are equally less widely cited (see previous section, “Email from Candidates or Parties”).

Table 4.14. Importance of Email from Friends for Voting Decisions

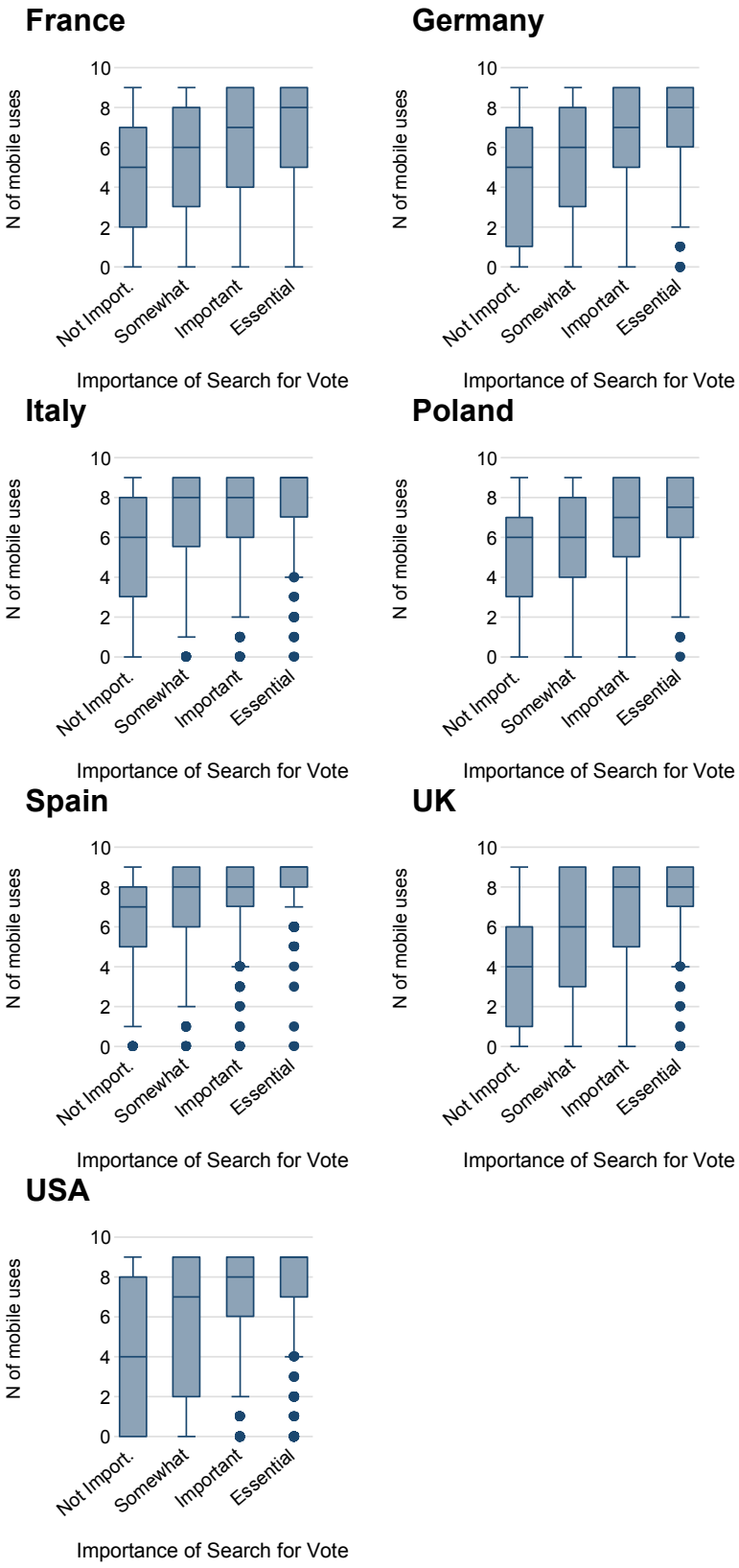
	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	69.3	67.7	68.5	55.2	63.1	69	56.5	64.6
Important	30.7	32.3	31.5	44.8	36.9	31	43.5	35.4
Total N	1,481	1,468	1,651	1,105	1,605	1,540	1,554	10,403
Total percent	100	100	100	100	100	100	100	100

Mobile Internet Use and the Shaping of Voting Decisions

Interestingly, those who do more on the mobile Internet are more likely to say they find information through search that shapes their voting decisions. As noted above, those who use mobile Internet apps are also more active on search, and it is therefore reasonable to find that they see it as useful to their considerations around elections. Making search always available online through mobile devices can enhance its role in campaigns and elections (Figure 4.2).

In every nation, the more Internet users do on mobile, the more likely they are to view the use of search as important or essential to their voting decisions (Figure 4.2). It may be that the more essential they view search to be, the more they are likely to use mobile Internet apps.

Figure 4.2. Plot of Number of Mobile Uses with Importance of Search for Voting



4.2. Modifying Political Opinions

A central question of this study is whether search plays a role in shaping political opinions. We asked if the results of search have had any effect on changing the opinions of respondents on political issues. Given the frequency of finding new and important information on search, it is perhaps surprising that fewer people find information that changes their mind, than find wrong information. Less than 10 percent (9%) of our sample of seven countries said they 'often' find information that leads them to change their mind about a political issue. At the same time, fewer than one in four (22%) respondents said this 'never' happens (Table 4.15).

One could argue that most people use search to reinforce their beliefs and opinions, in line with a confirmatory bias. However, it should be obvious that this would be a very different world if people changed their mind every time they were given new information. Here again, there are interesting cross-national differences, with users in Poland, Spain, Italy and the US being more likely to find information that changes their political views, while users in Germany, France and the UK are the least likely to modify their political views (Table 4.15).

Table 4.15. Frequency of Discovering Information that Changed Your Opinion on a Political Issue

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	29.7	30.2	20	14.8	17.4	28.4	17.2	22.5
Rarely	33.9	39.4	34.7	36.2	37.9	36.9	38.8	36.8
Occasionally	29.6	25.2	32.3	37.6	34.7	27.8	33.7	31.6
Often	6.8	5.2	13.1	11.5	10	7	10.3	9.2
Total N	1,867	1,847	1,892	1,853	1,889	1,847	1,913	13,107
Total percent	100	100	100	100	100	100	100	100

We asked a similar question in a more general way: "Have you ever modified your political views because of searching for information online?" In this case, over 40 percent (42%) said yes, suggesting that search can certainly lead people to modify their political views (Table 4.16). This is particularly large given the expectation that most people will be attracted to information that reinforces their opinions. Cross-nationally, there was considerable variation. Half of the respondents (49%), in the US, Spain, Italy, said yes, while a third of users in the UK (30%), Germany (33%), France (38%), and Poland (43%), said no, that the results of search had never changed their political views.

Table 4.16. The Role of Search in Changing One's Political Views

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not important	62	67.1	50.7	57.4	50.9	70.1	50.9	58.4

Important	38	32.9	49.3	42.6	49.1	29.9	49.1	41.6
Total N	1,726	1,614	1,664	1,643	1,712	1,634	1,674	11,666
Total percent	100	100	100	100	100	100	100	100

4.3. Intelligence about Others

More indirect political implications of search might be around the potential for learning more about what other people think about politics and political issues. Does search play a role in this area of intelligence about what others are thinking?

We asked all of the users in our samples if they knew about what other people thought about political candidates and issues (Table 4.17). Generally, most users are quite tentative about how much they know, with the modal response (42%) being 'it depends' on the candidate or issue. The main sense one gains from Table 4.17 is that there is considerable variation across individuals. Cross-nationally, there were also some modest tendencies for users in the US, Poland and Spain to feel somewhat more informed about the views of others.

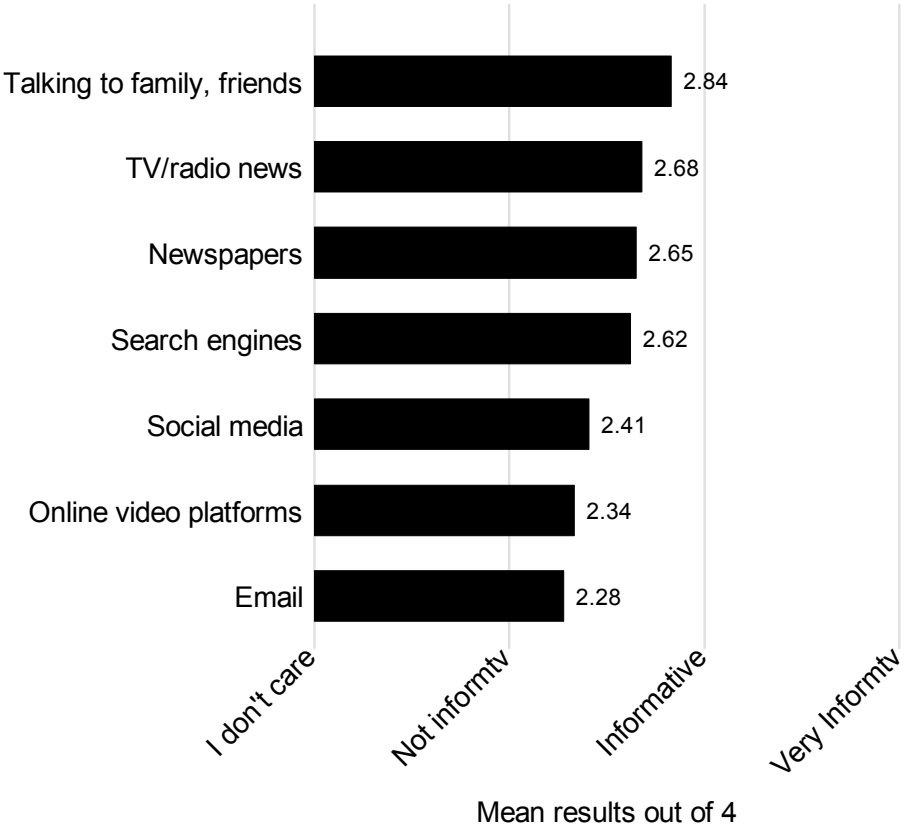
Table 4.17. Knowledge of What Other People Think about Political Candidates and Issues

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Not at all	12.3	11.7	13.1	5.3	11.5	13.3	8.5	10.8
Sometimes	19.1	18.4	18.5	18.3	22.5	17.4	13.4	18.2
Depends y/n	40.8	48.3	40.2	40.9	36.1	44.6	45.8	42.4
Mostly	23.4	17.8	22.6	31.8	24	18.7	22.9	23
Almost always	4.4	3.8	5.6	3.7	5.9	6	9.5	5.6
Total N	1,844	1,867	1,895	1,856	1,917	1,897	1,950	13,225
Total percent	100	100	100	100	100	100	100	100

How You Learn About What Other People Think

Respondents rated how informative a variety of media were about what other people thought about political candidates and issues. The most important source was talking to family and friends, followed by the media and press, and then via search. Search was rated somewhat more informative than even social media, but also more important than online video platforms and email (Figure 4.3).

Figure 4.3. Rating Media on Information About What Other People Think



Talking with Family and Friends

Responses of the sample suggest that they see the most informative approach to learning about what other people think is talking with family and friends. A majority of respondents (52%) say this is 'informative' and another 23 percent say it is 'very informative' (Table 4.18). Cross-nationally, the differences are not remarkable, but within each nation there are important variations across individuals.

Table 4.18. Learn about Others by Talking with Family and Friends

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
I don't care	17.4	10.8	12.6	15.8	12.1	18	12.2	14.1
Not informative	12.6	8.8	14	13	10.1	9.3	10.7	11.2
Informative	48.8	49.4	55.7	51.8	51.2	53.2	51.5	51.7
Very informative	21.2	31	17.7	19.4	26.7	19.5	25.6	23
Total N	1,920	1,929	1,905	1,910	1,927	1,876	1,951	13,418
Total percent	100	100	100	100	100	100	100	100

Television and Radio News Coverage

While speaking with family and friends is very personal, it is interesting that watching television and radio news coverage, which are among the more mediated sources, is rated nearly as informative (Table 4.19). Over two-thirds (68%) of our respondents say that TV/radio coverage is informative or very informative about what others think. In this case, there are few cross-national differences, except that the value of TV/radio broadcasting is perceived to be less informative about the views of others in Poland, than in the other nations.

Table 4.19. Learn about Others by Watching Television/Radio News Coverage

Percentages

	France	Germany	Italy	Poland	Spain	UK	US	Total
I don't care	19.1	12.8	11.1	20	11.5	17	12.7	14.9
Not informative	18.5	18.2	17	25.9	13.7	10.9	13.1	16.8
Informative	50.6	54.6	59.2	46	56.3	53.3	55.2	53.6
Very informative	11.8	14.5	12.7	8.1	18.6	18.8	19	14.8
Total N	1,908	1,920	1,906	1,899	1,922	1,878	1,946	13,378
Total percent	100	100	100	100	100	100	100	100

Newspapers

Right after TV or radio broadcasting comes another mass medium, the newspaper, as a means to know what others think about politics. Two-thirds (67%) of the sample view newspapers as informative or very informative (Table 4.20). Internet users in Poland are again somewhat less likely to see the newspaper as a way to learn about what others think, and users in France are also somewhat lower in their ratings of the newspapers as informative about others, but cross-national differences are not otherwise important.

Table 4.20. Learn about Others by Reading Newspapers

Percentages

	France	Germany	Italy	Poland	Spain	UK	US	Total
I don't care	19.9	12.6	11.5	20.4	11.1	18.3	13.8	15.4
Not informative	18.2	19.7	15.6	26.7	14.2	14.2	15.2	17.7
Informative	49.9	54.1	60.8	45.9	55.4	52.4	54.5	53.3
Very informative	12	13.7	12.2	7	19.3	15.1	16.5	13.7
Total N	1,907	1,908	1,899	1,881	1,922	1,868	1,927	13,312
Total percent	100	100	100	100	100	100	100	100

Search Engines

All the computer-mediated technologies are rated somewhat lower than interpersonal communication, mass media and the press as a means for learning about what other people think. In the case of search engines, respondents in France, Germany, Poland, and the UK, to a lesser degree, are somewhat more likely to say they are not informative, compared to respondents in Italy, Spain, and the US (Table 4.21). Nevertheless, half of the respondents in all nations say that search engines are informative when it comes to learning about what other people think.

Table 4.21. Search Engines as Informative about What Others Think

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
I don't care	21.5	16.6	12.5	19.4	12.9	20.6	14.2	16.8
Not informative	22.6	27.4	15	17	17.3	16.6	14.2	18.6
Informative	43.4	45.9	57.1	52.4	52.2	48.2	51.5	50.1
Very informative	12.5	10.1	15.4	11.3	17.6	14.6	20.1	14.6
Total N	1,893	1,868	1,890	1,870	1,891	1,820	1,923	13,154
Total percent	100	100	100	100	100	100	100	100

Discussions on Social Media

Surprisingly, social media are rated as less informative than search engines as a means for learning more about what others think. Only 14 percent of respondents rate social media as very informative, perhaps because they are less political, or because fewer Internet users are active on social media (Table 4.22). Nearly a quarter of the respondents in most countries indicated that they did not care what other people thought in relation to discussions on social media, and nearly half (49%) said they either did not care or did not find social media informative, where most content is focused on sociality and entertainment rather than politics (Sormanen and Dutton 2015).

Table 4.22. Social Media

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	U	Total
I don't care	28.2	23.4	20.2	24.4	19.3	29.9	22.6	24
Not informative	31.1	29.9	23.2	22.4	24.1	22.6	20	24.7
Informative	30	34.1	41.8	42.8	40.5	34.2	38.7	37.5
Very informative	10.7	12.6	14.8	10.3	16.1	13.4	18.7	13.8
Total N	1,886	1,826	1,875	1,866	1,869	1,799	1,913	13,034
Total percent	100	100	100	100	100	100	100	100

Online Video Platforms

A relatively small proportion of Internet users in our sample countries believe that online video platforms are a useful way to learn more about what others are thinking. Less than 10 percent rate them as very informative, and about one-fourth say they don't care, possibly suggesting that they do not regard these platforms as an appropriate way to learn about others political views (Table 4.23). Nevertheless, half of all respondents (48%) do find online video platforms helpful in this regard. Perhaps many online videos are perceived to be more remote from the communities and social networks of users, so they say little about what others think, but are nonetheless informative in other respects.

Table 4.23. Online Video Platforms as a Means to Learn about What Others Think

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
I don't care	27.6	22.6	19.9	24.2	19.7	28.2	22.6	23.5
Not informative	34.7	36.9	29.4	23.7	27.3	24.7	25.5	28.9
Informative	29.8	32.7	41.8	43.4	41.8	36.9	39.1	37.9
Very informative	8	7.8	8.9	8.7	11.2	10.2	12.8	9.7
Total N	1,854	1,821	1,824	1,827	1,875	1,765	1,847	12,813
Total percent	100	100	100	100	100	100	100	100

Email

Since email is often used for interpersonal communication with family and friends, it would not be surprising to find it useful for learning more about the views of others. However, this is not the case, with fewer than one out of ten (8%) users rating email as informative about the views of others. Like other Internet media, many do not view it as relevant, saying they 'don't care." But more than a third (36%) view email as not informative (Table 4.24).

Table 4.24. Email as a Means for Learning About the Views of Others

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
I don't care	23.8	20	21.6	25.3	19	25.6	18.5	21.9
Not informative	35.3	41.2	39.9	34.4	35.3	33.3	33.1	36.1
Informative	32.9	31.8	31.7	33.8	35.2	32.6	37.8	33.7
Very informative	8.1	7	6.9	6.5	10.5	8.5	10.7	8.3
Total N	1,895	1,857	1,850	1,818	1,873	1,816	1,905	13,013
Total percent	100	100	100	100	100	100	100	100

4.4. Changing Information Practices

Reshaping With Whom You Communicate

Discussion of echo chambers suggests that people choose to associate with like-minded individuals. Alternatively, the fact that politics is not the major use of social media or the Internet for most users could result in the Internet bringing together more diverse viewpoints on politics. We will look more closely at this in later stages of this report, but it is useful to see how diverse the associations of Internet users are perceived to be – by the users themselves. Table 4.25 shows the degree to which users see the people they communicate with online to have similar, mixed, or different views from their own.

The most pronounced pattern is that nearly two-thirds (65%) of users believe that the people they communicate with online hold a mixed range of viewpoints (Table 4.25). Smaller percentages perceive that their associates have different (15%) or similar (20%) views to their own, although they are somewhat more likely to share similar views (Table 4.25). Cross-nationally, the proportion who say the views of their associates are the same as their own are higher in the US (24%), Poland (24%), and Germany (22%). The proportions that say the views of their associates are different from their own are higher in France (19%), Poland (16%), Spain (16%), and Italy (16%).

Table 4.25. The Diversity of Views Among Those People Communicated with Online

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Different from you	18.9	11.7	16.2	16.8	16.5	15.1	12.9	15.4
Mix beliefs	65.7	65.8	71	59.4	64.6	65.8	62.7	64.9
Same as you	15.5	22.5	12.8	23.8	18.9	19.1	24.4	19.7
Total N	1,451	1,576	1,613	1,701	1,607	1,435	1,704	11,087
Total percent	100	100	100	100	100	100	100	100

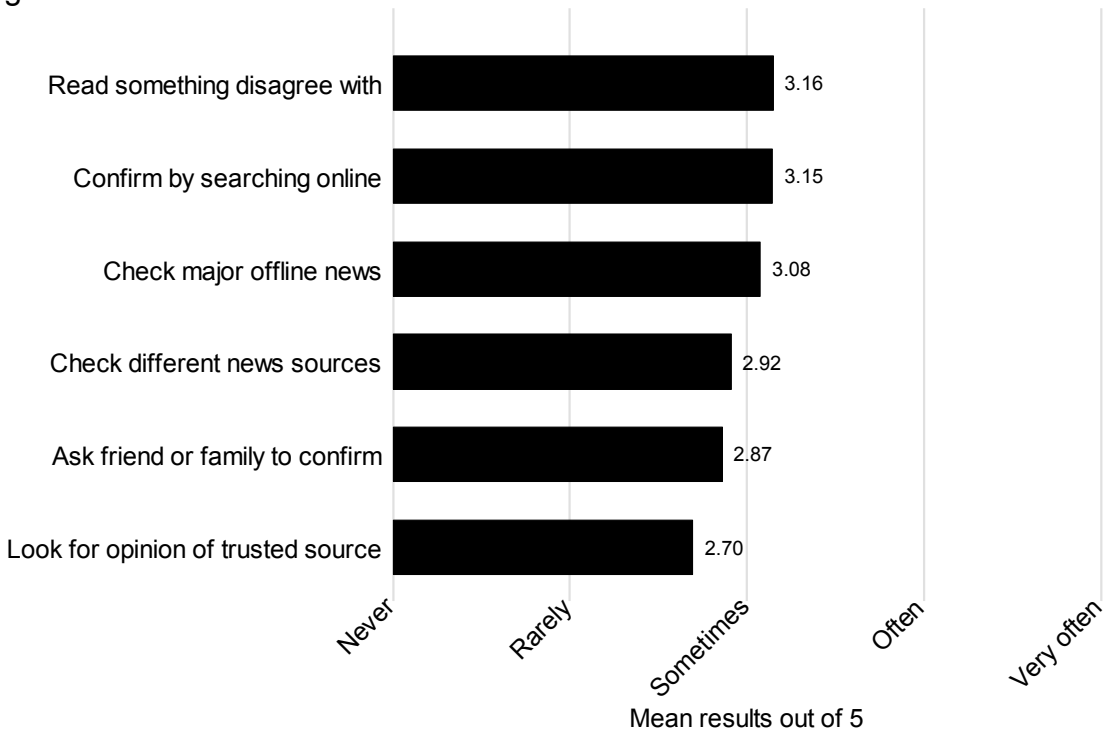
Whether and How People Check Information

Given the rising concerns over misinformation and fake news online, we asked how skeptical users were about the news they receive online, and how they check or authenticate it if they do doubt it. Figure 4.4 provides a sense of the relative frequency with which our seven-nation sample practices each approach.

In the order of their frequency across all countries, when looking for political information, users say they: try to confirm information by searching online for another source; read things they disagree with; try to confirm information found by checking major news outlets, like TV news, radio, or the press online or offline; try to confirm information found by asking a friend or family member; check a news source that's different from what they normally read; and look online for people who they trust to see what they say. So Internet users have a fairly wide range of approaches to check information online.

The two most common ways users confirm a news story is by searching online for confirmation, and reading something they disagree with (Figure 4.4). They are next most likely to check an offline news source, such as a newspaper, or other different news sources. They are less likely to pursue activities that require more steps in their research, such as asking a family member or friend or looking up the opinion of a trusted news source.

Figure 4.4. Political Information Practices



Confirm Through Search

The most frequent approach to confirm a news story or piece of political information is to use search to find more information about the person, event or issue (Table 4.26). Just over 10 percent (11%) say they never do this, but most people do this at least sometimes (36%), often (28%), or very often (12%). Most users, being skeptical, do not simply assume that the information they see is valid or accurate. They have a number of common approaches to confirming news or information about politics.

This general propensity to be skeptical and check information online through search challenges general concerns over individuals being fooled by fake news and misinformation. In politics, individuals are often confronted with countervailing statistics and interpretations, so it is understandable that they cannot accept all the information they see online about politics.

Individual differences in the use of search seem to be far more important than cross-national variations, but respondents in France were the least likely to confirm information through search, and those in the US the most likely. For example, 16 percent of the sample in France said they never used search to confirm, but half this percentage (8%) of respondents in the

US said they never searched for this purpose (Table 4.26). Likewise, less than 10 percent in France (9%) said they did this very often, compared to 16 percent in the US.

Table 4.26. Using Search to Confirm News or Political Information

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	15.8	14.8	9.3	6.8	9.2	13.9	8.2	11.1
Rarely	14.5	18.4	12.9	12.2	10.5	15.3	10.7	13.5
Sometimes	35.8	38.7	35.2	35.4	35.4	37.7	35.1	36.2
Often	24.7	21.1	32.2	33.5	28.4	23.7	29.7	27.6
Very often	9.2	7.1	10.4	12.1	16.5	9.4	16.3	11.6
Total N	1,916	1,899	1,926	1,937	1,949	1,880	1,948	13,455
Total percent	100	100	100	100	100	100	100	100

Reading Material You Disagree With

We asked Internet users: “When looking for news or political information, how often, if ever, do you read something you disagree with?” When looking for news and information about politics, people often read material with which they do not agree. Over three-fourths of our respondents (79%) say they sometimes, often, or very often, read something they disagree with (Table 4.27). Most Internet users do not consciously lock themselves in an echo chamber. Here again, individual differences are more important than any cross-national variations, which are negligible.

Table 4.27. Frequency of Users Reading Something They Disagree With

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	13.1	7.2	7.2	6.3	8	8.9	6.3	8.2
Rarely	15.4	14.1	11	15.1	12.8	11.8	11	13
Sometimes	42.9	46.7	39.1	41.6	40.8	44.7	45.2	43
Often	21.4	24.3	33.2	29.1	28.1	24.9	25.8	26.7
Very often	7.2	7.7	9.4	7.9	10.3	9.7	11.7	9.1
Total N	1,922	1,889	1,926	1,923	1,935	1,872	1,940	13,406
Total percent	100	100	100	100	100	100	100	100

Checking Major Offline News Sources

Another approach to confirming information online is to consult trusted offline sources, such as the newspaper or magazines that are trusted. Just over 10 percent (12%) of respondents say they never do this, but over a third (36%) do this sometimes, 27 percent do this often, and 10 percent say they do this very often (Table 4.28). Again, most people sometimes double

check information by consulting offline sources. Cross-national variations are minor, but this is less frequently done in France, Germany and Poland, and somewhat more frequently in the US and Spain. For example, the percentage of users who say they do this very often is less than 10 percent in France (7%), Germany (7%), and the UK (8%), and the percent is greater than 10 in Spain (14%), and the US (15%).

Table 4.28. Check Offline News Sources

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	18.3	17	8.7	8.3	9.4	13.7	10	12.2
Rarely	17.7	19.4	12.5	15.7	10.8	15	13.2	14.9
Sometimes	34	35.3	38.1	34.7	31.9	39.7	35.1	35.5
Often	23.2	21	31.3	31.7	34.2	23.6	26.4	27.4
Very often	6.8	7.3	9.3	9.7	13.8	8	15.3	10.1
Total N	1,912	1,888	1,919	1,925	1,947	1,885	1,950	13,425
Total percent	100	100	100	100	100	100	100	100

Check with a Friend or Family Member

Fewer Internet users confirm information by discussing it with friends or family members, than by searching or checking other sources online and offline, but many do. A third (35%) say they never or rarely go to family or friends to confirm information about politics. How often have people seen family or friends going online to determine who is correct about a certain piece of news or information? Just over a quarter of our sample checks with family or friends (Table 4.29). Interestingly, consulting with family or friends is somewhat less common in France, Germany and the UK, than in the other nations, as indicated by the percentage who say they never do this.

Table 4.29. Check with a Friend or Family Member

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	19	15.5	13.1	10.1	10.5	17	10.8	13.7
Rarely	20.6	23.6	20.1	24.3	18.8	19.6	20	21
Sometimes	36.2	38.6	37.6	38.9	35.6	38	38.4	37.6
Often	18.3	16.7	23.1	20.9	26.2	18.3	20.3	20.6
Very often	5.9	5.7	6.2	5.8	8.9	6.9	10.6	7.2
Total N	1,915	1,900	1,936	1,932	1,951	1,886	1,956	13,476
Total percent	100	100	100	100	100	100	100	100

Going to Different News Sources

A smaller proportion of Internet users go through the trouble of checking different news sources from what they normally read (Table 4.30). However, fully 40 percent say they do this sometimes, and over a quarter of respondents (29%) say they do this often or very often. This is done less frequently in Germany, France and the UK, where people tend to rely on their chosen newspaper, but the cross-national differences are small. For example, the proportions saying they never consult a source they do not normally read is 29 percent in Germany, 17 percent in France, and 22 percent in the UK. Compare this with 15 percent in Italy or 16 percent in Poland.

Table 4.30. Frequency of Checking a News Source That's Different from What You Normally Read

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	17	18.9	9.6	7.67	9.2	15.9	10	19.3
Rarely	19	28.8	15.1	16.7	16.2	22.4	17.1	19.3
Sometimes	38.8	38.2	39.7	41.7	38	38.8	41.5	39.5
Often	18.6	10.2	27.5	26.5	25.9	16.7	21.7	21.1
Very often	6.6	3.8	8.2	7.4	10.8	6.2	9.7	7.6
Total N	1,909	1,882	1,923	1,918	1,938	1,872	1,942	13,385
Total percent	100	100	100	100	100	100	100	100

Look Up a Trusted Source

From the options that we provided in the survey, the least likely approach to checking information was to "look online for people who you trust to see what they say." Nearly a quarter of respondents say they 'never' do this (22%), and only 27 percent say they do this 'often' or 'very often' (Table 4.31). Respondents in Germany and France, and to a lesser extent in the UK, are the least likely to consult a trusted source. For example, there are proportions of 38 percent of the German sample, 29 percent of the French sample, and 22 percent of the UK sample saying they never do this, compared to 15 percent of the US sample, who never do this.

Table 4.31. Look Up a Trusted Source

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Never	29.2	37.8	20.6	19.1	17.3	21.9	14.7	22.9
Rarely	20.2	21.1	18.4	20	18.4	17.8	15.9	18.8
Sometimes	27.9	25.2	33.3	33.4	29.8	34.8	35	31.4
Often	17.1	11.9	20.7	20.2	23.8	17.7	23	19.2
Very often	5.6	4	7	7.3	10.7	7.8	11.4	7.7
Total N	1,912	1,895	1,931	1,927	1,942	1,880	1,943	13,430
Total percent	100	100	100	100	100	100	100	100

4.5. The Objectivity and Bias of Media

As noted above, respondents trust the reliability of search engines about as much or more than other media, but these ratings were very close. We also asked respondents to tell us if search engines "give more or less balanced and objective information than other media." Here again, search rates very well in comparison with other media. Table 4.32 shows the responses by country and overall.

A majority of respondents overall (51%) rated search engines about the same as other media (Table 4.32). However, somewhat more respondents rated search as more objective than less objective (30% versus 19%). Also, this varied by country. Respondents in Germany were the most likely to rate search as less objective, with over a quarter (28%) saying so, compared to 16 percent in Poland (Table 4.32). Likewise, 37 percent of respondents in Poland rated search as more objective, compared with 24 percent in Germany, but a little over a quarter in all countries thought search was more objective than other media, perhaps since search provides access to information across most other media.

Table 4.32. The Relative Balance and Objectivity of Search

Percentages

	France	Germany	Italy	Poland	Spain	UK	US	Total
Less objective	17.9	27.8	17.1	15.9	16.5	18.5	17.2	18.7
About same	57.6	47.8	47.2	47.3	49.7	55.5	51.5	50.9
More objective	24.5	24.4	35.7	36.8	33.9	26	31.3	30.5
Total N	1,701	1,703	1,760	1,748	1,801	1,670	1,725	12,098
Total percent	100	100	100	100	100	100	100	100

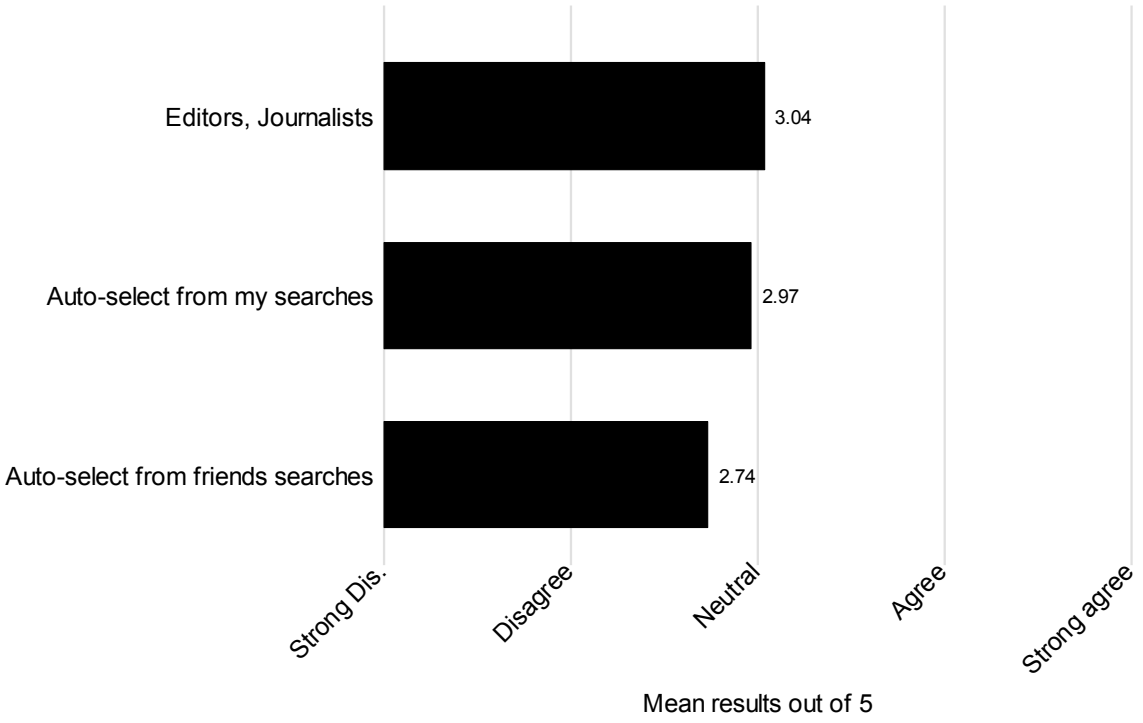
Who Should Curate the News?

