Digital Political Talk and Political Participation: Comparing Established and Third Wave Democracies

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Abstract

We investigate whether and how informal political talk on digital media contributes to citizens' political participation with unique surveys based on samples representative of Internet users in seven Western democracies. We show that political talk on both social networking sites and mobile instant messaging platforms is positively associated with institutional and extra-institutional political participation. However, the relationship between talk on social networking sites and both types of participation is significantly stronger in established democracies (Denmark, France, United Kingdom, and United States) than in "third wave" democracies (Greece, Poland, and Spain). By contrast, the strength of the relationship between political talk on mobile instant messaging platforms and participation is not significantly different when comparing established and more recent democracies. These findings suggest that informal political talk on digital platforms can contribute to citizens' participatory repertoires and that different institutional settings, in combination with different technological affordances, play an important role in shaping these patterns.

Introduction

In a democracy, citizens are *entitled* to freely express themselves but, to some degree, they are also *expected* to do that in both formal and informal contexts. Whether and how citizens' political conversations are relevant and desirable for democratic governance is, however, a matter of contention. In 1997, Michael Schudson argued that informal, extemporaneous, and sociable political talk is not inherently beneficial to democracy. Instead, the kinds of conversations that enhance democracy are public, governed by norms, and oriented to solving problems (Schudson, 1997). Almost 20 years later, Dhavan Shah contended that even the informal conversations that Schudson described as immaterial should instead be considered valuable for democracy (Shah, 2016). Shah argues that all kinds of political conversations—including the most incidental and cluttered ones—offer participants expressive and informational opportunities that, in turn, can foster their political participation—a core value for democratic governance.

Shah's argument is grounded on long-standing theoretical elaboration and empirical research. In particular, Shah and his collaborators (e.g., Shah, Cho, Eveland, & Kwak, 2005; Shah et al., 2007) studied the implications of informal political talk on political participation based on the Orientation-Stimulus-Orientation-Response (O-S-O-R) Model (Markus

& Zajonc, 1985), the Communication Mediation Model (McLeod, Scheufele, & Moy, 1999), and the Cognitive Mediation Model (Eveland, 2001). The former model considers how structural and subjective dispositions preceding and following information exposure influence specific individual responses to it. The latter two models highlight the crucial mediation role of communication and elaboration in the path toward participation. By combining these different theoretical strands, Shah and colleagues (2007, p. 698) contended that interpersonal and intrapersonal reasoning should be placed at the very center of the process that links information exposure to participation. From this standpoint, conversation helps individuals reflect and elaborate on political information, and by doing that it boosts the participatory benefits of information.

Such theoretical argument has been empirically demonstrated by Shah and others (2005) in a panel study of U.S.

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citizens showing that face-to-face interpersonal conversation and interactive messaging online mediate the relationship between information seeking and civic participation, with online exchanges being central in the process. On these grounds, Shah argues that *online* political conversation may even have stronger implications for citizens' participation compared to offline political talk because digital media "permit self-paced, asynchronous communications, which may promote deeper reflection than the immediacy of face-to-face interactions" (Shah, 2016, p. 14). Political conversation on digital media is also more easily initiated and sustained than face-to-face political talk. For citizens who are not particularly engaged in politics, low-threshold political talk online may constitute a gateway to more demanding political action (Vaccari et al., 2015).

In this article, we explore the relationship between political talk on two widely popular digital environments—social networking sites (SNS) and mobile instant messaging platforms (MIMS)—and political participation—differentiating between institutional and extra-institutional endeavors—in comparative perspective. We begin by discussing how the different conversational affordances of SNS and MIMS may enable forms of political talk that contribute to political participation. Subsequently, we formulate hypotheses on the differential effects online political talk may have on participation in established and newer democracies. We test our hypotheses with a unique data set comprising custom-built survey measures on representative samples of Internet users in seven Western democracies.

We define political participation as any action aimed at influencing collectively binding decisions (as when people pressure public officials demanding they enact certain policies), the selection of those tasked with making those decisions (as when people vote in an election for representatives or government officials), and the processes underlying such selection (as when people try to affect the dynamics of an election, for instance, by donating money to a candidate or by trying to convince others to vote in a certain way). We also differentiate between institutional and extra-institutional forms of political participation. Institutional participation addresses the main institutions and processes of representative democracy, as in the examples provided above. Extra-institutional participation relies on contentious practices (for instance, protest) to express grievances outside the circuit of representative institutions (Theocharis & van Deth, 2017).

Political Talk on Social Media and Political Participation

During the last decade, the relationship between online political discussion and political participation has been widely debated (e.g., Hardy & Scheufele, 2005; Johnson & Kaye, 2003; Price & Cappella, 2002). Most studies suggest that online political talk, especially on SNS, can have positive implications for citizens' participation. In a meta-analysis of 133 studies based on surveys, Shelley Boulianne found that the average effect of social media use for political expression on offline participation is as strong as the effect of education (Boulianne, 2017, pp. 11-12). While it is challenging to devise realistic experimental settings that randomize the emergence, frequency, and content of informal political talk, experimental studies confirm that exposure to politically relevant messages on social media can increase voter turnout (Bond et al., 2012; J. J. Jones, Bond, Bakshy, Eckles, & Fowler, 2017) and petition signing (Coppock, Guess, & Ternovski, 2016).

Various causal mechanisms have been suggested to explain why political talk on social media—as opposed to face-to-face or other online settings—may enhance institutional participation. Some authors (e.g., Gil de Zúñiga, Jung, & Valenzuela, 2012) highlight that social media are embedded in citizens' daily routines and are accessed for multiple reasons, many if not most of which have little to do with politics. However, once users have engaged with digital platforms for nonpolitical reasons, they may accidentally encounter political content posted by others they are connected with (Anspach, 2017). As a result, social media may facilitate encounters with political content among users who are less politically involved, and this may encourage them to entertain some political discussions which may, in turn, mobilize them to political action (Valeriani & Vaccari, 2016).

Scholars have also addressed the implications of political discussion on SNS for citizens' extra-institutional participation. Paolo Gerbaudo (2012) argued that social media reshape contentious communication repertoires and mobilize individuals to participate in social movement activities. Zizi Papacharissi contended that the expressive and discursive opportunities offered by SNS can unleash emotions and "feelings of engagement" that in turn facilitate the mobilization of digitally connected publics, driven by shared affective statuses as much as common interests and opinions (Papacharissi, 2015, p. 8). Other authors such as Lance Bennett (2012) focused on the "personalizing" effects of digital technologies on contentious political action, a process that encourages the diffusions of individualized practices such as political consumerism (Stolle, Hooghe, & Micheletti, 2005). Larson, Nagler, Ronen, and Tucker (2016), for instance, showed that participants in the Charlie Hebdo demonstrations in Paris were closely connected on Twitter with other participants, suggesting that social media enable the rapid transmission of relevant information about the intention to protest among members of one's networks. Various studies show positive correlations between political talk on SNS and extra-institutional participation in established and newer democracies (Macafee & De Simone, 2012; Valenzuela, 2013).

The literature thus suggests a positive association between political discussion on SNS and participation in both institutional and extra-institutional activities. However, some issues require further investigation. First, as noted by Boulianne (2017), existing studies employ a broad spectrum

of measures of participation, which do not always account for the fact that contemporary citizens integrate institutional and extra-institutional forms of participation across physical and digital spaces (Chadwick, 2007). Second, while studies addressing the relationship between political expression on social media and institutional participation are mainly focused on Western democracies (mostly the United States), research considering extra-institutional participation has tended to concentrate on authoritarian regimes (e.g. Tufekci & Wilson, 2012). Third, some potentially counterproductive aspects of online political talk have risen in prominence, including hate speech (Ben-David & Matamoros-Fernandez, 2016), trolling (Phillips, 2015), and disinformation (Margolin, Hannak, & Weber, 2018). These phenomena, and the moral panics that have emerged around them, may be making social media users more reluctant to express their political views, and even when they do that, the resulting exchanges may have become less beneficial for participation. Four decades ago, Michael Robinson coined the term "video malaise" to describe how television news was discouraging political engagement (Robinson, 1976). It is possible that the current negative climate around political talk on social media may be creating the conditions for a digital declination of the same phenomenon.

