The Role of Filter Bubbles and Echo Chambers in the Rise of Populism: Disentangling Polarization and Civic Empowerment in the Digital Age[*]

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Abstract

Concerns around filter bubbles, echo chambers and misinformation have informed a growing number of claims about the political risks tied to social media and search engines along with the algorithms that drive them. One particular theme has been the role of digital technologies in shaping a rise in populism. This chapter briefly reviews theoretical perspectives on how search engines and social media could create echo chambers and filter bubbles, but argues that they adhere to a problematic, technologically deterministic perspective. We then turn to an analysis of internet users in seven nations where we find evidence that their online practices are unlikely to be responsible for a rise in populism. In addition, the findings raise questions about the very meaning of populism in a digital era of perceived citizen empowerment. Are we seeing citizens gaining a greater sense of empowerment through access to resources via the Internet? Populist attitudes perceived as unrealistic and anti-elitist in earlier decades might be more realistic and mainstream in the digital age. While we cannot definitively rule out populism as being driven by digital media, the chapter shows why it is more likely that echo chambers are tied to empowerment and the rise of polarization in politics, rather than populism. These findings underscore the importance of examining the actual uses of search engines and social media more rigorously to critically challenge technologically deterministic perspectives.

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Introduction

The outcomes of elections and referenda across the world, such as the election of Donald Trump as President of the United States, and the Brexit vote for the United Kingdom to leave the European Union (EU), both in 2016, contributed to a growing sense that there was a rise in populist attitudes that would undermine liberal democratic institutions. This thesis has in turn fuelled Internet-related theoretical perspectives on what is driving this populist resurgence. One prominent perspective is tied to the role of search engines and social media, along with the algorithms that govern them, to explain why Internet users are being trapped in filter bubbles and echo chambers rather than being exposed to diversity of information required for them to draw sound conclusions about what to believe and how to vote.

This chapter examines this explanatory thesis through the analysis of empirical data on Internet users in seven developed nations. Gathered in early 2017, our surveys of Internet users show that populism is indeed prominent as conventionally defined and, in fact, so prominent that it is difficult to view these beliefs and attitudes as extreme or radical in our contemporary digital age. Moreover, we find that those who hold populist beliefs and attitudes are no more likely to be trapped in filter bubbles or echo chambers than are other Internet users. Quite the contrary, the opposite is the case. So-called populists are more politically engaged and more actively seek out sources of information about politics. In such ways our findings raise questions about the very meaning of populism and theories about its effects, leading us to speculate on alternative perspectives on populism, such as the rise of a sense of citizen empowerment and the polarization of political communication in the digital age.

The following sections review key work on populism, including its operational definition, and how it is connected with dominant perspectives around filter bubbles and echo chambers. We then turn to the methodology of our survey research and the survey findings. The concluding sections briefly summarise the findings and speculate on alternative perspectives that are suggested by the patterns of relationships emerging from our analysis. This study not only questions deterministic theories of access to

political information, but also the very conceptualization and operational definition of populism in the digital age.

Conceptualizing populism

'Populism' is a term with a number of different meanings and connotations (Kaltwasser 2015). These can range from anti-immigration right-wing populism in Europe (Kaltwasser 2015) to the progressive populism of Bernie Sanders in the United States (Gerbaudo 2018). Clearly, populism can be defined or viewed somewhat differently depending on the political context being considered, underscoring how populist sentiments cut across the political spectrum (Gerbaudo 2018; DeLuca et al. 2012).

To account for these variations in the manifestation of populism, scholars have argued that, at its core, populism is generally characterised by two features: anti-elitism and appeals to 'the people' as the just and ultimately authoritative force in a democracy (Canovan 1999; Mudde 2004). Canovan (1999), for instance, has argued for a structural understanding of populism, defining the concept not by its specific contents – e.g. the nationalism of right-wing populism or the anti-capitalism of left-wing populism – but by the structural relationship between its constituent actors: the people and elite (or dominant power structure). A structural definition reduces the concept of populism to its ethos or animus. Fundamentally, in this view, populist rhetoric involves 'some kind of revolt against the established structure of power in the name of the people' (Canovan 1999, 3). The populist ethos is anti-elitist and anti-establishment, one which seeks to wrestle power and authority away from a minority and give it to the majority, whether that majority is from the right or left of politics.

Generally, populists challenge the elite from the view that authority and sovereignty should not rest with a small number of individuals – whether they be political elites, economic elites, academics, or the media – but with the people as a whole. People are the core of a democracy and the elite 'threaten the purity and unity of the sovereign people' (Akkerman et al. 2014, 1327). In light of this, populists often favour direct democracy (Canovan 1999) as an expression of the majority's preference. Mudde (2004, 543) follows a similar line of reasoning, albeit more pejoratively, arguing that populism is 'an ideology that considers society to be ultimately separated into two

homogeneous and antagonistic groups, “the pure people” versus “the corrupt elite”, and which argues that politics should be an expression of the volonté générale (general will) of the people.’ Thus, while populism may be seen as a broad worldview with varying manifestations, its core has been characterised by a common feeling of distrust and antipathy towards elites.

Explaining Populist Impulses in Europe and the United States

From the election of Donald Trump in the Unites States, to the Brexit vote in the United Kingdom, to the National Front or National Rally in France, it has been argued that populism has been on the rise in recent years (Gerbaudo 2018). Here we touch on two key explanations for this apparent rise, tied to the Internet and social media. Two overlapping perspectives are among the most prominent: the notions of filter bubbles and echo chambers.