What news should you see, and who should choose it? How should your news be curated? We asked about three possible approaches to selecting news. We told respondents that "every news website, mobile app or social media site makes decisions about what political content to show to you." We asked how these decisions should be made. Should you have your news curated by:

- Having stories selected by editors and journalists as a good way to get political news?
- Having stories automatically selected based on what I have looked at in the past as a good way to get political news?
- Having stories automatically selected on the basis of what my friends have looked at as a good way to get political news?

Most users in our sample favored editors and journalists over having news automatically selected from their past searches, or the searches of friends and associates, such as 'people like me' (Figure 4.5).

Figure 4.5. Approaches to Selecting Your News



Editors and Journalists

Many users (37%) seem indifferent, neither agreeing nor disagreeing about whether news should be selected by editors and journalists (Table 4.33). However, over a third (35%) agreed, or strongly agreed, and more than a quarter (28%) disagreed or strongly disagreed with this. Internet users in Italy seemed to be somewhat more skeptical of selection by journalists and editors, with nearly a third (32%) disagreeing or strongly disagreeing with their role in selection.

Table 4.33. Editors and Journalists Should Select My News

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Disagree Strongly	11.7	10.2	12.6	7.6	7.7	11.4	11.2	10.3
Disagree	13.9	12.6	19.1	21.8	14.9	18.5	21.1	17.5
Neither Agree/Dis	36.9	37.7	37.3	39	34.1	39.6	34.6	37
Agree	31.9	32.5	25.9	26.4	33.6	24.2	24.1	28.3
Agree Strongly	5.6	7	5.1	5.3	9.8	6.3	9	6.9
Total N	1,791	1,836	1,856	1,869	1,869	1,853	1,916	12,990
Total percent	100	100	100	100	100	100	100	100

Based on My Previous Searches

As with other approaches to selection, there is much individual variation on the wisdom of your news being based on your previous search behavior. This is apparent from the proportions that neither agree nor disagree (37%), and the balance of those who disagree/strongly disagree (31%) and agree/strongly agree (32%). Clearly opinion is divided across individuals, but views are not dramatically different across nations (Table 4.34).

Table 4.34. News Selection Based on Previous Searches

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Disagree Strongly	14.5	15.1	11.4	6.4	8.5	12.2	9.4	11
Disagree	19.3	21.7	16.4	18.7	19.1	21.5	22.6	19.9
Neither Agree/Dis	35.9	36.6	39.6	36.9	36.1	36.1	35.2	36.6
Agree	24.8	22.1	26.6	31.9	28.3	24.3	23.8	26
Agree Strongly	5.5	4.4	6.1	6.1	8	5.9	9.1	6.5
Total N	1,793	1,814	1,847	1,878	1,869	1,851	1,923	12,975
Total percent	100	100	100	100	100	100	100	100

Generating Information Based on Previous Searches

Respondents were also more likely to dislike basing the results of search on what friends and associates have searched for (Table 4.35). Only a quarter (25%) of the entire sample agreed or strongly agreed that this was a good idea, which seems to counter any intentional cocooning in a political echo chamber.

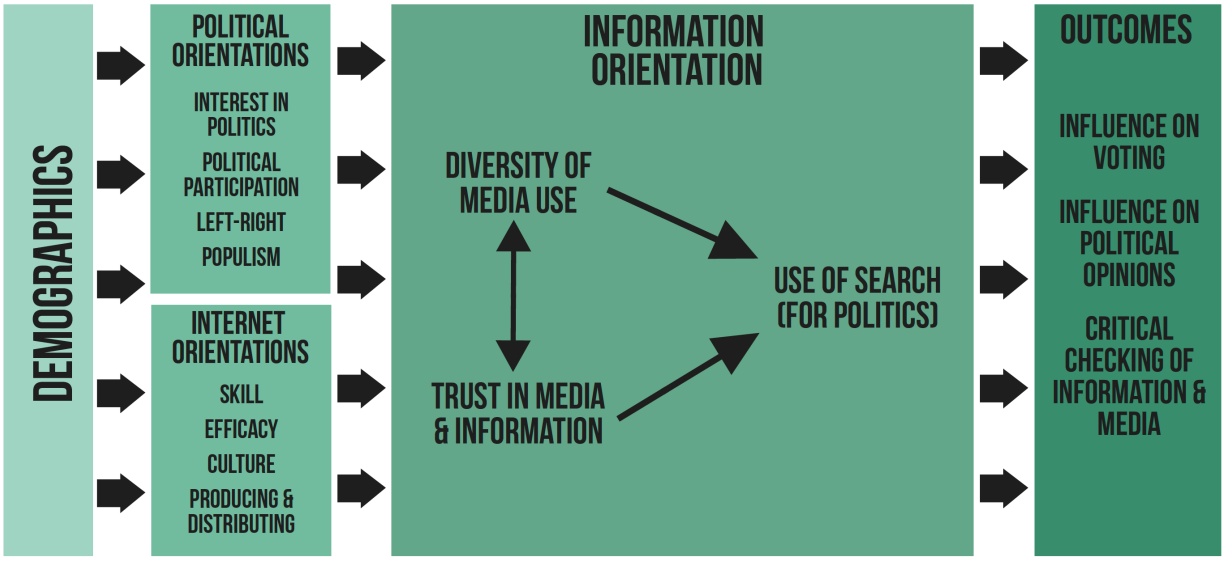
Table 4.35. News Selection Based on Previous Searches of Friends

	Percentages							
	France	Germany	Italy	Poland	Spain	UK	US	Total
Disagree Strongly	17.9	20.4	15	9.4	13	19.8	16.5	16
Disagree	21.5	24	20.3	28.7	26.2	26	28.8	25.1
Neither Agree/Dis	35	34	37.5	37.1	34.6	31.5	28	33.9
Agree	20.2	17.7	22.2	19.8	19.8	17.3	18.5	19.3
Agree Strongly	5.4	4	5	5	6.5	5.5	8.3	5.7
Total N	1,799	1,815	1,855	1,865	1,871	1,850	1,921	12,976
Total percent	100	100	100	100	100	100	100	100

Part 5. Individual Differences in Search Behavior

The overview of survey responses to specific sets of questions demonstrated that there were marginal differences cross-nationally, but that far more variations were apparent across individuals within each nation. In order to explore the reasons behind variations in the search behavior of individual Internet users, this section turns to an analysis of demographic and attitudinal factors, such as age and orientations to politics, that might explain 1) who searches more frequently for information about politics; and 2) whether and how search behavior is related to rethinking how one votes, modifying one's political views, as well as using search more critically, such as having a greater propensity to double check facts and other information online.

Figure 5.1. A Model of Factors Shaping Search and its Implications for Opinion



A model that emerged from our empirical analyses of individual differences, reported here and in our review of the basic findings reported in the previous sections, is provided by Figure 5.1. This model delineates four basic sets of variables to consider: demographic characteristics, and what we broadly describe as orientations to politics, the Internet, and information. Our central concern is to explain variations in the use of search for political information and its implications for politics. The implications are political outcomes, such as whether the information sourced online has a role in shaping individual voting behavior or political opinions or viewpoints, and if this use of search plays a role in being more likely to check the accuracy of information.

A propensity to search is one aspect of a more general set of orientations to information. We also include the diversity of media that one consults for political information, and the trust one has in the accuracy and reliability of various media, including online information, obtained through search.

In turn, the model envisions that a person's orientations to information are shaped by their political and Internet orientations. Political orientations include one's interest in politics, participation in politics (offline and online), one's political beliefs and attitudes, and the degree to which one adheres to more populist versus elitist views on legitimacy in politics.

Internet orientations concern one's level of use of the Internet, skills or sophistication in using the Internet in general, and skill in using search in particular. In addition, this orientation should be reflected in the degree one feels efficacious in the use of search as opposed to feeling frustrated or helpless.

All of these factors might be shaped by a variety of demographic factors tied to individuals, such as one's socioeconomic status, education, age, and gender. And of course all of these relationships exist within different cultural and regulatory contexts across our seven nations. These variables are generally described in the next section, and operationally defined in Table 5.1.

Indicators Used for the Analysis of Individual Differences

The analysis of factors that might explain individual differences employs multiple regressions as a means to discern the relative importance of different explanatory variables. The analyses are designed to explain four different outcomes, or dependent variables. Each dependent variable measures an impact of search. By showing what variables predict these search impacts, we can determine the characteristics of individuals who are most likely to be affected by the use of search in each of these ways. The four dependent variables are:

- Political Search: The frequency that a respondent uses search to find information about politics and current events
- Voting Choice: We asked respondents: "Have search results changed your vote?" A higher score on this variable means the respondent said that search information had a stronger effect on their vote decision.
- Opinion Change: We asked respondents: "Have search results changed your political views?" The more respondents indicated they have, the higher this score.
- Fact Checking: The frequency that a respondent indicates search was used to check political information found elsewhere

The independent variables are of two types. First there are five demographic variables:

- Age, with higher codes representing older people. Older Internet users might be expected to use search somewhat less often than younger users.
- Gender, with male score 0, and female 1, a higher code representing female. While there is no major difference in access to the Internet across gender categories in developed nations, men tend to spend more time online and therefore might be expected to use search more often.
- Lifestage, as dichotomous variables: employed, retired, or unemployed, with students being the omitted category. Internet use declines for those retired or unemployed, and so might the use of search tools.

- Education: scored as dichotomous variables: primary, middle school, or higher education, the latter defined as having at least some college or higher education, with primary school used as the omitted category. Drops in Internet use are primarily around those with no educational qualifications, such that higher educational backgrounds might be expected to be positively associated with the use of search, and fact checking, for example.
- Marital status: coded as single; married; living with a partner; divorced or separated; or widowed. We expect married and other couples to be more engaged in the Internet and politics.

These demographic factors often have a relationship and potentially an impact on use of the Internet and political activity or interests. We also looked at the presence of children in the household, since previous research has found this kind of household more likely to make greater use of the Internet. However, since it has no effect on any dependent variable in this analysis, it is not included in the following tables.

The second set of potential explanatory variables goes beyond demographic characteristics to include attitudes, beliefs, or behaviors that might predict and therefore help explain the use of search for political information, and its outcomes – our dependent variables.

- Interest in Politics: (Not at all, Somewhat, Interested, Very Interested). Higher scores are for respondents who say they are interested or very interested in politics. People who are uninterested will be less likely to use search (or any other media) to find political information.
- Political Participation: The more active respondents are in politics the more we would expect them to use search for political information. We measured political participation with two variables: online political participation (scored as number of online political activities, ranging from 0–4), and offline political participation (scored as number of offline political activities, ranging from 0–8).
- Populism: People who hold political beliefs and attitudes out of the mainstream – e.g. populists – may use search because they find their interests less well served by mainstream mass media.
- Progressives, Liberals, and Conservatives. We asked people to rate themselves on a right–left scale of political attitudes. However, such a large number of respondents (between 10 and 30 percent of respondents) failed to answer this question that we were unable to use this variable for multivariate analyses.
- Search Skills: The more skilled respondents are, the easier it is for them to search and the more likely they are to search. We have available self-reported measures of both Internet skills in general and search skills specifically. The questions are: “How do you rate your ability to use a search engine?” and “How do you rate your ability to use the Internet?” We can’t combine both in the same model because they are so closely related (collinear). The models below contain only the search skills variable, as it is the most closely related to search and a surrogate for Internet skills in general.
- Search Efficacy: If respondents feel that search results are not a matter of luck or blind chance we would expect them to be more likely to use search for political information and take the results of search more seriously. This indicator ranges from 0–16 on the set of efficacy items, with a higher score being more efficacious.

- Trust in Accuracy: We asked: “How reliable and accurate to you rate information in search engine results?” We expect that the more respondents believe they will receive reliable, accurate results from their searches, the more likely they are to make use of search.
- Sources of Political Information: We expect that the more sources respondents say they use for political information, the more likely they are to use search. This variable represents the number of specific media the individual uses for political information.
- Internet Use: The more active respondents are on the Internet, the more likely they will use search. We have several measures of Internet use but they are highly collinear, so we cannot put any two of them in a model. The models below use a measure of the overall amount of Internet use, similar to the measure developed by Blank and Groselj (2014). Those scoring higher are more actively engaged with the Internet in general.

The multivariate analyses of these factors shaping search behavior are described below, and they are operationally defined in Table 5.1. We will look at each of the four dependent variables in turn, then focus more on a particular analysis of what explains a propensity to check information found online, and then explore the relationship of populist views with the use of search.

Table 5.1. Operational Definitions of Variables in this Analysis

Variable	**Operational definition**
DEMOGRAPHIC	
Age	Age in years
Female	Gender of respondent: 0 = male, 1 = female
Employment	Four categories: student, employed, retired, and unemployed
Education	Each country questionnaire contained a 7-category variable with choices matching the educational system of that country. This was divided into 3 categories with approximately equal numbers of cases in each category, producing a single variable that could be used across all countries. The categories are named basic, middle, and higher.
Marital status	Five categories: Single, married, living with partner, divorced or separated, and widowed
POLITICAL ORIENTATION	
Interest in politics	How interested are you in politics? A four-category Likert scale: Not at all, somewhat interested, interested, very interested.
Offline participation	Number of offline political activities the respondent participates in, range: 0–8. The activities are: • Been a member of a political party • Run for or held a political office • Contributed time to campaign on issue • Attended a political rally • Discussed political issues or candidates with others • Voted in last election • Tried to convince someone to vote certain way • Wore campaign button, sticker, poster

Online participation	Number of online political activities the respondent participates in, range: 0–4. The activities are: • Posted on social media in support of a campaign • Sent an email in support of a campaign • Donated online to candidate or political party • Support candidate or issue on a blog or social media
Populism	A scale drawing from Andreadis, Ruth and Stavrakakis (2016) was developed, based on the sum of five agree–disagree items. Each item is a 5-point Likert scale ranging from 0 to 4, so the full scale ranges from 0–20. The items are: • People not politicians should participate in making policy decisions • Political differences between politicians and people are larger than among the people • Compromise in politics is selling out one's principles • Elected officials talk too much & take too little action • Elected politicians should follow the will of the people
INTERNET ORIENTATION	
Ability	How do you rate your ability to use a search engine? A five-category Likert scale
Search efficacy	A scale consisting of the sum of four items measuring feelings of efficacy of search. Each is a 5-point Likert scale ranging from 0 to 4, so the variable ranges from 0–16. The items are: • There is too much information about politics online • I sometimes feel helpless trying to find information about politics • I often feel frustrated when searching online for political information • If my search is successful, it is probably because I was lucky
INFORMATION PRACTICES	
Diversity of media	Number of specific media respondent uses as a source of political information, range: 0–6. The items do not include search. The media are: online news sites, online sites of offline newspapers & magazines, social media, email, political websites, online videos.
Accuracy of search results	How reliable and accurate do you rate the information in search engine results? A five-category Likert scale.
Use of the Internet	The sum of activities the respondent does on the Internet. There are 12 activities and each is a six-category Likert scale ranging from 0 to 5, so the range is 0–60. The activities are buy a product online, get information about local events, order groceries, send email to a list, make or receive phone calls, watch TV, use email, check a fact, use instant messaging, look for news, investigate topics of personal interest, and watch videos or movies.
USE OF SEARCH	
Political Search	How often do you use search to find information about politics or current events? A five-category Likert scale.
OUTCOMES	
Voting Choice	How important is information you found in online search for your vote decision? A four-category Likert scale.

Opinion Change	How often have you changed your opinion on a political issue because of information you found by searching online? A four-category Likert scale.
Fact Checking	How often have you used search to check political information you found online? A five-category Likert scale.

In the tables below we always report standardized regression coefficients. These coefficients are in units of standard deviations. So a coefficient of 1.0 means that as the independent variable changes by one standard deviation, the dependent variable would change by one standard deviation. Similarly, a coefficient of 0.25 would be interpreted as if the independent variable changes by one standard deviation, then the dependent variable changes by one-quarter of a standard deviation, a smaller effect.

5.1. Political Search: The Use of Search for Information about Politics

The first analysis focuses on the factors that explain how often people used search to find political information. We conducted a separate analysis of each country, allowing comparison of relationships within any one country with the other countries. Drawing on the independent variables defined above, the model was able to explain between 31 percent of the variance of the dependent variable of search for political information in Spain to 40 percent in the UK. Given social scientific standards, this is an excellent explanation of this dependent variable: political search.

It is notable that the demographic variables alone explain only 4–10 percent of the variance (table not shown), indicating that the non-demographic variables are much more important as an explanation of political search. You can see this in the fact that the only demographic variable that is at all consistent across the countries is age, with older respondents being more likely to search for political information. This was not expected, since older people are less likely to be online at all. However, age is significant in only three of the seven countries.

A few other demographic variables are statistically significant, such as education in the UK, but with little consistency cross-nationally. This is similar to what is reported in the other analyses of our dependent variables, described in the tables below: the demographics don't have much impact on search compared to the other variables. This does not mean that they are insignificant, as they can be indirectly related to search patterns, such as by shaping such characteristics as political participation.

Among the non-demographic variables, three variables are consistently significant in our seven nations: interest in politics, number of sources of political information, and the extent of Internet use. Search ability is also important, and statistically significant in five of seven countries. Offline political activity and the perceived accuracy of search results are significant in four. Interestingly, populism is only significant once, in Spain, where those with populist views were somewhat more likely to use political search more often. Surprisingly, search efficacy is never statistically significant.

These results indicate that the most important factors driving the use of search for political information are interest in politics and the use of more sources to obtain political information. Those who use search for political information are also likely to use the Internet more frequently and for more kinds of activities, and also to consult more media (Table 5.2).

Table 5.2. Multivariate Analysis of Political Search: Frequency of Using Search for Information about Politics and Current Events Using Standardized Coefficients

Variable	France	Germany	Italy	Poland	Spain	UK	US
Age	0.04	0.07*	0.08*	0.17***	0.06	0.00	0.05
Female	-0.01	0.03	0.01	0.04*	0.00	0.03	0.00
Lifestage							
Employed	0.00	-0.10*	-0.03	0.04	0.03	-0.13*	-0.04
Retired	0.02	-0.08	0.07	0.02	0.04	-0.08	-0.08
Unemployed	-0.01	-0.07*	0.01	0.02	0.01	-0.08	-0.01
Education							
Middle	0.04	-0.05	0.05	-0.01	0.01	0.07**	0.02
Higher	0.03	-0.06*	0.04	-0.01	0.04	0.08**	0.00
Marital status							
Married	-0.03	-0.04	-0.07*	-0.01	-0.06*	-0.03	-0.02
Living w partner	0.03	-0.03	-0.01	-0.03	-0.02	-0.03	0.01
Divorced/separated	-0.01	-0.05*	-0.01	-0.06*	0.00	-0.05*	-0.02
Widowed	-0.01	-0.02	-0.03	0.00	-0.02	-0.04	-0.02
Interest in politics	0.28***	0.25***	0.28***	0.37***	0.27***	0.26***	0.25***
Political activity, offline	0.07**	0.10***	0.05	0.03	0.02	0.06*	0.06*
Political activity, online	-0.02	0.04	0.02	0.06*	0.00	0.03	0.07*
Populism	-0.01	0.01	0.01	0.01	0.05*	0.01	0.02
Search ability	0.03	0.09***	0.07**	0.02	0.09***	0.06*	0.11***
Search efficacy	-0.01	-0.01	-0.01	0.02	-0.03	0.01	0.03
Diversity of Media Sources	0.23***	0.18***	0.10***	0.12***	0.16***	0.14***	0.10***
Accuracy of search results	0.00	0.01	0.06*	0.08***	0.06**	0.05*	0.02
Use of the Internet	0.25***	0.31***	0.30***	0.16***	0.25***	0.31***	0.26***
N	1630	1654	1690	1655	1756	1620	1740
R^2	0.27	0.25	0.24	0.14	0.24	0.34	0.23

Note: Omitted categories are males, students, and primary education, single.
* p<.05; ** p<.01; *** p<.001

The results of these regressions provide a strong confirmation of the basic model presented in Figure 5.1 (also Figure 1). Interest in politics has the strongest relationship with the use of search for political information. More generally, the key factors accounting for search of information about politics are one's political orientation, including interest in politics, followed by online and offline political participation, and one's Internet orientation, primarily defined by levels of Internet use. The third strongest relationship is the diversity of media sources, suggesting that those interested in politics consult multiple sources as well as using online search for political information. Three other variables are sometimes significant: offline political activity, skill in using search, and trust in the reliability of search results.

In sum, frequent use of search for political information is importantly shaped by whether an individual is interested in politics, is a frequent user of the Internet, and consults diverse sources. Interest in politics means even more than actual participation in politics for explaining one's use of search. And skills in using Internet search are more important than even one's sense of efficacy in using search. Those with the ability to search and an interest in politics will tend to use search for political information whether or not they are comfortable with these tools.

5.2. Voting Choice

The analyses then turned to the effect of search on political outcomes: voting, opinions, and checking of information. In the regressions presented in Table 5.3, the dependent variable is the influence of search on how one decides to vote. Our analysis explored a number of models, but only the models equivalent to those on the use of search to find information on politics are reported here. The results from this analysis (Table 5.3) broadly parallel the previous regressions (Table 5.2). An R^2s ranging from 25 (Poland) to 35 percent (Spain) are generally excellent.

Table 5.3. Voting Choice: Importance of Online Search for Information on Voting, Using Standardized Coefficients

Variable	France	Germany	Italy	Poland	Spain	UK	US
Age	-0.09*	-0.14**	-0.14**	-0.09*	-0.12***	-0.12**	-0.14***
Female	0.00	0.05	0.03	0.00	-0.01	0.09***	0.04
Lifestage							
Employed	-0.08	-0.08	-0.05	-0.02	-0.03	0.00	-0.02
Retired	-0.14	-0.09	-0.04	-0.07	-0.05	-0.02	-0.05
Unemployed	-0.04	-0.06	-0.06	0.03	0.00	-0.02	-0.02
Education							
Middle	0.05	0.00	-0.04	-0.01	-0.04	0.01	0.00
Higher	0.03	0.01	-0.03	-0.01	-0.02	-0.02	-0.06
Marital status							
Married	-0.01	-0.07*	-0.09**	-0.05	-0.02	-0.04	0.00
Living w partner	0.02	-0.02	-0.07*	-0.02	-0.01	-0.05	-0.02
Divorced/separated	0.04	0.00	-0.05	0.00	-0.02	-0.04	0.01
Widowed	0.02	0.00	-0.03	-0.04	0.02	-0.01	0.01
Interest in politics	0.14***	0.09***	0.15***	0.19***	0.12***	0.05	0.09**
Political activity, offline	0.07*	0.04	0.03	0.07	0.04	-0.02	0.00
Political activity, online	0.12***	0.14***	0.17***	0.12***	0.16***	0.15***	0.13***
Populism	0.07*	0.08**	0.06*	0.06	0.06**	0.09***	0.07**
Search ability	0.03	0.10***	0.08**	-0.04	0.05*	-0.01	0.07**
Search efficacy	0.03	0.01	0.01	0.00	0.08**	0.06*	-0.05
Diversity of Media Sources	0.14***	0.12***	0.05	0.04	0.11***	0.14***	0.14***

Accuracy of search results	0.09***	0.09***	0.14***	0.13***	0.14***	0.10***	0.09***
Use of the Internet	0.20***	0.21***	0.15***	0.19***	0.20***	0.26***	0.20***
N	1352	1379	1517	1052	1538	1385	1456
R^2	0.34	0.31	0.29	0.25	0.35	0.33	0.3.0

Note: Omitted categories are males, students, and primary education, single.
* p<.05; ** p<.01; *** p<.001

Again, the demographic variables contribute relatively little to the explanatory power, ranging from 2 to 13 percent (table not shown). The only consistently important demographic variable is age, which is significant, but in this case, negative for all countries. This means that older people looking for information about politics are less likely to change their vote based on search results. Recall that we found older people more likely to use search (Table 5.2), but less likely to reconsider their vote on the basis of search results (Table 5.3).

Among the non-demographic variables, interest in politics and extent of Internet use are both significant in all countries, with extent of Internet use being the strongest relationship in the table. They are joined by online political activity and belief in the accuracy of search results. The number of sources of political information a person uses is not significant in Italy and Poland, but it is significant in the other five countries, where it rivals the importance of perceived accuracy of information in explaining the importance for a voting decision.

Populism is significant in six of seven countries (non-significant in Poland). It is always positive, meaning that more populist respondents are more likely to reconsider their vote in light of the information they find through search. Offline political activity is significant in only one country and search efficacy is only significant in two countries. Search ability is significant in four countries. The perceived accuracy of information found on search is a more important criterion in shaping the voting decision than it was for using political search in general. So is online political activity.

In summary, those who say that search for political information is more likely to have influenced their voting decisions are more likely to be active users of the Internet, interested in politics, and more active online political participants. They are also more likely to perceive political search to be accurate. In some countries, they are also likely to have higher skills in the use of search and consult more sources. Finally, those with more populist political beliefs and attitutudes are more likely to reconsider their voting on the basis of what they find through online search (Table 5.3).

5.3. Changing Political Opinions

This section focuses on whether Internet users report that the use of search for political information has changed their views on one or more issues. As before, the R^2s are again high, between 14 and 34 percent, indicating that we are able to explain a large proportion of the variance in whether respondents believed that the results of search were influential in changing their opinions on one or more issues. Poland stands out with the lowest R^2 of 9 percentage points. The next lowest is the US (23%), followed by Italy and Spain (both 24%). The highest R^2, 34 percent, is the UK (Table 5.4).

Also in line with the previous analyses, the demographic variables contribute relatively little to explaining the variance in opinion change. Taken alone, the R^2s for the demographic

variables range from 1 percent in Poland to 11 percent in the UK (Table not shown). Age is not an important variable in explaining variance in opinion change, although it is statistically significant in three of the seven countries. Demographic variables seem to play no statistically significant role at all in France, Poland, and the US.

However, the non-demographic variables of Internet and political orientations show a different pattern than found in the previous regressions on other outcomes. The three most important variables here are the extensiveness of Internet use, number (diversity) of sources of political information, and self-efficacy in using search. The more people use the Internet, the more likely it is that they will have changed their views as a result of information discovered through search.

Table 5.4. Discover Information That Changed Your Opinion on a Political Issue, Using Standardized Coefficients

Variable	France	Germany	Italy	Poland	Spain	UK	US
Age	-0.05	-0.09*	-0.15***	0.02	0.03	-0.09*	-0.01
Female	0.02	-0.02	0.05	-0.01	0.01	-0.02	-0.01
Lifestage							
Employed	-0.01	0.05	-0.07	0.04	-0.01	-0.07	0.02
Retired	-0.02	0.09	0.00	0.03	-0.04	-0.07	0.02
Unemployed	-0.01	0.02	-0.01	0.03	0.01	-0.03	-0.02
Education							
Middle	-0.02	-0.12***	0.00	0.00	0.01	0.02	-0.01
Higher	-0.04	-0.14***	-0.02	-0.05	-0.01	-0.01	-0.03
Marital status							
Married	-0.01	-0.03	0.00	0.02	-0.06	0.00	-0.05
Living w partner	-0.02	-0.01	-0.02	0.04	-0.09***	-0.04	0.00
Divorced/separated	-0.03	-0.03	0.01	-0.02	-0.09**	-0.05	-0.01
Widowed	-0.01	-0.01	0.01	0.04	0.00	-0.01	-0.01
Interest in politics	0.04	0.03	0.08**	0.10***	0.09**	0.06*	0.05
Political activity, offline	0.02	0.03	0.01	0.02	-0.02	0.00	-0.04
Political activity, online	0.05	0.11***	0.04	-0.01	0.07*	0.09**	0.11***
Populism	-0.01	0.03	0.02	0.00	0.03	0.02	-0.01
Search ability	-0.02	0.02	0.03	0.04	0.03	-0.02	-0.02
Search efficacy	0.11***	0.14***	0.12***	0.13***	0.10***	0.14***	0.12***
Diversity of Media Sources	0.25***	0.14***	0.15***	0.13***	0.11***	0.18***	0.17***
Accuracy of search results	0.02	0.03	0.03	0.03	0.05*	0.04	0.07**
Use of the Internet	0.23***	0.24***	0.25***	0.19***	0.29***	0.29***	0.24***
N	1630	1654	1690	1655	1756	1620	1740
R^2	0.27	0.25	0.24	0.14	0.24	0.34	0.23

Note: Omitted categories are males, students, and primary education, single.
* p<.05; ** p<.01; *** p<.001

Interest in politics is significant in four countries, where those more interested in politics are more likely to be influenced on the issues. Three variables are not significant in any country: offline political activity, populism, and skill in search.

Table 5.3 showed that populists tended to reconsider their vote in light of information gathered through search, but Table 5.4 shows that search information does not change their minds about political issues. This is not necessarily inconsistent. For example, a person could find that a candidate does not conform with a person's viewpoint, and therefore reconsider their vote but not change their opinion on the issues.

It is also notable that search ability is unrelated to opinion change. Trust in the accuracy of search is only significant for one country (the US). Offline political activity is not significant in any of our countries, and offline political activity is only significant in four countries, always with a weaker effect than other variables.

In summary, higher Internet use, more diverse media sources, and greater search ability all contribute to the likelihood of changing one's opinions on political issues, whereas other factors are less important and less consistent in the explanatory power for different countries.

5.4. Fact Checking Information about Politics

The analyses in this section examine which factors are related to using search for fact checking political information that was found elsewhere. Table 5.5 describes the results of the analysis of this dependent variable.

Overall, these multiple regression models explain between 13 (Italy) and 34 (UK) percent of the variance in the dependent variable. In line with the previous regressions, the demographic variables alone are not very important, with R^2s ranging from 4 (Italy) or 5 (Poland) percent to 16 (USA) or 18 (UK) percent, table not shown. Among the demographics, age is significant in four of seven countries, with older respondents being less likely to check information about politics. Similar to the previous analyses, the other significant demographic variables are more scattered, presenting a less consistent pattern (Table 5.5).

Among non-demographic variables, the extent of Internet use, search ability, and diversity of media sources are the variables that most influence fact checking. Extent of Internet use is the strongest. Online political activity is also significant in six of seven countries, and it rivals search ability and diversity of media sources in strength. Generally, the more able, the more sources, and the greater one's use of the Internet, the more likely a respondent indicated that they check information they find about politics. This may be because doing many more things online could result in a need to check many more things online, or because use of the Internet develops a set of skills that enables users to check facts more easily.

Offline political activity is only significant in three countries, as is search self-efficacy. Interest in politics is significant in two countries. Accuracy of search results is only significant once and populism is never significant in explaining the tendency to check information.

