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WhatsApp political discussion, conventional participation and activism: exploring direct, indirect and generational effects

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Abstract

Ordinary citizens are increasingly using mobile instant messaging apps such as WhatsApp for politically-related activities. Compared to other 'semi-public' online platforms, WhatsApp provides a more intimate and controlled environment in which users can almost simultaneously gather and share news, discuss politics, and mobilize others. Relying on two-wave panel data collected in Spain, USA, and New Zealand, this study examines the mediating role of WhatsApp political discussion in the relationships between different types of news use and various forms of political participation. First, our findings reveal WhatsApp discussion has a positive influence on activism, and a more nuanced effect on conventional participation. Second, results are partially supportive of a fully mediated set of influences between news media and social media news uses and both types of participation via WhatsApp. Finally, the study examines age differential effects between younger (Gen Xers and Millennials) and older (Boomers) age groups.

Keywords: WhatsApp political discussion, conventional participation, activism, news media use, social media news use, generational effects

Introduction

Instant Messaging (IM) software for smartphones has gained widespread popularity and acceptance over the last years, especially among the youngest. WhatsApp is the dominant player in IM in 107 countries around the world, with more than 1.5 billion monthly active users who exchange nearly 60 billion messages a day¹ (Bobrov, [2018](#)). While most of IM conversations are *relational* in nature (e.g., to coordinate private activities and keep in touch with friends and family) or primarily oriented to fulfill *entertainment* needs, some other uses of IM are *informational*, that is, associated with news gathering and sharing, and discussion of politics and public affairs (Quan-Haase & Young, [2010](#); Valeriani & Vaccari, [2018](#)).

Some of the distinctive characteristics of IM apps such as WhatsApp are their *immediacy* and *privacy*. WhatsApp allows its users to message anyone (including groups of people) and share multimedia content at any time. Also, WhatsApp provides a relatively private and controlled environment for discussion, where users feel safer and less vulnerable to social sanctions. These attributes make IM apps well suited for politically oriented activities, especially attractive to those perceiving their views as extreme or minority, and to those using these channels to mobilize their networks for political activism – namely demonstrations, protests, boycotts, etc. (see Rojas & Puig-i-Abril, [2009](#); Valeriani & Vaccari, [2018](#)). Based on this theoretical background, the present study examines *informational* uses of WhatsApp and their potentially democratic implications. First, we explore the differential role of WhatsApp discussion in fostering conventional and activist forms of participation. Second, and drawing on a citizen communication mediation framework (Shah, Cho, Eveland, & Kwak, [2005](#)), we test an empirical indirect model of communication effects. Specifically, we shed light over citizens' news use indirect effects on political participation through WhatsApp discussion, described as follows: (1) Citizens obtain information about politics and current events from news and social media; (2) this information provides (over time) the 'raw material' that fuels interpersonal discussions via WhatsApp-like apps; and (3) WhatsApp political discussions lead to increased levels of conventional and activist participation. We also examine generational differences in this mediation model between two age groups: Baby Boomers and older adults, on the one hand, and Millennials and Gen Xers, on the other. Compared to cross-sectional designs, the temporal component of our longitudinal data allows us to better assess causal relationships among our variables of interest. Furthermore, the cross-country nature of our sample provides

our results with higher external validity than those from single-country studies.

WhatsApp as a platform for discussion of news and political events

People largely learn about their political surroundings through media, whether traditional, digital or social. The mass mediated picture of the social world – in the form of news, comment, pictures, videos, memes, posts, etc. – provides the ‘raw material’ that fuels political discussion with family, friends, or acquaintances (Mondak, [2010](#), p. 94). This connection between news uses and political talk is well established in the literature and has been found in a variety of face-to-face and online – including social media – discussion environments (see Chan, Chen, & Lee, [2017](#); Cho et al., [2009](#); Kim, Hsu, & Gil de Zúñiga, [2013](#)).

Mobile news users commonly arrive at news content by directly visiting news organizations websites and through social media (Pew Research Center, [2017](#)). Using IM apps such as WhatsApp gives them the opportunity to contextualize and spur their political discussions by sharing links, pictures, videos, memes, or gifs that relate to politics or current events. Alternatively – although perhaps less frequently – WhatsApp users can also discuss and share content from traditional news media sources by taking pictures of newspaper articles, recording audio from radio or television programs, etc. IM apps users can therefore access news anywhere anytime through their phones, and almost immediately (and from the same device) open a chat window and start talking about what they have just learnt with their favorite discussion partner/s or group/s. Much like it happens with other social media platforms, our theoretical and empirical models assume that news from social and traditional media sources stimulates political discussion on WhatsApp.

WhatsApp political discussion and conventional participation

The development of internet-based platforms and apps has changed the ways in which people talk about politics. Barely few decades ago, this type of discussions took place almost exclusively face-to-face or over the phone. Nowadays, an increased amount of political talk occurs in online environments. Accumulated empirical evidence expanding over the past two decades suggests that, for the most part, and similar to face-to-face discussions, online political talk has beneficial effects on conventional

forms of civic and political engagement. A number of theoretical reasons – some of them common to any form of political talk, others specific to online discussions – explain these positive outcomes. Overall, political discussion raises awareness about social problems, helps identify opportunities for political action, and provides a context for persuasion and mobilization (see Gil de Zúñiga, Barnidge, & Diehl, [2018](#); Rojas & Puig-i-Abril, [2009](#); Weeks, Ardèvol-Abreu, & Gil de Zúñiga, [2017](#)). Political talk has also indirect paths to participation: those who frequently discuss politics also tend to show higher levels of political interest, knowledge, efficacy, and cognitive elaboration, which in turn influences their level of political engagement (see Eveland, [2004](#); Kwak, Williams, Wang, & Lee, [2005](#)).