Eli Pariser’s (2011) notion of a filter bubble is the idea that the algorithms designed to personalise search and social media tend to feed users results that reflect the interests, location, and topics that Internet users have searched for previously. From this perspective, individuals’ past online behaviour shapes future results in ways that lead users to see a less diverse array of information which reinforces their existing views, rather than exposing users to countervailing information.

The idea of an echo chamber is that people have a confirmation bias that leads them to use social media and other sources of information in ways that confirm their pre-existing biases and connect with like-minded people (Nickerson, 1998; Sunstein, 2017). This bias could lead to the creation of relatively homogeneous groups of like-minded individuals with limited viewpoints and one-sided political information (Sunstein, 2007, 2017). This social filtering of media choices by individuals, such as whom they follow and friend on social media, could reinforce algorithmic filtering to create a homogeneity bias among media users (Nikolov et al., 2015), and populists in particular.

Populists, digital media, and echo chambers

Scholars have argued that the rise of populism cannot be explained by factors of economics, globalization, or migration alone and that media technologies and systems

have an important role to play (Schroeder 2018; Kaltwasser 2015; Postill 2018). In particular, digital media technologies may have provided opportunities for the formation of alternative counter-publics which seek to challenge dominant power structures (Schroeder 2018). Specifically, the idea that the Internet has empowered individuals to hold institutions more accountable is a theme across research on the Fifth Estate (Dutton 2009; Dubois and Dutton 2014).

In a new media context where information flows have been democratised, Nichols (2017) argues that an increased sense of self-belief has been engendered in the public who now feel better able to independently source news and political information, using it to challenge those in authority. The decline in media authority engendered by communication technologies (Waisbord 2018) and the apparent rise in populist sentiments may be seen as a positive in the sense of the public being empowered by their access to information and networks (Mudde 2004; Dubois and Dutton 2014).

On the other hand, these developments can be seen as a negative if populists find themselves in highly agreeable and potentially radical online echo chambers or filter bubbles (Nichols 2017; Schroeder 2018; Fawzi 2019). Gerbaudo (2018), for instance, argues that an ‘elective affinity’ between populists and social media may have come about because social media platforms suit populists’ needs: they provide spaces where ordinary members of the public can come together to express their own views, support one another, and challenge elites. Once there, Gerbaudo (2018) argues that algorithmic features of social media may operate to provide populist users with content which matches their political dispositions while sheltering them from alternative views. Moreover, such technologies may also enhance connections between like-minded individuals, drawing them into online crowds. The risk here is that individuals may become more extreme within self-selected and algorithmically-driven online echo chambers and filter bubbles.

Researchers have pointed out that digital media platforms appeal to populists because of two mutually reinforcing factors: 1) the exclusion of populists from the mainstream, and 2) the negative attitude of many populists toward the mainstream media. First, scholars have noted the negative framing of both right- and left-wing populist

movements in the mainstream media both in Europe and the United States (Decker 2008; Jutel 2016; Esser et al. 2016; DeLuca et al. 2012). Such populist movements have been variously characterised as threats to liberal democracy, civil rights, and social order (Jutel 2016; Esser et al. 2016). In response to negative coverage and attitudes toward them, scholars observe that populist movements have used digital media (e.g. social media, online newspapers) to circumvent the mainstream media and spread their own messages (Krämer 2017; Schroeder 2018; Engesser et al. 2017).

As a tool, the Internet 'provides platforms for both organized and ordinary populists to avoid not only journalistic gatekeeping, but also criticism and social control' (Krämer 2017, 1304). In particular, recent scholarship has noted how the affordances of social media have helped populist movements to gain ground and sustain themselves by allowing them to easily communicate ideas, share information, organise, and build support (Schroeder 2018; Krämer 2017; Gerbaudo 2018; Engesser et al. 2017). For populist voters, social media spaces become places to rally and make their voices heard. And for populist politicians being outside the mainstream media apparatus allows them to be stronger in their language, not having to comply with mass media logics (Engesser et al., 2017). Extreme political parties on both the left and right use social media to voice populist messages more than centrist parties do, attacking the political elite and advocating on behalf of the people (Ernst et al. 2017).

Second, and relatedly, populists tend to view the mainstream media as biased against them (Schroeder 2018; Schulz et al. 2020). Donald Trump, for instance, has railed against the mainstream media, accusing them of fabricating stories and trying to undermine him. In turn, he has made extensive use of his Twitter account to communicate messages to his supporters, often expressing his view that the mainstream press is 'fake'. Such opposition to the mainstream media may arise from the media's tendency to exclude or negatively frame populist movements but also because media outlets are seen as powerful influencers in democratic society who are part of an elite minority or political establishment that needs to be attacked or

undermined (Gerbaudo 2018; Krämer 2017; Engesser et al. 2017; Schulz et al. 2020; Fawzi 2019).

Both of these factors may drive individuals with populist attitudes away from mainstream news sources to alternative media and into politically agreeable online echo chambers (Schulz et al. 2020; Fawzi 2019). Moreover, the 'aggregation logics', 'filter-by-interest' dynamics, and network effects at play online may create populist filter bubbles whereby users are exposed to attitude-consistent content that is popular with dense networks of like-minded others (Gerbaudo 2018).