Table 5.5. Frequency Using Search to Fact Check Information about Politics Found Elsewhere, Using Standardized Coefficients

Variable	France	Germany	Italy	Poland	Spain	UK	US
Age	-0.07	-0.10**	-0.12**	-0.05	-0.06	-0.12***	-0.18***
Female	-0.02	0.01	-0.02	0.06**	-0.01	-0.01	0.06**
Lifestage							
Employed	0.06	-0.01	-0.04	-0.03	-0.06	-0.04	0.01
Retired	-0.05	0.01	-0.01	-0.11*	-0.1	-0.12*	-0.04
Unemployed	0.03	0.03	0.00	-0.05	-0.01	-0.04	0.02
Education							
Middle	-0.04	-0.03	0.02	-0.01	0.00	0.02	0.04
Higher	-0.09**	-0.09**	-0.04	0.00	-0.01	-0.01	-0.02
Marital status							
Married	0.01	-0.05	0.03	-0.01	0.00	0.00	0.03
Living w partner	0.02	-0.03	0.00	0.01	-0.01	0.04	0.05**
Divorced/separated	0.03	0.03	0.04	-0.04	0.02	0.00	0.01
Widowed	-0.04	-0.02	0.08*	0.01	-0.02	0.03	-0.01
Interest in politics	0.04	0.03	0.04	0.07*	0.06*	-0.04	0.04
Political activity, offline	-0.01	-0.06*	-0.01	-0.05	-0.12***	-0.10***	-0.04
Political activity, online	0.04	0.11***	0.09**	0.10**	0.16***	0.19***	0.17***
Populism	0.00	0.00	0.01	0.02	0.02	0.00	-0.01
Search ability	0.11***	0.08**	0.12***	0.12***	0.12***	0.07**	0.11***
Search efficacy	0.02	0.04	0.02	0.07**	0.06*	0.05*	0.01
Diversity of Media Sources	0.08**	0.16***	0.07*	0.10***	0.12***	0.13***	0.13***
Accuracy of search results	0.00	0.04	0.01	0.00	0.04	0.06**	0.03
Use of the Internet	0.20***	0.29***	0.16***	0.16***	0.21***	0.28***	0.23***
N	1632	1681	1726	1716	1793	1647	1763
R^2	0.16	0.25	0.13	0.16	0.23	0.34	0.32

Note: Omitted categories are males, students, and primary education, single.
* p<.05; ** p<.01; *** p<.001

Summary of Analyzes of the Four Dependent Variables

What can we conclude from the regression analyses of these four dependent variables? The R^2s are generally impressive for social science research based on survey data. This is particularly notable since the dependent variables are all Likert scales with a range of either four or five possible values. Often this kind of restricted range dependent variable is difficult to model statistically. We ran the same models using logistic regressions where the dependent variables were always binary. However, we found no substantive differences, suggesting that the analyses reported here are robust.

The results for each country are generally similar. Poland has the smallest R^2 in three of the four tables, while the United Kingdom has the highest R^2 in three of the four models. This reflects the strength of the effects, but not which effects are significant.

The significant variables are largely consistent across countries. To see the patterns in the models we can walk through the variables in a series of points.

First the most consistently significant variables are orientations to the Internet and politics (see Figure 5.1). Specifically, the amount a person used the Internet and the diversity of their media sources are the most important determinants of most of our dependent variables. This suggests that respondents who do more things online and rely on more sources of political information, also use search more often to find information about politics, are more likely to change their views on political issues, and more often use search to check political information. Diversity of media sources seems to be less important in explaining the effect of search on voting decisions.

Second, interest in politics is frequently associated with greater use of political search, the importance of search for voting decisions, and changing one's mind on political issues. It is, however, not important for the propensity to use search to check information gathered elsewhere, such as over social media.

Third, respondents seem to make a distinction between political information and political activity. While number of sources of political information are important in all tables, political activity, both online and offline, is less important and often inconsistent. Surprisingly, offline political activity is not typically significant in explaining the outcomes of using search. Online political activity is important for checking information and for voting, but not when finding political information or for changing political opinions.

Fourth, populism is only consistently significant for shaping voting decisions. It is not related to the use of search for political information in general. We don't have a good measure of left-wing extreme positions, so we can't compare right wing versus left wing versus moderates in their use of search.

Fifth, one's personal sense of search efficacy is important for changing one's opinion on political issues, but not in explaining any other outcomes examined here.

Finally, only trust in the accuracy of search results is consistently important for shaping voting decisions. Perhaps this reflects the reasonable assumption that people are more likely to base their vote on certain information, if they perceive the information to be accurate.

Figure 5.1 divided the independent variables into three categories: political orientations, Internet orientation and information orientation. In the political orientations category, interest in politics and political activity were positively related to a number of the search outcomes, but not all, and we did not obtain consistent results for populism. In the Internet orientations category, Internet use and search ability are positively related to most of the search outcomes, but perceptions of efficacy are not. For information orientation, only diversity of media use was consistently significant. Trust was only important for voting decisions. Demographic factors were inconsistent throughout the analyses, although previous research has shown that factors such as age and education have a direct impact on the amount and

breadth of Internet use (Blank and Groselj, 2014). The influence of demographic factors is therefore more indirect through their role in shaping orientations to politics, the Internet, and information.

5.5. Populist Views and the Use of Search

Findings on populism were sufficiently interesting to take a closer look. Table 5.6 below shows the relationship between five dependent variables and three indicators of populism as independent variables for the seven countries. The populism variables were developed on the basis of items drawn from Andreadis et al. (2016). Five questionnaire items were used to tap into attitudes and beliefs in support of populism (see Table 5.6).

Table 5.6. Variable Definitions

Populism indicated by tendency to agree with:
People not politicians should participate in making policy decisions
Political differences between politicians and people are larger than among the people
Compromise in politics is selling out one's principles
Elected officials talk too much & take too little action
Elected politicians should follow the will of the people

The ‘populism’ scale was based on the sum of these five variables (Table 5.6). Each variable ranges from 0–4, so the total scale has a range of 0–20. All countries are skewed to the right, being more sympathetic than opposed to populist sentiments.

We created another scale, adding a 1 for each time the respondent answered ‘agree’ or ‘strongly agree’ to a populism variable, called ‘Popul5’. Thus, it is a count of the number of “populist answers,” with a range of 0–5.

Finally, a scale (Popul2) was developed to indicate if a respondent is “populist” or not. This variable was created by giving a 1 to respondents who had 3 or more “populist answers” to the popul5 variable. These are respondents who had a majority of populist responses. It is rather remarkable that the majority of Internet users in every one of our seven countries agreed with three or more populist sentiments (Figure 5.2). Respondents in Germany and the UK are somewhat less likely to be sympathetic to populist opinion, but there is a general ‘populist’ sentiment across all the nations in favor of what might be called a more democratic individualism.

This is so interesting that we also looked at this with a more fine-grained indicator of the populism scale. Figure 5.3 shows the mean of populism in each country. Here again, respondents in Germany and the UK are the least populist, but even in these countries, there is a skew towards more populist sentiments (above a mean of 10).

Figure 5.2. Proportion of Respondents with Three Populist Sentiments by Country

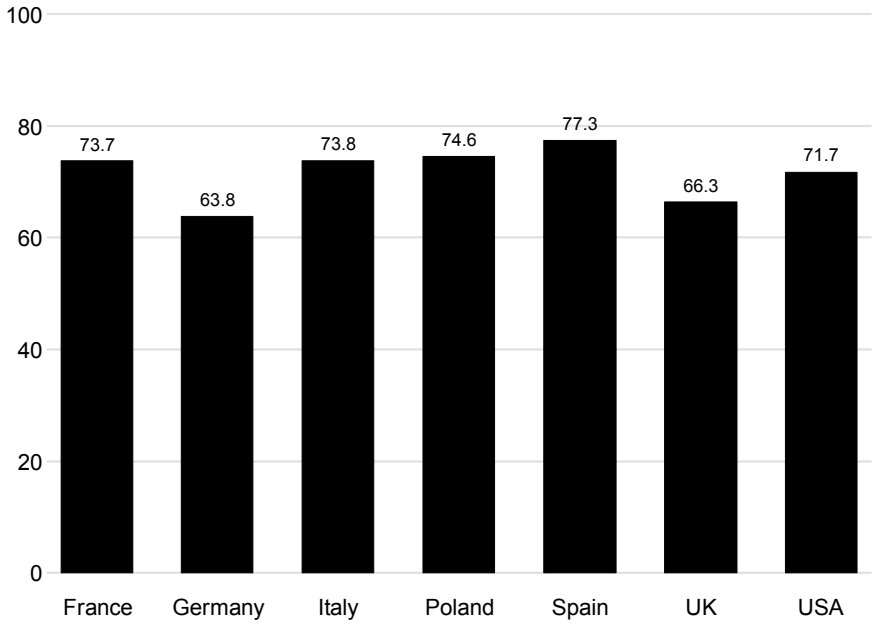
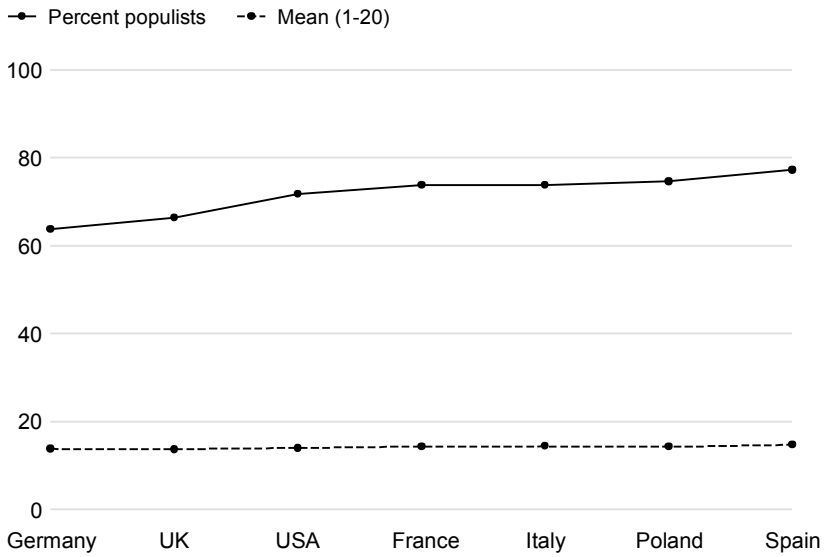


Figure 5.3. Percent Populist and Mean of Populism Scale by Country



Using these three alternative scales, we examined the relationships between populism and our dependent variables (Table 5.7). The results are summarized in Table 5.8. The statistical significance of any relationship is based on chi-square statistics from tables with post-stratification weights (see legend for Table 5.8). We used Goodman-Kruskal gamma coefficients to measure the strength of these relationships. Since gamma coefficients cannot be calculated from weighted frequencies, the gammas are based on un-weighted tables.

While we cannot place a lot of confidence in the difference in predictive strength between "+" and "++", the signs (indicating the direction of the relationship) can be trusted to be correct.

Table 5.7. Outcome variables:

Opinion change	Frequency using search to discover information that changed your opinion on political issue
Political information	Frequency using search to find information about politics or current events
Views modified	Have you ever modified your political views because of searching information online?
Search & vote	Importance for voting decision: Online search for information
Confirm by search	Frequency try to confirm information using search

Independent variables:

Popul	Populism scale, range 0–20
Popul5	Populism scale, number of populist answers, range 0–5
Popul2	Populism scale, 2 category

Table 5.8 has the five dependent variables in the left-hand column. The independent variables are in the second column from the left. So, the first sub-table is the table of relationships between opinion change and the 12 independent variables. Following that is the sub-table for political search and the independent variables, and so forth.

Table 5.8. Meta-Analysis of Populism Variables with Outcomes by Country

		France	Germany	Italy	Poland	Spain	UK	US
Opinion Change	Popul	+	+	+	0	+	+	+
	Popul5	+	0	+	+	+	+	+
	Popul2	0	+	0	0	0	0	+
Political Search	Popul	+	0	+	+	+	+	+
	Popul5	+	0	0	+	+	+	+
	Popul2	0	+	0	0	+	+	+
Views Modified	Popul	0	0	0	0	+	0	0
	Popul5	0	+	0	0	0	0	+
	Popul2	0	0	0	0	0	0	+
Voting Choice	Popul	+	+	+	+	+	+	+
	Popul5	+	0	+	+	+	+	+
	Popul2	+	+	+	+	+	++	+

Fact Checking	Popul	+	+	+	+	+	+	+
	Popul5	+	+	+	+	+	+	++
	Popul2	+	+	+	+	+	+	++

Legend for Table:
++: significant χ^2, gamma greater than 0.2
+: significant χ^2, gamma between 0.0 and 0.2
0: non-significant χ^2
-: significant χ^2, gamma between 0.0 and -0.2
--: significant χ^2, gamma less than -0.2

These tables are generally consistent. Most generally, the different ways of measuring populism are all positively related to the outcome variables. There are no negative associations. That is, there is a general zero-order relationship between being more sympathetic to populist views and being more likely to use and be influenced by search for political information. This conforms to our expectation that those holding populist views perceive themselves more central to politics (democratic individualism), but also outside the mainstream, and therefore less well served by the mass media, and more likely to rely on search.

Two outcome variables are more strongly related to populism than the others: Search & Vote (importance of online search for a voting decision) and Confirm by Search (Trying to confirm political information by using search). Those expressing populist sentiments are more likely to say their votes are influenced by political information they find online, and they are also more likely to use search to check information they find on other sources, such as social media.

That said, most of these relationships are relatively weak. In the entire table only three gamma coefficients exceed 0.20, one with Search & Vote and in the UK, and two with Confirm by Search and in the US. Views Modified (have you modified political views as a result of search) seems to have no relationship to populism. Of the 21 possible associations only four are statistically significant.

The 2-category populism variable is generally less likely to be significant and it has weaker gammas than the other two measures. This is particularly clear for Opinion Change (Have you discovered information that changed your political opinion?), where five of the seven associations are not significant.

Part 6. Assessing Alternative Theoretical Perspectives

As discussed in the introduction to this report, there have been a wide variety of theoretical perspectives in the social sciences and interdisciplinary literature that have underpinned speculation about the role of search, such as in shaping political opinion. This section reviews a variety of some of the most prominent propositions that have been put forward by scholars in order to understand the role of technology in social life, broadly defined, and the process of political opinion development, more specifically. Each can be examined in the light of the evidence generated by this seven-nation study of search.

6.1. Technological Determinism vs. Social Shaping of Technology

On two ends of the same spectrum, technological determinism assumes that the technology prevalent in a society will drive the behaviors of its citizens and hence the social structure as well as cultural values, whereas the social shaping of technology (SST) assumes that people's (subconscious) choices matter in the design, use, and impacts of technologies in ways that shape technology to fit the needs of society and individuals alike.

Put simply, a technologically deterministic perspective sees the design of technology following an inevitable path of advancement – towards the one best way of doing things, and believes that design will have implications based largely on the features of the technology. As Donald MacKenzie and Judy Wajcman (1985: 1) put it: "Technologies change, either because of scientific advance or following a logic of their own; and they then have effects on society." Applied to our study, this first model would assume that prevalent technologies, such as the Internet and its diverse tools, shape and structure the information that is available to citizens to form their political opinions, which would in turn influence the way they vote. At the same time, these technologies also shape media and information consumption, leading to an effect on political opinions. For example, search engines and social media, which are widely available and used among citizens across the seven examined countries would have a strong influence on how they find, consume, and share information, which would lead them to form a certain political opinion that leads to a certain vote.

Several theoretical perspectives discussed below are anchored in a determinist perspective, such as the notion of a filter bubble. From this perspective, search engines and the algorithms that support search are shaping if not determining what people see and believe about politics. However, we find ample evidence to show that individuals are not simply reliant on search, and often check information on one media through other media. Moreover, our own experiment, which aligns with other research, suggests that the political bias of search is likely to be exaggerated.

Consider another example. From a technologically determinist perspective, we would expect individuals to be influenced most in their opinions and voting decisions by the technologies that they use the most. In those countries, for instance, with the highest use of search for finding political information, you would expect search to be the most important in shaping their voting decision. However, the data paint a different picture. For example, 59 percent of the sample in Poland reported using search (very) often for finding political information, and only 39 percent reported that they relied on television (very) often to find political information. However, when asked which sources were important for shaping their voting decision, of

those respondents who had voted in the last elections, 79 percent said search was important and 76 percent said television was important.

More generally, one of the major themes emerging from the findings of this study is the degree that national and individual differences are driving the use and impact of search. In every nation, many do not have access to the Internet at all, and of those who use the Internet, differences emerge cross-nationally and across individuals in the extent they rely on search and other media for political information. Cultural, regulatory, media contexts and individual – social factors – are shaping the use and impact of search. These social factors shaping search tend to be ignored by technologically deterministic perspectives.

The dominance of a multitude of technical, economic, political and other social factors led to the notion of the Social Shaping of Technology (SST). SST suggests, “[…] there are 'choices' […] inherent in both the design of individual artefacts and systems, and in the direction or trajectory of innovation programmes. […] Significantly, these choices could have differing implications for society and for particular social groups” (Williams & Edge 1996: 866).

As our study looks at national and individual level data, this would mean that nations and citizens would be able, not only to choose the technologies and tools that serve them best, but also to redesign, use, adjust, and appropriate them to serve their own ends. This study provides evidence that this theoretical approach is more fruitful than technological determinism. However, this is not without problems. For example, most Internet users across all seven nations make use of search tools, so they must have some effects. An assumption of SST would be that social factors, such as interest in politics would shape whether and how individuals use search engines and other media to look for political information.

Conceptions of SST do not deny the impact of technology, but view technology as one set of factors among many that shape outcomes. The influence of social factors was confirmed in multivariate analyses: the more interested individuals are in politics, the more individuals tend to use search to find political information, and this result holds across all country samples. The same is true for the ability to use search engines: those who report higher confidence in their skills using search engines use search more to look for political information; this result too holds across all the different countries.

Technological and social-shaping perspectives are very general perspectives on technology and its social implications. There are also more specific perspectives from political science and media studies that more directly relate to how people use information about politics and its social consequences, several of which are discussed in the next section.

6.2. Perspectives on Information About Politics Shaping Opinion

The Rational Voter

The rational voter model stipulates that voters act rationally, such as on whether to vote in the first place, and for whom to vote. They weigh the benefits and costs of voting (for a certain candidate or party) and make a rational decision based on this calculation. While very useful in formal models of political behavior, this perspective veers far from the facts on the ground in politics. For example, rationality would probably lead people not to vote, given the small probability of affecting the outcome. Moreover, the idea that voters search for and study

information about all the candidates up for election and make a choice based on which are more aligned with their preferences, is unrealistic. For example, most people are well informed about candidates and issues and more likely to vote out of a sense of civic duty, rather than because they think their vote will make a difference in the outcome of the election.

Nevertheless, many accounts of search are based on such a rational model. Concern over voters not getting all the information about all the candidates, or being influenced by friends and family members, are examples of worries about veering away from a rational information-based model of voting.

In the present study, for example, following the logic of the model, we would assume that those country samples that report high percentages of media use for finding political information would report a relatively higher voter turnout. We found that individuals chose a variety of different sources to make a decision and vote. However, the data do not confirm a linear relationship for this model. For example, the French sample reported comparatively low use of all media to look for political information in contrast to other countries, but the voter turnout in the last presidential elections was 80 percent (Conceil Constitutionnel, 2012: 4) – which is considerably higher than many of the other countries surveyed in this study. On the flipside, the Spanish sample reported very high use of all media to get political information but the voter turnout was 58 percent in the December 2015 elections and only 51 percent in the June 2016 rerun (see Spanish country report).

However, as another example, we would also assume that respondents would choose sources to make their voting decision that they trust the most. We asked respondents to rank the reliability of different media and other sources of information. While some country samples follow a logical structure – i.e., those sources they trust the most had the biggest impact on their voting decision – the relationship does not follow the same structure or is even inverse in some countries. For example, the French sample reported the highest reliability ranking for newspapers, followed by radio, search, and television. However, the most important source for making a voting decision was television (which had the lowest reliability rating), followed by search, radio, and newspapers (which had the highest reliability rating).

Pluralistic Cue Takers

While not rational from a traditional perspective, cue-taking models have found a good deal of empirical support. For example, legislators, rather than reading every bill that comes up for a vote, most often take cues from others on how to vote, such as the ranking member of their party on the committee reporting the bill (e.g., Box-Steffensmeier et al. 2015). Citizens, likewise, might ask a trusted neighbor or family member who to vote for in a coming election. This is rational in that it saves them time and effort, while giving them some confidence in making the right decision.

There is indirect evidence from our study to support the importance of multiple cue givers. For example, most people interested in politics tend to consult multiple sources of information, with search being only one of many. In addition, television and interpersonal influence remain important, again suggesting that asking friends and family what they think can be a useful and influential shortcut to making a decision. Search is one of many sources for cues.

Agenda Setting

Availability and quality of political information is closely tied to how people develop their political opinions. There are traditionally two major sources of political information: the news media, increasingly including online news and search, and everyday associates such as family and friends. Agenda-setting theory and the two-step flow hypothesis address each in turn.

Agenda-setting theory stipulates that the news media do not tell us what to think, but rather, what to think about. News coverage in the mainstream media, through choosing to focus on specific themes or objects and in narrowing the frames within which they are portrayed, may also tell us how we should think about the content that is presented to us (McCombs & Shaw 1993). While there is little evidence to uphold a direct agenda-setting link, elements of the theory can be observed according to both the survey data and supplementary trace data provided by Google Hot Trends and the longitudinal trends over time.

Firstly, as one might expect, the number one source – marginally – that respondents indicated as being influential in their voting decisions was television. Since a few of the countries that were surveyed, such as the US and France, were going through significant political elections or events, it would follow that political content would be more prominent on television and major news outlets in those nations, whether this was informative pieces from established channels or satirized renderings of the political process and its figureheads. Though there were certain variations of importance that each nation accorded to television coverage, at least 67 percent or more in each country agreed that it was 'important' in helping shape their voting habits (see Table 4.1, "Importance of Television Coverage to Voting"). The literature on the influence of television in politics is also well recognized and spans, at the publication of this report, several decades already. The media helped ensure that people thought about politics, if not necessarily shaping for whom they voted.

One obvious contradiction to this agenda-setting observation lies in that though mass media tell people what they should think about, their behavior online might more accurately reflect what they actually are thinking about. That is: though television was reported by the survey respondents to be the overall number one source in helping shape their voting attitudes and behavior, and it can be reasonably assumed that political coverage dominated much of the televised content they viewed, in general, these countries actually searched very little for politics at all. As seen in the Section, "What Do People Search for Online," politics comparatively ranked the lowest in terms of specific topics that people search for online. After medical or health information and entertaining content, politics ranked the lowest, with a little over a quarter (26%) saying they 'never' or 'rarely' used search for this purpose. So, despite television being the number one medium by which people are influenced in terms of politics, few people actually go online to search for information about politics, as is evident by the trends trace data.

Both the longitudinal global-trending topics over time compiled by Google and the daily hot topics per day, by country, supplement these findings. As discussed in the section, "Trends Over Time (global)," though there has been a very slight increase in political search terms in the past few years, in general, political search terms remain relatively low when compared to search queries such as those for celebrities and entertainment-related topics. As is noted in the trace data report of the section, the spike in political searches in the past year could be

attributed to global fascination with the Trump family, as well as unprecedented political events such as Brexit. However, both longitudinally and cross-nationally, there is relatively little search interest in politics beyond these phenomena.

Further to this point, the top ten most searched queries were recorded for each country, for each day the survey was in the field. The analyses from this data support the phenomenon described above: even in the midst of major political upheavals, few people were truly searching for political content. As seen in the section entitled “Hot Trends,” apolitical queries range from 66% up to 92%, as in the case of Italy.

In conclusion, agenda-setting theory as it relates to our survey and trace data can be summarized in the following way: while television constitutes a persuasive and compelling medium that sways political opinion and tells people what to think about, as is illustrated in the trace data, few people are actually going online to learn more about these topics and they place less importance on politics than what the political content on television would have us believe.

Two-Step Flow

The Two-Step Flow theory postulates that the dissemination of information occurs in two separate phases: that first, information is consumed directly by an opinion leader, who then spreads this information (colored with his or her own interpretations, as well as influence) out to his or her close peer groups by whom he or she is respected (Katz 1957).

Hypothetically, the new media could undermine this process. However, based on the survey results, a “two-step flow” phenomenon is quite clearly consistent with our findings. Following television, “offline discussions with friends” was cited as the second-most influential source of information that impacted voter decisions. This was seen generally across all countries, that is, approximately three-quarters of survey respondents indicated that discussion offline about politics and voting with their friends was considered ‘important’ (72%). (See Table 4.2, “Importance of Offline Discussion with Friends on Voting”). There were not substantial variations between countries in this respect: the highest country deeming interpersonal communication as “important” was Poland at 80 percent, and the lowest being the United Kingdom at 65 percent, with other countries such as the US and Spain hovering in the middle at 77 percent and 70 percent respectively. The tendency cross-nationally to lean towards placing a higher importance on communicating political information with friends may suggest that those who are politically oriented, and who consume political information through the media, tend to pass on and have conversations within their own social groups about what they know and think.

However, it is important to recognize the caveat that distinguishes “offline discussions with friends,” from “offline discussions,” the latter being a source of information that was placed significantly lower in rank than the former in shaping voter behavior. Where “offline discussions with friends” ranked second as the source of information most likely to influence a voter’s decision, “offline discussions” ranked tenth. As opposed to “offline discussions with friends,” which has more or less a general consensus across the board as to its importance in influencing voting decisions, there appears to be less overall agreement as to the importance of “offline discussions” between the countries surveyed. This is illustrated in the data where in “offline discussions with friends,” roughly 72 percent of all respondents believed that this

source was ‘important’ in influencing their decision-making; with the ‘offline discussions’ category, the significance was split and was seen by respondents to be nearly as ‘important’ (52%) as it was ‘not important’ (48%) (See Table 4.10, “The Importance of Offline Discussion to Voting”).

Despite these differences, the countries remained consistent in the importance they attributed to offline discussions, whether these took place amongst friends or otherwise:

- Respondents in Poland deemed “offline discussions with friends” highest amongst the countries surveyed at 80%, and were once again the highest for “offline discussions” at 59%.
- The US was the second highest in both instances, with 77% of respondents citing “offline discussions with friends” as “important” in influencing voting decisions, and 56% for “offline discussions.”
- France was consistently one of the countries to place the least amount of importance on these types of discussions: “offline discussions with friends” had 68% of respondents reporting it important, and for “offline discussions,” 46% (the same proportion as the UK).

With regards to mediated forms of two-step flow, where opinion leaders disseminate their information to peer groups and wider publics through virtual means, these were seen to be less influential in the case of such media as emails. For example, “emails from friends” (see Table 4.14, “Importance of Email from Friends for Voting Decisions”) was the least influential across all the types of sources surveyed, with a large percentage (65%) of respondents marking it as ‘not important.’ It is interesting to note that both Poland and the US, countries which placed importance on offline discussions both amongst friends and in general, also appeared to place a more notable importance on emails from friends: 45 percent and 44 percent respectively citing them as ‘important.’

While the above describes how two-step flow is seen in the types of sources that are most likely to influence one’s voting choice during an election, with countries like Poland and the US placing a greater importance on information that is obtained both offline and online through social circles and discussions with others, how one learns about others’ political leanings also reinforces evidence of a two-step flow phenomenon. Further to this point, “talking to family and friends” was cited as the number one source of information for learning about others’ views, and outranked even both traditional and contemporary sources of information such as TV/radio news, newspapers, search engines and social media. Seventy-five percent of respondents across all countries cited speaking with friends and family as either ‘informative’ (52%) or ‘very informative (23%) in learning about what other people think. (Though television and radio news coverage did indeed come as a close second, with an aggregate 69% indicating such sources as being ‘informative’ (54%) or ‘very informative’ (15%).)

Given the established corpus of knowledge on the theory of two-step flow as it relates to political opinion formation and decision-making, these findings are not altogether surprising. As has been demonstrated in earlier literature, an individual’s friends and families can be quite influential and are often consulted sources of information. This is reflected in our own findings, where offline discussions with friends are seen to be important for influencing a voter’s behavior following television, and where talking with family and friends constitutes the

number one way that a voter learns about what others think. While two-step flow does not necessarily perfectly align with the survey results, it is evident that politics are consulted within a social group which likely has one or more opinion leaders, and this may serve as a manner by which a person can learn about others' opinions and thereby shape or alter their own; there is a clear interplay between mediated information consumption and the personal influence of peer groups. Furthermore, it appears that certain countries are more inclined to discuss, or place greater importance on the opinions of those in their friendship circles than other countries: Poland and the US, for example, appear to exhibit less inhibition when it comes to discussing politics with others, while those in France and the UK are somewhat less likely to do so. This is an unexpected observation that could very well serve as the basis for ongoing research.

Werther Effects

The Werther effect, coined following an increase in suicides that was observed after highly publicized instances of suicide in the media (Phillips 1974), has been applied in the past to better understand how certain individuals are more susceptible to copying the behavior they that they see on television and through other digital means. But the idea could apply across media, and also be of value to explaining the role media, including search, could play for relatively small proportions of the population.

For our case, in a general sense, there does not appear to be much evidence of a Werther effect based on the findings extrapolated from our survey responses, but surveys are not well suited to identify the implications for a particular segment of the population that would be small and not conforming to the norm.

However, specific portions from the available survey data support this assertion. Firstly, when examining the section "Information that Changes Your Mind," across all countries, less than 10 percent of survey respondents indicate that they are 'often' finding search results that change their mind about a specific political topic or subject. Moreover, more than half (59%) say that this 'never' or 'rarely' happens to them; thus, the fact that information that our respondents find online is generally unsuccessful and ineffectual at changing their opinion, does not mean that it sometimes does for some people.

The Internet users surveyed in this cross-national sample can therefore be seen to exercise their own judgment, maybe being less open minded, but also possibly less vulnerable to fake news or false information that may crop up in search results; effectively rejecting the characterization of fake news as the new powerful and feared "specter" of the Internet. Instead, our data suggests that users assess the information they retrieve against their own opinions and do not necessarily blindly agree with or follow what is put out in front of them. In terms of country-specific trends:

- Poland and the US were amongst the countries least likely to say 'never' when it comes to discovering information that changed their opinion through search (15% and 17%, respectively); and
- France and Germany (both 30%) indicated the highest likelihood of never confronting information that would change their opinion on a political issue via search results.

Conversely, while the above describes whether participants found information *through search* that changed their political opinion about a specific subject, asking more *generally* whether an individual has modified their political views because of searching for information online paints a slightly different portrait. In the latter case, more than 40 percent (42%) say that they have done so, which demonstrates that information found online can indeed have the ability to change a user's perception. Nevertheless, the fact remains that across all seven nations surveyed, more than half (58%) responded 'no' when asked whether information they'd seen online had changed their political views. This once again strengthens the supposition that Werther Effects are by definition a rare occurrence, and that they are difficult to distinguish from rational choice based on new information. While some may be more inclined to change their political views based on what they have seen online, a greater proportion do not. A closer inspection for individual countries provides more specific insights:

- The polarity between the countries with the lowest and highest percentages of respondents indicating 'no' as to whether they had modified a political view based on information they found online is quite striking, with Italy, the US and Spain all at 51 percent, and the UK at 70 percent. Cultural contexts, political climate and regional differences (i.e., big cities versus less populated areas) are a few potential factors among many that could be contributing to the numbers for each of these countries.
- The US once again stays demonstrably consistent; based on the answers to both this data set and the former on search results changing political opinion, those in the US seem more malleable and open to changing their views based on what they have read online, through search or in general.

These two sets of data taken together illustrate that we cannot conclusively say Werther Effects are at play for a small proportion of individuals; rather, the Internet users surveyed generally lean towards keeping and perhaps reinforcing their own political viewpoints over adopting or imitating the views that they encounter in the online realm.

6.3. Internet Enabled Dynamics

Two theoretical perspectives are anchored in the degree that the Internet can enable social processes to be more powerful than would otherwise be possible. These perspectives include the notion of winner-takes-all effects, and the Fifth Estate.

Winner-Takes-All Effects: Power Laws

In business, science and other fields, there is a tendency for a 'winner-takes-all' effect, and this could be exacerbated by the visibility of winners on electronic networks (Frank and Cook 1995; Barabási and Albert 2014). This 'power law' is the simple point that online, on the Web and in the context of search, a small number of sites are the most likely to be most popular in any given area of search content. As more people link or click on a site, the more visible it becomes and the more likely others will do so. If you are going to a movie in your local area, your choice is limited to those showing. If you go online, you are likely to go to what you believe to be the best movie that you have not already seen. Why go to the second best? In such ways, the winner-takes-all process can be magnified online. This is evident in sports, science, and in politics (Hindman et al. 2003; Caldas et al. 2008; Ackland 2010). As Ackland (2010: 49) notes in the case of science, "researchers … access the articles, data, or methods

of a particular researcher not because of quality, but because this particular researcher is already popular or prominent."

In the trace data on trends in search reviewed in this report over a five-year period and during the course of this survey, some aspects of this winner-takes-all dynamic were reflected. A few popular celebrities and politicians garnered most of the search queries, not because they were the most relevant, perhaps, but because they were already the most popular. In the survey results, you can also see the proportion of respondents who say they primarily focus on the top search results, which would tend to move towards a similar winner-takes-all effect. This happens in many networks, but electronic networks enable this to happen in more dramatic ways, such as with Donald Trump trending in nearly all of our seven nations. The experiment also showed that a few sites (Wikipedia, *The New York Times*, *The Guardian*) regularly appear among the top search results for a variety of topics, supporting a "winner-takes-all" effect among search results.