For all these reasons, it is worth reassessing the relationship between political discussion on SNS and different types of participation with fresh data covering a variety of Western democracies. To this end, we hypothesize that

> **Hypothesis 1 (H1):** political talk on social media is positively associated with institutional and extra-institutional political participation.

Political Talk on Mobile Instant Messaging Platforms and Political Participation

One of the reasons digital political talk is embedded in people's daily routines is that most users now go online through mobile devices. According to market research,[1] in 2017 there were 412 million active social media users in Europe, and 340 million (81.6%) of them accessed these platforms via smartphones and tablets; in the Americas, there were 599 million active social media users, and 535 million (89.3%) used mobile devices to access them. However, computer-native SNS are not the only type of platforms employed by mobile users. Mobile-native platforms such as mobile instant messaging platforms (MIMS) are gaining momentum and the two most popular among them—WhatsApp and Facebook Messenger—have one billion users worldwide each (see Note 1) and have already overtaken all SNS but Facebook in terms of global diffusion.

MIMS have specific affordances compared to SNS and users perceive and employ them accordingly. Various studies (O'Hara, Massimi, Harper, Rubens, & Morris, 2014; Utz,

Muscanell, & Khalid, 2015; Vaterlaus, Barnett, Roche, & Young, 2016) showed that users consider MIMS as more private environments than SNS. MIMS users feel they have greater control of who can see their messages, while most SNS users address larger and more heterogeneous audiences (Marwick & boyd, 2011). Valeriani and Vaccari (2017) found these affordances have relevant implications on the types of users favoring MIMS for political expression and conversation. Users who restrain themselves from revealing some of their political views on social media and users who live in political cultures that prioritize discretion over disclosure of one's political viewpoints are more likely to talk about politics on MIMS even after controlling for a variety of covariates. Thus, when compared with social media, MIMS are offering new opportunities for political talk to individuals who are less likely—due to both individual and contextual factors—to discuss politics elsewhere. To the extent that political talk may enhance participation, the opportunities for more private and controlled political talk provided by MIMS may thus be making a distinctive contribution to political action.

To date, research on the relationship between political expression on MIMS and participation is lacking, but studies addressing other means of mobile communication—that is, voice and text messages exchanged via mobile phones—provide some guidance. Most research in this area (e.g., Rojas & Puig-i-Abril, 2009) concluded that employing mobile phones for political expression (and/or information) can favor civic and institutional participation (Martin, 2015).

Similarly, mobile communication plays an important role for social movements. The fact that smartphones are personal, constantly connected, and accessible (Turkle, 2008) enhances both expression and collective action in contentious politics. Online communication via handheld devices enables the circulation of information and images on protest actions, public discussion about strategies and tactics, and real-time coordination (Neumayer & Stald, 2014). Mobile technology has also established connections between those who take to the streets and those who, while not attending a protest, can be mobilized as a result of real-time communication by and with the protesters (Penney & Dadas, 2014).

Research on mobile communication and political participation thus suggests that political discussion on MIMS may encourage users to engage in more demanding institutional as well as extra-institutional activities. Accordingly, we hypothesize that

> **Hypothesis 2 (H2):** political talk on MIMS is positively associated with institutional and extra-institutional political participation.

Online Political Talk and Participation Across Different Democracies

Informal political talk, while *generally relevant* for participation, could be *more or less relevant* depending on

contextual factors. In this study, we focus on *systemic social trust* as a key moderator. Social trust is the general feeling of an actor that others will not willingly harm her, and that they may also act in her interest if they can (Newton, 2001, p. 202). Levels of social trust vary substantially across countries. The roots of this variation lie, among other things, in the functioning and legitimacy of political institutions. Rothstein and Stolle (2008) argue that institutions such as the army, police, and courts provide incentives for citizens to act lawfully, generate expectations on how other citizens may behave as a result of these incentives, set patterns of how people are expected to treat others, and produce memorable experiences (such as discrimination) when individuals engage with them. As a result, when citizens do not trust the institutions responsible for impartially implementing government policies, they also tend not to trust others.

Although democratic institutions can operate at widely different levels of institutional fairness, authoritarian regimes generally perform more poorly in this regard (Delhey & Newton, 2005). Among democracies that experienced nondemocratic regimes in the recent past, the legacy of authoritarian experiences diminishes citizens' trust in the impartiality of institutions, especially among people old enough to have lived through the past regime. Thus, while democracies normally enjoy higher levels of social trust, faith in generalized others tends to be lower in younger democracies (Rothstein & Stolle, 2008, p. 453), where authoritarian legacies still loom.

As a result, "Third Wave democracies (Huntington, 1993)—that is, countries, including most Eastern and some Southern European states, that undertook democratic transitions between the mid-1970s and the early 1990s—generally exhibit lower levels of social trust than more established democracies. In Southern Europe, N. Jones, Malesios, Iosifides, and Sophoulis (2008, p. 178) showed that a "utilitarian political culture" hindered the emergence of a strong civil society in Greece, depressing social trust. This social configuration was not substantially altered after the transition to democracy, where the main parties established patronage networks that stymied autonomous civil society (see also Theocharis & van Deth, 2015). In Spain, Torcal and Montero (1999) suggested that the legacy of the 1939 to 1975 authoritarian regime explains why levels of social trust had not increased two decades after the country's successful democratization. In former communist Eastern Europe, democratic transitions were complicated by the legacy of the rigid top-down reconfiguration of society by the communist regimes, which depressed social trust (Paldam & Svendsen, 2002). Pop-Eleches and Tucker (2017) showed that individuals who lived through communist regimes for longer periods are more affected by these attitudinal legacies than those who experienced communism for shorter periods.

In sum, compared with established democracies, countries that undertook more recent transitions to democracy enjoy lower levels of social trust.[2] Different levels of social

trust, in turn, shape how informal political talk may encourage individuals to participate in politics.

The extent to which citizens may increase their participation as a result of discussing politics with others depends at least in part on whether they trust those they talk with. If individuals do not believe their discussants can be trusted, they may still engage in conversations with them, but they may be less predisposed to gain useful information, increase their interest in a cause, and learn how they can get involved as a result of such exchanges. How citizens judge others to be trustworthy is thus crucial.

Digital media users can choose among a variety of platforms where they can informally talk about politics. In particular, SNS and MIMS present specific affordances that facilitate different levels of engagement with known and unknown others in highly heterogeneous settings.

Most SNS favor the development of public or semi-public exchanges involving a diverse plethora of actors, far from being limited to close connections (Ellison, Steinfield, & Lampe, 2007). On Twitter, for instance, "ad hoc publics" (Bruns & Burgess, 2011) emerge around hashtags, connecting users who may have never interacted before but are brought together by a common interest or salient event. On Facebook—where hashtags are also available—popular public pages of news outlets, politicians, activist groups and celebrities often host political threads involving previously unconnected strangers. As Marwick and boyd (2011) have shown, social media users are only partially aware of who their audiences are on these platforms, and thus adjust their behavior based on a mixture of openness and restraint to make sure they do not offend anyone. Under these circumstances, whether social media users believe others can be trusted may powerfully shape what they say, especially in a potentially sensitive and conflict-ridden field such as politics. To the extent that online political talk is more likely to enhance participation if it occurs among trusted discussants, generalized social trust may enhance this relationship when such talk involves weak ties on SNS. Thus, we expect informal political talk on SNS to be conducive to higher levels of political participation in established democracies, where social trust is, on average, higher, than in Third Wave democracies, where individuals tend to be more distrustful of others. We, therefore, hypothesize that

Hypothesis 3 (H3): political talk on social media is more strongly associated with institutional and extra-institutional participation in established democracies compared with Third Wave democracies.

By contrast, mobile instant messaging platforms are mainly used to maintain connections with family members, friends, and acquaintances, and to chat within small groups in private settings (O'Hara, Massimi, Harper, Rubens, & Morris, 2014). In navigating these interactions, users do not need to rely on generalized evaluations of others to decide

whether they should trust the people they engage with, as they have ongoing personal relationships with them. Individuals who do not particularly trust others, and who know others feel the same way, may not be bothered by these sentiments when they talk about politics with carefully selected, strong-tie networks in private conversations of the kinds that MIMS are mostly employed for. Therefore, the positive association between political conversation on MIMS and political participation should not be conditional on systemic levels of social trust, as they tend to involve people who already know each other well. Thus, we hypothesize that

> **Hypothesis 4 (H4):** the strength of the positive association between political talk on MIMS and institutional and extra-institutional participation does not differ between established and Third Wave democracies.