Methodological Approach

In order to empirically examine the relationships between populist attitudes and media and information practices, our study draws on a larger study of how Internet users access information about politics (Dutton et al. 2019). Supported by a grant from Google, Internet users in seven nations were surveyed online in early 2017.‡

The survey included a standard attitudinal scale of populism. One virtue of conceptualizing populism in a structural way, with a focus on the people and the elite, is that it provides a definition which is able to 'travel' across contexts and the political spectrum (Akkerman et al. 2014, 1326). A structural definition allows for an appraisal of populism as an ideology, rather than being tied to specific political ideologies, policy platforms, types of organization, or specific forms of communication (Mudde 2004). It also provides a way to measure the populist attitudes of the public by putting forth an operationalizable definition.

Based on this view of populism, scholars have formulated and tested survey items that tap into its core structural features (see Hawkins et al. 2012; Akkerman et al. 2014). The items in this measure are designed to capture a general populist attitude, including such statements as 'the people, not the politicians, should make the most important policy decisions', 'the political differences between the elite and the people are larger than the

‡ These nations and their sample size were: Germany (N = 2000), Spain (N = 2007), France (N = 2000), Italy (N = 2000), Poland (N = 2005), the United Kingdom (N = 2000), and the United States (N = 2018).

differences among the people', and 'politicians need to follow the will of the people' which speak to anti-elitist attitudes, views on differences between the people and the elite, and the idea of popular sovereignty (Hawkins et al. 2012; Akkerman et al. 2014; Schulz et al. 2018; Van Hauwaert et al. 2020). Agreement with these questions is considered an indicator of populist attitudes. The validity, reliability, distinctiveness, and predictive power of the measure has been supported by multiple studies in the U.S. and Europe (e.g. Hawkins et al. 2012; Akkerman et al. 2014; Hawkins et al. 2020).

In line with these studies, our surveys asked respondents the extent to which they agreed with five populism scale items drawn from prior research (see Table 1). We found that the level of agreement with each of the items of the populism scale was sufficiently varied but relatively high, ranging from 45 percent to almost 80 percent, with a quarter to one-third of all respondents across the nations agreeing or strongly agreeing with all items.

[Table 1 here]

Since these items are highly correlated, we created a single scale of populism by averaging across the five items with non-missing values. Cronbach's alphas ranged from .76 in the US to .84 in Germany, which is indicative of good scale reliability and in line with prior analyses (see Akkerman et al. 2014; Schulz 2019; Hameleers and de Vreese 2018; Tsatsanis et al. 2018; Spruyt et al. 2016).

Findings

Before focusing on how populist attitudes relate to patterns of Internet use and access to political information, it is critical to note and discuss the items composing the populism scale (Table 1). We review our findings by describing the distribution of opinions, identifying who holds populist attitudes, and then looking at the relationships between populist attitudes and information practices of Internet users.

Support for Populism

Most generally, the responses of Internet users reinforce notions that populist attitudes are prominent in the US and EU. Nearly three-fourths of all respondents across all

seven nations agree that ‘elected politicians should follow the will of the people’. The weakest item in support of populism still has nearly half of respondents agreeing that ‘what people call “compromise” in politics is really just selling out on one’s principles’ (Table 1). Populism is most often discussed as an outlier or offshoot from mainstream politics, but populist attitudes are found in nearly half or more of the general public of Internet users across all seven nations.

That said, this finding is in line with prior studies in Europe and the US which have found an affinity for populist attitudes among the public (Hawkins et al. 2012; Rico and Anduiza 2019; Tsatsanis et al. 2018; Spruyt et al. 2016; Hawkins et al. 2020). It is also further evidence that our indicators of populism are reliable. Rather than a small proportion of the public, our results echo Mudde’s (2004) argument that populism has become mainstream in Western democracies. In this sense, the fact that a strong majority of respondents in our sample were classified as having populist attitudes might be surprising in light of the rhetoric surrounding recent elections, but not surprising in light of other empirical research.

The Populists

Who are the populists? We analysed variables that might explain or account for populist attitudes across the seven nations. Prior studies have found populist attitudes are shaped by demographic factors and political orientations. Major demographic correlates of populism have been older age and less education. Relevant political orientations have included a stronger political ideology and higher anti-immigrant (nationalist) sentiments (Hawkins et al. 2012; Bernhard and Hänggli 2018; Rico and Anduiza 2019; Tsatsanis et al. 2018; Spruyt et al. 2016).

Following this research, we looked at the multivariate relationships between populism, as indicated by our summary scale, and sets of demographic and political orientation variables. Populist attitudes were entered as the dependent variable in multiple regression analyses, with demographic and political antecedents entered as explanatory variables (see Table 2). The results of our multiple regression analyses show that populist attitudes tend to be most closely associated with older age and less education, in line with previous research, as well as higher levels of political

participation and a stronger political ideology. Accounting for these associations, less education may be associated with populism due to a perceived elite/non-elite divide between those with greater and lesser education and stronger political attitudes due to populism's links to more radical politics (Hawkins et al. 2012; Bernhard and Hänggli 2018; Tsatsanis et al. 2018).

[Table 2 here]

That populism is associated with greater levels of political participation may be reflective of the political discontent and want for political action or change that populist rhetoric can stir. Scholars have also noted a relationships between political knowledge, political interest, and populism (Rico and Anduiza 2019; Bernhard and Hänggli 2018), associations which may emerge from a sense that citizens are in a better position now, due to higher levels of education, to pay attention to politics, judge politicians, and think for themselves (Mudde 2004).