More recently, IM apps such as WhatsApp have been added to the already wide collection of online platforms for interpersonal discussion. Although this phenomenon is relatively recent, some studies indicate that IM app use for political talk is rapidly increasing in many countries. For example, in Germany, 25% of IM app users discuss politics on their smartphones, a figure that rises to 27.8% in Italy, and 38.1% in Britain (Valeriani & Vaccari, [2018](#)). Concerning its democratic meaning, some preliminary findings suggest that mobile-based political talk may also foster civic and political engagement, both directly and through a ‘spillover effect’ (i.e., via the stimulation of face-to-face and other forms of computer-mediated political discussions) (Chan et al., [2017](#)).

Besides the general arguments linking discussion and participation, specific affordances of mobile technology may also be considered to explain the democratic outcomes of smartphone use for political talk. Thus, one of the unique features of mobile communication is its *immediacy*, i.e., the possibility of contacting (virtually) anyone and sharing content anytime, anywhere. When using IM apps, this ubiquitous character may exert an enhancing effect on the frequency of discussion and its subsequent behavioral outcomes, since there is no need to wait for a face-to-face encounter or to sit in front of the desktop to start a political conversation. Furthermore, some online forms of formal political participation – such as donating money to a campaign or contacting a politician – can easily be performed through mobile apps, which centralizes the discussion-participation process on a single device. Based on these considerations, we pose our first hypothesis:

H1: WhatsApp use for discussion positively predicts conventional participation.

WhatsApp discussion as a safe environment for activism

Not all forms of political involvement revolve around institutionalized activities such as voting, campaigning, or contacting politicians. At times, citizens engage in actions directed against elites, which are aimed at achieving social change through various forms of protest (Ekman & Amnå, [2012](#); Norris, [2002](#)). These include politically motivated acts, whether legal (e.g., political consumerism, *buycotting*) or illegal (e.g., civil disobedience, confronting the police); individual (e.g., creating and signing petitions) or collective (e.g., participating in demonstrations, political rallies, or marches) (Ekman & Amnå, [2012](#)).

Activist forms of participation seem to suit particularly well the post-materialist values of post-industrial societies. In this novel context, the decline of political trust, the increased people's skepticism toward politics, and even lower voter turnouts may not necessarily be signs of democratic erosion and could be interpreted in the light of the emergence of new forms of political engagement (Norris, [2002](#); Saunders, [2014](#)). In fact, many of those who engage in protest or activist politics also tend to show high levels of political interest and commitment to democratic principles (Curtice & Jowell, [1997](#)).

On the basis of these conceptual and empirical distinctions, recent research has found some uses of internet-based and social media to have a beneficial effect on these alternative forms of political engagement. The reasons behind these influences are varied. Thus, on the one hand, social networking sites and other online media are an important source of mobilizing information not commonly found in traditional media, or that might be difficult to obtain in face-to-face encounters for a variety of reasons – from fear to social rejection or legal consequences to comparatively reduced opportunities for political discussion (Tufekci & Wilson, [2012](#)). On the other hand, some of the affordances of the social web are especially well suited to channel social pressure and reinforcement, which are particularly necessary tools to persuade potential participants in the context of activism (Valenzuela, Correa, & Gil de Zúñiga, [2018](#); Valeriani & Vaccari, [2018](#)). For example, IM apps offer low-effort mechanisms for opinion leaders and social organizations to contact and mobilize their networks (friends, followers, or members). These tools also allow for a better tailoring of the messages to meet specific individual and group needs and preferences. Finally, online media might also play an important role in the construction of group identity, because they facilitate the development of shared experiences and views. This ultimately helps to build social capital that can be mobilized for activism (Bakardjieva, [2009](#); Valenzuela, Arriagada, & Scherman, [2012](#)).

Most of these theoretical explanations apply to IM apps, and therefore it seems reasonable to expect a beneficial effect of WhatsApp discussion on activism. Furthermore, WhatsApp has distinctive affordances that can make it decidedly appealing for discussing politics and mobilizing protest. For example, WhatsApp provides a relatively private and controlled environment where discussants may feel safe from social surveillance and rejection. WhatsApp users can create and join clearly defined groups where they can control the reach of the content they share, thereby preventing their opinions from damaging their reputation or relationships with other members of their networks that may not share their views. In fact, some preliminary evidence suggests that a non-negligible amount of IM app users share political information and opinions that they would *not* send via other more open online environments such as social media (Valeriani & Vaccari, [2018](#)).

This controlled nature of WhatsApp may be particularly attractive to those perceiving their views as minority or extreme opinions that might cause social sanction, and to those using these channels to mobilize their networks for activism (Valeriani & Vaccari, [2018](#)). Based on these explanations, we pose our second hypothesis:

H2: WhatsApp use for discussion positively predicts activist participation.

Differential effects of WhatsApp discussion across generations

There are several reasons to expect that the above hypothesized impact of WhatsApp on formal and activist participation may be more intense in younger than older generations, either due to generational, life-cycle effects, or both. Previous theoretical and observational accounts pose that each generation might react differently to the same communicative stimuli (i.e., WhatsApp discussion) based on the contextual characteristics of the era in which they received their early political socialization (Quintelier & Vissers, [2008](#); see also Grasso, [2014](#)). Different from Millennials or Gen Xers, older generations (Boomers) were politically socialized in a world without internet. In older age cohorts, we might therefore expect a pattern of ‘inertia’ and ‘generational attenuation’ of the influence of WhatsApp discussion that would result in comparatively smaller effects on politically-related behaviors (see Bachmann, Kaufhof, Lewis, & Gil de Zúñiga, [2010](#); Quintelier & Vissers, [2008](#)).