Research Design, Data, and Measures

Our comparative research design includes four established democracies (Denmark, France, the United Kingdom, and the United States) and three Third Wave democracies (Greece, Poland, and Spain). While these seven countries cannot represent by themselves the diversity and complexity of older and newer Western democracies, let alone emerging democracies and hybrid regimes, they offer a solid basis to explore relevant cross-country differences in systemic social trust identified by our theory.

We test our hypotheses based on surveys conducted in each country on samples representative of Internet users, where we asked standardized questions to measure informal political talk on different digital platforms, various modes of institutional and extra-institutional participation, political attitudes, and demographic characteristics. Surveys are imperfect instruments to gauge everyday practices such as online political talk, and online activities conducted by social media users leave digital traces that can be fruitfully collected and analyzed to measure some of the constructs we focus on here (Nagler & Tucker, 2015). However, surveys offer the advantage of providing a unified set of consistent measures, which is important to simultaneously and consistently measure different modes of political talk and forms of political action, many of which cannot be observed with publicly available online data. Nonprobabilistic samples as the ones we employ here also have limitations, but these shortcomings are less severe when estimating correlations between variables (Pasek, 2015; Sanders, Clarke, Stewart, & Whiteley, 2006)—which is our main goal here. Moreover, online surveys are less affected by social desirability bias than in-person surveys (Kreuter, Presser, & Tourangeau, 2008).

We fielded our surveys immediately after general elections in each country between June 2015 and July 2017.[3] The surveys were administered by Ipsos with Computer-Web assisted Interviewing (CAWI) on online panel subscribers whose participation was rewarded with nonmonetary incentives. Participation rate was on average 20%. For each country, we constructed samples representative of the adult population with Internet access ($N = 1,750$ apart from the United States where $N = 2,500$) based on quotas for gender, age, education, region, and occupational condition.

For our dependent variables, we constructed two indices measuring respondents' participation in a variety of institutional and extra-institutional endeavors. To measure institutional participation, we aggregated respondents' answers to questions addressing six different actions.[4] We measured four actions with a battery introduced by the question: "People often carry out various activities to participate in politics. During the last 12 months, have you taken part in any of the activities listed below?." We included the following items: "Financing a party," "Contacting a political representative to support a cause," "Distributing leaflets to support a political or social cause," and "Participating in public rallies or meetings on political issues." We measured two other actions—trying to convince someone to vote for a candidate or party[5] and signing a petition or referendum—by combining respondents' answers to questions addressing such behaviors as occurring in general or specifically online.[6]

Our index of extra-institutional participation aggregates answers to six items measuring activities related to protest, political consumerism, and contentious politics.[7] We included the following items, all taken from the main battery on participation presented above: "Participating in a strike," "Boycotting or buying a product or brand for political, ethical or environmental reasons," "Participating in a legal demonstration or march," "Participating in an illegal demonstration or march," "Taking part in the occupation of a school/college/university," and "Not participating in an election as a sign of protest."

Response options for all the items we combined in the two indices were "Yes" (coded as 1), "No" (coded as 0) and "I don't remember" (treated as missing value). Each index is the sum of activities, among the six we measured, that respondents reported performing, and thus ranges from 0- to 6. Table 1 shows descriptive statistics for the two indices that constitute our dependent variables and our two main independent variables, which we discuss below.

H1 and H2 consider the direct effects of political discussion on SNS and MIMS, respectively, on political participation. Our main independent variables thus measure respondents' engagement in political conversation in these two digital environments. To measure political talk on SNS, we asked respondents: "How often do you speak about politics with your contacts on social networks/social media platforms?" Response modes were "Every day or almost every day," "A few times a week," "A few times a month," "Never or almost never," and "I don't remember." To measure political discussion on MIMS, we relied on a battery considering different political activities performed on MIMS and

Table 1. Descriptive Statistics for Main Independent and Dependent Variables in Seven Western Democracies.

Variables	Denmark	Greece	France	Poland	Spain	UK	USA	All[a]
Political talk on social media (0-1)								
Percentage Yes	36	56.9	40.7	50.8	51.2	45.1	45.3	46.6
SD	0.480	0.495	0.491	0.500	0.500	0.498	0.498	0.499
N	(1,685)	(1,716)	(1,704)	(1,657)	(1,688)	(1,696)	(2,447)	(12,593)
Political talk on MIMS (0-1)								
Percentage Yes	6.4	26.6	17.2	11.5	29.4	22	20.9	19.1
SD	0.244	0.442	0.377	0.319	0.456	0.415	0.406	0.393
N	(1,725)	(1,712)	(1,697)	(1,700)	(1,699)	(1,697)	(2,463)	(12,693)
Institutional political participation (0-6)								
M	1.009	1.372	1.263	1.347	1.324	1.369	1.576	1.325
SD	1.223	1.249	1.496	1.414	1.404	1.547	1.658	1.442
N	(1,563)	(1,666)	(1,512)	(1,503)	(1,569)	(1,535)	(2,309)	(11,657)
Extra-institutional political participation (0-6)								
M	0.458	1.385	1.110	.616	1.013	0.660	0.670	0.846
SD	0.849	1.279	1.411	1.002	1.279	1.295	1.148	1.232
N	(1,619)	(1,659)	(1,560)	(1,576)	(1,589)	(1,555)	(2,351)	(11,909)

Note. Statistics are based on the original data set before multiple imputation of missing values and CEM preprocessing of the data set. MIMS = mobile instant messaging platforms; CEM = Coarsened Exact Matching.
[a]Analyses are based on weights that equalize sample sizes across the seven countries.

introduced by the question "Over the past 12 months, when using these mobile instant messaging services, have you . . ." This battery included an item which read: "discussed politics, public affairs, or the last general election." Response modes were "Yes" (coded as 0), "No" (coded as 1), and "I don't know" (treated as missing value). To ensure consistency in the results across our two main independent variables, and to better take advantage of Coarsened Exact Matching (CEM; on which see below), we recoded the variable measuring political talk on SNS as dichotomous, coding as 0 respondents who "never or almost never" discuss politics on social media and as 1 all others (treating "don't remember" as missing values).

These two questions on digital political talk were only asked to respondents who had previously reported to use SNS and MIMS, respectively. Conducting our analyses solely on those who answered these questions may yield biased results because SNS and MIMS users differ from the general population of Internet users we study. Thus, we also included respondents who claimed not to use any SNS or MIMS, assigning them a value of 0 on the variables measuring political talk on each platform.

H3 and H4 address whether the length of a country's democratic regime moderates the relationship between digital political talk and participation. Following Huntington's (1993) periodization of "waves" of democratic expansion, we grouped respondents into two supra-national clusters. We considered Denmark, France, the United Kingdom, and the United States as established democracies, while treating Greece, Poland, and Spain as Third Wave democracies. We included in our models two interaction terms between the variables measuring political talk on SNS and MIMS and a

dichotomous variable that distinguishes between established and Third Wave democracies.

Because our data featured missing values in most variables, we performed multiple imputation to avoid introducing biases with listwise deletion (King, Honaker, Joseph, & Scheve, 2001). We computed 20 sets of imputed values using a chained equations method (van Buuren, Boshuizen, & Knook, 1999) combining logistic, ordered logistic, and ordinary least squares regressions to account for the different characteristics of the variables to be imputed. The models included variables for which we had no missing data (country, gender, age, and education) and variables with missing data whose imputed values we subsequently entered in our multivariate analyses (income,[8] interest in politics, political efficacy,[9] exposure to political news via different media, face-to-face political talk, political talk via SNS and via MIMS, and the 12 dichotomous variables which we then used to construct our indices of institutional and extra-institutional participation). Since our regressions feature interaction terms that include the length of a democratic regime, we computed separate imputations for countries classified as established and Third Wave democracies. This procedure enabled us to substantially increase the number of units in our multivariate analyses.