In short, while populists conform with some stereotypes, such as being older and less educated, they are more engaged and interested in politics than their non-populist counterparts. But are populists trapped in echo chambers or filter bubbles?

Populism, Political Engagement and Access to Political Information

We have two approaches to questions about the relationship between populism and online political echo chambers and filter bubbles (Gerbaudo 2018). First, our respondents were asked if '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' and also how often they agreed with the political opinions or political content posted by friends on social media. The relationships between these responses and populist attitudes are shown in Tables 3 and 4.

[Tables 3 and 4 here]

Generally, the results indicate that populist attitudes are not associated with higher levels of agreement with the political opinions or content posted by friends on social media, nor with a higher likelihood of communicating primarily with politically similar

others online. Populist attitudes are positively associated with agreeing with content posted by friends on social media, but this relationship is not statistically significant except in Germany ($\beta = .072$, $p < .01$) and the United States ($\beta = .077$, $p < .01$). Meanwhile, among populists, there is only a higher likelihood of communicating with similar others in Germany alone ($B = .268$, $p < .01$). These findings go against arguments that online echo chambers foster populist sentiments but are in line with Groshek and Koc-Michalska (2017) who found that homogeneous online networks were not related to support for populist political candidates.

Agreement with the opinions or content posted by friends on social media is more closely associated with younger Internet users and those most interested and involved in politics, as measured by participation (Table 3). Communicating primarily with similar others online is most closely associated with political participation and strength of ideology (Table 4). Thus, polarization is more likely to be related to echo chambers than populism.

Secondly, we explored the diversity of populists' media use, assessing whether there is a risk of individuals with populist attitudes being trapped in online echo chambers or filter bubbles. If true, we might expect individuals with populist attitudes to visit fewer and less diverse sources of information. In this case, as well, our findings counter the thesis of populists cocooned in echo chambers or filter bubbles.

We developed a number of indicators of the number and diversity of sources consulted online and offline. In all seven nations, respondents were asked how often they used seven different online sources for information about politics and public affairs, including social media sites, search engines, online-only news sites, legacy online news sites, email, political websites (e.g. for politicians or online political groups), and online video platforms (1=never to 5=very often). The more sources consulted frequently online, for example, the less likely would it be for them to be trapped in a filter bubble or echo chamber.

We then focused on the relationship between populist attitudes and this set of media use variables. We used multiple regressions, looking at the association between populism and source diversity, controlling for demographic and political variables that might moderate this relationship. We also included a measure of online ability as a control ('How would you rate your ability to do things online?' 1=bad to 5=excellent), as this may have been an obstacle for consulting more sources.

The results reported in Table 5 show that when controlling for demographic and political moderating variables, those with populist attitudes more often consult online news sources, contrary to what a populist narrative would suggest. Frequent consultation of more online sources is also associated with being younger, greater ability to use the Internet, and more interest and participation in politics. In four of the countries, those with a strong ideological position were less likely to frequently consult more online sources.

[Table 5 here]

Figure 1 shows the overall pattern of findings, indicating that as populist attitudes increase, the number of online political news sources consulted often or very often increases. Respondents were split into groups with high (+ 1 standard deviation above the mean), moderate, and low (- 1 standard deviation below the mean) levels of populist attitudes, with these groupings becoming factors in one-way ANOVAs. The average number of online political news sources that strong populists used often or very often is significantly different than the number of sources consulted frequently by weak or non-populists in all nations.

[Figure 1 here]

This finding adds further evidence that populists may not be trapped in online echo chambers or filter bubbles. Instead, they seek out a greater range of political information

from different sources. This finding is in line with that of Schulz (2019) who found that populists in Europe and the United States were also more likely to use news.

We also found that populist attitudes are significantly associated with more frequently reading disagreeable news or political information in all seven nations (Table 6). The pattern of results, represented graphically in Figure 3 (with one-way ANOVAs included), is the same as with diverse political news consumption: stronger populist attitudes are related to more frequent consumption of disagreeable political content. Also, those less likely to look at disagreeable news or information about politics are younger, less skilled in using the Internet, and less interested and participative in political activity (Table 6).

[Table 6 here]

While not reported in tables here, we also found that, when controlling for demographic and political orientation variables, in five of the nations surveyed, those with populist attitudes more frequently accessed a more diverse set of online *and* offline political news sources. In four nations, populist responders said they more frequently checked sources different to what they normally read. And in all nations surveyed, they indicated more frequent and diverse use of online search as well as more frequent participation in a more diverse set of online activities. All these findings reinforce the basic theme of populism not being a determinant of individuals being trapped in filter bubbles or echo chambers.

[Figure 2 here]

Conclusion: Populism, empowerment, and political engagement?

Contrary to expectations, populists use a range of sources for political news and information more frequently than non-populists. This may be a positive finding, indicating that populists are unlikely to be trapped in echo chambers or filter bubbles (see also Groshek and Koc-Michalska 2017). Instead, they seek out political news and information from a variety of places on- and offline. This challenges the deterministic notion of digital media contributing to a rise in populism.