Likewise, a complementary theoretical account for this argument would be a ‘generational accentuation’ of the effects among younger cohorts due to their different patterns of IM use and the larger size of their

discussion networks on WhatsApp. Younger generations not only show higher levels of technological expertise regarding mobile use but, more importantly, have more online friends and belong to more WhatsApp groups (Chan, [2018](#); Xenos, Vromen, & Loader, [2014](#)). This could in turn, increase their levels of online and social media social capital and political information, subsequently enhancing the mobilization potential of WhatsApp (see Gil de Zúñiga, Barnidge, & Scherman, [2017](#)).

In addition, younger generations of activists are using communication technologies in ways that go beyond exchanging information. Digital media and internet-based applications are becoming organizational structures of collective political action that complement – and sometimes replace – the role of conventional, ‘brick and mortar’ organizations (i.e., unions, political parties, or NGOs) in which ‘the communication network becomes the organization form of the political action’ (Bennett & Segerberg, [2012](#), p. 9). These *connective* action networks are particularly appealing for younger age cohorts, heirs of postindustrial democracies and characterized by higher levels of individualism and disaffection with political organizations (Inglehart, [1997](#)). Accordingly, we hypothesize:

H3: The relationship between WhatsApp discussion and conventional participation is more intense among younger cohorts.

H4: The relationship between WhatsApp discussion and activism is more intense among younger cohorts.

From news uses to participation: indirect pathways through WhatsApp discussion

The associations between news use – whether traditional or online – and political participation has been well established in the literature. These connections, however, are not always straightforward, but involve a combination of often overlapping, direct and indirect effects (Cho et al., [2009](#); McLeod, Kosicki, & McLeod, [2009](#); Yoo, Kim, & Gil de Zúñiga, [2017](#)). Moving beyond paradigms of direct effects (stimulus-response), the core of the *communication mediation model* proposes that communication *stimulus* (i.e., media use and interpersonal communication) channel the influence of previous *orientations* of the audience – i.e., ‘structural, cultural, cognitive and motivational characteristics’ – on behavioral *responses* such as civic or political participation (McLeod et al., [2009](#), p. 238). Later developments of the model have found that certain communication patterns further mediate the relationship between media uses and participation. For example, the *citizen communication mediation model* specifies a mediating

mechanism between informational uses of media and political participation via (on and offline) discussion (Shah et al., [2005](#)).

Building on these prior ideas, this study examines the mediating role of WhatsApp discussion in channeling the influence of media uses on various types of participation (behavioral responses). As explained above, smartphones allow their users to access news content, discuss about it and, to a certain extent, participate in political activities. This centralized and potentially immediate nature of the process gives us grounds to believe that WhatsApp discussion may invigorate this multi-step, indirect process. Based on these explanations, we pose an additional set of hypotheses:

H5: WhatsApp discussion mediates the effect of news media use on conventional participation.

H6: WhatsApp discussion mediates the effect of social media news use on conventional participation.

H7: WhatsApp discussion mediates the effect of news media use on activism.

H8: WhatsApp discussion mediates the effect of social news use on activism.

Much in the same way as for the conditional effects hypothesized in H3 and H4, we might reasonably expect these indirect routes to participation (H5-H8) to vary across generational groups. In accordance with the 'attenuation' (for Boomers) and 'accentuation' (for Millennials and Gen Xers) effects of WhatsApp stated above, we propose the following hypothesis:

H9: The indirect effects of news and social media uses on participation through WhatsApp discussion are more intense among younger age cohorts.

Methods

Sample

Data were gathered from surveys in 22 countries from the Americas, Asia, Europe and South Africa. The study was developed collaboratively by a partnership between research groups based in Austria (University of Vienna) and New Zealand (Massey University). The survey was designed and administered by both research groups with the support of the media-polling group Nielsen. Using online opt-in panels at each country, from a pool of potential respondents over 10 million, Nielsen generated 22 samples whose demographic characteristics closely match those reported by census agencies (for detailed country and demographic breakdowns,

see Gil de Zúñiga, Ardèvol-Abreu, Diehl, Patiño, & Liu, [2019](#); Gil de Zúñiga & Liu, [2017](#)). The first wave of the study (W^1) was distributed, concurrently in all countries, from 14 to 24 September 2015. The same respondents were re-contacted six months later – between 22 March and 1 April – for a second wave (W^2).

The survey items about WhatsApp discussion, used as endogenous variable in this study, were included only in W^2 in three of the countries (Spain, United States, and New Zealand). Despite being culturally different, these countries share important common features such as being established democracies, having an independent and pluralistic media environment, and showing high mobile penetration rates. These traits provide us with a relatively diverse sample that establishes a benchmark for future comparisons with other contexts. Overall cooperation rate in W^1 averaged 77% across the panel (AAPOR, [2016](#); COOP3). In the three countries of this study, a total of 3307 respondents completed the questionnaire in W^1 : Spain ($n=1,019$); United States ($n=1,161$); and New Zealand ($n=1,157$). In W^2 , 1,436 respondents re-answered the questionnaire, for an overall retention rate of 43.42%. By country, retention rates were 30% in Spain, 46% in the United States; and 52% in New Zealand.

Endogenous variables

Activism. This variable was measured as the extent to which individuals engage in different forms of protest. We asked respondents how often (1 = *never* to 7 = *all the time*) they take part in ‘boycotting a certain product or service because of the social or political values of the company,’ ‘attending a political rally, participating in any demonstrations, protests, or marches,’ or ‘creating an online petition’ (3 items scale, W^1 Cronbach’s $\alpha = .68$; $M = 1.88$; $SD = 1.13$; W^2 Cronbach’s $\alpha = .65$; $M = 1.67$; $SD = 0.97$).