This does not mean that only massively popular information is privileged. Power laws arise even in very specialized fields and topics. As a consequence, a winner-takes-all effect does not necessarily crowd out particular political issues, such as information about a candidate or party with a small following. However, it does indicate the value in alerting Internet users to the potential for power laws to be dysfunctional, such as by leading them to choose what they believe to be the best source, when a more appropriate source is lower down the search results.

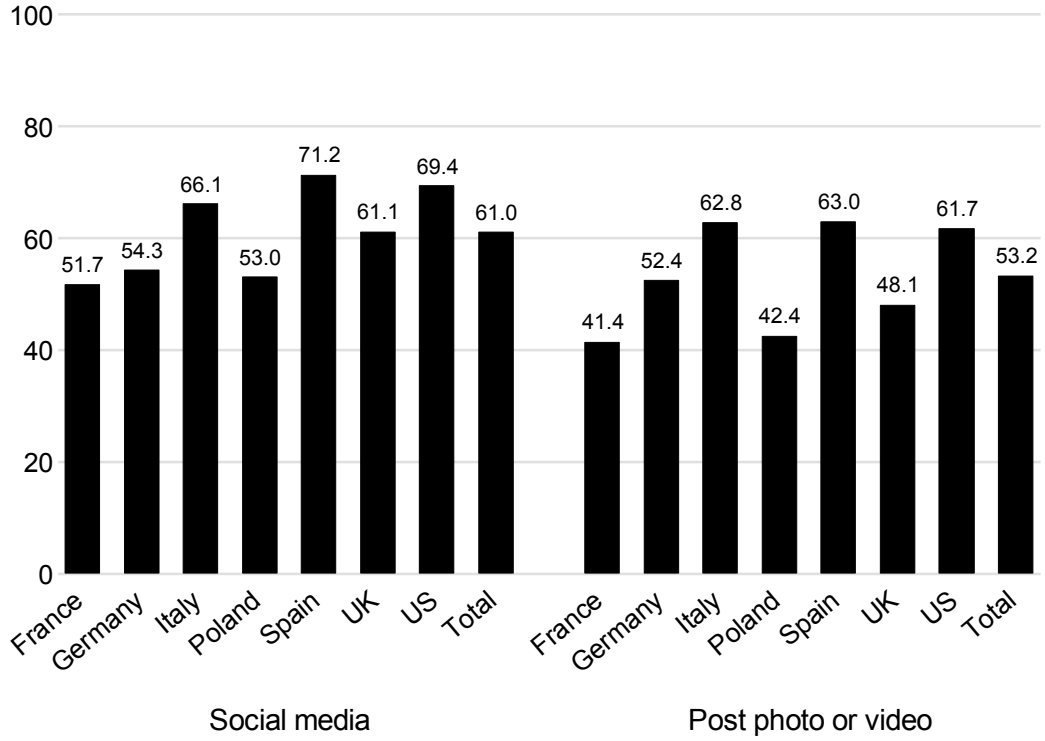
Fifth Estate

The concept of a Fifth Estate is another perspective on a technologically enabled social process tied to search (Dutton 1999, 2011, 2015). It is based on the idea that the Internet enables individuals to source their own material online, such as through the use of search, mobile video and more, in ways that are comparable to the press as the Fourth Estate.

For example, we asked Internet users with a mobile whether they used their mobile for a variety of activities, including two related to sourcing their own material, such as by posting on social media and posting photos or videos online. Figure 6.1 shows that 61 percent of mobile Internet users post on social media, and 53 percent post photos or videos online. Italy, Spain and the US are relatively high with respect to both activities, and France, German, Poland, and the UK are relatively low, but even in France, which was relatively low, 40 percent or more mobile Internet users are posting information online (Figure 6.1).

In such ways, through blogging and otherwise sourcing and distributing information, individual Internet users can become producers and not simply consumers of information about politics, such as in posting information about the climate of opinion at a political rally or protest or about the news and accounts in the press. Bloggers, for example, often play a watchdog role on the press (Cooper 2006). But they are empowered in part from their use of search and the Internet in general, both in sourcing their material, and in enabling others to find the Fifth Estate's input to particular issues.

Figure 6.1. The Use of Mobile Internet for Social Media and Posting Photos and Videos



The survey results illustrate the many ways in which Internet users are producing and distributing information, as well as receiving and consuming information. However, the information is different from broadcasting and the newspaper in that the citizen, consumer, or individual is not simply an individual, viewer, listener or reader. Most notions of the politics of search focus on this role as a receiver, as they are based on theories anchored in the study of mass media. In this way, the Fifth Estate, like two-step flow models, challenges more passive models of the individual being limited to what search terms to use, what news to read, or what people to follow, and incorporates end-users as a new source of politically relevant information, albeit in the long tail of search – in infrequently searched sites, rather than among the celebrities.

More indirectly, the role of the Internet in supporting the empowerment of individuals might well be connected with the rise of more populist beliefs in the significance of a democratic individualism. As individuals discover that they can source information in ways that are as powerful as the means open to politicians, and various institutional actors, it is understandable that they may feel qualified to count more in policy and practice.

6.4. Social and Algorithmic Contexts of Political Opinion Formation

Individuals develop their political opinions in specific contexts. The spiral of silence theory (Noelle Neumann 1984) speaks to the impact of people's perceptions of others' opinions, and more recent theoretical work on echo chambers and filter bubbles considers the extent to

which individuals are exposed to the opinions of others and to ideas that confirm or contradict their existing beliefs.

Echo Chambers and Filter Bubbles: Complementary Perspectives

The theory of echo chambers suggests that individuals tend to expose themselves to information, ideas and opinions online that reinforce their existing beliefs. Ideas tend to spread only within a group rather than across groups (Sunstein 2007). Similarly the notion of a filter bubble suggests that due to the way personalization algorithms are developed by social media companies and search engines, individuals tend to be confronted with information that confirms their existing beliefs and/or reinforces their existing preferences (Pariser 2011).

When it comes to echo chambers and filter bubbles, survey questions are related to three distinct aspects of relevance to these theories:

1. Perceptions of echo chambers or filter bubbles being created
2. Beliefs regarding the possible utility of echo chambers or filter bubbles
3. Actions taken that may produce echo chambers or filter bubbles

Survey questions probed each of these with respect to both search engines and social media – two online platforms where filter bubbles and echo chambers have been hypothesized due to the effects of individual choices and personalizing algorithms (Pariser 2011; Sunstein 2007). Additional questions also ask about more general beliefs and habits regarding the media.

1. Perceptions of Echo Chambers and Filter Bubbles

Survey questions here probe individuals' perceptions that they might be in an echo chamber. For example, if people notice that all the information they encounter online is agreeable, especially on social media, it is possible that they are in an echo chamber. Regarding search engines and echo chambers/filter bubbles, respondents were asked: "Thinking about recent searches you have done online using a search engine, how often have you discovered something that changed your opinion on a political issue?"

Across all nations, responses tip slightly in favor of rarely and never, indicating that the majority of people (59.3%) have not encountered information in search engine results that has changed their political opinions. Yet, surprisingly, four-in-ten respondents (40.7%) say they *have* discovered something via search that has changed their views occasionally or often. This suggests that people may be encountering challenging information relatively frequently, and that many people are open to altering their political positions based on online information. Such evidence tends to counter the filter bubble hypothesis, with a large proportion of respondents indicating they encounter and are open to ideologically challenging information.

In terms of inter-country differences, patterns reflect those noted elsewhere (see discussion of Fake News). Respondents in the UK, Germany, and France are the least likely to report having changed their political opinion based on something they have discovered via search, with two-thirds (65%, 69.5%, and 63.5% respectively) saying this happens rarely or never. This compares to 55 percent of respondents in Italy and Spain, and half (51%) of respondents

in Poland reporting ‘rarely’ or ‘never’. Respondents in Poland are the most likely to report occasionally or often changing their views, with almost half (49%) reporting this.

Regarding search engines, respondents were also asked: “Compared with other sources of news and information, do you think Internet search engines are more or less balanced and objective in the information they provide you?”

Across all nations, the perception is that search engines are about as objective and balanced in the information they provide as other sources. Half of all respondents (51%) report that search engines are ‘about the same’ when compared to other news and information sources. Interestingly, fully 30 percent of all respondents say search engines are *more* objective. Combined, this means that over 80 percent of respondents view search engines as reliable and objective sources of information. Such evidence indicates that people do not perceive themselves to be trapped within algorithmically created echo chambers or filter bubbles. On the whole, respondents say they trust search results and believe that they tend to be objective – not tailored to one point of view or another.

Nevertheless, there remain a sizeable proportion of respondents (19%) who believe that search engines are less balanced and objective. A large portion of these respondents appears to live in Germany; where over a quarter (28%) of respondents say search engines are less objective. This represents a 10 percent difference from other countries, where around 16–19% of respondents believe search engines are less balanced and objective. This finding may, however, reflect a more general distrust of search engines and search results in Germany and not be indicative of any perception of echo chambers being more or less prevalent in that country.

Regarding social media, respondents were asked both of the following questions: “When your friends post on social media, how often do you agree with the political opinions or political content they post?” and “How often do you find that you disagree with the political opinions or political content your friends post on social media?”

When it comes to social media, there is again a pattern of findings that suggests that most users are not living in filter bubbles or echo chambers. When asked how often they agree with the political opinions or political content posted by friends on social media, half of respondents (54%) say they sometimes do. A quarter (22%) cross-nationally says they rarely or almost never agree, while another quarter (24%) say they mostly or nearly always agree. On the flip side of this, when asked how often they disagree with the political opinions or political content posted by friends on social media, again over half (60%) of respondents say they sometimes do, while a quarter (22%) say they mostly or nearly always do, and a fifth (18%) say they rarely or almost never do. The survey data therefore reveals a tendency for social media users to be exposed to a range of views.

In terms of inter-country differences, respondents in Germany (39%) are considerably more likely to rarely or almost never agree with friends’ political posts. Strangely, respondents in Germany (32%) are also considerably more likely to rarely or almost never *disagree* with friends’ political posts. Attitudes towards the political posts of friends in Germany are therefore complex and reveal ambivalence.

Overall, across nations, respondents appear to encounter a mix of viewpoints on their social media feeds and are not all cloistered in agreeable echo chambers or filter bubbles. In terms of perceptions, respondents appear not to see themselves as trapped inside ideological echo chambers or filter bubbles. By and large, cross-nationally, respondents say they encounter new and challenging information, are open to changing their views, see search results as being largely fair and objective and find their social media feeds filled with a range of agreeable and disagreeable political viewpoints. Such evidence points away from the pervasive existence of filter bubbles or echo chambers, with indications that people engage with rich and complex online news and information ecosystems.

2. Beliefs and Attitudes Related to Echo Chambers or Filter Bubbles

Survey questions here gauge respondents' attitudes towards echo chambers/filter bubbles and the mechanisms that contribute to the creation of echo chambers/filter bubbles. Regarding search engines, respondents were asked: "Should search engines prioritize results that are in line with your viewpoints, present a range of viewpoints, or prioritize objective news and information?"

Across all nations, the majority of people (54.5%) believe that search engines should prioritize objective news and information. A further third (35%) say that search engines should present a range of viewpoints in search results. This data indicates that, by and large, people want search engines to be objective in the presentation of information and do not wish for their personal viewpoints to be prioritized. In other words, respondents do not wish for echo chambers but want to be presented with full and fair information. Only a tenth of people (10.5%) want search engines to prioritize their own views.

Interestingly, with respect to cross-national differences, there is a lower proportion of respondents in the UK (38%) and the US (44%) that believe search results should prioritize objective news and information. This may be reflective of the respective media cultures in each country, where strongly partisan and divided media have perhaps engendered a disbelief in the value or utility of objectivity. Respondents in the UK lean towards the belief that search engine results should provide a range of views, with half of respondents (51%) answering this way.

Further, to explore beliefs about the utility of personalizing algorithms, people were asked to respond to the following statement: "Having stories automatically selected based on what I have looked at in the past is a good way to get political news."

Cross-nationally, responses are mixed, with a third (31%) disagreeing or strongly disagreeing, a third neither agreeing nor disagreeing (37%), and a third (32%) strongly agreeing or agreeing. There is, therefore, no consensus on whether automatic filtering of news stories based on prior Internet history is a good or a bad thing.

These responses contrast somewhat with those above, where there was a much stronger belief that search engines should prioritize objective information or, if not, a range of viewpoints. A third of respondents here indicate that they think having stories automatically selected based on past interests is a good way to get political news. While this is not necessarily a case of personal political views being prioritized, if news is filtered based on past behavior, there may be a tendency towards personal political interests. Thus, it can be

said that a third of all respondents believe, to some degree, that personalized (potentially partisan) filtering is a positive.

Respondents in Germany are the least likely to agree (or strongly agree) that filtering based on past behavior is a good way to get political news, with only a quarter (27%) of respondents answering affirmatively. Respondents in Poland (38%) are the most likely to agree or strongly agree.

For comparison, and to more generally gauge beliefs regarding the pre-selection of political news stories, people were also asked to respond to the following statement: Having stories selected by editors and journalists is a good way to get political news.

Reponses here are again split between those who believe editorial selection is agreeable, disagreeable, and those who are ambivalent. Cross-nationally, approximately a third (27.75%) of respondents disagree or strongly disagree (28%), a third (37%) neither agree nor disagree, and a further third agree or strongly agree (35%).

Respondents are somewhat more likely to agree or strongly agree in Spain (43%), France (37.5%), and Germany (39.6%), compared to respondents in Italy (31%), the UK (30.5%), Poland (31.65%), and the US (33%). Respondents in the US and Italy are the most likely to disagree or strongly disagree, though cross-national differences are small.

Data generally indicate, again, that editorial selection of news is a complex issue. There is no clear preference anywhere towards one mode of news filtering, whether it is by journalists and editors or algorithms.

Indeed, when it comes to the filtering of stories on social media based on the preferences of friends, there again is no clear preference cross-nationally, though there are slightly more respondents disagreeing that it is a positive thing.

When asked to respond to the statement, “Having stories automatically selected on the basis of what my friends have looked at is a good way to get political news,” slightly more people (41%) disagree or strongly disagree that this is a good thing, compared to the quarter (25%) who agree or strongly agree, and the third (34%) who neither agree nor disagree

Thus, while respondents are not always clear on whether they like algorithms to personalize their search results based on their own tastes or whether they like editors and journalists making selection judgments, they are somewhat clearer when it comes to filtering based on the preferences of friends. There remains, however, no strong preference cross-nationally for one type of editorial selection.

Overall, in terms of beliefs, respondents in all nations appear to lean away from or express ambivalence when it comes to personalized filtering of news (and the potential creation of echo chambers). There can be said to be no strong belief that this is a positive thing. The evidence indicates, generally, that people do not particularly *want* personalized echo chambers or filter bubbles, though they are open to some personalization and therefore filtering. Moreover, respondents *do* express a preference for the objective delivery of news and information on search engines. Combined, data present a picture of media consumers that suggests they are unsure of how best news should be delivered to them. They are

relatively more certain, however, in their belief that this news and information should be fair and objective.

3. Actions that Support Echo Chambers or Filter Bubbles

Survey questions here assess individual choices and actions taken that may contribute to the creation of echo chambers/filter bubbles – particularly on social media.

What to Read

One concrete action people can take to prevent the algorithmic creation of filter bubbles is to read a diverse range of news and information. Theoretically, those who only engage with content that is, for example, strongly right- or left-leaning may find themselves being shown more of this content due to the personalization effects of social media and search algorithms. Respondents were therefore asked, when it came to political news and information, how often, if ever, they read something they disagreed with.

Across all nations, a sizeable proportion of people say they do this. Overall, a third of respondents (36%) say they often or very often read something they disagree with. A further four-in-ten (43%) say they sometimes do this, while only a fifth (21%) say they rarely or never do this. The evidence suggests, then, that people by and large engage in a behavior that counters the potential impacts of algorithms in the creation of filter bubbles. If almost eight in ten people (79%) read something which runs against their political views, at least sometimes, algorithmic filtering of content in favor of one ideological viewpoint is less likely to occur.
In terms of inter-country differences, respondents in Italy are the most likely to engage in this behavior, with four in ten (43%) saying they often or very often read something they disagree with. Respondents in France (29%) are the least likely to read disagreeable news and political information often or very often. Responses in other nations fall around the cross-national average of 36 percent.

Another action people can take is to read news sources that are different from what they usually read. These may be news sources which differ in their political perspective or which offer other alternative viewpoints. When asked how often, if ever, they checked a news source that was different from what they normally read, almost a third of respondents (29%) cross-nationally said they often or very often did this, while over a third (39%) said they sometimes did this. A further third (32%) said they rarely or never did this.

Again, the evidence here suggests that people engage in behaviors that counter the potential echo chamber effects of algorithms.

In terms of cross-national differences, respondents in Germany are far less likely to engage in this behavior. Almost half (48%) of respondents in Germany say they rarely or never check news sources that are different from what they normally read, while only 14 percent say they often or very often do. Respondents in the UK are also less likely to check alternative sources, with 38 percent saying they rarely or never check different sources, with 23 percent saying they often or very often do so.

Checking Information

When it comes to social media, the choices people make regarding the information they encounter can determine the extent to which they find themselves 'trapped' in agreeable echo chambers or filter bubbles. One choice people can make to break themselves out is to question the news and information they see on their social media feeds, using tools at hand to check dubious posts.

Respondents were asked how often they used search engines to double check whether something on social media was true or false. Across all nations, the majority of people (53%) say they occasionally check the veracity of social media posts, while a further fifth (21%) check posts when they are in doubt. A minority of respondents (16.5%) says they never or hardly ever check the truth or falsity of information on social media. Interestingly, almost a tenth (9%) of respondents say they simply disregard posts they find dubious, without checking whether they are true or false.

Overall, responses here indicate that people have a healthy skepticism when it comes to information on social media. They will tend to crosscheck dubious information when they encounter it.

Engaging with Others Online

On social media, the individual choices people make regarding who they connect to and communicate with will shape their online experience. Facebook's NewsFeed algorithm is well known to shape user experiences around their behavior, taking into consideration the content they read and also the people they communicate with. Apart from Facebook's algorithm, people can take matters into their own hands by blocking or removing others they disagree with politically and choosing only to 'friend' politically similar individuals.

Cross-nationally, the majority of respondents (65%) say they communicate with people who have a mix of political beliefs. Indeed, considering other variables as well, it appears that having agreeable political views is not a primary reason people connect with others on social media. This is not surprising, given that people are more likely to connect with one another for more general social reasons, such as being school friends, work colleagues, or family members.

When it comes to disconnecting from others on social media, respondents in all countries were asked if they had ever blocked, unfriended, or hidden someone because they:

- Posted political content that you disagreed with or found offensive: Yes 20%, No 72%, Didn't know they could 8%
- Disagreed with political content you posted: Yes 12%, No 80%, Didn't know they could 8%
- Posted political content that you worried would OFFEND your other friends or people who follow you: Yes 15%, No 76%, Didn't know they could: 9%

The consistent responses here indicate that, overall, people don't block or unfriend others because of political disagreements or differences.

Overall, the evidence indicates that people do not engage in actions and behaviors that encourage the creation of online echo chambers or filter bubbles. People generally do not

block or ‘unfriend’ others they disagree with politically. The majority of people also tend to check alternative sources and sometimes or often read content they disagree with politically. All of these actions counter the potential echo chamber/filter bubble effects of algorithms in search and on social media. In addition, the results from our small-scale experiment also fail to demonstrate that search engines are using personalization to provide users with ideologically tailored (and agreeable) information, again countering the echo chamber and filter bubble narratives.

Spiral of Silence

The spiral of silence theory suggests that individuals will be more likely to share their political opinions publicly if they believe the majority of the public hold the same view. Conversely, when individuals feel they hold a minority view they are less likely to share their political opinions. This is important in the political opinion development process because most people develop their political opinions based on, at least in part, the political information and opinions they observe via news media and friends and family (see the previous section). Furthermore, trends toward echo chambers and filter bubbles can create a false sense of the majority and minority opinions thus exacerbating the spiral.

Survey and trace data analysis are used to examine:

1. The role of search and personalization in political opinion formation
2. Whether or not sharing political opinions and the perception of having a majority view are related

As described in the agenda-setting and two-step flow sections above, search is becoming an additional source of political information and opinions which individuals can use to form their own political opinions and decide whether or not to share those opinions with their friends and family, online and offline.

Personalization of search could reinforce a spiral of silence. The echo chambers and filter bubble analyses have shown that individuals neither perceive echo chambers and filter bubbles nor do they self-report actions that would be consistent with echo chambers and filter bubbles. Furthermore, our trace data experiment suggests that personalization is largely limited to the order in which results are presented. Partisanship does not seem to matter, which suggests a Google search-based filter bubble is unlikely to impact the political opinion-forming process or consequently intervene in the spiral of silence. Potentially, search could help circumvent the spiral of silence by presenting more balanced and countervailing information. For example, our data indicate that Internet users are exposed to a diversity of information, and often check the accuracy of what they find online.

Our Google search experiment shows that news, particularly from popular mainstream sources is more common than other types of content for political responses. Across all three accounts we found 30–35 percent of news results were mainstream outlets and about 21 percent came from magazines. By comparison, 17–21 percent of news results came from alternative sources.

Overall, the role of search in political opinion formation is tempered by the diverse array of other sources individuals tend to rely on. Furthermore, the personalization of search is

relatively limited. In prioritizing news, in particular mainstream news, it is possible, however, that search is reinforcing existing mainstream media effects such as agenda setting, which in turn contributes to a spiral of silence.

Beyond exploring the specific role of search, our study allows us to contextualize search within the wider set of forces leading to political opinion formation. In order to test the spiral of silence more broadly, we can examine the relationship between perceptions of having a majority view and the likelihood of sharing political opinions.

Respondents were asked: “Generally speaking, do most people you communicate with online tend to have political beliefs similar to yours, different political beliefs from you, or a mix of various political beliefs?”

Cross-nationally, the majority of respondents (65%) say they communicate with people who have a mix of political beliefs. A minority (15%) tends to communicate primarily with people who have different political beliefs, while a fifth (20%) communicate primarily with people who have the same beliefs. Interestingly, those who believe they hold minority views and those who believe they hold majority views both tend to post, comment and like political content more frequently than those who say they communicate with people who have a mix of political beliefs. This does not directly support the spiral of silence theory but does not discount it either.

Furthermore, when we examined the relationship between how often individuals agree with those they interact with and frequency of self-censorship (deciding not to post something for fear of offending or upsetting someone online), the relationship is in fact the opposite from what the spiral of silence predicts. Those who disagree with others frequently tend to self-censor less than those who do not disagree.

In short, evidence suggests that on average, Internet users are not likely to refrain from political posting because they do not hold a majority view.

Fake News

In the time frame of this project, a panic over the rise of fake news continued to grow in the US, and other nations, particularly in the aftermath of the 2016 US Presidential election. There are limitations in looking at this issue. First, fake news is not yet fully conceptualized and, as such, there is no well-accepted theoretical perspective to adopt. Further, we do not have questions specifically asking about fake news, as it was clear that this is a concept used by academics, journalists, and politicians in multiple ways, and not by the general public. However, our survey included a number of questions related to fact checking. The data we have on fact-checking behaviors allow us to discuss this issue with some empirical basis.

Fake news is only a problem to the extent that people a) read fake news, and either b) believe the fake news stories they read, or c) fail to fact-check the fake news stories they read. If people are seeing and reading fake news stories but dismiss them, like celebrity gossip magazines, or if they are also frequently fact-checking by consulting other sources, then the existence of fake news may not be a pressing problem. However, if people are seeing and reading fake news stories and failing to fact-check, this leaves the door open to fake news to

have a negative impact on political discourse. In light of this, the question to answer is: To what degree do people fact-check news and information they encounter (online)?

Across all nations there are a sizeable number of respondents who say they rarely or never fact-check the news and information they see. This ranges from 17 percent of respondents who rarely or never use search engines to check facts to 35 percent who say they rarely or never ask friends or family to confirm information.

Nevertheless, a majority of respondents say they sometimes, often or very often check facts. Across all our sample nations:

- 17 percent of respondents report rarely or never using search engines to check the accuracy of news or information. Half of respondents (51%) say they check the accuracy of information often or very often, while 32 percent do sometimes.
- 27 percent of respondents say they rarely or never try to confirm news or political information by checking with major news outlets. Meanwhile, 37 percent say they often or very often do so. A further 36 percent say they sometimes do so.
- A quarter (25%) of respondents say they rarely or never try to confirm news or political information by searching online for another source (mainstream or not). A further 39 percent say they often or very often search for confirming sources, while 36 percent say they sometimes do this.
- 35 percent of respondents say they rarely or never seek out the guidance of a friend or family member in confirming information. Slightly fewer respondents, 28 percent, say they often or very often ask friends and family members to confirm information they've found. Another 38 percent say they sometimes ask for guidance.
- 16 percent of respondents say they never or hardly ever use a search engine to check whether something on social media is true or false. A total of 74 percent of respondents check social media posts occasionally or when in doubt. Close to 9 percent overall simply disregard the information they don't trust, without checking it. Thus, overall, the majority of respondents across all nations report checking social media content. However, there remains the 16 percent of respondents who never or hardly ever engage in fact-checking using search.

Notably, the number of people who report not fact-checking is sizeable and is a potential reason why fake news has been able to spread. If a quarter of respondents (25%) across seven nations rarely or never crosscheck news or political information by looking to other sources online or if 16 percent do not use search engines to check whether social media posts are true or false, fake news has the space and opportunity to thrive. An analogy is telemarketing, which can thrive even if a very small percentage of recipients respond.

Some respondents do, however, report simply ignoring dubious information they encounter, specifically on social media. Responses here indicate that they are skeptical of the information and do not just accept it. However, while some respondents do report ignoring questionable information, this proportion is small. Only 9 percent overall said they simply disregarded dubious information on social media. This is a minority of people. There remains the larger proportion of respondents (16%) across all seven countries that report never or hardly ever checking the veracity of social media posts.

Of course, most uses of social media are for entertainment, and they are less often used by most people for political news and information. Nevertheless, it leaves us with questions about how large the minority of Internet users is who do not ignore, nor check the veracity of information about politics received on social media sites.

With respect to differences across our seven countries, respondents in Italy, Spain, Poland, and, to a slightly lesser degree, the United States, are most likely to fact-check. They are the most active and skeptical. In particular, respondents in Italy and Spain report being very active in fact checking. In contrast, respondents in the UK, Germany, and France are the least likely to report fact checking. Consistently, the proportion of respondents in Germany who report often or very often checking information is lower than in other countries.

These observations are consistent across the various modes of fact checking explored in the survey. Specifically, when it comes to using search engines to check the accuracy of news and information:

- Respondents in Italy and Spain appear the most vigilant, with six in ten (61% and 59% respectively) saying they check news and information using search engines often or very often. At the lower end of this group, close to half (49%) of respondents in the US say they check news and information often or very often. Meanwhile, only four in ten (39%) respondents in the UK and a third (35%) in Germany say they check news and information with such frequency.

Further, in terms of using search engines to help fact-check the veracity of social media posts:

- Respondents in Italy, Spain and Poland are again the most likely to check information on social media, with eight in ten (85.1%, 79.43%, and 79.97% respectively) saying they check social media posts occasionally or when in doubt.
- Around three-quarters of respondents in the US (75.66%) and France (74.7%) say they check social media posts occasionally or when in doubt.
- Respondents in the UK and Germany are the least likely to report checking social media posts this often, with only six in ten (60.65% and 64.45% respectively) saying they use search engines to verify information occasionally or when in doubt.
- Interestingly, more respondents in the UK (13.2%), Germany (13.9%) and France (11.76%) say they simply disregard information they don't trust without checking it.

Thus, while fewer respondents in these countries say they actively check information, they are more likely to simply ignore social media posts they don't trust. Responses in these nations compare to 5.12% in Italy, 6% in Spain, 7.6% in Poland, and 6.97% in the US.

The use of other mediums – such as major news outlets, like TV news, radio, or the press, either online or offline – and methods – such as asking friends and family members – to fact-check news and political information conforms to the same patterns:

- Only around three-tenths of respondents in France (30%), Germany (28%), and the UK (31%) report checking major news outlets to verify information often or very often. Meanwhile, four-tenths of people in Italy (41%), Poland (41%), and the United States (42%) – and almost half of people in Spain (48%) – say they check news and information this frequently.

- These same patterns are witnessed when the question is broadened to ask if respondents try to confirm information by searching online for any other source, mainstream or not.
- Respondents in Italy, Spain, and the United States are the most likely to seek confirmation of information by asking friends or family members, with three in ten (29%, 35%, and 31% respectively) reporting seeking guidance often or very often. Only around a quarter of respondents in the UK (25.28%), Germany (22%) and France (24%) report seeking the guidance of others often or very often.

Overall, across all countries, the majority of respondents say they sometimes, often or very often check facts. Nevertheless, there remain a sizeable proportion of people – a fifth to a quarter – who rarely or never check news and political information. This is notable given the tools at hand, such as search engines, which make fact checking easier. It is perhaps this population of people who do not fact-check who are most susceptible to fake news. Further research could probe the potential reasons people do not use the tools available to them to fact-check or, more broadly, why people do not fact-check dubious information at all, especially in the case of social media – a medium which people have low trust in.

Part 7. Points of Summary and Conclusion

The rise of the Internet and related information and communication technologies, such as search engines, social media, and mobile applications, have generated increasing concerns over the role of these new media in political opinion formation. Politicians face pressure to address these concerns, such as by expanding their authority to regulate media plurality from print and broadcast media to the Internet. Given the many assumptions about the impact of search and the behavior of individuals built into any actions that politicians and regulators might take, it is critical for these assumptions to be the subject of research. Positive and negative assumptions about the role of search should be examined in relation to empirical evidence. Given that this remains an under-researched area, there is a lack of significant evidence of the impact of the Internet, and the impact of search, in particular, on political opinion formation. This creates a higher risk that a lack of data will lead to regulators making ill-informed and inappropriate decisions in this area.

This study has sought to fill some of this information gap by conducting original research on how search impacts the political opinion formation of individuals, particularly with respect to political issues and current events. To accomplish this, the project focused on the collection of a unique set of survey data that enabled us to develop strong generalizations about the part played by search in the larger nations of the EU as a whole and in comparison with the US. Given this survey, along with a review of previous surveys and literature, and analysis of trace data, the report is able to describe how individuals use different forms of media, including Internet search and mobile apps, to inform their political views, and how search complements this information gathering. There is no other dataset that matches the range of media explored by this study in its coverage of Europe and the US with a focus on search.

These descriptive findings provide a strong, empirically anchored perspective to compare and contrast the value of a number of competing and complementary theoretical perspectives on the part search plays in political opinion formation. This report summarizes the initial descriptive and more general explanatory findings of this study. Future papers and reports will develop themes arising from more in-depth analysis of the data reported on in this early report of findings.

The remainder of this section first takes each of the 6 initial research questions in turn and summarizes the key findings related to each. The focus is on explaining the perspectives, media uses, and political opinion formation processes of individuals cross-nationally. Country-specific reports can be found in Appendix 5. Next, we briefly review two policy recommendations which first emphasize the need for training related to search and second emphasize the importance of understanding the diversity of the current media ecology which calls into question some of the alarmist responses to ideas such as echo chambers and filter bubbles. Finally, we conclude with a discussion of future research opportunities.

Responding to the Research Questions

1. How is important is search perceived by those who use the Internet?

As sections 2 and 3 of this report have shown, search − in general and for information about politics − is a very important tool for the majority of Internet users based on our survey responses across all countries. In total, 64 percent report using search more than once a day

and almost all others use search daily. From finding information about natural disasters to planning a journey to researching political issues, the majority of people go to search first to find what they need. Of the 6 activities we examined only learning about a neighborhood or community event was most commonly learned about via an alternative source. The reasons people use search varies widely, but even the least common purposes (finding entertainment content and learning about politics) were at least sometimes used on average across all countries. Indeed, as section II-D showed, search is seen as the most reliable source of information relative to other sources including radio, television, and friends and family. Social media is seen as least reliable (section 2.5).

Notably, there is a consistent trend wherein respondents in Germany use search less and those in Poland use it more on average.

Findings indicate that search is a crucial part of most Internet users' daily lives and reinforces the need for a more nuanced understanding of the role of search. The remaining research questions focus specifically on the political role of search.

2. How do people consume various media to form political opinions or set political agendas?

Individuals report relatively low interest and relatively low use of any media for political information sourcing or sharing. Most of the general public are not very interested in politics. That said, political opinion can be formed without explicit interest and through information seeking and sharing that an individual does not actually perceive to be 'political.' Moreover, interest in politics tends to ebb and flow with the political climate locally, nationally, and internationally, and over time, which can be hard to capture using a single survey even if across seven major countries. Nevertheless, our study provides important information about how search is integrated into a larger set of media.