Schulz (2019, 105) however, has found that populists have a particular affinity for soft commercial television news and tabloid newspapers which may present an issue because they are 'the most sensationalist, scandalized, and dramatized news sources' which could stoke social divisions and promote populist sentiments (see also Fawzi 2019; Hameleers et al. 2017). Populists, Schulz (2019) reasons, may use such sources to reinforce their existing attitudes. In our study, it is possible that populists may be using online sources to reinforce their pre-existing attitudes, searching out agreeable information by visiting populist-friendly sources. Indeed, populists view the mainstream media negatively, seeing it as less trustworthy, and such attitudes may drive populists to alternative media (Fawzi 2019). Hameleers et al. (2017) have found that populists are attracted to attitudinally congruent news content; that which supports their pre-existing attitudes. Unfortunately, our measure of political news use does not tap into *what* news outlets or sources populists are using online. But even if this were the case, choices of sources for political information would have been chosen by Internet users, rather than being the content filtered by a search algorithm or limited by an echo chamber. In this case, people have a confirmation bias and are the major decider, not search engines or social media.

Nevertheless, Schulz (2019) also found that populists were just as likely to watch public television news, a finding which may indicate habitual news use or a need to stay up-to-date with content that is not aimed at populists. Or also, again, it illustrates that users are not trapped in a filter bubble or echo chamber – they actively go to sources that are mainstream rather than right- or left-wing. While it may be argued that populists seek out quality news in order to learn and develop counter-arguments to elite media content (Schulz 2019), this is a contortion, and ignores the fact that populists in our study went to more sources than non-populists. They may have greater interest in news and politics, period. Indeed, we also found that political participation was a predictor of populist attitudes. A potential reason for this and other findings may be that the measure of populist attitudes used in this study – and others – is reflective of an interest or engagement in public affairs.

It is plausible to hypothesise that the large number of people in Europe and the United States agreeing with the populism scale items suggests that the measure may be tapping into elements of citizen empowerment. In this sense, the level of populist attitudes may be a positive trend. As Mudde (2004, 554) argues, as a result of education and greater emancipation, 'citizens today expect more from politicians and feel more competent to judge their actions.' A 'cognitive mobilization' has 'led citizens to stop accepting that the elites think for them and to no longer blindly swallow what the elites tell them.' This may also explain populists' more frequent use of political news sources: it represents a desire to find out for oneself. That said, Spruyt et al. (2016) have found opposite trends, with populist attitudes being related to lower interest in politics and political news in Belgium. But the direction of this relationship in Belgium is not consistent with our findings in seven other nations, including six European nations.

Perhaps, in light of the high level of agreement with populist sentiments, the measure of populist attitudes employed may be capturing more moderate populist attitudes which are easier to agree with today than in earlier years (Van Hauwaert et al. 2020). Indeed, the items may well be agreeable to any follower of contemporary politics, particularly when politicians are so frequently criticized for not to listening to public sentiments, for debating and stalling more than passing effective legislation, and generally appearing out-of-touch with the people.

Alternatively, we did find some evidence of the strength of ideology tending to conform with a pattern of relationships connected with an echo chamber or filter bubble hypothesis. Those with more polarized opinions are more likely to communicate primarily with those political similar to themselves (Table 4), be less likely to often consult online news sources (Table 5), and less likely to read something they disagree with, although that particular relationship is not statistically significant in 5 of the 7 nations (Table 6).

Our findings therefore raise questions about whether the measure of populist attitudes used, which speaks largely to anti-establishment sentiments, appropriately taps into strong ideological sentiments which are often exclusionary (nationalist, anti-immigrant) or extreme in nature (Hameleers and de Vreese 2018; Van Hauwaert et al. 2020). Such

exclusionary ideologies might be more captured by our indicators of polarization, tapping very left or very right of centre political orientations, and these are more line with an echo chamber thesis. These extreme forms of populism are not positive from a normative perspective and an increase in such populist sentiments would be cause for alarm. But they are not captured by the standard operational definition of populism that we employed, and might be better conceptualized as trends toward polarization.

Overall, our findings problematise the very meaning and measurement of populism in a digital era of perceived citizen empowerment. It may be that those populist citizens who are anti-elitist and anti-establishment are actually politically interested individuals who express a desire to take back some control from political leaders, spurred on by their greater access to information and communication technologies. Are populist citizens simply more confident in thinking and finding out for themselves? Are they gaining a greater sense of empowerment through access to resources via the Internet?

While we cannot definitively rule out populism as being driven by digital media, the evidence we marshalled challenges this technologically deterministic view. For example, populists are more likely to be older, but younger Internet users are more likely to avoid information they disagree with, consult fewer news sources online, and agree with the political opinions and content posted by their friends online. Our findings indicate that we need to disentangle citizen empowerment and polarization from populist rhetoric. This chapter shows also why it is important for political researchers to examine the actual uses of search engines and social media more rigorously and rely less heavily on technologically deterministic perspectives.

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Table 1. Populism scale items and percentage of respondents in each country who agreed or strongly agreed.