Conventional participation. We measured respondents’ tendency to engage in parliamentary (election-related) or contact activities, following the procedures and arrangements of representative democracy (Ekman & Amnå, [2012](#)). We included questions about respondents’ frequency of engagement in activities such as ‘an online question and answer session with a politician,’ ‘contacting an elected public official,’ or voting in ‘local or statewide elections’ and ‘national or presidential elections’ (4 items scale, W^1 Cronbach’s $\alpha = .67$; $M = 3.63$; $SD = 1.16$; W^2 Cronbach’s $\alpha = .61$; $M = 3.66$; $SD = 1.11$).

WhatsApp use for political discussion. We asked participants about the frequency with which they use WhatsApp ‘to have discussions about

politics and current events,' and 'to exchange views about what is going on in politics and public affairs' (pooled sample, W^2 Spearman-Brown Coefficient = .97; $M=1.64$; $SD=1.25$; Spain, W^2 Spearman-Brown = .95; $M=2.58$; $SD=1.68$; United States, W^2 Spearman-Brown = .99; $M=1.40$; $SD=1.01$; New Zealand, W^2 Spearman-Brown = .98; $M=1.38$; $SD=0.90$).

Exogenous variables

Social media use for news. Building on previous measures of the construct (see Gil de Zúñiga et al., [2018](#)), we asked respondents for their level of use of social media 'to stay informed about current events and public affairs,' 'to stay informed about [their] local community,' and 'to get news about current events from mainstream media' (W^1 Cronbach's $\alpha=.89$; $M=3.72$; $SD=1.65$).

News media use. The study considered respondents' frequency of exposure to a variety of news media other than social media. Respondents were asked how often (1 = *never* to 7 = *all the time*) they get news from 'television news,' 'newspapers,' 'online news sites,' 'radio,' and 'citizen journalism sites (non-professional journalism, e.g., blogs)' (5 items scale; W^1 Cronbach's $\alpha=.58$; $M=4.19$; $SD=1.07$).

Control variables

We controlled for the effect of three different attributes of political discussion: *frequency of offline discussion*, *frequency of online discussion*, and *discussion network size*. Our regression models also controlled for *internal and external political efficacy*, *political interest*, *political trust*, *political knowledge* (3 items additive scale based on multiple-choice questions), and *strength of ideological identification* (3 items coded from '0' = *no ideological identification* to '10' = *strong ideological identification*). Finally, demographic variables were measured with single items such as age ($M=47.00$; $SD=16.21$), gender (55.7% female), race (84.8% whites), income self-perception ('1' = *people who are the least well off in society* to '10' = *people who are the most well off*; $M=5.87$; $SD=1.83$), and education ('1' = *elementary school* to '6' = *graduate school or higher*; $Mdn=4$, *some college*).

Results

The first hypotheses stated a positive effect of WhatsApp discussion on conventional participation (H1) and activism (H2). The first and third

autoregressive models² in Table 1 (pooled sample) show a positive influence of WhatsApp use on conventional participation (H1; $\beta = .056, p < .01$) and activism (H2; $\beta = .253, p < .001$). Further analyses comparing the magnitude of these two beta coefficients show that the effect of WhatsApp discussion is more intense on activism than on conventional participation ($p < .001$).³ As shown in the third regression model in Table 1, WhatsApp for discussion was – apart from the autoregressive term – the main predictor of activism, and accounted for 5.1% of its variance.

Table 1. Autoregressive models for conventional participation and activism (pooled sample).

	Conventional (W ²)		Activism (W ²)	
	w/o interaction	With interaction	w/o interaction	With interaction
<i>Block 1: Demographics W¹</i>				
Age / Generation ^a	.058**	.105**	-.052*	.107***
Gender (1 = female)	-.003	-.003	.017	.022
Race (1 = white)	.038	.047*	.019	.011
Income	.005	.001	.007	.005
Education	.076***	.070***	.011	.013
ΔR ²	12.2%	10.4%	3.5%	3.5%
<i>Block 2: Sociopolitical Antecedents W¹</i>				
Strength of Ideology	.009	.010	.020	.017
Political Knowledge	.050*	.056*	.078**	.078**
Political Interest	.031	.035	-.037	-.032
Internal Efficacy	-.034	-.029	.009	.016
External Efficacy	.059**	.051*	.072**	.072**
Discussion Network Size	.037	.037	.084**	.087**
Offline Discussion Frequency	-.012	-.017	-.027	-.033
Online Discussion Frequency	-.013	-.020	.045	.047
Political Trust	.016	.019	-.042	-.047*
ΔR ²	14.2%	14.6%	19.2%	19.2%
<i>Block 3 (Autoregressive) W¹</i>				
Conventional Participation	.664***	.677***	---	---
Activism	---	---	.498***	.499***
ΔR ²	30.0%	31.9%	20.5%	20.5%
<i>Block 4: IVs of Interest W¹</i>				
News Media Use	.022	.022	-.019	-.020
SM News	.010	.006	-.011	-.011
ΔR ²	0.1%	0.1%	0.1%	0.1%

Block 5: Mediation and Interaction W¹

WhatsApp Discussion	.056**	.109***	.253***	.372***
WhatsApp Discussion * Age ^a	---	-.110**	---	-.231***
ΔR^2	0.3%	0.6%	5.1%	0.6%
Total R ²	56.8%	57.6%	48.3%	57.6%

Notes. ^a Age was coded as an interval variable in the models without interaction, and as a dummy variable (1 = Boomers & older) in the models with interaction. Cell entries are beta coefficients. To maximize statistical power, missing values on control variables (except for gender and race) have been replaced with the mean. Sample size: 1,157. * $p < .05$; ** $p < .10$; *** $p < .001$ (two-tailed). W¹ = Wave 1, W² = Wave 2.