As section 3 showed, 40 percent of respondents report using search often or very often to find information about politics or current affairs. This is about as common as using search to find entertainment content but far less common than the most popular uses of search (finding information about a particular topic and navigating to specific websites). While the frequency of political search is low relative to a number of other purposes, it must be noted that the most frequent purposes are more general and could in fact include some political searching. Furthermore, the sporadic nature of most people's political interest means that there could be moments in time when search is used very frequently for finding information about politics, such as in the days before an election, and other times, when it is not used at all.

Considering political news specifically, online sources are the second most common (television is most common). Among online sources, search is by far the most likely place for people to start. That said, there are important individual differences in how people perceive and use search for political information sourcing. For example, we found that 35 percent enjoy using search for political information. Meanwhile, 30 percent are frustrated by it. This suggests that when people want political news, search is sufficiently important that people overcome their frustrations to get the information they seek.

Notably, search tends to change few people's minds on particular issues (under 10%) but is more commonly a contributor to moderating or changing political views (42%). Meanwhile, 68 percent of respondents said search was important in deciding whom to vote for. However, it

was one of several sources that individuals believed to be important in making voting decisions. This reinforces the importance of considering both the wider set of media and the wider political climate when trying to assess the role of search in political opinion formation.

There are also individual differences when it comes to search and to forming and changing political opinions. While demographic variables are not consistently or strongly related to patterns of search or changing political opinions, the number of sources of political information and search efficacy are related. It is therefore important to consider the wide range of media individuals have access to when assessing the political opinion formation process. Furthermore, as we report in Part 2.8, heavy mobile users also tend to be heavier users of search generally and for political purposes, and they tend to seek out more political information from a more diverse set of sources.

Finally, our trace analyses of trends show that interest in political issues is relatively infrequent based on data collected globally over the past seven years and nationally over a three-week sampling period in January 2017. While there is evidence of an increase in the frequency of political searching over time, it is limited. This does not mean that search is not important for political opinion formation but rather that the popularity of other topics overshadows the important role of search given the sporadic and specific nature of most people's political interests, such as focusing on issues or candidates in their local area.

3. How does search impact the individual's view on the results they receive?

Individuals vary greatly in their expectations of search. As we reported, most (51%) believe search has about the same amount of bias as major news outlets. However, when asked how the curating of news content should work, there is little agreement. Individuals tend to prefer journalists and editors over automated processes generally. Yet, as noted in Part 4.4, when asked about the process of curating, about a third of respondents think any curating should be based on their past search results, a third think it should not, and the remainder are uncertain. That said, there is more agreement that search results should not be based on the searches of others such as friends. This is an important distinction, which points to a key difference between search and social media as sources for political information.

While the majority of people (65%) tend to believe they are exposed to a range of views on social media, they still trust social media less than search or other news sources. Search is believed to be more trustworthy and a less biased source. Indeed, searching for more information is one of the most frequently used strategies individuals employ for checking information found on other sources. As noted in Part 5.4, reading news stories they disagree with and consulting alternative news sources are other common approaches. What is striking about people's approaches to checking information is that the majority of people make use of a wide variety of strategies. This suggests that it is naïve to consider any one source when assessing the quality of information a person has access to as they develop political opinions.

Furthermore, the use of multiple sources of political information is one of the most consistently significant variables impacting our four outcome variables (political search, voting choice, opinion change, and fact checking). Considering fact checking specifically, use of the Internet, ability using search, and some online political activities are the strongest predictors. This highlights the importance of individual differences in shaping how people make use of search and how they view search results. Notably, demographic factors are not consistently

related to fact checking at a statistically significant level, or most other outcomes. In other words, individuals' own experiences, perspectives and preferences are the key drivers.

Finally, those who are heavy mobile users also tend to be heavy Internet users generally and heavier users of search. Mobile users are more intensive searchers cross-nationally. That said, there are some potential cultural differences that require future work to untangle. For example, the relationship across all outcome variables is somewhat weaker in Poland than in all other countries.

4. Do search results play a big role in opinion formation or agenda setting? Does the personalization of search make its role decidedly different from the mass media in shaping opinions?

There are significant individual differences in how people search, what they expect from search, and more broadly how people collect and share information that informs their political opinions, as shown in Part 5. This report documents many systematic cross-national and individual differences, such as in reliance on search rather than the mass media. Cross-nationally, these findings emphasized the history and culture of the media in each nation that engendered a greater or lesser reliance on television and the mass media as opposed to the Internet and social media. An individual's political and Internet orientations shape their dependence on dependence on search and their sophistication in its use to source and check information. For example, for users who are interested in politics and skilled in search, search engines play a powerful role by enhancing their ability to source the information they are seeking. For users who are not interested in politics, and who lack skills in the use of search, there will be less reliance on search and this could be to the detriment of using the Internet and search to source and check the accuracy and veracity of information.

Our experimental results showed there was little effect of personalization on the results people are served, at least in the limited case of the US (Appendix 4). Furthermore, in the previous sections on theories including agenda-setting, two-step flow and echo chambers, we showed that people report that they are exposed to a diverse array of ideas and that they make use of a variety of online and offline approaches to identify important issues (set agendas) and develop their opinions on specific issues as well as form broader political views. This indicates that search does play an important role but that it must be interpreted in the context of many other media, in a specific political climate, and according to individuals' own interests, abilities and preferences. This is not to say the proverbial 'it depends'. Search is very significant but in ways adapted to particular individuals and contexts.

While it is tempting to compare search to mass media and ask which has a greater impact, it is important to recognize that in the current media ecology they co-exist. Individuals continue to rely on mass media to an important extent and they supplement that with a range of sources. Search is a key way that people find political information – indeed, it is a key way people find and access mass media information – but it is one among a wide range of sources individuals can rely on that shape outcomes like changing voting choice and changing political opinions.

5. What aspects of individuals, such as their locations or search histories, shape the results received from a search query?

Our ability to answer this question was limited by our methodological approach. To accurately answer this question, we would require access to people's browsing history and/or detailed information about how search algorithms are developed which was not possible for this study. In line with past research, our experiment reinforces findings that there is little impact on search results based on partisanship (Appendix 4). Past research, however, suggests that location does have a stronger impact on the results presented, particularly when and if users enable their locations to be taken into account.

This represents an important but also challenging area for future research. Search is a core way people access information about politics and current affairs and so the types of information served to different people could have great influence on how people develop their opinions. Of course, search is but one of many sources. However, since the algorithms search engines use are proprietary and changing over time, it is extremely challenging to know what exactly is being presented to different individuals. Nevertheless, our survey results suggest that technologically deterministic perspectives on algorithms creating filter bubbles, for example, are exaggerated and do not take the larger media context into account.

6. What is the impact of populism on search and opinion formation?

Search does provide results that are popular among those searching for a particular topic. The basic algorithms used by search engines by definition prioritize those websites that are highly linked and clicked and are already a known commodity. This allows the popular to become more popular and the obscure to remain obscure the majority of the time, as discussed around the notion of 'power laws' or a winner-takes-all effect. The prominence of news of the day as trending "hot topics" we found illustrates this as does the prominence of large legacy news sites in the results from our experiment (Appendix 4).

While this is not new, there is a parallel growing concern related to the political notion of populism, interpreted not simply as whether what is already popular becomes more popular or not, but in terms of whether or not people, on average subscribe to populist ideology and whether this is reinforced by their use of search.

One of the more remarkable findings of this project was the popularity of populist views on democracy. Contrasting populist versus elitist views on democratic institutions, there was a clear preference among the Internet users we surveyed for more populist perspectives on democracy. The majority of those surveyed agreed with 3 or more of 5 populist viewpoints. Internet users – most of the public in the nations surveyed – tend to trust in themselves and public opinion rather than defer to elected or appointed representatives. In many ways, this should not be surprising in societies in which the public can gain access to an increasingly sophisticated trove of information about any topic. They know more and more about political issues that they care about, and the politicians that matter to them. This makes them more informed, but also less likely to put their representatives on a pedestal (Meyrowitz 1986). They know too much about them – 'warts and all', as Oliver Cromwell put it. The concern this raises is based, ironically, on the degree to which democracy has long depended on elites to protect its values and institutions, such as freedom of expression, leading to so-called democratic elitist theories (McClosky 1964).

However, while we found populist perspectives strong across our sample nations, we did not find these viewpoints to be important in explaining search and its outcomes. Instead, interest

in politics, political participation, and Internet use and skills were more critical to any explanation of individual differences in the use or outcomes of search for political information.

Limitations of the Present Research

There are important limitations to this research. First, we chose to make use of an online survey, which means we cannot compare Internet users to non-Internet users in terms of their use of other media and their political opinions. Without these points of comparison, we cannot speak to broad patterns of political opinion formation online versus offline. However, in the countries we studied, the lion's share of individuals have access to the Internet and are well represented in our study.

Similarly, we purposively selected seven countries to include in this study. Other countries may well provide different results. While there were some consistent trends across countries there was also consistency in differences, for example Germany and Poland are often found on opposite ends of the search use spectrum. This suggests that cultural differences are crucial. That said, there are major commonalities across the countries, such as the importance of search. Differences of degree are not differences in the overall patterns of search.

Furthermore, within each country, our random sample, stratified on such variables as age and gender, did not prevent oversampling of certain demographics, such as education. In particular, respondents in Poland, Italy and Spain were disproportionately more highly educated. That said, as section 5 showed, education is not a strong predictor of any of our main outcome variables, which suggests this oversampling has a limited impact on our overall results.

Also, as they are based on survey data, responses are always subject to the potential of biased responses, such as a social desirability response set. For example, respondents might believe it is socially expected that they check information, and therefore over-report their fact checking. The wording of questions was designed to reduce this potential by ensuring that questions were as neutral as possible. We also focused on asking people about their own behavior as many perceptions of problems, such as with echo chambers can be subject to what are called 'third-person' effects. For example, a person might believe they see a diverse set of viewpoints, but that other people don't, or that they can tell if information is problematic, but others are likely to be fooled. By asking about the individual's own beliefs and behavior, this study avoids that problem.

Next, our trace data approach was limited, and meant to be complementary to the core study. We used only data that was publically available from Google to determine the most searched terms worldwide (2010–2016) and to determine the "Hot Trends" per country (January 2017). We assume this data was up to date and accurate and that other search engines would have similar results. No other search engines make this data available in a similar structure and so comparison was not possible. We also had to rely on the existing categories Google uses for reporting global trends (all searches, news/events, people). Notably, news and events is a combined category since in some countries in some years the term 'events' was used when in other instances news was used. Through manual analysis, the research team determined these were similar enough categories to be assessed as one. As with all manual content analysis, training coders and ensuring each piece of content is coded in the same way is a

substantial undertaking. Nevertheless, multiple training sessions led to remarkable consistency across our coders, and the generalizations drawn from our trace data approach appear robust and valid.

Implications for Policy and Practice

There are a number of crucial policy implications arising from this study. First, there is a need for better training programs to develop a greater sense of ease when using search for those who presently feel frustrated or incapable, and lack skills in search. At least there is a need for greater sensitively to the value of learning about the use of search. Skills and efficacy in use of search are both important predictors of our outcome variables.

Secondly, policy designed to address fears of echo chambers and filter bubbles should be tempered and perhaps re-imagined given the context of a diverse media ecology, which does not necessarily produce such narrow structures for political information collection and opinion formation. Paradoxically, search itself is one of the major tools for individuals to check facts and challenge information seen on any media, so policy should avoid undermining the very tool that individual Internet users can employ to check information.

The data as described throughout this report illustrate that, contrary to popular belief, not everyone is comfortable or feels that they are skilled at using the Internet to search for the information they need. Rather, a sizeable proportion of the respondents in our survey indicated that this was difficult for them and that they often felt a sense of frustration when using search. This did not prevent many people from using search when they are indeed interested in politics, but it remains a problem that could be usefully addressed.

In terms of providing better training and accessibility to Internet users, comprehensive programs should be developed by both government and industry to address these issues and lower the barriers that may make using search intimidating for some. For example, while Google Support does provide information on how to effectively search on Google, users who do not feel savvy using search would not easily find such a page to begin with. Making this information readily available and easy to access, perhaps even by placing a “help” button on the search engine’s home page, would be a critical first step to removing the obstacles to fruitful search. For government, offering Internet and search-related educational services at local libraries or community centers would also help to lower the barriers to the world of search. More generally, future designs of search pages should keep this problem in mind and seek to simplify search, even if possibly reducing new features or options.

Another important policy implication that arises from the data is making sure that search and social networking/information-sharing platforms do not become needlessly, inappropriately, or excessively regulated. While the specters of filter bubbles, echo chambers, and spirals of silence are viewed as a result of search personalization and claimed by many to be serious threats, our data suggests that this is overly simplistic, either technologically or socially deterministic, and exaggerated. Instead, the respondents from our survey indicated that they frequently encounter opinions that do not align with their own, and become knowledgeable about a range of political viewpoints.

Moreover, use of multiple sources of political information is consistently and significantly related to each of our outcome variables. For example, our research demonstrates that many

Internet users regularly check the veracity of claims found online by searching for reputable sources, and do not simply accept what they read at face value. This does not mean that training and education in critical skills, such as in identifying fake news, would not have value. But it does suggest that while contemporary discourse surrounding echo chambers, filter bubbles, search personalization, and fake news have intuitive appeal, they are quite alarmist, and not in line with the findings of this research. This report shows that we should take an evidence-based approach and review the data before implementing any policies that call for stricter regulation or accountability that might undermine the value of search for individuals interested in finding information about politics.

Further Research

This report has provided a detailed but largely descriptive review of the key variables associated with the use of search for political information, and its role in political opinion formation as well as the role of the larger ecology of media. We have emphasized the role of search in this report yet there is much more to be gleaned from this data. We have been able to paint a broad picture of the ways in which search plays into the political opinion formation process but the next steps include diving deeper into data regarding social media use that we collected in order to provide a more nuanced comparison. Often search engines and social media companies are grouped together in discussions of the power that digital media and their algorithms have on the political lives of citizens. A detailed comparative examination was not possible in the context of this report but is a promising avenue for future work. Similarly, the data collected for this study offer useful opportunities for additional cross-national comparisons, understanding media habits, understanding the role of populism, and much more.

Beyond further exploration of the existing data, this research opens up many additional questions for further research, such as through further analysis of specific aspects of our cross-national survey data, more in-depth interviews, follow-up surveys, or additional analysis of Google Search data. One particularly interesting example would be a long-term in-depth analysis of political searches through the analysis of traffic data, such as are available through Google Toolbar. These would enable a more accurate measurement of the impact of potential search result bias, as we would be able to trace which links users clicked on after they received their search results, joining any influence of algorithms with the influence of the choices made by users.

8. Appendices

Appendix 1. Sampling of Nations

The survey data consist of random samples of about 2,000 Internet users aged 18 and older from seven nations: the UK, the US, Germany, France, Italy, Spain, and Poland. The samples were drawn from pre-qualified panels of Internet users in each of the countries. The selection of respondents was done using quotas based on age, gender, and region. The resulting sample was weighted using age, gender and region so that it matched known national population proportions.

The weighting targets for gender for each country were:

	France	Germany	Italy	Poland	Spain	UK	US
Male	49.0	47.0	49.0	48.0	48.0	48.7	47.5
Female	51.0	53.0	51.0	52.0	52.0	51.3	52.5

The region used for sampling and weighting varied with each country. The following table gives the unit for each region and the number of categories. Since the number of categories is different in each country, the target proportions are also different. This would make the table of weighting targets long and we do not reproduce it here.

	France	Germany	Italy	Poland	Spain	UK	US
Region	Region	Bundesland	Region	Province	Autonomous Community	Region	State
Number of categories	13	16	20	16	19	12	50

The age brackets used for weighting also varied with each country. Reproducing them would require seven tables, one for each country, so we do not present them here.

The weighting efficiency for each country is in the table below. The weighting efficiencies are very high because online surveys have tight control over who completes the questionnaires.

France	Germany	Italy	Poland	Spain	UK	US
98.5%	97.4%	94.1%	93.6%	85.6%	98.0%	98.5%

The questionnaires contained items for approximately 244 variables. They contain a number of variables that are not easily translated cross-nationally, like education and political party. To ensure the most accurate data, we used separate national education categories and national political parties. These will differ from country to country. The local survey companies translated the questionnaires into each local language. Each translation was also reviewed and corrected by a social scientist. The questionnaire was in the field during 4–16 January 2017. The table below contains the number of completed questionnaires for each country.

	France	Germany	Italy	Poland	Spain	UK	US
N	2,000	2,000	2,000	2,005	2,007	2,000	2,018

The total number of respondents across all seven countries was 14,030. We asked for about 2,000 respondents per country because that would give us a sampling error of about ±2% on the entire sample and it was big enough to support some analysis by subgroups, for example by gender or by education category or by party preference.

Appendix 2. Coding Schedules for Trace Data

Trends over time, popular searches and Hot Trends items were coded at two levels according to the following schedule:

Political or not (all terms)

- Political
- Not political
- Possibly political

News type (only news/events items for trends over time and all Hot Trends items)

- Political
- Event
- Terrorism/attack
- Disaster
- Health/pandemic
- Crime
- Sports
- Celeb/Media
- Other
- Not news [used for Hot Trends only]

Experiment results were also analyzed at two levels:

Type (all)

- Government
- News
- Organization (such as NGO, think tank)
- Political
- Reference
- Search
- Social
- Other

News type (only those identified as news in first level of analysis)

- Mainstream (unless international)
- Magazine (unless international)
- Alternative (unless international)
- Technology and business (unless international)
- International

Appendix 3. Search and Autocomplete: An Experiment

Given persistent concerns over online 'echo chambers' and their potential effects, we conducted a small-scale experiment. Informed by prior literature (Feuz et al. 2011; Hannak et al. 2013; Kliman-Silver et al. 2015), the experiment was conducted to explore the 'filter bubble' hypothesis as it relates to Google search results. Specifically, the question was asked whether Google would serve different search results to users based on their ideological leanings.

Previous studies have found that the primary causes of personalization are a user's location and their login state/use of cookies (Hannak et al. 2013; Kliman-Silver et al. 2015). In fact, almost all observed personalization on Google has been found to be a result of location differences, with results tailored to suit users in different localities (Hannak et al. 2013). For example, two users in different cities searching for store names (e.g. Home Depot) will receive results pointing them towards relevant stores nearby. This is perhaps an unsurprising finding. Other observed personalization has been attributed to users being logged into Gmail accounts (or not) and having cookies enabled (Hannak et al. 2013).

Other potential sources of personalization (such as browser type and operating system) have not produced results reaching beyond a level of baseline noise (Hannak et al. 2013; Kliman-Silver et al. 2015). Studies have, however, reached mixed results regarding the role of search and browsing history in Google search personalization. Hannak et al. (2013) observed no notable personalization arising from users' search and browsing histories. Feuz et al. (2011), on the other hand, did observe personalization resulting from different users' search and browsing histories. Further, in terms of the topical differences between search and browsing histories, searches relating to 'political' and 'controversial' topics have been found to produce minor personalization effects (Kliman-Silver et al. 2015).

Given that the focus of this experiment was on uncovering political personalization, location was controlled for and removed by conducting all searches from the same geographic locality. In theory, this left each user's login state and search/browsing history related to (partisan) politics as the primary independent variables.

The following procedures were followed in setting up the experiment.

Seven computers of the same model, using the same operating system, were set up in East Lansing, Michigan, and different features were assigned to each. Each computer was absent of any search or browsing history. With the aim of the experiment being to test the 'echo chamber' and 'filter bubble' theses in the context of (US) political search, three computers were designated as 'right-leaning' political accounts and three designated as 'left-leaning' political accounts. The seventh account was a mix of both. A corpus of right- and left-leaning search phrases was compiled for each of the two groups (and the mixed account). These search phrases were gathered using the following process:

- Complete texts of DNC and GOP party platforms from 1988 to 2016 were entered into a text analysis program and the most common recurring words identified
- Taking those most common words and using the concordance feature offered in the program, search phrases were pulled from the texts

- For example, one of the most common words in the corpus of GOP platforms was ‘government’. In context, the word ‘government’ occurs in such phrases as “safeguard religious institutions against government” and “full constitutional protection from government”

These phrases were used to ‘train’ each of the accounts, with the aim being to produce three computers with right-leaning search/browsing histories (using GOP phrases), three with left-leaning search/browsing histories (using DNC phrases), and one with a mixed political search/browsing history (using a mix of both GOP and DNC phrases).

Given the findings of previous studies, which have shown that the login state of users and use of cookies are features of personalization, each computer was set up with a particular configuration, with the aim being to uncover differences between login states. These configurations were as follows:

1. A right-leaning user logged into a Gmail account using a Google Chrome browser in ‘incognito’ mode
2. A right-leaning user logged into a Gmail account using a regular Google Chrome browser
3. A right-leaning user not logged into any account using a regular Google Chrome browser
4. A left-leaning user logged into a Gmail account using a Google Chrome browser in ‘incognito’ mode
5. A left-leaning user logged into a Gmail account using a regular Google Chrome browser
6. A left-leaning user not logged into any account using a regular Google Chrome browser
7. A mixed user not logged into any account using a regular Google Chrome browser

Prior to conducting any account training, control searches were performed on each of the computers to establish a pre-test baseline. Searches relating to a number of political topics (such as immigration, Brexit, and terrorism) were performed and both the autocomplete suggestions and first-page search results recorded. The search terms used were: ‘politics’, ‘political party’, ‘immigration’, ‘trade’, ‘terrorism’, ‘Brexit’, ‘climate change’, ‘internet regulation’, and ‘privacy’. The autocomplete suggestions used were: ‘why do immigrants’, ‘immigration’, ‘immigration should’, ‘immigrants should’, ‘terrorism’, ‘Brexit is’, ‘climate change’, ‘climate change is’, ‘trade should’, ‘the internet is’, ‘the internet should’, ‘privacy’, ‘privacy is’, ‘Donald Trump’, ‘Donald Trump is’, ‘Hillary Clinton’, and ‘Hillary Clinton is’.

These search terms were selected because they were inherently political and likely to yield potential results indicating partisan bias. They were also terms related to questions in the broader survey that this experiment is connected to. Only first-page search results were recorded because our survey findings indicate that people rarely go beyond the top ten Google results. Second-page results are, therefore, somewhat insignificant.

Each of the accounts was then trained according to its specific orientation (left, right, or mixed), with search phrases being entered into the Google search bar at random intervals (between 1 and 15 minutes) over the course of a day. Each time a search was performed, a

randomly selected link from the front page of Google results was clicked on. This was done to ensure each account built up both a search and browsing history.

The training process was performed manually so as to prevent Google from blocking any automated scripts (an issue encountered by previous researchers: see Feuz et al. 2011) and to approximate the 'natural' search and browsing behavior of ordinary Google users.

Searches were conducted over an eight-hour period, with a total of 60 training search phrases entered into each of the partisan accounts and 60 random results clicked on. The mixed account saw 120 searches performed and 120 results clicked on. Although the number of searches performed was relatively small, it must be noted that Feuz et al. (2011) witnessed personalization after as few as ten searches being performed, indicating that Google can quickly begin using an account's search and browsing history to tailor results.

After the training period, the same pre-training searches (relating to a range of political topics) were conducted again and both the autocomplete suggestions and first-page search results recorded. Final test searches were conducted at 11-minute intervals to avoid carry-over effects (Hannak et al. 2013). The differences between pre- and post-training search results constitute our (personalization) findings.

Our analysis of the data consisted of three steps. First, raw differences between pre- and post-training search results were assessed. We then used a Jaccard Index in order to measure similarity between sets of search results. The Jaccard Index measures the extent to which two lists of objects are similar. It has a range of 0 to 1 where 0 means there is no overlap between the lists and 1 means the two lists are identical. Qualitative differences between lists of search results were also assessed. Next, raw differences and Jaccard Indexes were calculated for autocomplete suggestions. Again, qualitative differences between autocomplete suggestions were also assessed. Finally, we extracted the subdomain and domain suffixes for the URLs of each search result for three accounts (2, 5, and 7). We also used content analysis to examine the type (e.g. news/magazine, Government/agency, Dictionary/encyclopedia) of these websites based on their URLs, and looked for differences in type based on partisanship.

Personalization of search results was measured by both looking at raw numbers and by calculating Jaccard Indexes. Personalization was viewed in an absolute sense by looking at unique results – if a new result appeared in a post-training search result list that did not appear in the pre-training list, this was considered personalization.

This experiment, while limited, provided insights into the extent to which Google might (or might not) be tailoring first-page search results based on partisan political preferences (searching and browsing history). Data also provided insights into source diversity within Google search results.

We used this data to conduct three types of analysis:

- Items and order of search results and partisanship
- Autocomplete and partisanship
- Type of search results and partisanship

Items and Order of Search Results and Partisanship

Consistent with previous research, there was personalization of search results based on each user's search and browsing history. A total of 16.15% of post-training search results were unique (compared to pre-training (control) results). Each user saw an average of 1.84 different results (out of 11–12) across all of the tested search terms (See Table A3.1).

Table A3.1. Number of Personalized Search Results Between Pre- and Post-training Tests

No. Different results	Right 1	Right 2	Right 3	Left 4	Left 5	Left 6	Mix 7	AVG
politics	2	2	1	1	1	1	2	1.43
political party	2	2	3	2	2	2	2	2.14
immigration	3	2	4	4	3	4	3	3.29
terrorism	2	2	1	1	1	2	2	1.57
Brexit	2	2	2	2	2	2	2	2
climate change	1	0	1	0	0	0	1	0.43
trade	4	5	4	3	3	3	4	3.71
internet regulation	1	1	1	1	1	1	1	1
privacy	1	1	1	1	1	1	1	1
AVG	2	1.88	2	1.66	1.55	1.77	2	1.84

Comparing the different users, there were no significant differences between each of the seven accounts when post-training search results were paired with their controls. The amount of personalization was consistent across all users. Every user saw approximately the same number of personalized results across all of the tested search terms.

To check for list similarity in search results, Jaccard Indexes were calculated between pre- and post-training search results for each account and search term (see Table A3.2). The coefficients represent the proportion of identical results contained in each list of search results (regardless of item ranking). As Hannak et al. (2013) note, the Jaccard Index "views the result lists as sets and is defined as the size of the intersection over the size of the union. A Jaccard Index of 0 represents no overlap between the lists, while 1 indicates they contain the same results (although not necessarily in the same order)" (p. 531–532).

As Table A3.2 shows, all users saw an average Jaccard similarity coefficient of .72-.78, indicating that between 72% and 78% of the results were identical. In other words, all accounts saw a 22–28% difference in search results. These results show that the type of account (being logged into a Gmail account or using an 'incognito' browser) had no impact on the amount of overall personalization.

Table A3.2. Jaccard Similarity Coefficients across all Accounts and Search Terms

Jaccard similarity coefficients	Right1	Right2	Right3	Left4	Left5	Left6	Mix7	AVG similarity	AVG Difference
politics	0.71	0.71	0.85	0.92	0.85	0.85	0.71	0.80	0.20
political party	0.71	0.71	0.60	0.71	0.71	0.71	0.71	0.70	0.30
immigration	0.57	0.69	0.47	0.47	0.57	0.47	0.57	0.54	0.46
terrorism	0.69	0.69	0.83	0.83	0.83	0.64	0.69	0.75	0.25
Brexit	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.23
climate change	0.85	1.00	0.85	1.00	1.00	1.00	0.85	0.93	0.07
trade	0.47	0.38	0.47	0.57	0.57	0.57	0.47	0.50	0.50
internet regulation	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.15
privacy	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.17
AVG similarity	0.72	0.74	0.72	0.77	0.78	0.74	0.72		
AVG difference	0.28	0.26	0.28	0.23	0.22	2.26	0.28		

Further, there were no partisan differences observed between the post-training results received by each of the users. All accounts changed in similar ways as a result of the partisan training, with each user receiving approximately the same personalized results. In fact, accounts often received exactly the same personalized results regardless of the 'left' or 'right' designation of the account. For example, after training, both left- and right-leaning accounts searching for 'Brexit' received the same new result: 'Donald Trump's bizarre Brexit lie during his press conference with'. Similarly, right- and left-leaning accounts received the same CNN story ('The golden age of terrorism') when searching for 'Terrorism' post-training.

There were some differences observed, however, between users logged into Gmail accounts and those not logged into Gmail accounts. Users not logged into Gmail accounts saw slightly different news results.

The bulk of personalization of search results came in the form of re-ordering of the same results. While only a few post-training search results were substantively different from control search results, post-training search results were re-ordered to a great degree. The re-ordering and unique personalization of results occurred largely among lower ranks (rank 5 and beyond). Higher ranks (1–4) witnessed a lesser degree of personalization that is important because users tend to select the first few links when searching.

Overall, based on the experiment results, it can be said that the personalization of search results does not appear to place people in ideological filter bubbles. Partisan users on opposite sides of the political divide received the same personalized results based on their political search interests.

Autocomplete and Partisanship

Autocomplete results again show a consistent level of personalization across accounts, with between 30 percent and 36 percent of autocomplete results being personalized for each user. This equates to 1.2 different autocomplete suggestions (out of 4), on average, for each user across the tested phrases.

The personalized suggestions across each of the seven accounts were almost entirely the same, indicating there was no ideological filtering and hence no ideological filter bubble arising from Google's autocomplete suggestions.

Despite a lack of evidence for partisan filtering, autocomplete suggestions provide some evidence of topically personalized results, with changes between pre-training and post-training search suggestions revealing a somewhat greater tendency towards politics. In other words, autocomplete suggestions become more specific and personalized based on the semantic search histories of each user. These results suggest the possibility of Google creating topical filter bubbles, rather than ideological filter bubbles. That is, users highly interested in certain topic areas may find their autocomplete suggestions tailored to those specific interests (whether they are focused on sports, celebrities, politics, etc.). This is different from users having suggestions or search results tailored to particular political ideologies. Results here are only tentative, however. This concept of topical filter bubbles requires further research.

Table A3.3. Main Differences Between Pre- and Post-training Autocomplete Suggestions

Term	**Pre-training suggestions**	**Post-training suggestions**
Terrorism	… news	… and privacy
Privacy	… screen, … act, … fence	… definition, … Act 1974
Donald Trump	… memes	… on immigration, … Jr, … climate change
Donald Trump is	… going to win	… Israel
Hillary Clinton	… memes, … logo	… emails, … polls, … on immigration, … news
Hilary Clinton is	… sick, … is toast	… issues on immigration

Type of Search Results and Partisanship

From our seven experiment accounts we selected the three accounts (2, 5, and 7) and examined the differences and similarities in types of post-training search results. Type is defined in terms of the subdomain and domain suffix for the URL of each search result. Considering all nine search terms (terrorism, climate change, etc.), 70 distinct websites account for the 304 first page results collected in this sample. Of those 70 websites, 34 are news or magazines (only four of which are not American). Only seven sites are government and agencies (such as the FCC and NASA). Other types of sites include dictionaries and encyclopedias, NGOs and think tanks, and other sites including one political site (donaldtrump.com).

Considering the frequency with which particular sites appear, Wikipedia is the most popular site (N=30) and news outlets such as the *New York Times* (N=19) and *The Guardian* (N=12) are second and third in popularity. Twitter (N=8) and Reddit (N=6) are the only social media sites to show up in the first page of results across topics. The following Table A3.4 shows the top ten most popular domains within our sample.

Table A3.4. Top 10 Most Popular Domains (Users 2, 5 and 7)

Subdomain	Type	Number of results	Percentage of all results
Wikipedia	Dictionary/encyclopedia	30	9.9
nytimes	News/magazine	19	6.3
theguardian	News/magazine	12	3.9
nasa	Government/agency	12	3.9
economist	News/magazine	9	3
politico	News/magazine	9	3
theatlantic	News/magazine	9	3
twitter	Social media	8	2.6
huffingtonpost	News/magazine	7	2.3
bbc	News/magazine	6	2

Table A3.5. Six Domain Suffixes in this Dataset (Users 2, 5 and 7)

Suffix	Number of results	Percentage of all results
.com	219	72
.org	44	14.5
.gov	29	9.5
.co.uk	6	2
.edu	3	1
.ac.uk	3	1
Total	*304*	*100*

The majority of results represent commercial sites (.com and .co.uk). Non-profit and charity organizations (.org) are less frequent but relatively common. There are few government (.gov) or educational (.edu and .ac.uk) institutions among these search results.

Considering partisanship, when comparing the site types presented in results for our left, right and neutral accounts there are limited differences. Roughly the same proportion of news, government and other types of sites appear in the results. There is again, therefore, no indication of partisan filtering in this regard. The only notable difference between partisan accounts is that for climate change searches there were no ads served along with results to the neutral or right-leaning account but two advertisements for organizations (“Cool Effect” and “Gardens of health” were included at the end of the search results for the left-leaning content).