We test our hypotheses with cross-sectional, observational data, and thus cannot make any claims on the causality of the statistical associations therein. However, we can ameliorate some of the selection biases inherent in the observational nature of our data by taking into account observed empirical differences between respondents who discuss politics online and those who do not *before* we include them into our regression models. To this end, we employed CEM

(Iacus, King, & Porro, 2012). CEM allows to control for the confounding influence of variables that affect the probability that subjects are treated—in our case, that they talk about politics online—by matching treated and untreated respondents based on some relevant characteristics. CEM matches units exactly by identifying discrete layers in the values of the variables rather than based on model-dependent regressions. It then excludes units that were not paired and assigns weights to all paired units so that the untreated units that more closely resemble treated units weigh more than those that less closely resemble treated units. As a result, our observational data better approximate the ideal experimental condition of comparable treatment and control groups, although this outcome is obtained with statistical analysis instead of random assignment.

We used CEM on the multiply imputed data to match respondents who did and did not report talking about politics on social media and on MIMS and calculated weights for all matched units using the STATA package by Blackwell, Iacus, King, and Porro (2009). Following Soroka et al. (2013), we used CEM to match respondents achieving satisfactory balance for gender, age, education, and interest in politics, using the exact values for all variables apart from age where we grouped respondents into five brackets (18-26, 27-35, 36-44, 45-55, and 56 and over). When we matched respondents based on political talk on SNS, we managed to include 97.8%

of total units, obtaining matches for 99% of treated and 96% of untreated units. When we matched respondents based on political talk on MIMS, we were able to include 95.1% of total units, obtaining matches for 99% of treated and 94% of untreated units. To combine the results of the matching for both our key independent variables, we multiplied the weights obtained based on the CEM procedure for political talk on SNS and MIMS and used the combined weight in our subsequent analyses. Hence, our analyses include 12,136 of the total 13,000 respondents for which we have data—including imputed data.

Given the count nature of our dependent variables, we employed negative binomial regressions to test our hypotheses. Our models include the following control variables: frequency of face-to-face political talk, frequency of exposure to political information (an index combining television, newspaper, radio, and the Internet), interest in politics, political efficacy, gender, age, education, and income. We report standard errors corrected for clustering on country to account for intracountry correlations not captured by our models (Pop-Eleches & Tucker, 2011).

Findings

Table 2 shows the results of negative binomial regressions predicting the values of the indices of institutional and

Table 2. Dependent Variables: Institutional and Extra-Institutional Political Participation.

| | Institutional participation (0-6) | | | | Extra-institutional participation (0-6) | | | |
| | Model 1a | | Model 2a | | Model 1b | | Model 2b | |
	B	SE	B	SE	B	SE	B	SE
Political talk on SNS	0.573***	0.067	0.423***	0.026	0.621***	0.147	0.349***	0.095
Political talk on MIMS	0.240***	0.039	0.233***	0.041	0.298***	0.073	0.288*	0.119
Length of democratic regime (Third Wave democracy as reference)								
ED	0.146*	0.057	−0.023	0.063	−0.178	0.210	−0.501	0.323
Digital political talk × Length of democratic regime								
Political talk on SNS × ED			0.280***	0.061			0.572*	0.231
Political talk on MIMS × ED			0.004	0.060			0.002	0.136
Political talk offline	0.156***	0.039	0.151***	0.038	0.134**	0.045	0.124**	0.043
Exposure to political information	0.038***	0.006	0.037***	0.006	0.046**	0.015	0.043**	0.015
Interest in politics	0.059**	0.019	0.065***	0.020	−0.018	0.057	−0.008	0.058
Political efficacy	0.049***	0.012	0.050***	0.012	0.008	0.020	0.011	0.021
Gender (male)	0.002	0.030	0.004	0.031	0.009	0.059	0.013	0.052
Age	−0.003	0.002	−0.003	0.002	−0.006	0.004	−0.006	0.004
Education	−0.038	0.034	−0.035	0.034	−0.019	0.041	−0.014	0.040
Income	−0.003	0.008	−0.003	0.008	−0.031	0.019	−0.032	0.019
Constant	−1.036***	0.144	−0.934***	0.150	−0.835*	0.340	−0.661	0.351
F	233.68		769.59		75.22		130.04	
Prob > F	.000		.000		.000		.000	

Note. N = 12,136 for all models. Cell entries are unstandardized coefficients for negative binomial regressions, with robust standard errors clustered by country. SNS = social networking sites; MIMS = mobile instant messaging platforms; ED = Established Democracy.
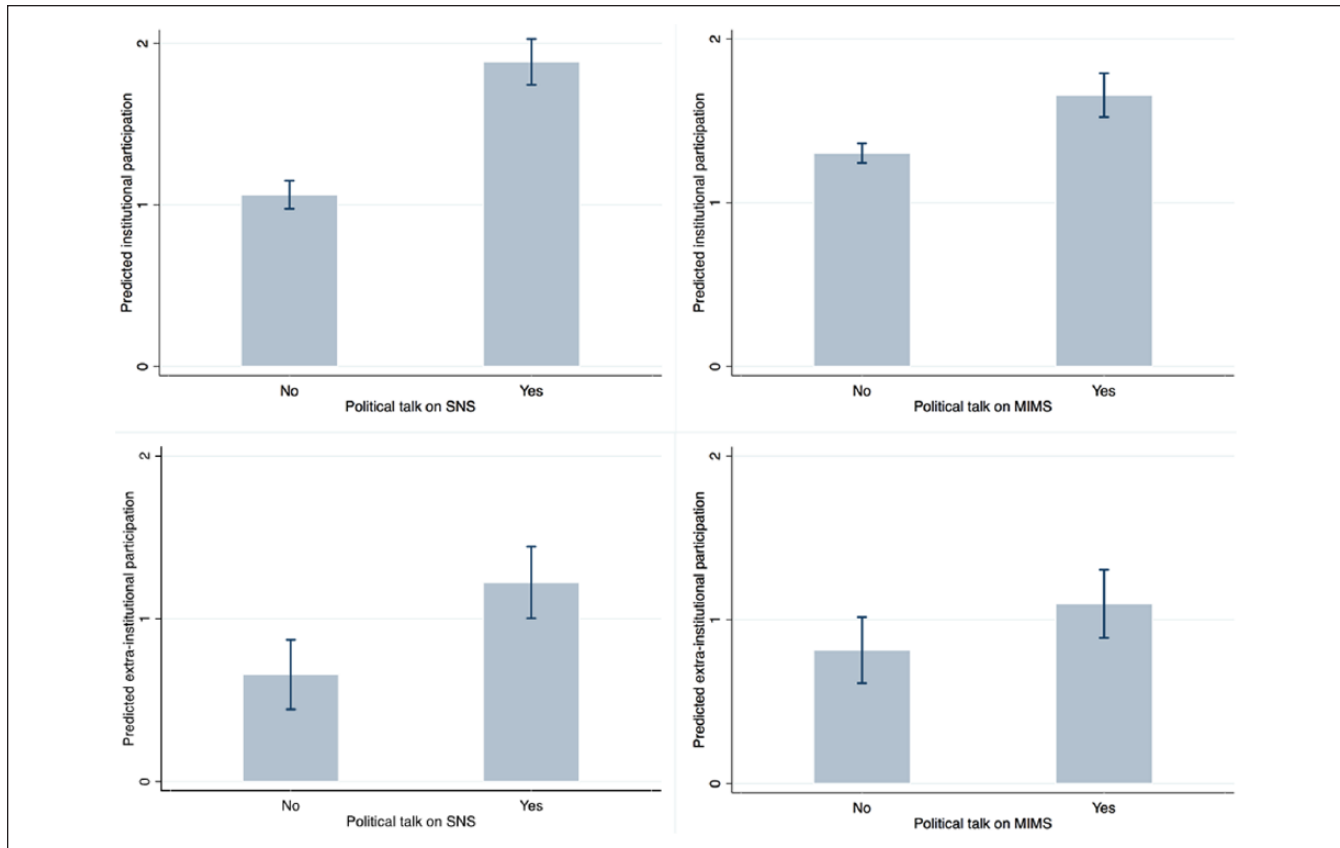*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Figure 1. Predicted values of political participation at different levels of political talk on SNS and MIMS, with 95% confidence intervals.
Note. The top-left quadrant plots the relationship between political talk on social media and institutional participation; the top-right quadrant plots the relationship between political talk on mobile instant messaging platforms and institutional participation; the bottom-left quadrant plots the relationship between political talk on social media and extra-institutional participation; the bottom-right quadrant plots the relationship between political talk on mobile instant messaging platforms and extra-institutional participation. All analyses are based on Models 1a-b in Table 2. SNS = social networking sites; MIMS = mobile instant messaging platforms.

extra-institutional political participation as a function of political talk on SNS and on MIMS—in Models 1a-b, testing H1 and H2—the interactions between these variables and whether respondents lived in an established democracy, with Third Wave democracies as reference category—added in Models 2a-b to test H3 and H4—and the control variables listed above.