This positive influence of WhatsApp discussion on both forms of participation was confirmed through Structural Equation Modeling (SEM) analysis (see [Figure 1](#)). Our model assumes direct effects of WhatsApp use on conventional and activist participation, and also indirect influences of news media use and social media news on both forms of participation via WhatsApp discussion.⁴ This model provided a very good fit to the data: $\chi^2 = 3.27$; $df = 4$; $p = .51$; $RMSEA < 0.001$, $CFI = 1.000$, $TLI = 1.005$, $SRMR = .01$. The SEM regression parameters corroborated that WhatsApp discussion predicts formal participation ($\gamma = .086$, $p < .01$) and, more strongly, activism ($\gamma = .308$, $p < .001$).

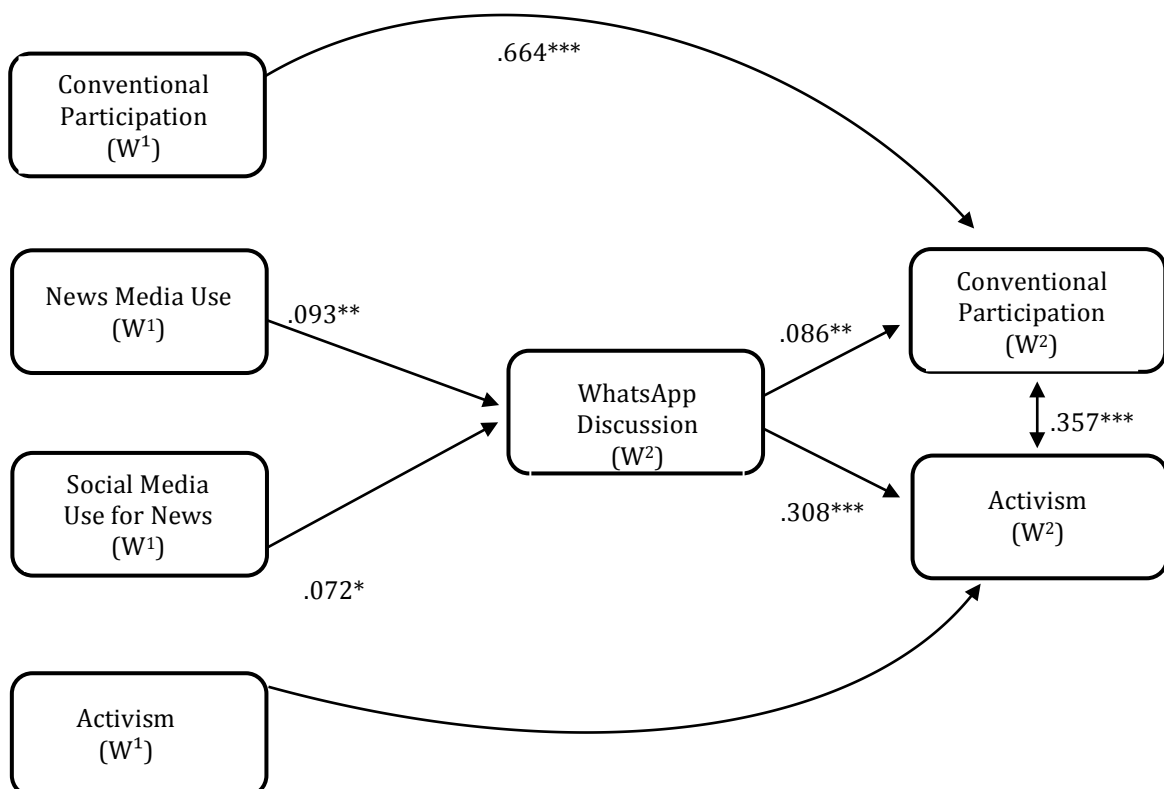


Figure 1. Autoregressive structural equation model of news media and social media use on WhatsApp use for discussion, conventional participation, and activism (pooled sample).

Note: N = 1,265. Path entries are standardized SEM coefficients. The model controls for the same set of variables as in Table 1 (blocks 1 and 2). The model includes indirect effects on participation (W^2) (see table 2). Model bootstrapped 1,000 iterations. Goodness of fit: $\chi^2 = 3.27$; $df = 4$; $p = .51$; RMSEA < 0.001, CFI = 1.000, TLI = 1.005, SRMR = .01. Explained variance of criterion variables: WhatsApp Use for Discussion (W^2), $R^2 = .018$; Conventional Participation (W^2), $R^2 = .007$; Activism (W^2), $R^2 = .095$.

This picture becomes more nuanced when one examines the above-mentioned effects at the disaggregated, country level. Thus, the relationships between WhatsApp discussion and conventional participation (H1) seem to be country-dependent: WhatsApp discussion positively influences conventional participation in Spain ($\beta = .110$, $p < .05$), but the association does not remain significant in the United States ($\beta = .040$, *n. s.*), and only approaches acceptable levels of significance in New Zealand ($\beta = .065$, $p < .10$). These findings provide only partial support for H1. By contrast, the positive effect of WhatsApp discussion on activism (H2) is more robust and holds in all three subsamples when we separately examine each country (Spain, $\beta = .296$, $p < .001$; United States, $\beta = .182$, $p < .001$; New Zealand, $\beta = .265$, $p < .001$). Differences between standardized coefficients of activism and formal participation remain significant in all subsamples at the .01 level or better (see note 3). These findings provide strong support for H2 and for the external validity of the effect.