However, there remains the fact that there are several sites (Wikipedia, *The New York Times*, *The Guardian*), that appear to be privileged among Google's search results. The frequency with which these sites appear among Google's search results (for a number of different topics) may represent a limiting of source diversity and access to information. Nevertheless, such observations are based on limited data. There is the opportunity here for further research on the issue of search diversity, perhaps in line with the suggestions of Granka (2010).

Limitations and Directions for Future Research

There are several limitations to this experiment. First, the experiment was only conducted over an eight-hour period on a single day, meaning only a limited number of training search phrases were used (and a limited number of links visited). Ideally, a more thorough experiment would be undertaken over a longer period of time and use a larger number of search phrases (and visited pages) in order to generate a more extensive search and browsing history. Nevertheless, Feuz et al. (2011) have demonstrated that personalization can begin to occur on Google after only a few searches being performed.

Second, results are constrained by the semantic validity of the search phrases used to train the accounts. Best attempts were made to select search phrases in a logical manner while also ensuring that their content was both political and ideologically slanted. The texts of DNC and GOP platforms were used to achieve this. However, the use of more strongly partisan search phrases or words (perhaps more purposively selected) might yield different results, with the possibility of more focused (and ideological) personalization.

Third, this experiment was conducted manually, leaving room for human error. Other experiments may wish to employ more automated procedures, as have been used in prior research, in order to maximize the timespan of the experiment and the number of search phrases used. However, the strength of this methodology was in its attempt to approximate 'natural' searching behavior – rather than the search behavior of a bot. It also prevented searches being blocked, a problem encountered in prior automated searching experiments.

Future research could focus on using highly partisan search phrases and words in an attempt to create ideological filter bubbles and create the best possible case to prove prima facie the filter bubble hypothesis (on a conceptual level). However, it is suggested that future experiments should also attempt to approximate real human behavior, taking into account how much people use search and the variety of topics individuals search for, as well as the websites they visit, which rarely may be all intensively focused on partisan politics. Further, as noted, research should look into the potential creation of topical filter bubbles, those bubbles which may not shield individuals from opposing political views, but which may shield them from politics altogether.

Appendix 4. Multivariate Regressions with Metric Coefficients

The following tables display metric coefficients for the multivariate analyses reported in Part 5 of this report, which display standardized coefficients.

Table A4.1. Multivariate Analysis of Political Search: Frequency of Using Search for Information about Politics and Current Events

Variable	France	Germany	Italy	Poland	Spain	UK	US
Age	0.00	0.00*	0.01*	0.01***	0.00	0.00	0.00
Female	-0.02	0.06	0.01	0.10*	0.00	0.06	0.00
Lifestage							
Employed	0.00	-0.21*	-0.05	0.09	0.07	-0.29*	-0.10
Retired	0.04	-0.20	0.17	0.06	0.1	-0.22	-0.21
Unemployed	-0.02	-0.26*	0.03	0.06	0.04	-0.24	-0.02
Education							
Middle	0.10	-0.10	0.11	-0.03	0.02	0.16**	0.04
Higher	0.07	-0.15*	0.08	-0.03	0.12	0.17**	0.00
Marital status							
Married	-0.07	-0.09	-0.15*	-0.01	-0.13*	-0.07	-0.05
Living w partner	0.08	-0.09	-0.04	-0.09	-0.05	-0.09	0.05
Divorced/separated	-0.03	-0.16*	-0.06	-0.24*	0.01	-0.20*	-0.06
Widowed	-0.09	-0.1	-0.19	-0.02	-0.1	-0.21	-0.12
Interest in politics	0.36***	0.34***	0.34***	0.49***	0.33***	0.34***	0.31***
Political activity, offline	0.05**	0.06***	0.03	0.02	0.01	0.04*	0.03*
Political activity, online	-0.03	0.04	0.02	0.05*	0.00	0.03	0.06*
Populism	0.00	0.00	0.00	0.00	0.02*	0.00	0.01
Search ability	0.06	0.14***	0.10**	0.04	0.14***	0.09*	0.19***
Search efficacy	0.00	0.00	0.00	0.01	-0.01	0.00	0.01
Diversity of Media Sources	0.14***	0.13***	0.07***	0.08***	0.10***	0.09***	0.07***
Accuracy of search results	0.00	0.02	0.08*	0.11***	0.08**	0.07*	0.02
Use of the Internet	0.03***	0.03***	0.03***	0.02***	0.03***	0.03***	0.03***
Constant	0.18	-0.21	-0.07	-0.38	-0.22	0.05	-0.04

N	1663	1713	1733	1729	1818	1670	1776
R^2	0.37	0.39	0.32	0.34	0.31	0.40	0.36

Note: Omitted categories are males, students, and primary education, single.
* p<.05; ** p<.01; *** p<.001

Table A4.2. Voting Choice: Importance of Online Search for Information on Voting

Variable	France	Germany	Italy	Poland	Spain	UK	US
Age	-0.01*	-0.01**	-0.01**	-0.01*	-.01***	-0.01**	-.01***
Female	0.01	0.09	0.05	0.01	-0.02	0.19***	0.09
Lifestage							
Employed	-0.16	-0.16	-0.1	-0.03	-0.07	0.00	-0.03
Retired	-0.29	-0.19	-0.1	-0.15	-0.13	-0.06	-0.12
Unemployed	-0.13	-0.22	-0.17	0.09	0.00	-0.06	-0.06
Education							
Middle	0.10	0.00	-0.09	-0.02	-0.08	0.02	0.00
Higher	0.06	0.02	-0.05	-0.02	-0.06	-0.05	-0.12
Marital status							
Married	-0.01	-0.15*	-0.17**	-0.09	-0.04	-0.09	0.01
Living w partner	0.06	-0.04	-0.23*	-0.06	-0.02	-0.14	-0.09
Divorced/separated	0.14	-0.01	-0.19	0.01	-0.06	-0.13	0.05
Widowed	0.13	0.02	-0.16	-0.15	0.12	-0.06	0.06
Interest in politics	0.16***	0.13***	0.18***	0.24***	0.15***	0.06	0.11**
Political active offline	0.04*	0.02	0.01	0.04	0.02	-0.01	0.00
Political active online	0.11***	0.13***	0.14***	0.09***	0.14***	0.13***	0.10***
Populism	0.02*	0.02**	0.01*	0.02	0.02**	0.03***	0.02**
Search ability	0.05	0.14***	0.10**	-0.05	0.08*	-0.01	0.11**
Search efficacy	0.01	0.00	0.00	0.00	0.02**	0.02*	-0.01
Diversity of media sources	0.07***	0.08***	0.03	0.03	0.07***	0.08***	0.09***
Accuracy of search results	0.11***	0.12***	0.18***	0.15***	0.18***	0.12***	0.11***
Use of the Internet	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***
Constant	-1.14***	-1.11***	-0.71**	-0.68*	-1.42***	-0.93***	-0.73**
N	1352	1379	1517	1052	1538	1385	1456
R^2	0.34	0.31	0.29	0.25	0.35	0.33	0.30

Note: Omitted categories are males, students, and primary education, single.
* p<.05; ** p<.01; *** p<.001

Table A4.3. Discover Information That Changed Your Opinion on a Political Issue

Variable	France	Germany	Italy	Poland	Spain	UK	US
Age	0.00	-0.00*	-0.01***	0.00	0.00	-0.00*	0.00
Female	0.03	-0.03	0.09	-0.01	0.03	-0.04	-0.03
Lifestage							
Employed	-0.02	0.09	-0.13	0.08	-0.02	-0.13	0.03
Retired	-0.04	0.17	0.00	0.07	-0.08	-0.15	0.04
Unemployed	-0.03	0.07	-0.03	0.09	0.01	-0.07	-0.04
Education							
Middle	-0.04	-0.21***	-0.01	0.00	0.03	0.05	-0.01
Higher	-0.08	-0.25***	-0.04	-0.09	-0.03	-0.03	-0.05
Marital status							
Married	-0.02	-0.05	0.01	0.03	-0.10	-0.01	-0.08
Living w partner	-0.06	-0.03	-0.04	0.11	-0.23***	-0.10	0.01
Divorced/separated	-0.10	-0.08	0.06	-0.07	-0.32**	-0.16	-0.04
Widowed	-0.04	-0.04	0.08	0.17	0.01	-0.03	-0.05
Interest in politics	0.04	0.03	0.09**	0.11***	0.09**	0.06*	0.05
Political activity, offline	0.01	0.02	0.00	0.01	-0.01	0.00	-0.02
Political activity, online	0.05	0.10***	0.03	-0.01	0.06*	0.07**	0.07***
Populism	0.00	0.01	0.01	0.00	0.01	0.01	0.00
Search ability	-0.02	0.02	0.03	0.04	0.03	-0.03	-0.02
Search efficacy	0.03***	0.03***	0.03***	0.04***	0.03***	0.04***	0.03***
Diversity of media sources	0.12***	0.08***	0.09***	0.07***	0.06***	0.09***	0.09***
Accuracy of search results	0.02	0.04	0.03	0.04	0.06*	0.05	0.07**
Use of the Internet	0.02***	0.02***	0.02***	0.02***	0.03***	0.02***	0.02***
Constant	-0.14	-0.30	-0.26	-0.59**	-0.67**	-0.25	-0.13
N	1630	1654	1690	1655	1756	1620	1740
R^2	0.27	0.25	0.24	0.14	0.24	0.34	0.23

Note: Omitted categories are males, students, and primary education, single.
* p<.05; ** p<.01; *** p<.001

Table A4.5. Frequency Using Search to Fact Check Information about Politics Found Elsewhere

Variable	France	Germany	Italy	Poland	Spain	UK	US
Age	0.00	-0.01**	-0.01**	0.00	0.00	-.01***	-.01***
Female	-0.06	0.03	-0.05	0.13**	-0.02	-0.02	0.13**
Lifestage							
Employed	0.14	-0.03	-0.07	-0.06	-0.11	-0.10	0.02
Retired	-0.15	0.02	-0.03	-0.28*	-0.25	-0.36*	-0.10
Unemployed	0.10	0.11	0.01	-0.17	-0.02	-0.14	0.05
Education							
Middle	-0.10	-0.08	0.04	-0.02	0.01	0.06	0.10
Higher	-0.24**	-0.23**	-0.08	0.00	-0.04	-0.01	-0.03
Marital status							
Married	0.02	-0.13	0.05	-0.01	-0.01	-0.01	0.06
Living w partner	0.06	-0.09	-0.01	0.04	-0.01	0.12	0.24**
Divorced/ separated	0.11	0.09	0.16	-0.14	0.08	-0.01	0.05
Widowed	-0.29	-0.1	0.48*	0.04	-0.09	0.21	-0.05
Interest in politics	0.05	0.04	0.05	0.08*	0.07*	-0.06	0.04
Political activity, offline	0.00	-0.04*	0.00	-0.03	-0.06***	-0.07***	-0.03
Political activity, online	0.05	0.13***	0.07**	0.08**	0.14***	0.20***	0.14***
Populism	0.00	0.00	0.00	0.01	0.01	0.00	0.00
Search ability	0.21***	0.13**	0.15***	0.17***	0.19***	0.12**	0.18***
Search efficacy	0.01	0.01	0.01	0.02**	0.02*	0.02*	0.00
Diversity of media sources	0.05**	0.12***	0.04*	0.06***	0.07***	0.09***	0.08***
Accuracy of search results	0.00	0.05	0.02	0.01	0.05	0.09**	0.04
Use of the Internet	0.02***	0.03***	0.02***	0.02***	0.02***	0.03***	0.02***
Constant	1.00***	0.33	1.70***	0.75**	0.75**	0.72**	0.94***
N	1632	1681	1726	1716	1793	1647	1763
R^2	0.16	0.25	0.13	0.16	0.23	0.34	0.32

Note: Omitted categories are males, students, and primary education, single.
* p<.05; ** p<.01; *** p<.001

Appendix 5. The Research Team

The project was conducted by a multidisciplinary team that has previously worked together on a number of projects at the University of Oxford and Michigan State University.

Sabrina Ahmad is a Communications Specialist at the Public Policy Forum in Ottawa, Canada, and a graduate of the University of Ottawa's joint honors Communications and Sociology program. Fully fluent in English, French, and Bengali, she has worked in communications for the Government of Canada and in marketing and research roles across Europe. Sabrina will be embarking on Master's studies at the Oxford Internet Institute, University of Oxford, in October 2017.

Grant Blank is Survey Research Fellow at the Oxford Internet Institute, University of Oxford. He is a sociologist who studies the social and cultural impact of the Internet and other new communication media. Grant began his career as an independent consultant based in Chicago Illinois specializing in research design, statistical analysis, and database design. He previously taught at American University in Washington DC. He completed his PhD at the University of Chicago in 1999, and joined OII in 2010.

Elizabeth Dubois is an Assistant Professor in the Department of Communication at the University of Ottawa. She completed her doctorate at the University of Oxford's Internet Institute and joined the University of Ottawa faculty in 2016. Her research is designed to understand how technology may be leveraged to increase democratic accountability and engagement. Elizabeth also has professional experience working on Parliament Hill and with NGOs in Canada.

William H. Dutton is the James H. Quello Professor of Media and Information Policy in the College of Communication Arts and Sciences at Michigan State University, where he is Director of the Quello Center. Bill was the first Professor of Internet Studies at the University of Oxford where he was founding director of the Oxford Internet Institute. His research on Internet Studies increasingly focuses on the Fifth Estate and related issues of how people use the Internet, as well as cyber policy, regulation and governance.

Dr. Bianca Reisdorf is an Assistant Professor in the Department of Media & Information of the College of Communication Arts & Sciences at Michigan State University and as of August 2016 also the Assistant Director of the Quello Center. Dr Reisdorf joined the Quello Center as a Postdoctoral Research Fellow in mid-August 2015. Prior to joining the Quello Center, Bianca worked as a Lecturer and Director of Distance Learning in the Department of Media and Communication at the University of Leicester in the UK with a focus on digital media and research methods. In addition, she has been an Adjunct Assistant Professor at the Department of Communication at the University of Cincinnati.

Craig Robertson is a doctoral student and Research Assistant in the Quello Center at Michigan State University. He has a Master's in Communications (First Class Honors) from the Auckland University of Technology as well as a Bachelor of Laws and a Bachelor of Arts from the University of Auckland. He has previously worked at the Auckland University of Technology and, being a qualified journalist, in various media roles in New Zealand. His research interests sit at the intersection of politics, journalism, and digital media.

Appendix 6. Country Profiles: Seven National Patterns of Search

6.1. France: Search Skeptics

In France, survey respondents are relatively more skeptical of search – as well as other media – and do not use it as often to get information. It doesn't play as large a role in what they think and the decisions they make as it does in other nations in this study.

What part do Internet search engines play in shaping public opinion in politics and public affairs? Are they important? Are they similar to other media, such as television and newspapers? These questions are at the heart of a multinational study of search and public opinion. This study is based on online surveys of Internet users in seven nations – France, Germany, Italy, Poland, Spain, the United Kingdom, and the United States – with individual country samples stratified by age, region, and gender. As the samples include Internet users only, they are not representative of the countries at large: they only represent the population of Internet users. The study found that search engines are indeed an important source of information for Internet users. However, search takes place in a pluralistic media context. While search is often used to look for information about politics, it is used more often in many other popular content areas. As a source of political information, online search is about as important as television, and yet search remains only one of several important media.

Cross-nationally, there are some relatively consistent patterns of media use, such as a greater reliance on television and the mass media instead of search in the German, French, and UK samples. By contrast, the Internet occupies a more central role for the Polish sample, and to a lesser extent for the Italian and Spanish samples. Internet users in the US are in some ways similar to those in Poland, Italy and Spain and in other ways similar to those in Germany, France and the UK.

Internet users in France use search less than users in other countries and they are skeptical of its reliability. They are also skeptical of all other media and use them less to find political information and to make their voting decisions. Respondents report an inverse relationship between which sources they consider reliable and which ones were important for their voting decision. For example, while they rank print and radio more reliable than other sources, they played the least important role in their last voting decision. Interestingly, the voter turnout in the last elections was comparatively high (80%).

At the time of the survey, France was anticipating a general election scheduled for April 2017. Election polls were predicting a tight race among parties that could well translate into greater interest in the election campaigns and politics generally.

Importance of Search

Among the most popular uses of the Internet across all seven countries is looking for news online as well as finding or checking facts – which is often done via search engines. Between 80 and 95 percent of Internet users use search engines at least daily. Search engines are also popular as a first port of call for finding various types of information, such as information on planning a vacation or natural disasters.

Respondents in France report less use of search engines in general. Fully 83 percent use search engines at least daily, which is similar to the US (82%), UK (80%), and German (78%) samples, and 7–12 percentage points lower than the other three country samples. Internet users in France are similar to other countries in where they go first for information, but they generally use search less to find many types of information. Only 23 percent often discover information that is really important to them via search, a similar figure to Internet users in the UK, and considerably lower than all other countries by 11–34 percentage points.

Internet users in France use search less often than respondents from other countries to look up facts and do not learn new things from search. Only 42 percent say they often learn something new, which is lower than most country samples, but not as low as the sample in Germany (32%). Only half of the respondents in France look up facts (very) often (51%), which is the lowest percentage among all countries and similar to survey respondents in Germany (54%) and Poland (55%).

Respondents in France rate their search ability high but are as overwhelmed by information as most others. Fully 90 percent rate their ability to use a search engine as good or excellent; similar to respondents in the UK, Spain, and the US, and higher than respondents in Germany, Italy, and Poland (75–79%). Reports of being overwhelmed by the amount of information found in a search and being confused by conflicting results are about average in relation to all of our national samples of respondents.

Use of Various Media

One of the popular uses of search is to check the accuracy of news and information found elsewhere. Half (53%) of the respondents in France use search to check the accuracy of news, which is at the higher midrange among all countries. While search is not used very often to check information found on social media, almost three-quarters of the respondents from our complete sample say they do this at least occasionally (74%), and a fifth do it any time that they question information (21%). A quarter (24%) of the French sample reported doing this any time they question the information, which is similar to the Italian, Spanish, and US samples (25–27%).

On average, television remains the most popular source for obtaining political news – however, it is closely followed by online sources, family and friends, and print news. There is a sizeable variation across countries, with the respondents in France reporting lower use of all media for finding political information. Search is the most popular source for finding political information. Half of the respondents (49%) say they use search (very) often to find political information. This is higher than the use of mass media for political information, but it is low compared to other countries. Only 44 percent get political information from television (very) often, 30 percent get this information (very) often from the radio, and 32 percent from print media. All of these percentages are low in comparison to other country samples. One-third of the respondents get political information (very) often from online-only news sites (29%) and online sites of major newspapers (34%), which is low, placing respondents in France with respondents in the US, Germany, and the UK. Only 17 percent get their information (very) often from political party websites, which is lower than most other countries, and 21 percent get political information (very) often from social media, which is among the lowest percentages of all countries.

Internet users in France find talking to friends and family (70%) the most informative way to learn what other people think about political issues. They find newspapers (62%; lowest by 5–23 percentage points), TV/radio (62%; lower end), and search engines (56%; lowest with Germany) less informative. The French sample finds social media (41%) and video platforms (38%) considerably less informative than other countries.

The sample of respondents in France also reports using different news sources less than other countries. Only one-quarter (25%) check a news source different from their usual one (very) often, similar to the UK sample (23%), and considerably lower than most country samples (apart from the German sample at 14%). A third try to confirm information they found elsewhere (very) often (34%) and information from news media (30%) by using search engines, similar to the UK sample (33% and 32%).

Internet users in France feel less helpless, but about equally frustrated when they try to find political information. About one-quarter (27%) agree with feeling helpless and one-third (34%) feel frustrated when trying to find information about politics. While helplessness in the French sample is similar to the UK sample, their frustration levels are more similar to those in Poland and the US.

Perception of Search in Comparison to Other Media

When asked about the reliability of different media, search receives the highest overall rating, followed by radio, family/friends/colleagues, online and offline newspapers, and television. Social media is rated lowest. However, there is some variation between countries with regards to the most reliable media.

Trust in search engines is lower among respondents in France than in most other countries. A quarter (25%) think search engines give more objective information than other media, which is similar to Internet users in Germany (24%) and the UK (26%) and considerably lower than other countries. Among those sampled, 59 percent are (very) confident that the top recommendations of search engines are factual and true, which is similar to respondents in Spain (59%) and Italy (62%) and in the midrange among all countries.

A smaller percentage (50%) of Internet users in France view search engines as reliable, similar to those in the UK (51%), whereas more rank newspapers as reliable (54%), similar to respondents in Germany (56%) and Spain (55%). They give radio a medium ranking (52%) in comparison to other countries, similar to Internet users in Poland (48%), and they also rank television medium (47%) compared to the other countries, similar to respondents in the US (47%) and Spain (46%). Only 16 percent rank social media as reliable (16%), similar to those in Germany (16%) and the UK (17%), and lower than the other countries.

Nearly three-fourths (70%) of the sample in France thinks news media should report objectively, and 54 percent believe news media are indeed objective. This places respondents in France near the mid-point of opinion across the seven nations – neither on the high or low side on their normative expectations or assessments.

Search and Political Opinion Formation

On average, search is first and foremost used to find information about a particular topic, navigate to specific sites, look up facts, and look up news on a topic or event. Finding political information is the least popular item of those we asked about, and searched for about as often as entertaining content.

Search is widely perceived as enabling new knowledge and leading to discovery of new, important information. Fully 90 percent of our complete sample report that they learn something new at least occasionally, and 82 percent report they discover important information at least occasionally. However, only 41 percent of the total sample of respondents report that they found information that changed their mind on a political issue, but with respondents in France just below the average (36%) of all countries.

Respondents in France believe that using search has a limited impact on their political views. Just over a third (38%) say they have modified their views because of searching for information online – similar to Internet users in Germany (33%) and Poland (43%), and 11–32 percentage points lower than the other countries.

In the cross-country average, television, offline discussions, and information found online were the most important factors in shaping a voting decision. Search was only the fourth most important information source. However, there are country differences in the relative importance of each source.

Among Internet users in France, those who voted in the last election report a relatively lower importance of all media and communication methods for their voting decision, which tracks with their relatively lower use of all media for finding political information. Two-thirds say that offline discussions with friends (68%) – second lowest after respondents in the UK (65%), similar to those in Italy and Spain (70%) – and television (67%) were important; these are the lowest percentages together with Internet users in Italy (67%), and 5–17 percentage points lower than the other countries. Only 58 percent regarded search as important for their vote decision, which is the lowest of all countries and similar to survey respondents in the UK (59%), 7–21 percentage points lower than others. However, 57 percent found leaflets important, which is comparatively high in comparison to other countries. Only 56 percent said information found online was important, which is the lowest percentage of all countries by 8–24 percentage points. Only half thought that print news (54%) – lowest of all by 5–22 percentage points – and radio (54%) – low but in line with the sample in Italy (51%) – was important; this is 5–15 percentage points lower than others. Only 52 percent thought online news websites were important, which is the lowest percentage by 12–28 percentage points. Less than a third (32%) thought social media discussions were important; this is the lowest of all countries, similar to Internet users in Germany (36%), and 9–28 percentage points lower than all others.

Populism, Search Behavior, and Political Opinion Formation

To find out whether populism has any effect on search behavior and political opinion formation, we conducted a number of multivariate analyses that include demographic factors, such as age, gender, lifestage, education, and marital status, as well as a number of variables that various theories predict will influence political search behavior, including interest in politics, political activity online and offline, search ability, search efficacy, diversity of media, accuracy of search results, use of the Internet, and populism.

Only a few of the demographic variables are statistically significant, such as education being associated with political search in the UK sample, but with little consistency cross-nationally. This is similar to what is reported in the other analyses of our dependent variables: the demographic factors do not have much impact on search compared to other variables.

Among these other, non-demographic variables, three variables are consistently significant in our seven nations: interest in politics, number of sources of political information, and use of the Internet. Search ability is statistically significant in five of seven countries. Offline political activity and the perceived accuracy of search results are significant in four. Interestingly, populism is only significant once, for the Spanish sample, where those with populist views were somewhat more likely to use political search more often. Surprisingly, search efficacy is never significant.

Almost three-quarters (73.7%) of the respondents in France agree with three or more populist sentiments out of five, such as a “Compromise in politics is selling out one's principles.” This is average among the country samples and similar to Italian (73.8%) and Polish (74.6%) respondents. While the general results of the multivariate analyses hold also for the respondents in France, a few results stand out.

One is the frequency of using search for information about politics or current events: Political activity offline is significantly and positively related to search for French, German, US, and UK Internet users, only. One’s perceived ability to use search is not statistically significant in the samples for France and Poland, but not for any others. Confidence in the accuracy of search results is not significant for respondents in France, Germany, and the US, but it is for all others.

With respect to influencing a voting decision, political activity offline is not significantly related with the sample of respondents in France, but it is related across all other country samples. Search ability is not statistically significant for survey respondents in France, Poland, and the UK, and populism is significant for all countries apart from Poland.

For the frequency of discovering information that changed opinions on a political issue when using search, interest in politics is not statistically significant in the French, German, and US samples, but it is for all other country samples.

As regards frequency of trying to confirm information found elsewhere by search online, the only demographic variable that is statistically significant is higher education in the French and German samples – higher education is negatively related, meaning that those with higher educational qualifications use search less to check information they found elsewhere. Political activity online is not significant for French respondents only.

Measuring the direct relationship between populism and the dependent variables, populism is positively and significantly related to most of them across most of our country samples with little variation. While some of the dependent variables – “Importance of search for vote decision” and “Frequency trying to confirm information by using search” – are positively related in the French sample, only two out of the three populism indicators were statistically significant for “Discovering information that changed your opinion on a political issue” and “Frequency of using search to find information about politics.” The dependent variable “Have

you ever modified your political views because of searching information?" is not significant. However, once other variables are controlled, populism has no statistically significant relationship with any of the dependent variables among French respondents, apart from the "Importance of search for vote decision."

This is a brief summary of the relationship between search and politics in France, but more can be found in the full report.

6.2. Germany: Traditionalists

For survey respondents in Germany, the traditional media are the go-to places for finding political information. Radio, television, and print are the mediums they trust, and more so than other nations in this study.

What part do Internet search engines play in shaping public opinion in politics and public affairs? Are they important? Are they similar to other media, such as television and newspapers? These questions are at the heart of a multinational study of search and public opinion. This study is based on online surveys of Internet users in seven nations – France, Germany, Italy, Poland, Spain, the United Kingdom, and the United States – with individual country samples stratified by age, region, and gender. As the samples include Internet users only, they are not representative of the countries at large: they only represent the population of Internet users. The study found that search engines are indeed an important source of information for Internet users. However, search takes place in a pluralistic media context. While search is often used to look for information about politics, it is used more often in many other popular content areas. As a source of political information, online search is about as important as television, and yet political search remains only one of several important media.

Cross-nationally, there are some relatively consistent patterns of media use, such as a greater reliance on television and the mass media instead of search in the German, French, and UK samples. By contrast, the Internet occupies a more central role for the Polish sample, and to a lesser extent for the Italian and Spanish samples. Internet users in the US are in some ways similar to those in Poland, Italy and Spain and in other ways similar to those in Germany, France and the UK. The German sample uses search engines less than other countries and relies more on traditional mass media, both to find political information and to make voting decisions. They give search a lower reliability rating than mass media, friends, and online news.

At the time of our survey, Germany was in an election year with the parliamentary elections scheduled for September 2017. A large increase in refugees from war-torn regions over the last two years has led to an increase in votes for right-wing parties. In addition, Germany has a strong tradition in valuing privacy, in part due to past abuse during the Nazi regime and by the Stasi in East Germany. Politicians have been increasingly concerned about the monopoly status as well as potential breaches of privacy by large Internet companies, such as Google and Facebook. This has led to calls for stronger regulation of such companies.

Importance of Search

Among the most popular uses of the Internet across all seven countries is looking for news online as well as finding or checking facts – which is often done via search engines. Between 80 and 95 percent of Internet users use search engines at least daily. Search engines are also popular as a first port of call for finding various types of information, such as information on planning a vacation or natural disasters.

Search engines are used less among German Internet users than in the other six nations in our study. Three-quarters of respondents in Germany (78%) use search engines at least daily, similar to respondents in the UK (80%), the US (82%), and France (83%), but considerably less often than in the other three countries. Nevertheless, respondents in

Germany report using search engines to find information on various matters in a similar way to other countries. They also report similar results to other countries in where they go first for information. However, Internet users in Germany prefer a personal visit on issues important to their community or neighborhood (56%) similar to those in Spain (48%) and considerably more than the other countries in this study (range: 20–31%). They also differ in the impact of these searches on their daily lives. Only one-third of respondents in Germany (33%) reported they often learned something new from an online search compared to 42–59 percent in the other six countries, and 19 percent say this happens never or rarely compared to roughly 10 percent elsewhere.

Interestingly, Internet users in Germany rate their search skills lower than any other country. Only 24 percent say their skills are excellent; this is the lowest out of all nations in this study. However, they also reported being less overwhelmed by the amount of information and less confused by conflicting search results. A third of respondents in Germany (30%) have never felt overwhelmed compared to 22 percent in the UK, 21 percent in the US and even fewer respondents across the other four countries. They also report being less confused by conflicting search results: 64 percent of the sample in Germany have never or rarely been confused in contrast to 57 percent in the UK and around 50 percent in the other five countries in this study.

Use of Various Media

A popular use of search is to check the accuracy of news and information found elsewhere – although the percentage of respondents saying they do this (very) often is lower among the sample in Germany (35%) than in the samples of the other six nations in this study (39–61%). While search is not used very often to check information found on social media, half of the respondents across all seven nations say they do this occasionally (53%), and a fifth do it any time that they question information (21%). However, only 12 percent of respondents in Germany reported checking anytime.

On average, television remains the most popular source of political news – however, it is closely followed by online sources, family and friends, and print news. There is a sizeable variation across countries, with respondents in Germany reporting a stronger reliance on television than other countries. Internet users in Germany get more political information from offline media than the other countries in this study: six-in-ten (60%) say they get political information from television (very often), 42 percent from the radio and print media. Half of the sample in Germany (53%) report getting political information from search, which is considerably lower than respondents in the other six nations in this study. They are more likely to learn what other people think about politics by talking to one another than respondents in other countries: 31 percent of the sample in Germany find it very informative, similar to respondents in Spain (27%) and the US (26%).

Respondents in Germany check news sources different from usual less than those from the other six countries: 48 percent never or rarely do this compared to the survey respondents from the UK (38%), France (36%), and the other four countries (~25%). They also look online for the opinions of people they trust less than respondents across the other surveyed nations: 38 percent never do this, compared to 29 percent among Internet users in France and 15–22 percent across the other five countries. A third of respondents in Germany (33%) never or rarely try to confirm information they found elsewhere by searching online, and 40 percent

never or rarely confirm information by talking to family or friends, similar to respondents in France and the UK.

Internet users in the German sample are less frustrated with trying to find political information online than those in most other countries. Less than one in five (18%) agree with feeling helpless and only 16 percent feel frustrated when trying to find information about politics. These are the lowest percentages across all the countries surveyed in this study.

Perception of Search in Comparison to Other Media

When asked about the reliability of different media, search receives the highest overall rating, followed by radio, family/friends/colleagues, online and offline newspapers, and television. Social media is rated lowest. However, there is some variation between countries with regards to the most reliable media.

Respondents in Germany reported the lowest confidence in the accuracy and objectivity of search results in comparison to the other six nations in this study: only 47 percent are (very) confident that the top recommendations of search engines are factual and true, followed by respondents in the Polish sample at 54 percent. Trust in search engines is lower as well: 28 percent of respondents in Germany think search engines give less objective information than other media compared to 16–18 percent in other countries.

Internet users in Germany give search engines the lowest reliability rating of all nations in this study (44 percent say search engines are reliable in contrast to 50–57 percent across the other six countries), and they report higher trust in more traditional media, such as broadcast and print media. Over half of the respondents in Germany (56%) say television is reliable, similar to 58 percent in the UK sample and 10 percentage points more than other countries. In addition, Internet users in the German sample give social media the lowest reliability rating with 16 percent saying social media are reliable, similar to respondents in France and the UK, but lower than other countries.

An interesting factor that distinguishes the sample in Germany from other countries is their view on whether news media are objective or whether they advocate a point of view. Respondents in Germany are similar to respondents in the other six countries in their attitudes about whether news media *should* be objective, but 44 percent think the media in Germany actually *do* advocate a point of view; this is 14 percentage points higher than the next highest country (UK).