	DE	ES	FR	IT	PL	UK	US
Elected politicians should follow the will of the people	75.3	79.5	72	76.4	77.7	70.4	73.9
Elected officials talk too much and take too little action	71.7	78.9	71.7	78.5	70.4	71.1	75.6
The people, not politicians, should participate in our most important policy decisions	50.5	65.6	65.3	59	65	54	61
The political differences between the people running this country and the people are larger than the differences among people in this country	50	65.9	56.7	56.8	61.7	49.4	55.9
What people call 'compromise' in politics is really just selling out on one's principles	45	47.2	50.9	55.5	52.5	47	43.7
% agreeing or strongly agreeing to all items	27.2	31.7	30.4	32.9	30.9	24.8	25.3
N =	2000	2007	2000	2000	2005	2000	2018
Scale reliability	α = .836 *M*=2.76 *SD*=.79	α = .791 *M*=2.97 *SD*=.70	α = .791 *M*=2.89 *SD*=.70	α = .822 *M*=2.89 *SD*=.77	α = .766 *M*=2.86 *SD*=.70	α = .811 *M*=2.77 *SD*=.70	α = .745 *M*=2.82 *SD*=.65
NOTE: Scale is 0=strongly disagree, 1=disagree, 2=neither, 3=agree, 4=strongly agree							

Table 2. Multiple regressions predicting populist attitudes.[1]

	DE	ES	FR	IT	PL	UK	US
	β	β	β	β	β	β	β
Demographic Factors							
Age	.107***	.056*	.094**	.028	.094**	.050	.069**
Female	.007	.024	.021	.005	-.004	-.002	-.016
Education	-.121***	-.035	-.061*	-.145***	-.063*	-.153***	-.086**
Income	-.038	-.013	-.052	-.056*	.020	-.002	-.028
White (UK/US only)						.009	.014
Born in country	-.007	.066**	-.023	-.037	.038	-.038	.038
Political Orientation							
Political interest	.070*	-.001	.015	.008	-.022	.005	.089**
Political participation	-.029	.104***	.113***	.068*	.045	.113***	.178***
Strength of ideology	.105***	.153***	.171***	.058*	-.016	.080**	.057*
R^2	.046***	.048***	.068***	.034***	.017*	.043***	.081***
N =	2000	2007	2000	2000	2005	2000	2018

NOTES: Standardised coefficients displayed; * $p < .05$ ** $p < .01$ *** $p < .001$

[1] Populism scale ranges from 0 (non-populist) to 4 (strong populist)

Models were also tested with marital status (single, married, lives with partner, divorced/separated, widowed) and life stage (student, employed, retired, unemployed) but these variables were non-significant and therefore excluded.

Table 3. Multiple regressions predicting level of agreement with the political opinions or content posted by friends on social media.

	DE	ES	FR	IT	PL	UK	US
	β	β	β	β	β	β	β
Demographic Factors							
Age	-.286***	-.092**	-.219***	-.073*	-.046	-.215***	-.209***
Female	-.027	-.006	.005	.061*	.055	.007	-.051*
Education	-.057*	-.021	.031	.005	-.023	.028	.021
Income	-.021	.034	-.006	.044	.022	-.038	-.046
Online ability	.072*	.138***	.080**	.095**	.040	.093**	.089**
Political Orientation							
Political interest	.083**	.113***	.110***	.020	.132***	.226***	.158***
Political participation	.266***	.188***	.305***	.266***	.281***	.210***	.203***
Strength of ideology	.022	.012	.015	.033	-.074*	.007	.022
Populist attitudes	.072**	.047	.013	.033	.037	-.026	.077**
R^2	.202***	.129***	.213***	.118***	.139***	.227***	.198***
N =	2000	2007	2000	2000	2005	2000	2018

NOTES: Standardised coefficients displayed; * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4. Logistic regressions predicting communication primarily with politically similar others online.[1]

	DE	ES	FR	IT	PL	UK	US
	β	β	β	β	β	β	β
Demographic Factors							
Age	-.008	-.003	-.003	.000	-.009	-.023***	-.006
Female	.220	.145	-.050	.312	.513**	-.163	-.109
Education	-.030	-.069	.168	.106	-.090	-.053	.174
Income	-.057	.086	-.077	-.010	-.049	-.002	-.056
Online ability	.038	.294*	.288	.206	.170	.313*	.174
Political Orientations							
Political interest	.104	.254*	.031	.280	.238	.606***	.385***
Political participation	.074*	.067*	.135***	.123***	.129***	.081**	.056*
Strength of ideology	.197*	.208*	.342***	.360**	-.047	.437***	.455***
Populist attitudes	.268**	.049	.103	.158	.195	.063	.166
Nagelkerke R^2	.049	.070	.090	.096	.076	.197	.150
N =	2000	2007	2000	2000	2005	2000	2018

NOTES: Standardised coefficients displayed; * $p < .05$ ** $p < .01$ *** $p < .001$

[1] outcome variable is binary 1 (communicates primarily with politically similar others) and 0 (communicates primarily with politically mixed or different others)

Table 5. Multiple regressions predicting number of online political news sources consulted often or very often.[1]

	DE	ES	FR	IT	PL	UK	US
	β	β	β	β	β	β	β
Demographic Factors							
Age	-.229***	-.101***	-.164***	-.096***	-.011	-.212***	-.269***
Female	-.024	.008	-.045	.006	.017	-.041	-.062**
Education	-.034	.013	-.014	.021	-.074**	.011	-.030
Income	.000	.050*	.013	-.026	.028	.017	-.008
Online ability	.180***	.184***	.160***	.179***	.105**	.173***	.117***
Political Orientation							
Political interest	.154***	.193***	.134***	.137***	.210***	.189***	.154***
Political participation	.287***	.230***	.349***	.244***	.273***	.235***	.338***
Strength of ideology	-.048*	-.070**	-.039	.010	.041	-.052*	-.075***
Populist attitudes	.098***	.055*	.067**	.080**	.124***	.122***	.128***
R^2	.264***	.226***	.279***	.200***	.217***	.287***	.345***
N =	2000	2007	2000	2000	2005	2000	2018