Digging into more detail on these associations, H3 and H4 proposed ‘generational effects’ that may come into play in the relationships between WhatsApp discussion and different forms of participation: conventional (H3) and activism (H4). Following previous approaches (Shah, Kwak, & Holbert, 2001), we chose 1964 as the cut-off year for the older and younger groups, and dummy-coded the generation variable: 0 = Millennials and Gen Xers; 1 = Boomers and older. The two interaction models in Table 1 confirm H3 and H4 and show that ‘generation’ moderates both the relationship between WhatsApp discussion and conventional participation (H3, $\beta = -.110$, $p < .01$), and the association between WhatsApp discussion and activism (H4, $\beta = -.231$, $p < .001$). As visible in the slopes of the regression lines in [Figures 2](#) and [3](#) (plotted with the aid of the PROCESS macro, see Hayes, 2013, Model 1), the young group experiences a ‘generational accentuation’ of the effects of

WhatsApp discussion on both types of participation. On the one hand, the effect of WhatsApp on conventional participation is strong and positive for the young group (point estimate = .105 [.025]; 95% C. I. = 0.056 to 0.154), but non-significant for the old group (Figure 2 and Table 3). On the other hand, the direct effect of WhatsApp use on activism is positive for both generational groups, although, once again, the association is stronger in the younger cohort (point estimate = .295 [.023]; 95% C. I. = 0.250 to 0.339) than in the older (point estimate = .090 [.023]; 95% C. I. = 0.044 to 0.135) (Figure 3 and Table 3).

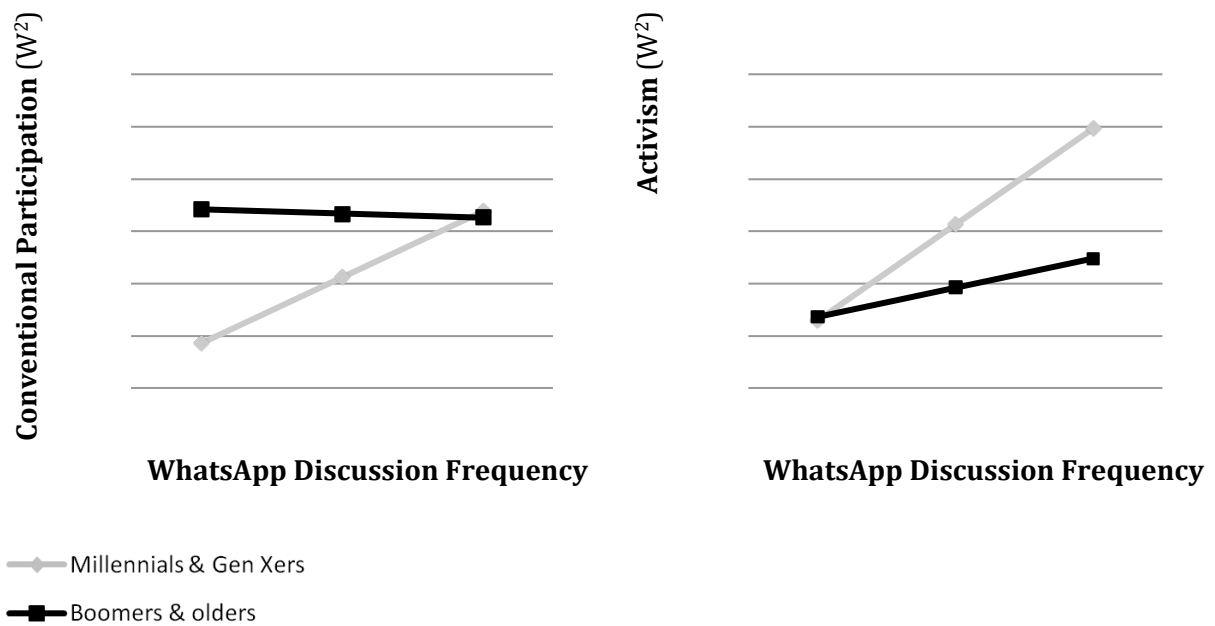


Figure 2 (left). Interaction between WhatsApp discussion and generation on conventional participation. Figure 3 (right). Interaction between WhatsApp discussion and generation on activism. Interactions estimated from the second and fourth regression models in Table 1. These conditional effects were plotted with the aid of the PROCESS macro (Hayes, 2013; Model 1). See also Table 3 for the estimates of the effects for each generational group.

Hypotheses H5 to H8 predicted indirect effects between different media uses and political participation via WhatsApp discussion. Because these hypotheses assume a particular causal direction (i.e., that different media uses affect subsequent levels of participation), exogenous variables (media use and social media news use) come from W^1 , while endogenous variables (WhatsApp discussion, conventional participation, and activism) come from W^2 . Based on the SEM model in Figure 1, Table 2 summarizes the findings concerning these indirect effects in the pooled sample. On the one hand, news media use indirectly stimulates conventional participation via WhatsApp discussion (H5, $\gamma = .008, p < .05$); while the

indirect effect of social media use for news on conventional participation is (barely) non-significant (H6, $\gamma = .006$, $p < .10$). On the other hand, both news media use and social media news use boost activism indirectly, via WhatsApp discussion (H7, $\gamma = .029$, $p < .01$; H8, $\gamma = .022$, $p < .05$).

Table 2. Indirect effects of news use (W¹) and social media news (W¹) on participation (W²).

Indirect Effects	Point Estimate [Standard Error]	95% C. I.
News Use (W ¹) → WhatsApp (W ²) → Conventional Participation (W ²)	.008 [.004]	.002 to .014
Social Media News (W ¹) → WhatsApp (W ²) → Conventional Participation (W ²)	.006 [.003]	.000 to .012 <i>n. s.</i>
News Use (W ¹) → WhatsApp (W ²) → Activism (W ²)	.029 [.009]	.013 to .044
Social Media News (W ¹) → WhatsApp (W ²) → Activism (W ²)	.022 [.009]	.007 to .037

Note: Indirect effects based on the SEM model shown in Figure 1 (calculated with Mplus, version 7.0). Standardized coefficients are reported. W¹ = Wave 1, W² = Wave 2.