Results of Models 1a-b suggest that online political talk on both SNS and MIMS has a positive and significant relationship with institutional and extra-institutional participation. H1 and H2 are therefore supported. The results do not change substantially if we run the same models on each country's data separately rather than on pooled data.[10]

The implications of these positive relationships become clearer if we take a respondent with average values on all variables and estimate how her levels of participation would change whether or not she engages in political conversation online based on the coefficients in Models 1a-b. As Figure 1 shows, the predicted effect sizes are higher for institutional than for extra-institutional participation, and the differences are greater for political talk on SNS than on MIMS. The

highest predicted effects involve the relationship between political talk on social media and institutional participation. Talking about politics on SNS is predicted to almost double respondents' levels of institutional participation from 1.06 to 1.89 actions on a 6-point scale (top-left quadrant in Figure 1), corresponding to more than half a standard deviation for the dependent variable (see Table 1). Conversely, the smallest predicted effects pertain to the relationship between political talk on MIMS and extra-institutional participation. While an average respondent who does not talk about politics on MIMS is predicted to engage in 0.81 contentious activities, a similar respondent who talks about politics on these platforms is estimated to take part in 1.1 activities (bottom-right quadrant in Figure 1). This difference (roughly one-fourth of a standard deviation) is not statistically significant—as can be seen from the confidence intervals plotted in Figure 1—even if the coefficient for political talk on MIMS is significant (Model 1b, Table 2).

These analyses qualify our conclusions: while both H1 and H2 are supported, the data more clearly corroborate H1 (political talk on SNS) than H2 (political talk on MIMS). It
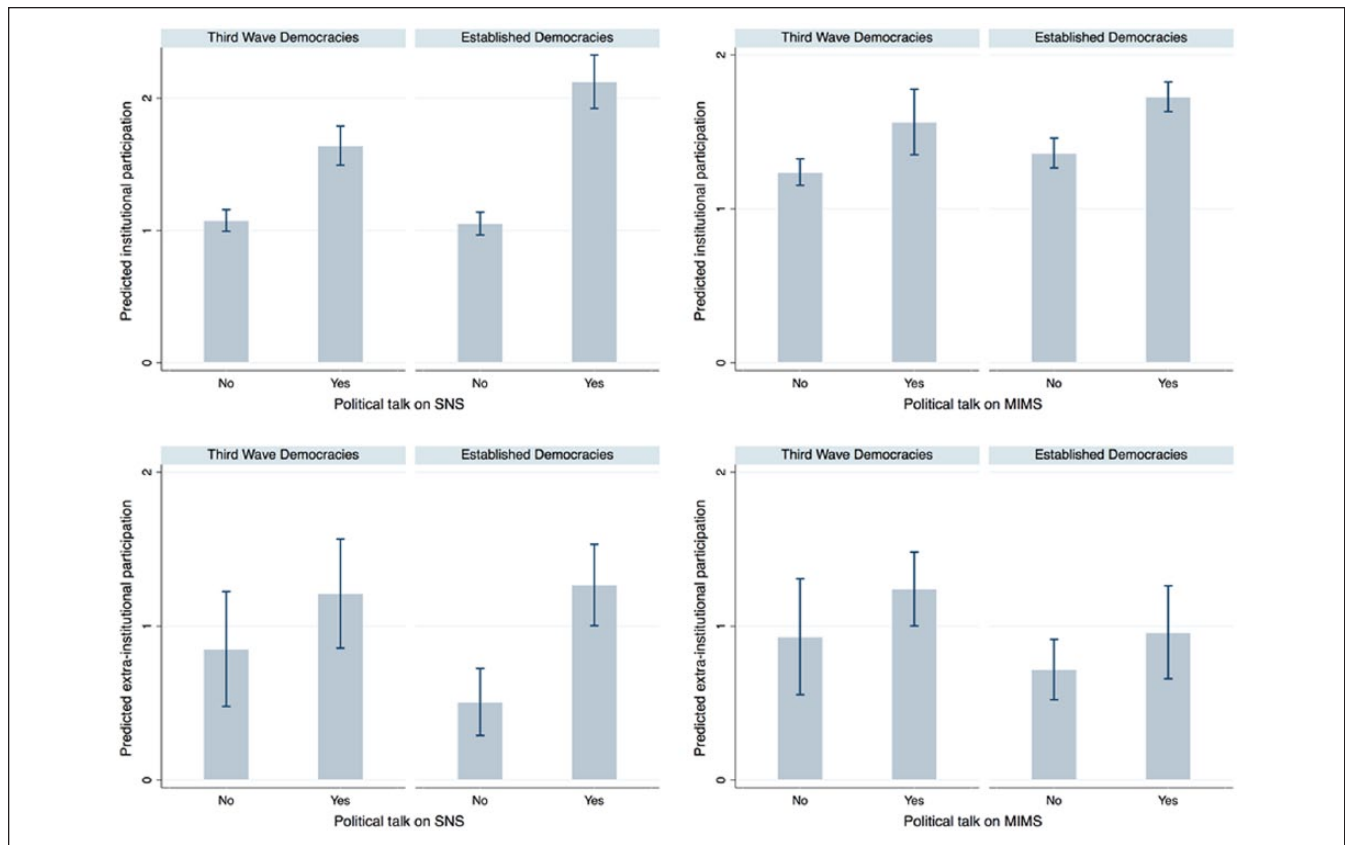
Figure 2. Predicted values of political participation at different levels of political talk on SNS and MIMS in established and Third Wave democracies, with 95% confidence intervals.

Note. The top-left quadrant plots the relationship between political talk on social media and institutional participation; the top-right quadrant plots the relationship between political talk on mobile instant messaging platforms and institutional participation; the bottom-left quadrant plots the relationship between political talk on social media and extra-institutional participation; the bottom-right quadrant plots the relationship between political talk on mobile instant messaging platforms and extra-institutional participation. All analyses are based on Models 2a-b in Table 2. SNS = social networking sites; MIMS = mobile instant messaging platforms.

is also worth considering that political conversation face-to-face, which we have included as a control variable, is a positive and significant predictor of both institutional and extra-institutional participation. Taken together, these findings indicate that political discussions occurring offline and online are not interchangeable: by offering citizens multiple opportunities for engagement with—at least potentially—different discussion partners, they can all contribute to political mobilization.

We now focus on the moderating role of the length of democratic regimes, assessed in Models 2a-b. The interaction term between living in established democracies (compared with Third Wave democracies) and political talk on SNS is positive and significant in both models. By contrast, the value of the coefficient for political talk on SNS, which now only represents this association in Third Wave democracies, becomes smaller than in Models 1a-b. Thus, the relationship between political talk on social media and institutional and extra-institutional participation is significantly stronger in established than in Third Wave

democracies, as H3 predicted.[11] Figure 2 illustrates these findings by plotting predicted values of institutional and extra-institutional participation among average respondents living in established and Third Wave democracies based on whether they engaged in online political talk.

Let us imagine four average respondents, two of whom live in an established democracy, the other two in a Third Wave democracy. Within each pair, the subject who talks about politics on social media participates in a higher number of activities than the one who does not talk about politics on social media. However, as the top-left quadrant in Figure 2 shows, this differential effect is much larger in established than in Third Wave democracies. Political conversation on SNS results in a 103% predicted boost to institutional participation in established democracies (from 1.05 to 2.13), while the predicted increase is 52% in Third Wave democracies (from 1.08 to 1.64). When extra-institutional participation is the dependent variable, a similar pattern applies: engaging in political discussion on social media results in a 151% predicted boost to contentious political activity in established

democracies (from 0.51 to 1.28), compared with a substantially smaller (and not statistically significant) 42% increase in Third Wave democracies (from 0.84 to 1.19; bottom-left quadrant, Figure 2).