NOTES: Standardised coefficients displayed; * $p < .05$ ** $p < .01$ *** $p < .001$

[1] DE *M*=1.92, *SD*=*1.92*; ES *M*=2.82, *SD*=2.20; FR *M*=1.91, *SD*=2.05; IT *M*=2.32, *SD*=2.12; PL *M*=2.73, *SD*=2.18; UK *M*=1.80, *SD*=2.05; US *M*=2.18, *SD*=2.19

'White' and 'born in country' were removed from these analyses due to their lack of predictive power

Table 6. Multiple regressions predicting frequency of "reading something you disagree with" when looking for news or political information.[1]

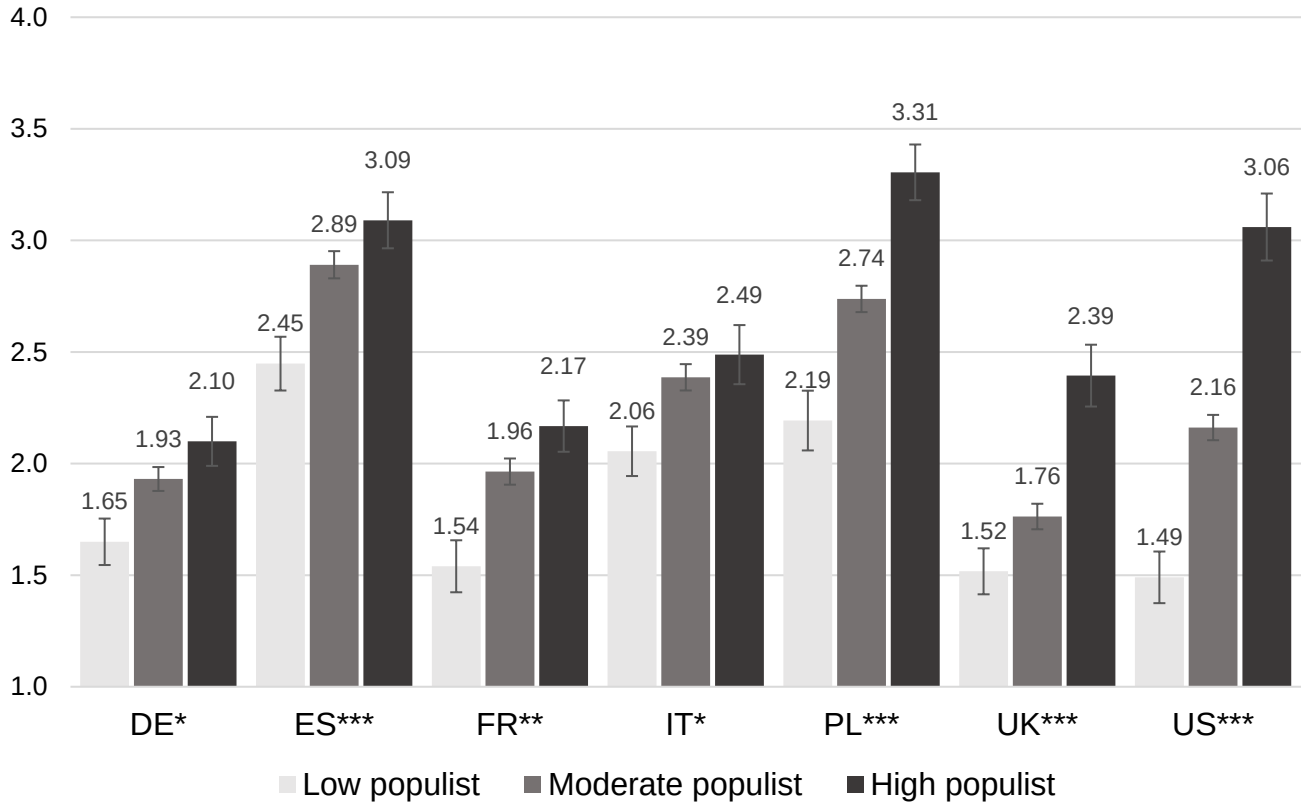
	DE	ES	FR	IT	PL	UK	US
	β	β	β	β	β	β	β
Demographic Factors							
Age	-.140***	-.115***	-.036	-.091**	-.107**	-.056*	-.078**
Female	.002	.008	-.074**	.016	-.001	.026	.008
Education	.022	.034	.006	.012	.017	.035	-.009
Income	.002	.007	-.005	-.009	.027	.029	.026
Online ability	.076**	.106***	.102***	.071*	.029	.085**	.031
Political Orientation							
Political interest	.228***	.318***	.322***	.200***	.263***	.231***	.158***
Political participation	.192***	.122***	.174***	.161***	.133***	.184***	.213***
Strength of ideology	.014	-.083***	-.050*	-.007	-.001	-.015	-.045
Populist attitudes	.065**	.067**	.062*	.096***	.089**	.110***	.086***
R^2	.169***	.206***	.237***	.133***	.139***	.177***	.133***
N =	2000	2007	2000	2000	2005	2000	2018

NOTES: Standardised coefficients displayed; * $p < .05$ ** $p < .01$ *** $p < .001$

[1] DE *M*=3.11, *SD*=*.98*; ES *M*=3.20, *SD*=1.05; FR *M*=2.94, *SD*=1.09; IT *M*=3.27, *SD*=1.02; PL *M*=3.17, *SD*=.99; UK *M*=3.15, *SD*=1.05; US *M*=3.26, *SD*=1.10

'White' and 'born in country' were removed from these analyses due to their lack of predictive power

Figure 1. Average number of online political news sources consulted often or very often.