Similar as for H1 and H2, we further examined these indirect influences (H5-H8) by replicating the above regression-based analyses on each of our country subsamples (results not included in Table 2). We found that the indirect effects of media use on participation (H5, H7, and H8) are not robust across countries. All the mediation routes fell outside the range of significance in the three subsamples, with just one exception: the indirect effect of social media news on activism via WhatsApp discussion in Spain (H8, $\gamma = .048$, $p < .05$). The smaller size of these country subsamples probably influenced the ability to detect significant effects, because statistical significance of the SEM γ regression coefficients is sample-size dependent. These results provide only partial support for H5, H7, and H8, but no support at all for H6.

Finally, H9 addressed potential generational differences in the indirect effects hypothesized in H5-H8. In order to test this final hypothesis, we developed a moderated mediation model (Hayes, [2013](#); Model 58) that estimates the significance of the difference between the indirect effects at the two values of the moderator (0 = Millennials and Gen Xers; 1 = Boomers and older). This model assumes that the moderator (W) operates: (a) on the relationship between the independent variable (X) and the mediator (M); and (b) on the relationship between the mediator (M) and the dependent variable (Y). In our models, X = 'news media use'

or ‘social media news;’ W = ‘generation;’ M = ‘WhatsApp discussion;’ and Y = ‘conventional participation’ or ‘activism.’⁵

Since our previous results did not support H6, we skipped the analyses of generational differences in the indirect pathway ‘social media news’ → ‘WhatsApp discussion’ → ‘conventional participation.’ Our analyses show that the indirect effects related to H5 and H7 are conditional on the generation. Thus, ‘generation’ moderates the following indirect effects: (a) ‘news media use’ → ‘WhatsApp discussion’ → ‘conventional participation’ (H5; index of moderated mediation = $-.026$ [.012]; 95% C. I. = $-.053$ to $-.006$);⁶ and (b) ‘news media use’ → ‘WhatsApp discussion’ → ‘activism’ (H7; index of moderated mediation = $-.050$ [.021], 95% C. I. = $-.093$ to $-.010$).⁷ Conversely, ‘generation’ does not moderate the indirect effect of ‘social media news’ on ‘activism’ through ‘WhatsApp discussion’ (H8; index of moderated mediation = $-.022$ [.013], 95% C. I. = $-.049$ to $.001$). As for H3 and H4, the indirect effect for Millennials and Gen Xers is, in both pathways, more accentuated than for Boomers and older (see Table 3 for further details).

Table 3. Conditional direct and indirect effects tests (interaction effects of ‘generation’).

Direct or Indirect Effects Pathways	Age group	Point Estimate [Standard Error]	95% C. I.
WhatsApp (W ²) → Conventional Participation (W ²)	Young	.105 [.025]	.056 to .154
WhatsApp (W ²) → Conventional Participation (W ²)	Old	-.006 [.027]	-.059 to .046
WhatsApp (W ²) → Activism (W ²)	Young	.295 [.023]	.250 to .339
WhatsApp (W ²) → Activism (W ²)	Old	.090 [.023]	.044 to .135
News Use (W ¹) → WhatsApp (W ²) → Conventional participation (W ²)	Young	.025 [.011]	.006 to .050
News Use (W ¹) → WhatsApp (W ²) → Conventional participation (W ²)	Old	-.002 [.004]	-.010 to .006.
News Use (W ¹) → WhatsApp (W ²) → Activism (W ²)	Young	.061 [.021]	.023 to .103
News Use (W ¹) → WhatsApp (W ²) → Activism (W ²)	Old	.011 [.006]	.002 to .024

Note: Path estimates are unstandardized coefficients based on the outputs of the PROCESS macro (Hayes, 2013; Model 1 and Model 58). Indirect effects based on bootstrapping to 5,000 samples with biased corrected confidence intervals. The models control for the same set of variables as in Table 1 (except age). W¹ = Wave 1, W² = Wave 2.

Discussion

This study utilized an indirect effects paradigm to examine WhatsApp discussion as a mechanism – similar to face-to-face or other internet-based modes of discussion – channeling the effects of news and social media uses on conventional and activist forms of participation. Overall, our results provide grounds for optimism regarding the role of mobile communications in promoting a participatory citizenship in two ways. First, WhatsApp political discussion seems – at least in some contexts and for some age groups – to foster conventional forms of participation such as voting, contacting elected officials, or participating in a question and answer session with politicians.

Second, our analyses suggest a distinctly stronger, cross-country consistent effect of WhatsApp discussion on activism. These politically-motivated forms of protest are not necessarily a sign of democratic erosion within the paradigm of ‘postindustrial societies,’ characterized by overall increased levels of distrust and skepticism, greater need for self-expression, and higher propensity to challenge authority (Inglehart, [1997](#); Norris, [2002](#)). In this regard, activism should be seen as an opportunity to strengthen democratic control of the political elites and reactivate citizens’ engagement in democratic decision-making processes.

There may be a number of reasons for the larger influence of WhatsApp discussion on activism – compared to that on formal participation. For example, users may perceive WhatsApp offers more control over who can see their messages than other more open online environments. As a result, they may have less reservation to discuss political issues or engage in persuasive or mobilizing talk. In addition, participation-related information may follow different distribution channels, depending on its content and tone. Thus, information on formal participation and associated mobilization efforts (e.g., requirements for voting, names and manifestos of the candidates, locations and dates of rallies, etc.) are frequently disseminated by a multitude of media outlets – from mainstream to alternative – and through a range of technologies – from newspapers to the internet – (see Couldry & Curran, [2003](#)). In this context, the effect of IM discussion on conventional participation may be diluted, as WhatsApp would just be one among many channels. Differently, activism-related information and persuasion attempts (e.g., locations and times of demonstrations, reasons for protesting, links to online petitions, etc.) are commonly channeled through more private channels and non-mainstream platforms (Weeks et al., [2017](#)). WhatsApp may therefore constitute a major, privileged platform for activism-related

information, which would explain its stronger influence on these forms of participation.