By contrast, in our regressions the coefficients representing the interaction between political talk on MIMS and established democracies are not significant (Table 2, Models 2a-b). As stated by H4, the relationship between political conversations on MIMS and both institutional and extra-institutional participation does not change across older and younger democracies. Accordingly, differences in the predicted levels of participation between respondents who talk about politics on MIMS and those who do not are noticeably similar when comparing established and Third Wave democracies (top-right and bottom-right quadrants, Figure 2).

Limitations

Our research suffers from at least four limitations that we must acknowledge.

First, we rely on cross-sectional, observational data, and thus cannot establish whether the correlations we found prove causality. Although CEM helped align our untreated and treated cases as closely as possible, we cannot rule out that our findings may be affected by endogeneity. However, previous research based on panel data (e.g., Shah et al., 2005, 2007) has already shown that changes levels of online political talk tend to affect changes in levels of participation rather than the other way around. Moreover, even if the causal arrow ran in the opposite direction to what we hypothesized—that is, if levels of political participation caused digital political talk—our findings would still have relevant implications. For one, they would show that politically active citizens are taking advantage of different online platforms to discuss politics. Given the high diffusion of SNS and MIMS, activists talking about politics in these environments may be starting two-step flows of communication that enable political content to indirectly reach other, less engaged users (Anspach, 2017). Moreover, the differences we uncovered between these relationships across established and Third Wave democracies would suggest that institutional legacies and political culture affect the extent to which active citizens take up new opportunities for informal political talk.

A second limitation is our reliance on self-reported measures. As an alternative, we could have chosen to unobtrusively collect data on users' behaviors on social media platforms, then analyze these digital trace data with computational techniques to estimate the frequency and contents of political discussion, as well as other characteristics (e.g., Barberá, 2014). However, those kinds of data are only publicly available for some platforms—mostly, if not only, Twitter—and, even there, in limited ways. Comprehensive user data on political discussions are only very partially available for Facebook—the most popular SNS—and completely unavailable for WhatsApp and Facebook Messenger— the two most popular MIMS. While research based on digital trace data can answer important questions pertaining to specific platforms and groups of users thereof, surveys are still useful to study political interactions across different digital and physical spaces among representative samples of users. However, it is highly desirable to combine survey data with digital trace data to assess the validity and reliability of self-reports of online behavior as well as measuring a wider variety of constructs (Guess, 2015).

Third, although we introduced a useful, hitherto unexplored, distinction between different online platforms—SNS and MIMS—reality is more complex. We argued that the technological affordances of different platforms may have different implications for political talk and for the participatory benefits resulting from such talk in different democracies. However, we employed a very basic distinction between SNS and MIMS that obfuscates substantial differences between individual platforms, and even between different uses of each platform. For example, we have contended that the affordances of SNS facilitate connections with larger networks potentially including strangers while MIMS are suitable for small group conversations mainly limited to friends and acquaintances. However, individual users take advantage of these affordances based on their individual dispositions and desires, and thus different users might develop highly diverse experiences on the same platform. To capture these dynamics, our models should have controlled for the size of respondents' conversational networks on SNS and MIMS, but, unfortunately, our data do not include these measures. Moreover, the functioning of digital platforms constantly changes due to often invisible decisions made by company executives, product managers, and software developers, as well as users' behaviors. Under these circumstances, studying the specific affordances of each digital platform becomes an even more daunting task, but one still worth pursuing if we are to fully understand digital media's contribution to political life.

The fourth limitation involves our comparative research design. By choosing a diverse set of seven Western democracies, we illuminated theoretically relevant systematic differences between established and Third Wave democracies, as well as offering more robust evidence on our direct effects of interest than would have been possible with data from one or two countries. Still, the small number of countries we analyzed prevents us from testing alternative theories on the factors that may cause the system-level heterogeneity we observed—the classic dilemma of "many variables, small number of cases" (Lijphart, 1971, p. 685). We also employed a broad-brush country classification based on the length of their democratic regimes. Although we justified this choice on theoretical grounds, a larger and more diverse country sample would have allowed us to build more granular models and test more nuanced theories.

Conclusion

The interplay of citizens' informal political talk, technology, and the quality of democratic governance is a central theme in contemporary scholarly and public discussions, to which this study has offered various contributions.

We have shown that digital media are more helpful than harmful in enabling informal political talk that, in turn, is associated with higher levels of both institutional and extra-institutional participation. To the extent that widespread citizen participation is beneficial for democratic governance, SNS and mobile instant messaging platforms are making a positive contribution toward this outcome.

We have also highlighted that technologies and their social adoption matter. Political talk on SNS is more strongly associated with participation than political talk on MIMS. We have also shown that face-to-face political conversation maintains a similarly positive role in fostering citizens' political voice. The fact that political discussion occurs offline or online is, thus, less important than the specific affordances, mechanisms, and social conventions enabling it.

Finally, institutional legacies shape the relationship between online political talk and participation. The differences we found between established and Third Wave democracies suggest that technology is not, *per se*, a panacea to the historically rooted problems of political disaffection and alienation in countries that transitioned to democracy in the past four decades. However, the fact that we did not find any differential effects across older and newer democracies when it comes to political talk on MIMS indicates that some technologies may enable behaviors yielding less unevenly distributed and historically constrained participatory benefits.

As we have shown in this study, technology interacts with individual predispositions and political institutions—including the legacy of those that are now history—in shaping political outcomes.

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Notes

1. Source: "We are social 2017 Global Overview" https://weare-social.com/special-reports/digital-in-2017-global-overview (accessed October 2017).
2. World Values Survey data from the 2010 to 2014 wave support these conclusions. When asked "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?," 44.6% of German and 34.8% of U.S. respondents answered "Most people can be trusted," while only 22.2% of Polish and 19% of Spanish respondents did. Retrieved from http://www.worldvalues-survey.org/WVSOnline.jsp (accessed April 2018); data for Denmark, France, and Greece were not available. This pattern is confirmed—with the sole exception of Spain—by data from European Social Survey (round of 2014 for all countries but Greece where the latest accessible data are from 2010). Respondents to the ESS were asked the same question as in the WWS but could answer by indicating a number between 0 and 10 (where 0 means "you can't be too careful" and 10 means "most people can be trusted"). On average, Danish respondents scored 6.67, British respondents 5.35, Spanish respondents 5.15, German respondents 5.02, French respondents 4.57, Greek respondents 4.02, and Polish respondents 3.93. Statistics have been calculated using post-stratification weights. Data retrieved from http://www.europeansocialsur-vey.org/data/country_index.html (accessed April 2018).
3. In Denmark, we collected responses between 19 June and 24 August 2015 (participation rate 20.5%); in Greece, between 22 September and 29 October 2015 (21.6%); in Poland, between 26 October and 25 November 2015 (16%); in Spain, between 21 December 2015 and 25 January 2016 (41.4%); in the United States, between 9 November and 1 December 2016 (3.3%); in the United Kingdom, between 12 and 28 June 2017 (17.7%); in France, between 20 June and 9 July 2017 (19.4%). The lower participation rate in the U.S. survey compared with other countries included in the study may be explained by panel fatigue, as a massive amount of electoral and post-electoral surveys—much larger than in the other countries we studied—had been administered in the run-up to and immediately after the 2016 U.S. Presidential election. In any case, as for other countries included in the study, the U.S. sample was constructed to match the characteristics of U.S. citizens with Internet access based on gender, age, education, zone of residency, and occupational status. Moreover, we compared our U.S. respondents against those participating in the 2016 American National Election Studies Time Series survey on three relevant variables: interest in politics, trust in government, and turnout. The comparison, while showing some limited differences, reassured us that our sample does not over-represent citizens who are more politically engaged than average U.S. Internet users (data available upon request).
4. Cronbach's alpha measuring interitem reliability was 0.692 across the six items. Cronbach's alpha for the subsample including exclusively Danish, American, British, and French respondents (which we consider established democracies, see below in the main text) was 0.723, while it was 0.641 for the subsample including exclusively Greek, Polish, and Spanish respondents (Third Wave democracies).
5. We have included electoral persuasion (i.e., trying to influence others' electoral choices) in our index of institutional participation since we believe that, following the definition provided in the opening section of the manuscript, it is a specific and highly relevant dimension of electoral participation. However, it might be argued that interpersonal electoral mobilization is a specific form of political conversation and that, given the nature of our independent variables, this choice could inflate

the relationships we investigate in the present study. To ensure this is not the case we have conducted a robustness check by replicating our analyses employing an alternative index which excludes persuasive talk. Results of these alternative models are completely coherent with those presented in Table 2 and have been included in the Supplementary Materials to this article.