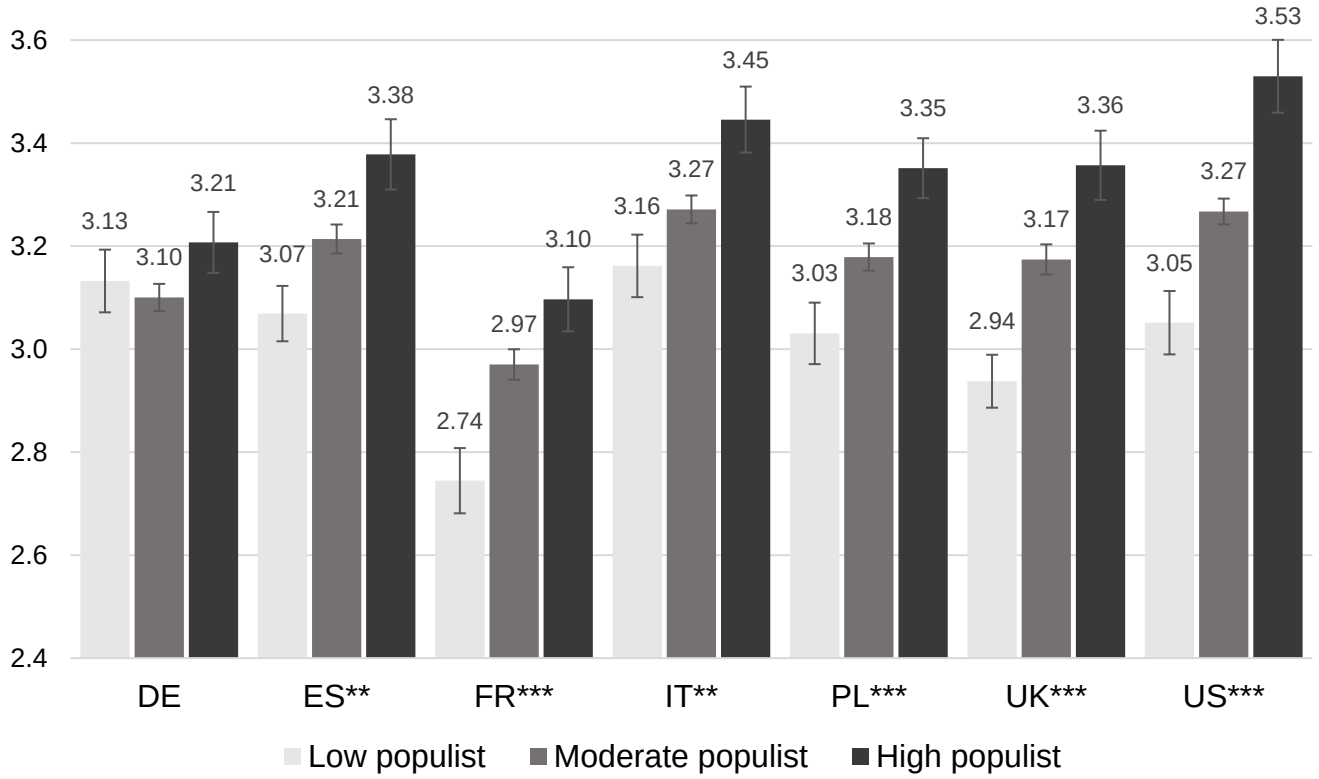


NOTES: Low populist = < populism mean score – 1 SD; High populist = > populism mean score + 1 SD

Means statistically different at * $p < .05$ ** $p < .01$ *** $p < .001$

One-way ANOVAs – DE: $F(2,1856) = 3.80$, $p = .022$; ES: $F(2,1905) = 8.05$, $p < .001$; FR: $F(2,1823) = 7.37$, $p = .001$; IT: $F(2,1877) = 3.83$, $p = .022$; PL: $F(2,1872) = 20.10$, $p < .001$; UK: $F(2,1835) = 16.37$, $p < .001$; US: $F(2,1897) = 39.08$, $p < .001$

Figure 2. Average frequency of 'reading something you disagree with' when looking for news or political information.



NOTES: Scale is 1=never, 2=rarely, 3=sometimes, 4=often, 5=very often

Low populist = < populism mean score – 1 SD; High populist = > populism mean score + 1 SD

Means statistically different at * $p < .05$ ** $p < .01$ *** $p < .001$

One-way ANOVAs – DE: $F(2,1853) = 1.71$, $p = .180$; ES: $F(2,1903) = 7.39$, $p = .001$; FR: $F(2,1852) = 8.71$, $p < .001$; IT: $F(2,1886) = 6.18$, $p = .002$; PL: $F(2,1882) = 8.46$, $p < .001$; UK: $F(2,1839) = 13.94$, $p < .001$; US: $F(2,1905) = 17.07$, $p < .001$