Also, of interest are the age-differential effects of WhatsApp discussion on political engagement. For both conventional and activist participation, there seems to be a pattern of attenuation with age. In simpler words, the positive effect of WhatsApp discussion on participation seems to be stronger for younger than for older respondents. Similarly, the indirect pathways between news uses and participation through WhatsApp discussion are remarkably more evident for Millennials and Gen Xers than for Boomers and older. These findings can be interpreted as a consequence of the 'inertia' effect: the fact that older adults experienced their early political socialization (adolescence and youth) in a world without internet could make them less reactive to the influence of new technologies on their political behaviors (Bachmann et al., [2010](#); Grasso, [2014](#)). A complementary explanation may be a 'generational accentuation' of the effects among younger participants due to their higher levels of technological expertise and their larger discussion networks on IM apps (Chan, [2018](#); Xenos et al., [2014](#)).

Finally, our indirect models included news media use and social media news at the beginning of the chain of causation. Our results provide only partial support for an overarching, citizen communication mediation model, in which media stimuli trigger WhatsApp discussion and, indirectly, conventional participation and activism. The null finding for the indirect route social media news → WhatsApp discussion → conventional participation deserves further attention in future research. One reason for this lack of effect may lie in the availability of mobilizing information about conventional forms of participation in traditional news media, which makes it redundant in social media. This would mitigate WhatsApp's unique additive effect over more conventional ways of engaging in political activities. Along similar lines, there are several considerations that may explain that the indirect effects of news and social media uses through WhatsApp did not hold consistently across countries. On the one hand, country-specific analyses reduce the sample size, and may therefore underpower our estimates. Also, all our autoregressive models controlled for the effects of a large set of potential confounding variables. This cautious approach reduces the amount of variance available to be explained. We have however preferred this conservative interpretation of our data, risking type-II error, instead of type-I. On the other hand, there could be country-individual interaction effects that could explain cross-country differences in the fully mediated models that we analyzed in this article. Using larger country samples, future research should assess both macro- and micro-level factors (i.e., multi-level approaches) that may affect the direct and indirect relationships found in this study.

The present study was designed to introduce WhatsApp as a mobilizing force for conventional and activist participation within a communication mediation paradigm. Future research may add more nuances and advance the general model we present in this paper. For example, it would be of great interest to compare the *relative* mobilizing power of different settings for political discussion, both online and offline, and both synchronous and asynchronous: discussion face to face or over the phone, discussion via WhatsApp or other IM apps, discussion in online forums or message boards, etc.

Forthcoming research should also examine in greater depth the network discussion attributes and content specific characteristics of news content and discussion patterns that emerge around WhatsApp, as well as their impact on democratic functioning beyond political participation. For instance, recent accounts highlight the potential for social media to polarize political discussions. WhatsApp interactions may not be immune to this trend. Research should clarify whether, and if so, under what circumstances, WhatsApp and IM apps create ideologically homogeneous communities that only share and discuss self-selected information and become more polarized and distrustful of diverse political views in time (see Flaxman, Goel, & Rao, [2016](#); Stroud, [2011](#)). This suggestion for future research is in line with Shah et al. ([2017](#), p. 496) call to ‘rethink communication mediation’ in order to look beyond participation and integrate other social and politically-relevant outcomes in our theoretical and empirical models – specifically social trust, institutional confidence, perceived legitimacy of the system, and exposure to cross-cutting talk.

Notes

1. Figures on WhatsApp use among adults for the three countries analyzed in this study are as follows: 32% in Spain (Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018), 22% in the United States (Pew, 2018), and 22% in New Zealand (Kemp, 2018).
2. OLS regression analyses were performed in SPSS, version 21.0
3. The formulae used to calculate the difference between standardized regression coefficients (betas) is based on the actual beta, their *t*-value, and their standard error. When *z* scores are obtained, differences that are $z > 1.96$, $z > 2.56$, and $z > 3.3$ represent a statistically significant difference at $p < .05$, $p < .01$, and $p < .001$, respectively.
4. Path analysis with structural equation modeling (SEM) test were performed with the assistance of Mplus, version 7.0.
5. In response to suggestions from anonymous reviewers, we tested two theoretically plausible alternative SEMs and compared their performance characteristics. The first of these alternative models was analogous to that presented in Fig. 1, but included offline political discussion as a second mediator (parallel to WhatsApp discussion) of the relationships between news uses and participation behaviors. Unfortunately, this

second formulation provided a much worse fit to the data ($\chi^2 = 31.04$; $df = 5$; $p < .001$; RMSEA = 0.06; CFI = 0.94; TLI = 0.83; SRMR = .031; AIC = 20942.93; BIC = 21055.81) than did our first model (in Fig. 1). Finally, we tested a third model in which offline and online discussion (exogenous variables) stimulate further political discussion via WhatsApp (mediator) which, in turn, boosts conventional and activist forms of participation (outcome variables). This last structure provided a much better fit to the data, and offers directions for future research on discussion attributes as antecedents of WhatsApp discussion (see discussion): $\chi^2 = 1.10$; $df = 4$; $p = .89$; RMSEA < 0.05; CFI = 1.00; TLI = 1.01; SRMR = .006; AIC = 17093.22; BIC = 17175.32.

6. Tests of highest order unconditional interactions for this model: $[X*W, R^2 = .003, F(1, 1149) = 4.51, p < .05]$; $[M*W, R^2 = .004, F(1, 1148) = 10.49, p < .001]$.

7. Tests of highest order unconditional interactions for this model: $[X*W, R^2 = .001, F(1, 1174) = 1.86, n. s.]$; $[M*W, R^2 = .017, F(1, 1173) = 39.46, p < .001]$. According to Hayes' (2015) description of the index of moderated mediation "evidence of statistically significant interaction between any variable in the model and a putative moderator is not a requirement of establishing moderation of a mechanism" (p. 3).

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