6. For trying to influence someone else's voting choices, we combined answers to the item "Trying to convince someone to vote for a party, politician or political leader" included in the general battery already presented in the main text, answers to the item "tried to convince someone to vote for a party leader, politician or party using email" included in a battery introduced by the question "Various political activities are carried out via the Internet. During the past 12 months have you . . .?," and answers to an identical item included in a battery addressing political engagement on social media, and introduced by the question: "Various political activities are carried out on social networks/social media platforms such as Facebook, Twitter, YouTube, etc. During the past 12 months have you . . .?." We measured signing petitions or referenda by combining answers to the items "Endorsing a petition or signing a referendum" and "signed an online petition," included respectively in the general battery and in the battery focusing on activities carried out via the Internet. Response modes were "Yes," "No," and "Don't remember" in all three batteries. For both activities, we coded as active all interviewees who answered "Yes" to at least one of the items that we combined, and as inactive those who answered "No" to all of them. We considered as missing data respondents who answered either "Don't remember," or "No" and "Don't remember," to all the questions we combined for each action.

7. Cronbach's alpha measuring interitem reliability was 0.655 across the six items. Alpha is 0.701 among respondents in established democracies and 0.585 in Third Wave democracies.

8. Due to a clerical error, Danish respondents were asked a question about monthly income, but the response modes they could choose from were designed to capture typical values in yearly income. However, analysis of the responses by the Danish respondents and comparison with responses in other countries, as well as comparison with Danish data from the 2014 European Social Survey, convinced us that the answers were not completely flawed as a result of such error. If we exclude respondents who indicated the lowest option offered—whose frequency is highly inflated compared with other countries we surveyed and with ESS Denmark data—the percentages of respondents in our data set who chose each of the remaining income brackets are coherent with ESS data (analyses available upon request). It is reasonable to believe that (at least part of) Danish respondents who placed themselves in the lowest income bracket in our survey ("less than 132,000 DKK") were thinking about the monthly income of their family, as asked by the question. This interpretation is supported by the fact that according to 2015 data from the Statistics Banken Denmark (www.statistikbanken.dk) the average monthly family income was 29,498 DKK (annual income divided by 12 months). Other respondents, by choosing options that would be completely out of scale when measuring monthly income, are very likely to have understood that, in spite of the question wording,

they were requested to indicate the annual income of their family and answered accordingly. Therefore, we have considered as missing values the income measures for Danish respondents who indicated the lowest option we offered, and for which there could be some legitimate confusion whether it referred to monthly or yearly income, while keeping the income data for all other Danish respondents. We subsequently imputed missing data for income and other variables, as described in the text.

9. This is an index combining (recoded) respondents' levels of agreement with the following statements: "People like me have no influence on what the government does," "Politicians are interested in what people like me think," and "Sometimes politics is so complicated that I cannot understand what is happening."

10. In all seven countries, the coefficients for political talk on SNS and MIMS are positive and significant when predicting both dependent variables, with three exceptions. In Denmark, the coefficients for both types of political talk are positive but not significant for extra-institutional participation. In the United States, the coefficient for political talk on MIMS is positive but not significant when predicting extra-institutional participation. Finally, in France the same coefficient is positive but not significant when predicting institutional participation. These models are available in the Supplementary Materials to this article.

11. Following Pop-Eleches and Tucker (2017), we further explored this finding to assess whether younger citizens in Third Wave democracies show converging patterns with younger citizens in established democracies. When we further specified our models by adding a three-way interaction between political talk on SNS, age, and length of democracy, the coefficient for the direct effect of political talk on SNS remained positive and significant in the model predicting institutional participation and positive and almost significant ($p = .070$) in predicting extra-institutional participation. Conversely the coefficients for all the interaction terms—including between political talk on SNS and length of democracy—became nonsignificant ($p = .162$ in the model predicting institutional participation and $p = .054$ in the model predicting extra-institutional participation). While these issues deserve further scrutiny, we take this as an indication that younger citizens in older and younger democracies receive comparable participatory benefits from political talk on social media. Therefore, the aggregate differences we found between established and Third Wave democracies might fade away with generational replacement.

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References

Anspach, N. M. (2017). The new personal influence: How our Facebook friends influence the news we read. *Political Communication*, *34*, 590-606.

Barberá, P. (2014). Birds of the same feather tweet together: Bayesian ideal point estimation using Twitter data. *Political Analysis*, *23*, 76-91.

Ben-David, A., & Matamoros-Fernandez, A. (2016). Hate speech and covert discrimination on social media: Monitoring the

Facebook pages of extreme-right political parties in Spain. *International Journal of Communication*, *10*, 1167-1193.

Bennett, W. L. (2012). The personalization of politics: Political identity, social media, and changing patterns of participation. *The ANNALS of the American Academy of Political and Social Science*, *644*, 20-39.

Blackwell, M., Iacus, S. M., King, G., & Porro, G. (2009). CEM: Coarsened exact matching in Stata. *The Stata Journal*, *9*, 524-546.

Bond, R. M., Fariss, C. J., Jones, J. J., Kramer, A. D., Marlow, C., Settle, J. E., & Fowler, J. H. (2012). A 61-million-person experiment in social influence and political mobilization. *Nature*, *489*, 295-298.

Boulianne, S. (2017). Revolution in the making? Social media effects across the globe. *Information, Communication & Society*. Advance online publication. doi:10.1080/1369118X.2017.1353641

Bruns, A., & Burgess, J. E. (2011, August 25-27). *The use of Twitter hashtags in the formation of ad hoc publics*. Paper presented at the 6th European Consortium for Political Research (ECPR) General Conference, University of Iceland, Reykjavik.

Chadwick, A. (2007). Digital network repertoires and organizational hybridity. *Political Communication*, *24*, 283-301.

Coppock, A., Guess, A., & Ternovski, J. (2016). When treatments are tweets: A network mobilization experiment over Twitter. *Political Behavior*, *38*, 105-128.

Delhey, J., & Newton, K. (2005). Predicting cross-national levels of social trust: Global pattern or nordic exceptionalism? *European Sociological Review*, *21*, 311-327.

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer Mediated Communication*, *12*, 1143-1168.

Eveland, W. P., Jr. (2001). The cognitive mediation model of learning from the news: Evidence from nonelection, off-year election, and presidential election contexts. *Communication Research*, *28*, 571-601.

Gerbaudo, P. (2012). *Tweets and the streets: Social media and contemporary activism*. London, England: Pluto Press.

Gil de Zúñiga, H., Jung, N., & Valenzuela, S. (2012). Social media use for news and individuals' social capital, civic engagement and political participation. *Journal of Computer Mediated Communication*, *17*, 319-336.

Guess, A. M. (2015). Measure for measure: An experimental test of online political media exposure. *Political Analysis*, *23*, 59-75.

Hardy, B. W., & Scheufele, D. A. (2005). Examining differential gains from Internet use: Comparing the moderating role of talk and online interactions. *Journal of Communication*, *55*, 71-84.

Huntington, S. P. (1993). *The third wave: Democratization in the late twentieth century*. Norman: University of Oklahoma press.

Iacus, S. M., King, G., & Porro, G. (2012). Causal inference without balance checking: Coarsened exact matching. *Political Analysis*, *20*, 1-24.

Johnson, T. J., & Kaye, B. K. (2003). A boost or bust for democracy? How the web influenced political attitudes and behaviors in the 1996 and 2000 presidential elections. *The International Journal of Press/Politics*, *8*(3), 9-34.

Jones, J. J., Bond, R. M., Bakshy, E., Eckles, D., & Fowler, J. H. (2017). Social influence and political mobilization: Further evidence from a randomized experiment in the 2012 U.S. presidential election. *PLoS ONE*, *12*(4), e0173851.

Jones, N., Malesios, C., Iosifides, T., & Sophoulis, C. M. (2008). Social capital in Greece: Measurement and comparative perspectives. *South European Society and Politics*, *13*, 175-193.