Search and Political Opinion Formation

On average, search is first and foremost used to find information about a particular topic, navigate to specific sites, look up facts, and look up news on a topic or event. Finding political information is the least used search item of those we asked about, and searched for about as often as entertaining content.

Search is widely perceived as enabling new knowledge and leading to discovery of new, important information. Fully 90 percent of our complete sample report that they learn something new at least occasionally, and 82 percent report they discover important

information at least occasionally. However, only 41 percent of the total sample of all seven countries in this study report that they found information that changed their mind on a *political* issue, with respondents in Germany below the average (30%) of all countries.

Respondents in Germany believe that search has an extremely limited impact on their political views. A third has never discovered information that changed their mind on a political issue, and two-thirds have not modified their views because of information they found in an online search (67%; only topped by respondents in the UK at 70 percent and followed by respondents in France (62%) and Poland (57%)).

In the cross-country average, television, offline discussions, and information found online were the most important factors in shaping a voting decision. Search was only the fourth most important information source. However, there are country differences in the relative importance of each source.

Those respondents in Germany who voted in the last election report that offline discussions with friends, traditional media, *and* search engines played an important role in their voting decision. Eight in ten respondents in Germany (81%) think television was important for their decision, similar to respondents in the US (84%) and the UK (79%), and higher than in the other four countries in this study. Three-quarters (76%) report offline discussions with friends and print news were important, similar to Internet users in Poland and the US. Fully 69 percent of Internet users in Germany found that radio impacted their voting decision, which is the highest percentage, followed by the US (64%). Two-thirds say that information they found on online-only news sites (66%) and search engines (66%) was important, which is close to the average among the seven countries. Only around a third report that social media (36%), emails from friends (32%) and emails from candidates (28%) played a role in their voting decision; this is at the lower end of the country averages.

Populism, Search Behavior, and Political Opinion Formation

To find out whether populism has any effect on search behavior and political opinion formation, we conducted a number of multivariate analyses that include demographic factors, such as age, gender, lifestage, education, and marital status, as well as a number of variables that various theories predict will influence political search behavior, including interest in politics, political activity online and offline, search ability, search efficacy, diversity of media, accuracy of search results, use of the Internet, and populism.

Only a few of the demographic variables are statistically significant, such as education being associated with political search in the UK sample, but with little consistency cross-nationally. This is similar to what is reported in the other analyses of our dependent variables: the demographic factors do not have much impact on search compared to the other variables.

Among these other, non-demographic variables, three variables are consistently significant in our seven nations: interest in politics, number of sources of political information, and use of the Internet. Search ability is statistically significant in five of the seven countries. Offline political activity and the perceived accuracy of search results are significant in four. Interestingly, populism is only significant once, for the Spanish sample, where those with populist views were somewhat more likely to use political search more often. Surprisingly, search efficacy is never significant.

Only 64 percent of the respondents in Germany agree with three or more populist sentiments, such as a “Compromise in politics is selling out one's principles.” This is the lowest percentage among the country samples and similar to UK (66.3%) respondents. While the general results of the multivariate analyses hold also for the respondents in Germany, a few results stand out.

One is the frequency of using search for information about politics or current events: A number of demographic variables are statistically significant for the sample in Germany but not for other country samples in the study. Being employed, unemployed, having a higher education, and being divorced are negatively related, meaning they use search less for finding political information. Political activity offline was significantly and positively related for Internet users in Germany, France, the US, and the UK only, but not for the other three countries. Confidence in the accuracy of search results is not significant for respondents in France, Germany and the US.

With respect to a voting decision, being married is significantly and negatively related to the importance of search for Internet users in Germany. Search ability is statistically significant for survey respondents in Germany, Italy, Spain, and the US, and populism is significant for all country samples apart from Poland.

For the frequency of discovering information that changed opinion on political issues when using search, having middle or higher education is statistically and negatively related for respondents in the German sample, meaning this happens to them less. Interest in politics is not statistically significant for the samples in France, Germany, and the US, but it is for all other country samples. Political activity online is significant for respondents in Germany, Spain, the UK, and the US.

The only demographic variable that is statistically significant for the frequency of trying to confirm information found elsewhere by search online is higher education for the samples in Germany and France – higher education is negatively related, meaning that those with higher educational qualifications use search less to check information they found elsewhere. Political activity offline is negatively related for respondents in Germany, Spain, and the UK only.

Measuring the direct relationship between populism and the dependent variables examined above, populism is positively and significantly related to most of them across most of our country samples with little variation. While one of the dependent variables – “Frequency of trying to confirm information by using search”—is positively related to all three indicators of populism for respondents in Germany, only two out of the three populism indicators are statistically significant for “Discovering information that changed your opinion on a political issue” and “Importance of search for vote decision”. For the variables, “Frequency of using search to find information about politics” and “Have you ever modified your political views because of searching information?” only one of the three indicators is statistically significant. However, once other variables are controlled, populism has no statistically significant relationship with any of the dependent variables among respondents in Germany, apart from the “Importance of search for vote decision.”

This is a brief summary of the relationship between search and politics in Germany. However, more can be found on Germany in the full report.

6.3. Italy: A Penchant for Search?

When it comes to the Web, survey respondents in Italy are big users of search. It's a tool they like to use and it's one that they trust more than other nations in this study.

What part do Internet search engines play in shaping public opinion in politics and public affairs? Are they important? Are they similar to other media, such as television and newspapers? These questions are at the heart of a multinational study of search and public opinion. This study is based on online surveys of Internet users in seven nations – France, Germany, Italy, Poland, Spain, the United Kingdom, and the United States – with individual country samples stratified by age, region, and gender. As the samples include Internet users only, they are not representative of the countries at large: they only represent the population of Internet users. The study found that search engines are indeed an important source of information for Internet users. However, search takes place in a pluralistic media context. While search is often used to look for information about politics, it is used more often in many other popular content areas. As a source of political information, online search is about as important as television, and yet political search remains only one of several important media.

Cross-nationally, there are some relatively consistent patterns of media use, such as a greater reliance on television and the mass media instead of search in the German, French, and UK samples. By contrast, the Internet occupies a more central role for the Polish sample, and to a lesser extent for the Italian and Spanish samples. Internet users in the US are in some ways similar to those in Poland, Italy and Spain and in other ways similar to those in Germany, France and the UK. The Internet users in Italy use search more than many other countries and have high confidence in the accuracy and reliability of search results. However, they rate their search skills lower than most countries, and search and online news are considered most important for their voting decision.

At the time of this study, Italy had the second-highest debt in the EU and was facing a north–south divide regarding unemployment and GDP. Since the Arab Spring, Italy has been struggling with an increase in refugees arriving mainly from Africa – leading to repeated requests for EU help. At the same time, the Prime Minister has been replaced several times, with the latest resignation of Renzi after an unsuccessful referendum to amend the constitution in December 2016. At the time of our survey, elections were scheduled for spring 2018; however, there was a possibility that they could be held in 2017.

Importance of Search

Among the most popular uses of the Internet across all seven countries is looking for news online as well as finding or checking facts – which is often done via search engines. Between 80 and 95 percent of Internet users use search engines at least daily. Search engines are also popular as a first port of call for finding various types of information, such as information on planning a vacation or natural disasters.

Respondents in Italy report frequent use of search engines. Fully 90 percent use search engines at least daily, similar to respondents in Spain (90%), and Poland (95%), roughly 10 percentage points higher than the other four countries in the study. Internet users in Italy report similar results to the other six countries in where they go first for information. Search engines are used by 39 percent for professional or school projects, which is similar to Internet users in Spain and Poland, and 10–15 percentage points lower than other countries.

Internet users in Italy report finding wrong information and learning something new from an online search more often than respondents in most other countries surveyed in this study. A fifth (20%) report that they find something online that they thought was wrong (very) often, which is higher than any other country, followed by respondents from Spain (16%), France (15%), and Poland (15%). More than half (55%) of the sample in Italy reports learning something new (very) often when doing an online search, similar to respondents in Poland (59%) and Spain (51%), and considerably higher than the other four countries.

Respondents in Italy are among the least confident in their skills and report feeling overwhelmed more than respondents in the other six countries. Only 28 percent rate their search skills as excellent, which is the second-lowest. A quarter (23%) say their skills are fair or poor, similar to respondents in Germany (25%) and Poland (21%). A fifth report being overwhelmed often by the amount of information they find in a search, compared to 17 percent of respondents in the Spanish sample, 16 percent in the US sample, and 15 percent in both the Polish and the UK samples. Italian Internet users report being confused by conflicting search results as much as those in other countries; 54 percent have never or rarely been confused, similar to survey respondents in the US (54%), and the UK 57%.

Use of Various Media

One of the popular uses of search is to check the accuracy of news and information found elsewhere – although the percentage of respondents saying they do this (very) often is high for respondents in the Italian sample (60%), similar to those in Spain (58%) and Poland (57%) and higher than the other country samples (35–53%). While search is not used very often to check information found on social media, half of the respondents from our total sample of all seven nations say they do this occasionally (53%), and a fifth do it any time that they question information (21%). In Italy, 27 percent of respondents reported doing this anytime, higher than any other country.

On average, television remains the most popular source for obtaining political news; however, it is closely followed by online sources, family and friends, and print news. There is a sizeable variation across countries, with respondents in Germany reporting a stronger reliance on television than other countries. Internet users in Italy report considerably higher use of online sources to find political information. They get political information less from television (48%

say often or very often) and radio (28%) than online sources (58%), similar to Internet users in Poland, Spain, and the US. Respondents in Italy (58%), Poland (59%), and Spain (62%) report more frequent use of search to find political information than Internet users in the other four countries (44–53%), and more use of online sites of major newspapers. Only 9–10 percent of respondents in the Italian, Polish, and Spanish samples report never using these sites, compared to 17–22 percent in the other countries.

Respondents in Italy report the most diverse political opinions among people they communicate with online. Seven in ten (71%) say the people they communicate with have mixed beliefs, which is the highest among all countries, and only 13 percent say they have similar beliefs, which is the lowest among all countries. Internet users in Italy find search engines (68%), newspapers (73%), TV/radio (72%), and talking to friends and family (73%) informative to learn what other people think – similar to respondents in Spain and the US. However, they also find discussions on social media (56%) important, similar to Internet users in Poland, Spain, and the US (53–57%), but different from those in France, Germany, and the UK (41–48%).

Internet users in Italy say they check news sources different from usual more: 25 percent never or rarely do this, similar to respondents in Poland, Spain, and US, and in contrast to those in France (36%), the UK (38%), and Germany (48%). Of those sampled in Italy, 43 percent report searching online to try to confirm information found elsewhere (very) often, similar to Internet users in Poland, Spain, and the US.

Despite low reported search skills, respondents in the Italy sample display confidence that they can find political information online. Less than one-quarter agree with feeling helpless (22%) and only 26 percent feel frustrated often when trying to find information about politics, similar to Internet users in the UK, and lower than most other countries.

Perception of Search in Comparison to Other Media

When asked to rate the reliability of different forms of media, search receives one of the highest overall ratings, followed by radio, family/friends/colleagues, online and offline newspapers, and television. Social media is rated lowest in the country average. However, there is some variation between countries with regards to the most reliable media.

Respondents in Italy have more trust in search engines and give them a higher reliability rating than respondents from other countries in the study. Over a third (36%) think search engines give *more* objective information than other media, similar to respondents in Poland (37%), and Spain (34%), and between 5–10 percentage points higher than respondents from the other four countries. Fully 62 percent of respondents in the Italian sample are (very) confident that recommendations of search engines are factual and true, similar to Internet users in Spain and France (59%), higher than those in Germany (47%), and lower than those

in the US (73%). Respondents in Italy give search engines a fairly high reliability rating. More than half (56%) say search engines are reliable, similar to those in Poland (57%), Spain (55%), and the US (54%). Internet users in Italy rank television less reliable than most countries (39%), similar to those in the UK (34%), and 21 percent rank social media as reliable (similar to Spain and the US).

Internet users in Italy think news media report objectively, but not in a balanced way. Almost two-thirds (60%) of the sample think the news media report objectively, which is higher than respondents from most of the other six countries and similar to respondents in the Spanish (66%) and Polish (64%) samples. However, only 16 percent of respondents in Italy believe the reporting in news media is balanced, which is the lowest among all countries.

Search and Political Opinion Formation

On average, search is first and foremost used to find information about a particular topic, navigate to specific sites, look up facts, and look up news on a topic or event. Finding political information is the least popular item of those we asked about, and searched for about as often as entertaining content.

Search is widely perceived as enabling new knowledge and leading to discovery of new, important information. Of our total sample across all seven countries surveyed, 90 percent report that they learn something new at least occasionally, and 82 percent report they discover important information at least occasionally. However, only 42 percent of the total sample report that they found information that changed their mind on a *political* issue, with respondents in Italy slightly above the average (45%) of all countries.

Respondents in Italy report a relatively high impact of search on their political views. Half of respondents in Italy (49%) say they have modified their views because of information they received from a search – similar to Internet users in Spain and the US, but a considerably higher percentage than in the other four countries.

In the cross-country average, television, offline discussions, and information found online were the most important factors in shaping a voting decision. Search was only the fourth most important information source. However, there are country differences in the relative importance of each source.

Among Internet users in Italy, those who voted in the last election report that online media had a strong impact on their voting decision. The majority reported that search, online only news sites, information found online, and offline discussions with friends were important for their decision. Three-quarters (73%) of respondents in Italy said search was important and 71 percent said online-only news sites were important. This is fairly high among the country averages, but lower than Poland and the US (77–79%). Information found in online and offline

discussions with friends was important for 70 percent of Internet users in Italy, which is average among the other countries. Television was less important (67%), similar to respondents in France (67%) and Spain (72%), and considerably lower than the other four countries. Print media (59%) and radio (51%) were less important for respondents in the Italian sample. This is the second lowest proportion after the French sample (54%) and considerably lower than other country samples.

Populism, Search Behavior, and Political Opinion Formation

To find out whether populism has any effect on search behavior and political opinion formation, we conducted a number of multivariate analyses that include demographic factors, such as age, gender, lifestage, education, and marital status, as well as a number of variables that various theories predict will influence political search behavior, including interest in politics, political activity online and offline, search ability, search efficacy, diversity of media, accuracy of search results, use of the Internet, and populism.

Only a few of the demographic variables are statistically significant, such as education being associated with political search in the UK sample, but with little consistency cross-nationally. This is similar to what is reported in the other analyses of our dependent variables: the demographic factors do not have much impact on search compared to the other variables.

Among these other, non-demographic variables, three variables are consistently significant in our seven nations: interest in politics, number of sources of political information, and use of the Internet. Search ability is statistically significant in five of seven countries. Offline political activity and the perceived accuracy of search results are significant in four. Interestingly, populism is only significant once, for the Spanish sample, where those with populist views were somewhat more likely to use political search more often. Surprisingly, search efficacy is never significant.

Almost three-quarters (73.8%) of the Italian sample agree with three or more populist sentiments, such as a “Compromise in politics is selling out one's principles.” This is the average among the country samples and similar to French (73.6%) respondents. While the general results of the multivariate analyses hold also for respondents in Italy, a few results stand out.

One is the frequency of using search for information about politics or current events: Being married is negatively related, meaning that those who are married use search to look for political information less. Search ability is statistically significant for survey respondents in Italy, Germany, Spain, the UK, and the US. Confidence in the accuracy of search results is significant for respondents in the Italian, Polish, Spanish, and UK samples.

With respect to influencing a voting decision, being married and living with a partner are negatively related with the sample of respondents in Italy. Search ability is statistically significant and positive for survey respondents in Germany, Italy, Spain, and the US, and populism is significant for all countries apart from Poland.

The frequency of discovering information that changed opinion on political issues when using search is statistically significant and positively related to interest in politics for Internet users in Italy, Poland, Spain, and the UK, but not for the other country samples. Political activity online is not statistically significant for respondents in France, Italy, and Poland.

As regards frequency of trying to confirm information found elsewhere by search online: The Italian sample is the only one where being widowed is strongly and positively related to trying to confirm information found elsewhere.

Measuring the direct relationship between populism and the dependent variables examined above, populism is positively and significantly related to most of them across most of our country samples with little variation. While some of the dependent variables – “Importance of search for vote decision” and “Frequency of trying to confirm information by using search” – are positively related to all three indicators of populism in Italy, only two out of three indicators for populism were statistically significant for “Discovering information that changed your opinion on a political issue,” and only one of the three indicators was significant for “Frequency of using search to find information about politics.” The variable, “Have you ever modified your political views because of searching information?” is not significant. However, once other variables are controlled, populism has no statistically significant relationship with any of the dependent variables among respondents in Italy, apart from the “Importance of search for vote decision.”

This is a brief summary of the relationship between search and politics in Italy. However, more can be found on Italy in the full report.

6.4. Poland: The Online?

In Poland, survey respondents stood out in their enjoyment of using the Web. They trust search to help provide them with the information they need to stay informed and to make decisions, more so than other nations in this study.

What part do Internet search engines play in shaping public opinion in politics and public affairs? Are they important? Are they similar to other media, such as television and newspapers? These questions are at the heart of a multinational study of search and public opinion. This study is based on online surveys of Internet users in seven nations – France, Germany, Italy, Poland, Spain, the United Kingdom, and the United States – with individual country samples stratified by age, region, and gender. As the samples include Internet users only, they are not representative of the countries at large: they only represent the population of Internet users. The study found that search engines are indeed an important source of information for Internet users. However, search takes place in a pluralistic media context. While search is used often to look for information about politics, it is used more often in many other popular content areas. As a source of political information, online search is about as important as television, and yet political search remains only one of several important media.

Cross-nationally, there are some relatively consistent patterns of media use, such as a greater reliance on television and the mass media instead of search in the German, French, and UK samples. By contrast, the Internet occupies a more central role for the Polish sample, and to a lesser extent for the Italian and Spanish samples. Internet users in the US are in some ways similar to those in Poland, Italy and Spain and in other ways similar to those in Germany, France and the UK. The Polish sample uses new media more in general and more for political information and voting decisions. They give search a considerably higher reliability rating than traditional media, but they are less confident in their skills and in the reliability of search recommendations.

Poland held its last parliamentary and presidential elections in 2015, in which the right-wing, conservative party Law and Order decisively won, after the country had been governed by the centrist, pro-European Civic Platform party since 2007. In 2016, Poland has seen various protests against proposed government policies, such as limiting media access to parliament.

Importance of Search

Among the most popular uses of the Internet across all seven countries is looking for news online as well as finding or checking facts – which is often done via search engines. Between 80 and 95 percent of Internet users use search engines at least daily. Search engines are also popular as a first port of call for finding various types of information, such as information on planning a vacation or natural disasters.

Respondents in Poland report consistently higher use of search engines for most topics and tasks, and they regard this information as important and valuable more than respondents in other countries do. Fully 95 percent use search engines at least daily, similar to the Spanish (90%), and Italian (90%) samples, and roughly 15 percentage points higher than the other four countries.

Internet users in Poland report results similar to other countries in where they go first for information, but they rely more on social media and specific websites for most kinds of information. In all 84 percent use search to find information on a specific topic (very) often, similar to respondents in Spain (81%) and Italy (79%), and 10–20 percentage points higher than the other four countries. More than half (57%) of Internet users in Italy discover something important (very) often, which is 20–33 percentage points higher than other countries, and 59 percent (very) often learn something new from search, similar to Internet users in Italy (55%), but higher than all other countries, especially Germany (32%).

Although respondents in Poland rely more on search than any other country, they report low confidence in search skills. More than a fifth (21%) say their skills using search are fair or poor, similar to respondents in the German (25%) and Italian (23%) samples. Similarly to Internet users in Spain (17%), the US (16%), and the UK (15%),15 percent report being overwhelmed often by the amount of information they find in a search. Internet users in Poland also report being confused by conflicting search results a little more than those in other countries: half (49%) have been confused occasionally or often, similar to those in Spain (52%), and France (51%).

Use of Various Media

A popular use of search is to check the accuracy of news and information found elsewhere. Internet users in Poland use search more for checking accuracy of news/information than many other countries: 57 percent do this (very) often, similar to Internet users in Spain (58%), Italy (60%), and France (53%), and considerably higher than others (35–49%). While search is not used very often to check information found on social media, half of the respondents from our total sample of all seven nations say they do this occasionally (53%), and a fifth do it any time that they question information (21%). Only 17 percent of respondents in Poland reported doing this anytime; however, almost two-thirds (62%) said they check occasionally.

On average, television remains the most popular source of political news – however, it is closely followed by online sources, family and friends, and print news. There is a sizeable variation across countries, with respondents in the Polish sample reporting a stronger reliance on online media than other countries.

To find political information, the Internet users in Poland rely more on new media than traditional media, and they use more sources to find out what other people think about

politics. Only 39 percent get political information from television (very) often (6–21 percentage points lower than other countries) and 28 percent from print media (similar to the respondents in the French and US samples). However, 56 percent get political information from online sources, similar to Internet users in Italy and Spain. Respondents in the Polish (59%), Italian (58%), and Spanish (62%) samples use search and online newspaper sites more for political information than others; only 9–10 percent report never using these sites in comparison to 17–22 percent across the other countries. Internet users in Poland get political information more often from social media (37%), similar to those in Spain (35%) and considerably higher than those in the other five countries. They also tend not to use political websites (15% never do this, compared to 28–41%) and online video platforms (14% never do this, compared to 21–39%).

To learn what other people think about politics, respondents in Poland find search engines (63%) and talking to friends and family (73%) most informative, similar to those in the UK. They find newspapers (53%) and TV/radio (54%) considerably less informative than any other country by 8–23 percentage points. Internet users in Poland check news sources different from usual more: only a quarter (24%) never or rarely do this, similar to those in Italy, Spain, and the US, and in contrast to Internet users in France, the UK, and Germany (36–48%). Almost half (46%) try to confirm information they found elsewhere (very) often by searching online, similar to respondents in Italy (43%), Spain (45%), and the US (46%).

Respondents in Poland are fairly frustrated with trying to find political information online. One-third agree with feeling helpless (32%) and frustrated (35%) when trying to find information about politics, similar to Internet users in Spain and the US, and higher than most other countries.

Perception of Search in Comparison to Other Media

When asked about the reliability of different media, search receives the highest overall ratings, followed by radio, family/friends/colleagues, online and offline newspapers, and television. Social media is rated lowest. However, there is some variation between countries with regards to the most reliable media.

Respondents in Poland trust search and online media more than those in other countries, while they rank the reliability of traditional media markedly lower. Over a third (37%) think search engines give more objective information than other media, similar to respondents in Italy (36%) and Spain (34%), and between 5–10 percentage points higher than other countries. Only a little more than half (54%) of Internet users in Poland are (very) confident that the top recommendations of search engines are factual/true, which is the second lowest percentage after Germany (47%). This is interesting as they also use search more than others.

Internet users in Poland rank the reliability of search engines high (57%), similar to those in Italy (56%), Spain (55%), and the US (54%), and they give newspapers the lowest reliability rating (40%) of any country in our study, similar to respondents in the UK and Italy (42%). Respondents in the Polish sample give television the lowest reliability rating (34%) of any country, similar to Italy (39%) and 12–24 percentage points lower than respondents in the other five countries. At the same time, they give social media the highest reliability rating (31%) out of any country – 8–15 percentage points higher than the other countries.

Fully 78 percent of the respondents in Poland think the news media should report objectively, which is higher than all other countries by 6–20 percentage points, and 64 percent believe the reporting in news media is objective, which is the second-highest among all countries after Spain (66%). This is interesting because respondents in Poland also ranked news media as less reliable than any other country, and they use traditional media less to get political information.

Search and Political Opinion Formation

On average, search is first and foremost used to find information about a particular topic, navigate to specific sites, look up facts, and look up news on a topic or event. Finding political information is the least popular item of those we asked about, and searched for about as often as entertaining content.

Search is widely perceived as enabling new knowledge and leading to discovery of new, important information. Fully 90 percent of our complete sample report that they learn something new at least occasionally, and 82 percent report they discover important information at least occasionally. However, only 41 percent of the total sample of respondents report that they found information that changed their mind on a political issue, with Polish respondents around the average (43%) of all countries.

Respondents in Poland believe that using search has a limited impact on their political views. Four in ten (43%) say they have modified their views because of searching information online – higher than in the UK (30%) and German (33%) samples, similar to Internet users in France (38%), and 6 percentage points lower than respondents in the other three countries.

In the cross-country average, television, offline discussions, and information found online were the most important factors in shaping a voting decision. Search was only the fourth most important information source. However, there are country differences in the relative importance of each source.

Among the Internet users in Poland, those who voted in the most recent elections reported more diverse sources were important for their voting decision than Internet users in other countries. Eight in ten (80%) reported that information found in online and offline discussions

with friends was important, similar to respondents in the US (and Germany for offline discussions) – 10–15 percentage points higher than other countries – and 79 percent reported that search was important (the same as Internet users in the US), followed by respondents in Italy (73%), and 12–20 percentage points higher than those in the other four countries. Online-only news sites were important for three-quarters (77%) of respondents in Poland, which is 7–17 percentage points higher than in the other six countries. Responses regarding the importance of television (76%), print news (67%), and radio (62%) are in the midrange among all countries. Online newspapers were important for seven in ten (70%) of those who voted, similar to respondents in the US (69%), Italy (67%), and Spain (66%), and 10–13 percentage points higher than the other three countries. Almost two-thirds (60%) of respondents in Poland reported that social media was important – the highest importance among all countries – similar to results from respondents in the Spanish (55%) and US (54%) samples, and 10–20 percentage points higher than the other four countries. Offline discussions (59%) with the candidate/campaigners were equally important for the Internet users in Poland (highest percentage, followed by respondents in the US 56% and Spain 55%). A little less than half said email from friends (45%) and candidates (40%) was important. This result is high among the complete sample, similar to the US sample (44% for both) and 10–15 percentage points higher than other countries.

Populism, Search Behavior, and Political Opinion Formation

To find out whether populism has any effect on search behavior and political opinion formation, we conducted a number of multivariate analyses that include demographic factors, such as age, gender, lifestage, education, and marital status, as well as a number of variables that various theories predict will influence political search behavior, including interest in politics, political activity online and offline, search ability, search efficacy, diversity of media, accuracy of search results, use of the Internet, and populism.

Only a few of the demographic variables are statistically significant, such as education being associated with political search in the UK sample, but with little consistency cross-nationally. This is similar to what is reported in the other analyses of our dependent variables: the demographic factors do not have much impact on search compared to the other variables.

Among these other, non-demographic variables, three variables are consistently significant in our seven nations: interest in politics, number of sources of political information, and use of the Internet. Search ability is statistically significant in five of seven countries. Offline political activity and the perceived accuracy of search results are significant in four. Interestingly, populism is only significant once, for the Spanish sample, where those with populist views were somewhat more likely to use political search more often. Surprisingly, search efficacy is never significant.

Three-quarters (75%) of the respondents in Poland agree with three or more populist sentiments, such as a “Compromise in politics is selling out one's principles.” This is slightly above average among the country samples and similar to Italian (73.7%) and French (73.8%) respondents. While the general results of the multivariate analyses hold also for the respondents in Poland, a few results stand out.

One is the frequency of using search for information about politics or current events: Being divorced or separated is negatively related to search, meaning that those who are divorced/separated use search to look for political information less. Search ability is not statistically significant for survey respondents in Poland and France. Confidence in the accuracy of search results is significant for respondents in the Polish, Italian, Spanish, and UK samples.

With respect to influencing a voting decision, search ability is not statistically significant and is positive for survey respondents in Poland, France, and the UK. Populism is not statistically significant for respondents in Poland, but it is for respondents in all other country samples.

For the frequency of discovered information that changed opinion on political issues when using search, interest in politics is statistically significant and positively related for Internet users in the Polish, Italian, Spanish, and UK samples, but not for others. Political activity online is not statistically significant for respondents in Poland, France, and Italy.

As regards frequency of trying to confirm information found elsewhere by search online: The Polish and US samples are the only ones where being female is positively related to trying to confirm information found elsewhere. Being retired is negatively associated, whereas political interest and search efficacy are positively associated.

Measuring the direct relationship between populism and the dependent variables, populism is positively and significantly related to most of them across most of our country samples with little variation. While some of the dependent variables – “Importance of search for vote decision” and “Frequency of trying to confirm information by using search” – are positively related to all three indicators measuring populism in the Polish sample, only two out of three indicators are significant for “Frequency of using search to find information about politics”, and only one out of three indicators was significant for “Discovering information that changed your opinion on a political issue.” The variable, “Have you ever modified your political views because of searching information?” is not statistically significant. However, once other variables are controlled, populism has no statistically significant relationship with any of the dependent variables among Polish respondents.

This is a brief summary of the relationship between search and politics in Poland. More can be found on responses in Poland in the full report.

6.5. Spain: Fact Seekers

In Spain, survey respondents are information seekers – reporting high use of search engines – and they like to check the facts, more so than other nations in this study.

What part do Internet search engines play in shaping public opinion in politics and public affairs? Are they important? Are they similar to other media, such as television and newspapers? These questions are at the heart of a multinational study of search and public opinion. This study is based on online surveys of Internet users in seven nations – France, Germany, Italy, Poland, Spain, the United Kingdom, and the United States – with individual country samples stratified by age, region, and gender. As the samples include Internet users only, they are not representative of the countries at large: they only represent the population of Internet users. The study found that search engines are indeed an important source of information for Internet users. However, search takes place in a pluralistic media context. While search is used often to look for information about politics, it is used more often in many other popular content areas. As a source of political information, online search is about as important as television, and yet political search remains only one of several important media.

Cross-nationally, there are some relatively consistent patterns of media use, such as a greater reliance on television and the mass media instead of search in the German, French, and UK samples. By contrast, the Internet occupies a more central role for the Polish sample, and to a lesser extent for the samples in Italy and Spain. Internet users in the US are in some ways similar to those in Poland, Italy and Spain and in other ways similar to those in Germany, France and the UK. Respondents in Spain report a high use of search and other online tools for finding information. They rank search and other media higher in reliability than many countries and often use search to confirm information and check the accuracy of news. The importance of various media for voting decisions is in the midrange compared to other countries, but social media are more important than in most other countries.

Importance of Search

Among the most popular uses of the Internet across all seven countries is looking for news online as well as finding or checking facts – which is often done via search engines. Between 80 and 95 percent of Internet users use search engines at least daily. Search engines are also popular as a first port of call for finding various types of information, such as information on planning a vacation or natural disasters.

Internet users in Spain report high use of search engines for a variety of purposes. Fully 90 percent use search engines at least daily, similar to respondents in Italy (90%), and Poland (95%), and roughly 10 percentage points higher than respondents in the other four countries. Eight in ten (81%) use search to find information on a specific topic (very) often, similar to Internet users in Poland (84%) and Italy (79%), and 10–20 percentage points higher than the other four countries.

Two-thirds (64%) of respondents in Spain look up facts (very) often, similar to respondents in Italy (66%), the US (65%), and the UK (68%), and considerably higher than those in Germany, France, and Poland (51–55%). Internet users in Spain report similar results to other countries in where they go first for information, but they prefer a personal visit for issues in the community (48%), similar to those in Germany (56%). They also use search more for entertainment; half (51%) do this (very) often, similar to survey respondents in Poland (49%) and the US (45%), and 9–23 percentage points higher than other countries.

Half (51%) of the respondents in Spain reported that they learn something new often when doing a search, which is among the higher results across countries, but only a third (34%) say they often discover important information from an online search; this is about average in relation to all of our national samples of respondents.

Although Internet users in Spain rate their ability to use search engines among the highest in the total sample of all seven countries, they also report feeling overwhelmed and confused more than Internet users in the other countries. Only 12 percent rate their ability to use a search engine as bad, poor, or fair – similar to respondents in the UK, the US, and France, and in stark contrast to those in Germany, Italy, and Poland (21–25%). However, more report feeling overwhelmed by the amount of information and being confused by conflicting search results than Internet users in other countries; only 14 percent responded that they have never been overwhelmed (lowest, similar to Internet users in Poland), and only 11 percent have never been confused (lowest, similar to respondents in Poland).

Use of Various Media

One popular use of search is to check the accuracy of news and information found elsewhere: 58 percent of the respondents in Spain report doing this, which is similar to those in Poland (57%), Italy (60%), and France (53%), and considerably higher than those in the other three countries (35-49%). While search is not used very often to check information found on social media, half of the respondents from our total sample of all seven nations say they do this occasionally (53%), and a fifth do it any time that they question information (21%). A quarter (25%) of respondents in Spain reported doing this anytime, which is similar to those in Italy, France, and the US, and considerably higher than the other three countries.