King, G., Honaker, J., Joseph, A., & Scheve, K. (2001). Analyzing incomplete political science data: An alternative algorithm for multiple imputation. *American Political Science Review*, *95*, 49-69.

Kreuter, F., Presser, S., & Tourangeau, R. (2008). Social desirability bias in CATI, IVR, and web surveys: The effects of mode and question sensitivity. *Public Opinion Quarterly*, *72*, 847-865.

Larson, J., Nagler, J., Ronen, J., & Tucker, J. (2016). *Social networks and protest participation: Evidence from 93 million Twitter users*. Retrieved from https://ssrn.com/abstract=2796391

Lijphart, A. (1971). Comparative politics and the comparative method. *American Political Science Review*, *65*, 682-693.

Macafee, T., & De Simone, J. J. (2012). Killing the bill online? Pathways to young people's protest engagement via social media. *Cyberpsychology, Behavior, and Social Networking*, *15*, 579-584.

Margolin, D. B., Hannak, A., & Weber, I. (2018). Political fact-checking on Twitter: When do corrections have an effect? *Political Communication*, *35*, 196-219. doi:10.1080/10584609.2017.1334018

Markus, H., & Zajonc, R. B. (1985). The cognitive perspective in social psychology. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (Vol. 1, pp. 137-230). New York: Random House.

Martin, J. A. (2015). Mobile news use and participation in elections: A bridge for the democratic divide? *Mobile Media & Communication*, *3*, 230-249.

Marwick, A. E., & boyd, D. (2011). I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New Media & Society*, *13*, 114-133.

McLeod, J. M., Scheufele, D. A., & Moy, P. (1999). Community, communication, and participation: The role of mass media and interpersonal discussion in local political participation. *Political Communication*, *16*, 315-336.

Nagler, J., & Tucker, J. A. (2015). Drawing inferences and testing theories with big data. *PS: Political Science & Politics*, *48*, 84-88.

Neumayer, C., & Stald, G. (2014). The mobile phone in street protest: Texting, tweeting, tracking, and tracing. *Mobile Media & Communication*, *2*, 117-133.

Newton, K. (2001). Trust, social capital, civil society, and democracy. *International Political Science Review*, *22*, 201-214.

O'Hara, K. P., Massimi, M., Harper, R., Rubens, S., & Morris, J. (2014, February). Everyday dwelling with WhatsApp. In *Proceedings of the 17th ACM conference on computer supported cooperative work & social computing* (pp. 1131-1143). Baltimore, MD: ACM.

Paldam, M., & Svendsen, G. T. (2002). Missing social capital and the transition in Eastern Europe. *Journal for Institutional Innovation, Development, and Transition*, *5*, 21-34.

Papacharissi, Z. (2015). *Affective publics: Sentiment, technology, and politics*. Oxford, UK: Oxford University Press.

Pasek, J. (2015). When will nonprobability surveys mirror probability surveys? Considering types of inference and weighting

strategies as criteria for correspondence. *International Journal of Public Opinion Research*, *28*, 269-291.

Penney, J., & Dadas, C. (2014). (Re)Tweeting in the service of protest: Digital composition and circulation in the occupy wall street movement. *New Media & Society*, *16*, 74-90.

Phillips, W. (2015). *This is why we can't have nice things: Mapping the relationship between online trolling and mainstream culture*. Cambridge, UK: MIT Press.

Pop-Eleches, G., & Tucker, J. A. (2011). Communism's shadow: Postcommunist legacies, values, and behavior. *Comparative Politics*, *43*, 379-408.

Pop-Eleches, G., & Tucker, J. A. (2017). *Communism's shadow: Historical legacies and contemporary political attitudes*. Princeton, NJ: Princeton University Press.

Price, V., & Cappella, J. N. (2002). Online deliberation and its influence: The electronic dialogue project in campaign 2000. *IT & Society*, *1*, 303-329.

Robinson, M. J. (1976). Public affairs television and the growth of political malaise: The case of "the selling of the pentagon." *American Political Science Review*, *70*, 409-432.

Rojas, H., & Puig-i-Abril, E. (2009). Mobilizers mobilized: Information, expression, mobilization and participation in the digital age. *Journal of Computer Mediated Communication*, *14*, 902-927.

Rothstein, B., & Stolle, D. (2008). The state and social capital: An institutional theory of generalized trust. *Comparative Politics*, *40*, 441-459.

Sanders, D., Clarke, H. D., Stewart, M. C., & Whiteley, P. (2006). Does mode matter for modeling political choice? Evidence from the 2005 British election study. *Political Analysis*, *15*, 257-285.

Schudson, M. (1997). Why conversation is not the soul of democracy. *Critical Studies in Media Communication*, *14*, 297-309.

Shah, D. V. (2016). Conversation is the soul of democracy: Expression effects, communication mediation, and digital media. *Communication and the Public*, *1*, 12-18.

Shah, D. V., Cho, J., Eveland, W. P., Jr., & Kwak, N. (2005). Information and expression in a digital age: Modeling internet effects on civic participation. *Communication Research*, *32*, 531-565.

Shah, D. V., Cho, J., Nah, S., Gotlieb, M. R., Hwang, H., Lee, N. J., . . . McLeod, D. M. (2007). Campaign ads, online messaging, and participation: Extending the communication mediation model. *Journal of Communication*, *57*, 676-703.

Soroka, S., Andrew, B., Aalberg, T., Iyengar, S., Curran, J., Coen, S., . . . Tiffen, R. (2013). Auntie knows best? Public broadcasters and current affairs knowledge. *British Journal of Political Science*, *43*, 719-739.

Stolle, D., Hooghe, M., & Micheletti, M. (2005). Politics in the supermarket: Political consumerism as a form of political participation. *International Political Science Review*, *26*, 245-269.

Theocharis, Y., & van Deth, J. W. (2015). A modern tragedy? Institutional causes and democratic consequences of the Greek crisis. *Representation*, *51*, 63-79.

Theocharis, Y., & van Deth, J. W. (2017). *Political participation in a changing world: Conceptual and empirical challenges in the study of citizen engagement*. London, England: Routledge.

Torcal, M., & Montero, J. R. (1999). Facets of social capital in new democracies: The formation and consequences of social capital in Spain. In M. Maraffi et al. (Eds.), *Social capital and European democracy* (pp. 167-191). London, UK: Routledge.

Tufekci, Z., & Wilson, C. (2012). Social media and the decision to participate in political protest: Observations from Tahrir square. *Journal of Communication*, *62*, 363-379.

Turkle, S. (2008). Always-on/always-on-you: The tethered self. In J. Katz (Ed.), *Handbook of mobile communication studies* (pp. 121-137). Cambridge, UK: MIT Press.

Utz, S., Muscanell, N., & Khalid, C. (2015). Snapchat elicits more jealousy than Facebook: A comparison of Snapchat and Facebook use. *Cyberpsychology, Behavior, and Social Networking*, *18*, 141-146.

Vaccari, C., Valeriani, A., Barberá, P., Bonneau, R., Jost, J. T., Nagler, J., & Tucker, J. A. (2015). Political expression and action on social media: Exploring the relationship between lower and higher threshold political activities among twitter users in Italy. *Journal of Computer Mediated Communication*, *20*, 221-239.

Valenzuela, S. (2013). Unpacking the use of social media for protest behavior: The roles of information, opinion expression, and activism. *American Behavioral Scientist*, *57*, 920-942.

Valeriani, A., & Vaccari, C. (2016). Accidental exposure to politics on social media as online participation equalizer in Germany, Italy, and the United Kingdom. *New Media & Society*, *18*, 1857-1874.

Valeriani, A., & Vaccari, C. (2017). Political talk on mobile instant messaging services: A comparative analysis of Germany, Italy, and the UK. *Information, Communication & Society*. Advance online publication. doi:10.1080/1369118X.2017.1350730

van Buuren, S., Boshuizen, H. C., & Knook, D. L. (1999). Multiple imputation of missing blood pressure covariates in survival analysis. *Statistics in Medicine*, *18*, 681-694.

Vaterlaus, J. M., Barnett, K., Roche, C., & Young, J. A. (2016). "Snapchat is more personal": An exploratory study on Snapchat behaviors and young adult interpersonal relationships. *Computers in Human Behavior*, *62*, 594-601.

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