On average, television remains the most popular source of political news. However, television is closely followed by online sources, family and friends, and print news. There is a sizeable variation across countries, with respondents in Spain reporting a stronger reliance on traditional media than respondents in most other countries – but still less than the German sample – as well as online media to find political information. Nearly three-quarters (71%) of Internet users in Spain say they use search more often than once a day (Table 2.5). Only the sample in Poland has a higher percentage of respondents (75%) using search more than

once per day. Fifty-four percent of respondents in Spain say they use search in looking for information about politics, specifically (Table 2.8). This is just below the average (56%) of respondents across all countries. Sixty-two percent of survey respondents in Spain say they use search engines for information about politics ‘often’ or ‘very often,’ which is higher than the average (54%) across all the countries (Table 3.8).

Fifty-one percent of respondents in Spain say they use online newspaper sites for political information, which is higher than the average (38.4%) for all the countries. Half (53%) also get political information from television (very) often, which is slightly above average, 37 percent from the radio, and 42 percent from print media, which is similar to the sample in Germany. More than a third (35%) also get political information from social media (very) often, similar to respondents in Poland (37%), and higher than those in France, Germany, and the UK (20–21%).

Internet users in Spain find search engines (70%), newspapers (75%), TV/radio (75%), and talking to friends and family (78%) informative to learn what other people think about politics, similar to those in the US. More than half also find social media (57%) and video platforms (53%) informative, similar to respondents in Italy and the US – and more than those in the other four countries.

Respondents in Spain check news sources different from their usual ones more often than other country samples in our study: more than a third (37%) do this (very) often, similar to those in Italy, Poland, and the US, and in contrast to those in France, UK, and Germany (14–25%). A third (35%) also look online for the opinion of people they trust (similar to respondents in the US (34%)) and ask family or friends, which is 7–19 percentage points higher than the other countries surveyed in this study. Almost half (45%) of Internet users in Spain often try to confirm information they found elsewhere (very) by searching online, similar to those in Italy (43%), Poland (46%), and the US (46%), and half (48%) try to confirm information they found in the news media – more than any other country in our study by 6–20 percentage points.

Internet users in Spain sometimes find it hard to find political information online. One-third agree with feeling helpless (31%) and frustrated (32%) when trying to find information about politics, similar to Internet users in Poland and the US, and higher than those in other countries.

Perception of Search in Comparison to Other Media

When asked about the reliability of media, search receives the highest overall rating, followed by radio, family/friends/colleagues, online and offline newspapers, and television. Social media is rated lowest. However, there is some variation between countries with regards to the most reliable media.

Internet users in Spain have more faith in search engines and online media than many other countries in this study, similar to respondents in Italy and Poland. However, they also rank the reliability of mass media high. A third (34%) think search engines give more objective information than other media, similar to Internet users in Italy (36%) and Poland (37%), and higher than respondents in the other four countries. Six in ten (59%) are (very) confident that the recommendations of search engines are factual and true, similar to survey respondents in France (59%), which is about average in the total sample of all seven nations in this study.

Respondents in Spain rank the reliability of search engines comparatively highly (55%), similar to respondents in Italy (56%), Poland (57%), and the US (54%). They also give newspapers a high reliability rating (55%), similar to respondents in Germany (56%) and France (54%), and higher than respondents in other countries. Internet users in Spain give radio a high reliability ranking (58%), similar to those in Germany (61%) and in the UK (57%), and considerably higher than those in other countries. They give television a midrange reliability rating (46%) similar to survey respondents in France and the US (47%), and they give social media a low rating (23%), which is about average in the total sample of all seven countries in this study.

Seven in ten (72%) respondents in Spain think the news media should report objectively, which is among the higher results (after Poland at 78%), and two-thirds (66%) believe the reporting in news media is objective, which is the highest among all countries.

Search and Political Opinion Formation

On average, search is first and foremost used to find information about a particular topic, navigate to specific sites, look up facts, and look up news on a topic or event. Finding political information is the least popular item of those we asked about, and searched for about as often as entertaining content.

Search is widely perceived as enabling new knowledge and leading to the discovery of new, important information. Fully 90 percent of our complete sample report that they learn something new at least occasionally, and 82 percent report they discover important information at least occasionally. However, only 41 percent of the total sample of respondents report that they found information that changed their mind on a political issue, with respondents in Spain above the average (45%) of all countries.

Cross-nationally, television, offline discussions, and information found online were the most important factors in shaping a voting decision. Search was only the fourth most important information source. However, there are country differences in the relative importance of each source.

For example, respondents in Spain consider the impact of search engines moderate to high. Half (49%) say they have modified their political views because of information discovered in an online search – similar to respondents in Italy and the US, and 6–19 percentage points higher than other countries. In addition, 45 percent have discovered information that changed their opinion on a specific political issue at least occasionally. This is among the higher percentages across all countries, similar to respondents in Italy, Poland, and the US, but 10–15 percentage points higher than respondents in Germany, France, and the UK.

Internet users in Spain who voted in the last election say that search and traditional media were moderately important in their voting decision. They rate offline discussions with candidates and social media more important than other countries. Traditional media like television (72%), print news (64%), and radio (61%) are all considered important for making a voting decision; these percentages are in the midrange among the other countries. Seven in ten (70%) find that offline discussions with friends are important, which is also about average among the total sample of all seven countries. Two-thirds of respondents in Spain consider search important for their voting decision (67%, midrange), as well as online newspapers (66%) and information found online (66%), both of which are slightly above the total country average. Two-thirds (65%) consider online news websites as important for their voting decision, which is average among the countries. More than half say offline discussions with candidates or campaigners (55%) as well as social media (54%) were important for their decision; these percentages are higher than average, together with respondents in the Polish and US samples.

Search Behavior, and Political Opinion Formation

To find out whether populist attitudes had any effect on search behavior and political opinion formation, we conducted a number of multivariate analyses that included demographic factors, such as age, gender, lifestage, education, and marital status, as well as a number of variables that various theories predict will influence political search behavior, including interest in politics, political activity online and offline, search ability, search efficacy, diversity of media, accuracy of search results, use of the Internet, and populism.

Only a few of the demographic variables are statistically significant, such as education being associated with political search in the UK sample, but with little consistency cross-nationally. This is similar to what is reported in the other analyses of our dependent variables: the demographic factors do not have much impact on search compared to the other variables.

Among these other, non-demographic variables, three variables are consistently significant in our seven nations: interest in politics, number of sources of political information, and use of the Internet. Search ability is statistically significant in five of seven countries. Offline political activity and the perceived accuracy of search results are significant in four. Interestingly,

populism is only significant once in Spain, where those with populist views were somewhat more likely to use political search more often. Surprisingly, search efficacy is never significant.

More than three-quarters (77.3%) of the sample in Spain agree with three or more populist sentiments, such as a “Compromise in politics is selling out one's principles.” This is above average among the country samples and similar to Polish respondents (74.6%). While the general results of the multivariate analyses hold also for respondents in Spain, a few results stand out.

One is the frequency of using search for information about politics or current events: Being married is negatively related to search, meaning that those who are married use search to look for political information less. Search ability is statistically significant for survey respondents in Spain, Italy, Germany, the UK, and the US. Confidence in the accuracy of search results is significant for respondents in the samples in Spain, Italy, Poland, and the UK. Populism is positively associated with the frequency of using search for Internet users in Spain only.

With respect to influencing a voting decision, being married and living with a partner are negatively related. Search ability is statistically significant and positively related to the importance of search for survey respondents in Germany, Italy, Spain, and the US, and populism is significant for all countries apart from Poland.

For the frequency of discovering information that changed opinion on political issues when using search, living with a partner or being divorced/separated are both negatively associated, meaning they found information that changed their opinions on a political issue less often. Interest in politics is statistically significant and positively related for Internet users in Spain, Italy, Poland, and the UK, but not for others.

As regards frequency of trying to confirm information found elsewhere by search online: Interest in politics is positively related for Internet users in Spain and Poland, as is search efficacy.

Measuring the direct relationship between populism and the dependent variables, populism is positively and significantly related to most of them across most of our country samples with little variation. While some of the dependent variables – “Frequency of using search to find information about politics”, “Importance of search for vote decision”, and “Frequency of trying to confirm information by using search” – are positively related to all three indicators of populism, only two out of the three indicators are significant for “Discovering information that changed your opinion on a political issue”, and only one out of the three indicators is significant for “Have you ever modified your political views because of searching information?”. However, once other variables are controlled, populism has no statistically

significant relationship with any of the dependent variables among respondents in Spain, apart from the “Importance of search for vote decision.”

This is a brief summary of the relationship between search and politics in Spain. Additional information about Spain can be found in the full report.

6.6. United Kingdom: Trust in Broadcasting?

In the United Kingdom, a nation with a rich history of public service broadcasting, survey respondents have a strong trust in broadcast media, stronger than in most other nations in this study. This may not be surprising in a nation identified with the BBC.

What part do Internet search engines play in shaping public opinion in politics and public affairs? Are they important? Are they similar to other media, such as television and newspapers? These questions are at the heart of a multinational study of search and public opinion. This study is based on online surveys of Internet users in seven nations – Britain, France, Germany, Italy, Poland, Spain, and the United States – with individual country samples stratified by age, region, and gender. As the samples include Internet users only, they are not representative of the countries at large: they only represent the population of Internet users. The study found that search engines are indeed an important source of information for Internet users. However, search takes place in a pluralistic media context. While search is used often to look for information about politics, it is used more often in many other popular content areas. As a source of political information, online search is about as important as television, and yet political search remains only one of several important media.

Cross-nationally, there are some relatively consistent patterns of media use, such as a greater reliance on television and the mass media instead of search among respondents in Germany, France and the UK. By contrast, the Internet occupies a more central role for the Polish sample, and to a lesser extent for the Italian and Spanish samples. Internet users in the US are in some ways similar to those in Poland, Italy and Spain and in other ways similar to those in Germany, France and the UK. The UK sample reports broadcast media are more reliable and important for their voting decision than either search or print media. They use search less than in other countries, and many prefer the media to advocate a point of view – in contrast to other countries.

During the last general election campaign in 2015, then-Prime Minister David Cameron promised UK citizens a referendum on whether to leave or to remain in the EU. In June 2016, the “Brexit” campaign won the referendum to leave the EU, leading to the resignation of the Prime Minister and selection of the new Prime Minister, Theresa May.

Importance of Search

Among the most popular uses of the Internet across all seven countries is looking for news online as well as finding or checking facts – which is often done via search engines. Between 80 and 95 percent of Internet users use search engines at least daily. Search engines are also most popular as a first port of call for finding various types of information, such as information on planning a vacation or finding more about natural disasters.

Respondents in the UK use search less in general and less for all the different things people look for online – apart from facts, which they do more often than in all other countries surveyed. Eight in ten respondents (80%) from the UK sample use search engines at least daily, similar to respondents in France (83%), the US (82%), and Germany (78%), but 8–13 percentage points less than respondents in the other three countries.

Internet users in the UK report similar results to other countries in where they go first for information, but they use search less than respondents in other countries to find all types of information, similar to respondents in the US.

Among all seven countries in this study, the UK sample reports the lowest percentage of Internet users saying they look up information on politics and current events (very) often (31%), search for information on a specific topic (64%), look up news or an event (47%), and search for medical information (31%). Facts are different from information. Two-thirds (68%) of respondents in the UK look up facts (very) often, similar to Internet users in Italy (66%), the US (65%), and Spain (64%), and considerably higher than those in Germany, France, and Poland (51–55%).

Only 45 percent of Internet users in the UK say they often learn something new when doing an online search, which is considerably higher than Internet users in Germany (32%), but also considerably lower than users in Italy (55%) and Poland (59%). Almost half (46%) never or rarely find things in an online search that they thought were wrong, similar to survey respondents in Germany (53%), but a considerably higher percentage than other countries. Only a quarter (24%) often discover information important to them, which is the second-lowest, only higher than France (23%), and 10–33 percentage points lower than all other countries.

Internet users in the UK are about average across the seven nations in how they rate their ability to use search and their frustration with results. A sizeable majority (87%) of the UK sample rate their ability to use a search engine as good or excellent, which is similar to respondents in the US, Spain, and France, and in contrast to respondents in Germany, Italy, and Poland (75–79%). Reports of being overwhelmed by the amount of information found in a search and being confused by conflicting results are about average in relation to all of our national samples of respondents.

Use of Various Media

One of the popular uses of search is to check the accuracy of news and information found elsewhere – although the percentage of respondents saying they do this (very) often is lower for respondents in the UK (39%) than for respondents in five of the six country samples (44–61%). Only in Germany is the proportion lower (35%). While search is not used very often to check information found on social media, half of the respondents from our total sample of

respondents say they do this occasionally (53%), and a fifth do it any time that they question information (21%). Only 16 percent of the UK sample reported doing this any time they question the information.

On average, television remains the most common source in the UK for obtaining political news – however, it is closely followed by online sources, family and friends, and print news. There is a sizeable variation across countries, with the German sample reporting a stronger reliance on television than any of the other countries. Respondents in the UK are about average in comparison to the total sample of respondents in their use of offline media for political information, but they use online media less. Half (51%) of the respondents in the UK get political information from television (very) often, which is average among all seven countries, 27 percent from the radio (low), and 36 percent from print media (midrange, similar to Italy (38%). Only 17 percent of Internet users in the UK get their information (very) often from political party websites, which is lower than other countries, and one-fifth (20%) get political information from social media, which is considerably lower than most countries. Forty-four percent use search (very) often to find political information, which is the lowest percentage among all the countries. Only one-third gets political information (very) often from online-only news websites (34%) and online websites of major newspapers (30%); these results place respondents in the UK at the low end, together with respondents from France, Germany, and the US.

To learn what other people think about politics, respondents in the UK sample find mass media and talking to friends/family more informative than online sources. They find TV and radio (72%), newspapers (67%), and talking to friends and family (73%) most informative, but these percentages are lower than in the other countries in this study. Only 63 percent find search engines informative, which is at the lower midrange among all countries and similar to Internet users in Poland (63%).

Only one-fifth (23%) of Internet users in the UK (very) often check news sources different from those they usually use, which is similar to respondents in France (25%) and much lower than most other countries. A third (33%) tries to confirm information they found elsewhere (very) often by using search engines, which is low compared to other countries.

Respondents in the UK sample are moderately frustrated with trying to find political information online. One-quarter agree with feeling helpless (26%) and frustrated (26%) when trying to find information about politics, similar to Internet users in Italy, and about average among the total sample of countries.

Perception of Search in Comparison to Other Media

When asked to rate the reliability of a variety of different media, search receives the highest overall rating on average cross-nationally, followed by radio, family/friends/colleagues, online

and offline newspapers, and television. Social media is rated lowest in reliability across all the countries. However, there is variation between countries with regards to the most reliable media.

Internet users in the UK give broadcast media a higher reliability ranking than search and much higher than newspapers. Although respondents in Britain do not think that search engines are more objective than news media, they trust that the results of a search are factual and true. One-quarter (26%) of respondents in the UK think that search engines yield more objective information than other media, which is similar to the proportions of respondents in Germany (25%) and France (25%), and considerably lower than other countries. Two-thirds (68%) are (very) confident that the recommendations of search engines are factual and true, close to Internet users in the US (74%) and higher than the other five countries by 6–21 percentage points.

Respondents in the UK rank the reliability of search engines lower than respondents in many other countries (51%), similar to respondents in France (50%). They give newspapers a lower reliability rating (42%), similar to Internet users in the US (45%), Italy (42%), and Poland (40%), and lower than respondents in other countries. Internet users in the UK rank radio comparatively high (57%), similar to those in Germany (61%) and Spain (58%), and they rank television the highest of all countries (58%), similar to respondents in Germany (56%). Respondents in the UK sample give social media a low reliability rating (17%), similar to respondents in the German and French samples (both at 16%).

Although more Internet users in the UK sample expressed trust in broadcast media, they do not think that news media report objectively – and many do not think they should report objectively. Only 58 percent think the news media should report objectively, which is the lowest result out of all seven countries, and only 39 percent believe the reporting in news media is objective, which is much lower than most countries. A third (30%) believe that the news media advocate a viewpoint.

Search and Political Opinion Formation

On average, search is first and foremost used to find information about a particular topic, navigate to specific sites, look up facts, and look up news on a topic or event. Finding information about politics is the least popular item of those we asked about, and searched for about as often as respondents search for entertaining content.

Search is widely perceived as enabling new knowledge and leading to discovery of new, important information. Fully 90 percent of our complete sample report that they learn something new at least occasionally, and 82 percent report they discover important information at least occasionally. However, only 41 percent of the total sample of respondents

reported that they found information that changed their mind on a political issue, but with respondents in UK below the average (35%) of all countries.

Internet users in the UK believe that the impact of search on shaping their political opinions is very low. Less than a third (30%) say they have modified their political views because of searching information online, which is the lowest percentage among all seven countries in this study and similar to the proportion of respondents in Germany.

In the cross-country average, television, offline discussions, and information found online were the most important factors in shaping a voting decision. Search was only the fourth most important information source. However, there are country differences in the relative importance of each source.

Of those respondents who voted in the last UK election, most relied on mass media, such as television, print media, and the radio to make their voting decision. Online media played a relatively less important role. Television was important for 78 percent of respondents in the UK, which is high and close to percentages from respondents in Germany (80%) and the US (84%), and 11 percentage points higher than for respondents in France and Italy. Two-thirds found print media important (67%), which is in the higher midrange among all seven countries and similar to respondents in Poland (67%). Two-thirds (65%) of Internet users in the UK found offline discussions with friends important, which is the lowest of all countries, similar to Internet users in France (68%) and Italy/Spain (70%) and 10–15 percentage points lower than in the other nations. Less than two-thirds of respondents in the UK consider information found online (64%) or search (59%) important. However, one in six (60%) of respondents in the UK said that leaflets were important, the highest among all countries and similar to survey respondents in France (57%), and 9–21 percentage points higher than in the other countries. Over half (57%) the respondents in the UK say online magazines were important, similar to respondents in France (58%) and Germany (60%), and 9–13 percentage points lower than the other four countries.

Populism, Search Behavior, and Political Opinion Formation

To find out whether populism has any effect on search behavior and political opinion formation, we conducted a number of multivariate analyses that include demographic factors, such as age, gender, lifestage, education, and marital status, as well as a number of variables that various theories predict will influence political search behavior, including interest in politics, political activity online and offline, search ability, search efficacy, diversity of media, accuracy of search results, use of the Internet, and populism.

Only a few of the demographic variables are statistically significant, such as education being associated with political search in the UK sample, but with little consistency cross-nationally.

This is similar to what is reported in the other analyses of our dependent variables: the demographic factors do not have much impact on search compared to the other variables.

Among these other, non-demographic variables, three variables are consistently significant in our seven nations: interest in politics, number of sources of political information, and levels of use of the Internet. Search ability is statistically significant in five of seven countries. Offline political activity and the perceived accuracy of search results are significant in four countries. Interestingly, populism is only significant once, for the Spanish sample, where those with populist views were somewhat more likely to use political search more often. Surprisingly, one's perceived efficacy in using search is never significant.

Two-thirds (66.3%) of respondents in the UK agree with three or more populist sentiments, such as a "Compromise in politics is selling out one's principles." This is lower than average among the country samples and similar to respondents in Germany (63.8%). While the general results of the multivariate analyses hold also for the respondents in the UK, a few results stand out.

One is the frequency of using search for information about politics or current events: Having middle and higher educational qualifications are positively related to search only for respondents in the UK sample. Confidence in the accuracy of search results is significant in the results for the UK, Poland, Italy, and Spain.

With respect to influencing a voting decision, being female is positively related to the importance of search only for respondents in the UK. Search ability is not statistically significant for survey respondents in the UK, Poland, and France. Perceived efficacy in the use of search is positively associated with influencing one's voting for respondents in Spain and the UK, and populism is significant in all countries apart from Poland.

With respect to the frequency of discovering information that changes one's opinion on a political issue, when using search, interest in politics is statistically significant and positively related for Internet users in the UK, Italy, Spain, and Poland, but not for others. Political activity online is statistically significant for respondents in Germany, Spain, the UK, and the US.

As regards the frequency of trying to confirm information found elsewhere by search online: Being retired is negatively associated with trying to confirm information found elsewhere, whereas search efficacy is positively associated. Confidence in the accuracy of search results is positively related to the likelihood of using search to confirm information in the UK sample only.

Measuring the direct relationship between populism and the dependent variables, populism is positively and significantly related to most of the outcomes hypothesized across most of our

country samples with little variation. While some of the dependent variables – “Frequency of using search to find information about politics”, “Importance of search for vote decision”, and “Frequency of trying to confirm information by using search” – are positively related to all three indicators measuring populism in the UK sample, only two out of the three indicators for populism are significant for “Discovering information that changed your opinion on a political issue”, and “Have you ever modified your political views because of searching for information?” is not significant. However, once other variables are controlled, populism has no statistically significant relationship with any of the dependent variables among UK respondents, apart from the “Importance of search for vote decision.”

This is a brief summary of the relationship between search and politics in the UK. More about the UK can be found in the full report.

6.7. United States: Media Omnivores

When it comes to getting news and information, survey respondents in the United States are media omnivores – consuming a diverse range of media in an attempt to meet their interests. However, it tends not to be political information they're looking for.

What part do Internet search engines play in shaping public opinion in politics and public affairs? Are they important? Are they similar to other media, such as television and newspapers? These questions are at the heart of a multinational study of search and public opinion. This study is based on online surveys of Internet users in seven nations – Britain, France, Germany, Italy, Poland, Spain, and the United States – with individual country samples stratified by age, region, and gender. As the samples include Internet users only, they are not representative of the countries at large: they only represent the population of Internet users. The study found that search engines are indeed an important source of information for Internet users. However, search takes place in a pluralistic media context. While search is often used to look for information about politics, it is used more often in many other popular content areas. As a source of political information, online search is about as important as television, and yet political search remains only one of several important media.

Cross-nationally, there are some relatively consistent patterns of media use, such as a greater reliance on television and the mass media instead of search in Germany, France, and the UK. By contrast, the Internet occupies a more central role for Internet users in Poland, and to a lesser extent in Italy and Spain. Internet users in the US are in some ways similar to those in Poland, Italy and Spain and in other ways similar to those in Germany, France and the UK. The US sample uses search less than other countries, but is confident about its accuracy and reliability. They do not use media much to find political information, but they use all media more than most countries to find out about other people's views. They report a moderately high impact of search on their views and report the importance of all media for their voting decision.

The 2016 Presidential election has been accompanied by rising interest in politics and the media. Political issues over immigration and healthcare, for example, have become hot button topics. The issue of "fake news" and its potential impact have been especially prominent during the last election cycle in the US.

Importance of Search

Among the most popular uses of the Internet across all seven countries is looking for news online as well as finding or checking facts – which is often done via search engines. Between 80 and 95 percent of Internet users use search engines at least daily. Search engines are also most popular as a first port of call for finding various types of information, such as information on planning a vacation or natural disasters.

Respondents in the US use search often, but less so than respondents in Poland, Italy, and Spain. Eight in ten respondents (82%) from the US sample use search engines at least daily, similar to respondents in France (83%), the UK (80%), and Germany (78%), but 8–13 percentage points less than the other three countries. Internet users in the US report results similar to other countries in where they go first for information, but they use search more across all types of information, similar to the UK sample.

We also find higher use of search for looking up facts, finding entertainment content, and double-checking information from social media for respondents from the US. Two-thirds (65%) look up facts (very) often, similar to Internet users in Italy (66%), Spain (64%), and the UK (68%), and considerably more than those in Germany, France, and Poland (51–55%). About half (48%) indicate that they often learn something new through search, which is about average among all seven countries.

Internet users in the US are confident in their ability to use search and report being confused on a par with respondents in other nations. Almost all (93%) of the respondents in the US sample rate their ability to use a search engine as good or excellent, which is similar to respondents in the UK, Spain, and France, and stands in contrast to respondents in Germany, Italy, and Poland (75–79%). Like being confused by conflicting results, the US respondents report being overwhelmed by the amount of information found in a search as at a level that is average in relation to all of our national samples of respondents.

Use of Various Media

A popular use of search is to check the accuracy of news and information found elsewhere. Half (49%) of respondents in the US do this (very) often, which puts it at the midrange among the other countries. While search is not used very often to check information found on social media, half of the respondents from our total sample of all seven countries say they do this occasionally (53%), and a fifth do it any time that they question information (21%). A quarter (26%) of the US sample reported doing this any time they question information, which is among the highest percentages across the seven countries in our study.

On average, television remains the most popular source of political news. However, it is closely followed by online sources, family and friends, and print news. There is a sizeable variation across countries, with the German sample reporting a stronger reliance on television than other countries. Respondents in the US do not use as many media to find information about politics, but they find mass media and online media very helpful when they want to find out about other people’s political views. Half (53%) use search (very) often to find political information, which is about average for all the countries as a whole. Half (49%) also get political information from television (very) often (average across the sample), a quarter (25%) from the radio (lowest among all countries), and a third (33%) from print media (low, similar to

respondents in France (32%)). One-third of Internet users in the US get political information (very) often from online-only news websites (35%) and from online websites of major newspapers (33%), which is relatively low, putting the US in company with respondents in France, Germany, and the UK. A quarter (26%) of respondents in the US get their information (very) often from political party websites, which is higher than other countries, and 28 percent get political information from social media, which ranks in the middle of all seven countries.

One-quarter (24%) of Internet users in the US report that the people they communicate with online share their political views, which is a high percentage, similar to respondents in Poland (24%) and Germany (23%). Respondents in the US find search engines (72%), newspapers (71%), TV/radio (74%) and talking to friends and family (77%) informative to learn what other people think about politics, similar to Internet users in Spain. They also report finding social media (57%) and video platforms (52%) informative, similar to respondents in Italy and Spain – which is higher than in other countries. A third (34%) look online for the opinions of people they trust, which is 7–19 percentage points higher than the other seven countries, and 31 percent ask family and friends.

Almost half (46%) of respondents in the US try to confirm information they found elsewhere (very) often by using search engines, and 42 percent try to confirm information from the news media, similar to respondents in Italy, Poland, and Spain. A third (31%) check sources different from their usual sources (very) often.

Internet users in the US indicate a fairly high level of frustration with trying to find political information online. One-third agree that they feel helpless (30%) and frustrated (33%) when trying to find information about politics, similar to Internet users in Poland and Spain, and higher than in most of the other countries.

Perception of Search in Comparison to Other Media

When asked to rate the reliability of different forms of media, search receives one of the highest overall ratings, followed by radio, family/friends/colleagues, online and offline newspapers, and television. On average, social media is rated lowest in the US and other nations. However, there is some variation between countries with regards to the most reliable media.

Internet users in the US are somewhat more confident than respondents in the other country samples that information found in search is factual and true. One-third (32%) think search engines give more objective information than other media, similar to respondents in Spain (34%), Italy (36%), and Poland (37%), but these percentages are higher than in other countries. Three-quarters (74%) are (very) confident that the recommendations of search engines are factual and true, similar to Internet users in the UK (68%), and the highest among all seven countries by 11–26 percentage points.

Respondents in the US say that search is more reliable than any other mass media. They rank the reliability of search engine results comparatively highly (54%), similar to respondents in Spain (55%), Italy (56%), and Poland (57%), and they rank newspapers lower (45%), similar to respondents in the UK (42%), Italian (42%), and Polish (40%) samples. Internet users in the US also rank radio low (47%) with respect to reliability, similar to those in Poland (48%) and Italy (45%), and 47 percent think television is a reliable source for information, similar to respondents in France (47%) and Spain (46%), and about average among the other countries. One-fifth (20%) say that social media is reliable, which is about average among the total sample of respondents.

A factor that might shape the higher impact of search for respondents in the US could be that only half (52%) of them believe that news media report objectively, and 26 percent believe the new media tend to advocate a particular viewpoint. However, only two-thirds (64%) of Internet users in the US think the news media *should* report objectively, which is among the lowest percentages across the seven countries.

Search and Political Opinion Formation

On average, search is first and foremost used to find information about a particular topic, navigate to specific sites, look up facts, and look up news on a topic or event. In fact, finding information about politics is the least popular item of those we asked about, and searched for about as often as respondents search for entertaining content.

Search is widely perceived as enabling new knowledge and leading to discovery of new, important information. Fully 90 percent of our complete sample report that they learn something new at least occasionally, and 82 percent report they discover important information at least occasionally. However, only 41 percent of the total sample of respondents report that they have found information that changed their mind on a political issue, with respondents in the US ranking above the average (44%) of all countries and 10–15 percentage points higher than those in Germany, France, and the UK.

Respondents from the US report a moderate to high impact of search on their political opinions. Half (49%) say they have modified their views as a result of information they found by searching online – similar to Internet users in Italy and Spain, and 6–19 percentage points higher than in other countries.

In the cross-national average, television, offline discussions, and information found online were the most important factors in shaping a voting decision. Search was only the fourth most important information source. However, there are country differences in the relative importance of each source.

Although respondents in the US report less use of all media for finding information about politics than respondents in many other countries (see above), those who voted in the last US elections report that all media were very important for their voting decision – often the highest of all seven countries. Television was important to 84 percent, which is the highest percentage together with respondents from Germany (81%) and the UK (79%). Eight in ten (80%) found online information important, which is the highest percentage together with Internet users in Poland (80%), and 10–24 percentage points higher than all other countries. Eight in ten (79%) also reported search as important, which is again the highest percentage together with respondents in Poland (79%) and Italy (73%), and 12–21 percentage points higher than the other four countries. A further 78 percent said online news websites were important, which is the highest percentage together with the Polish sample (77%), and 8–28 percentage points higher than others. Three-quarters (77%) found offline discussions with friends important, similar to Internet users in Poland (79%) and Germany (76%), and 7–12 percentage points higher than other countries. Print news were important for 71 percent of those respondents in the US who had voted in the last elections, which is the second highest after respondents in Germany (76%), and for 69 percent online magazines were important, which is the second highest after respondents in Poland (70%). Social media were important for more than half (54%), which is among the higher results and similar to Internet users in Poland (60%) and Spain (54%).

Populism, Search Behavior, and Political Opinion Formation

To find out whether populism has any effect on search behavior and political opinion formation, we conducted a number of multivariate analyses that include demographic factors, such as age, gender, lifestage, education, and marital status, as well as a number of variables that various theories predict will influence political search behavior, including interest in politics, political activity online and offline, search ability, search efficacy, diversity of media, accuracy of search results, use of the Internet, and beliefs and attitudes in line with populism.

Only a few of the demographic variables are statistically significant, such as education being associated with political search in the UK sample, but with little consistency cross-nationally. This is similar to what is reported in the other analyses of our dependent variables: the demographic factors do not have much impact on search compared to the other variables.

Among these other, non-demographic variables, three variables are consistently significant in our seven nations: interest in politics, number of sources of political information, and use of the Internet. Search ability is statistically significant in five of seven countries. Offline political activity and the perceived accuracy of search results are significant in four. Interestingly, populism is only significant once, for the Spanish sample, where those with populist views were somewhat more likely to use political search more often. Surprisingly, search efficacy is never significant.

Two-thirds (72%) of respondents in the US agree with three or more populist sentiments, such as a “Compromise in politics is selling out one's principles.” This is slightly lower than average among the country samples and similar to respondents in France (74%). While the general results of the multivariate analyses hold also for the respondents in the US, a few results stand out.

One is the frequency of using search for information about politics or current events: In addition to offline political activity, online activity is statistically significant for respondents in the US as well as Poland. Confidence in the accuracy of search results is not significant in the US, French, and German samples.

With respect to influencing a voting decision, search ability is statistically significant and positive for survey respondents in the US, Germany, Italy, and Spain, and populism is significant for all countries apart from Poland.

For the frequency of discovering information that changed opinion on political issue when using search, interest in politics is not statistically significant for US, German, and French Internet users, but it is for the other four countries. Political activity online is statistically significant for respondents in the US, Germany, Spain, and the UK. Confidence in the accuracy of search results is positively related in the US and Spanish samples only.

With respect to the frequency respondents report trying to confirm information found elsewhere by searching online, two factors were significant: Being female is positively associated with trying to confirm information found elsewhere, as is living with a partner.

Measuring the direct relationship between populism and the dependent outcome variables, populism is positively and significantly related to most of them across most of our country samples with little variation. The dependent variables – “Discovering information that changed your opinion on a political issue”, “Frequency using search to find information about politics”, “Importance of search for vote decision”, and “Frequency trying to confirm information by using search” – are all positively related to all three populism indicators in the US sample, whereas two out of the three indicators for populism are statistically significant for the variable, “Have you ever modified your political views because of searching information?”; it is the only sample that is statistically significant for all five dependent variables. However, once other variables are controlled, populism has no statistically significant direct relationship with any of the dependent variables among US respondents, apart from the “Importance of search for vote decision.”

This is a brief summary of the relationship between search and politics in the US. More information about the US responses can be found in the full report.

Appendix 7. References

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