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Social Media, Political Expression, and Political Participation: Panel Analysis of Lagged and Concurrent Relationships

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This article relies on U.S. 2-wave panel data to examine the role of social media as a sphere for political expression and its effects on political participation. Informational uses of social media are expected to explain political expression on social media and to promote political participation. This study clarifies the effect of using social media for social interaction in fostering political expression and participation processes. Results indicate that social media news use has direct effects on offline political participation and indirect effects on offline and online political participation mediated via political expression. Furthermore, social media use for social interaction does not have direct influence in people's political engagement, but rather an indirect effect by means of citizens expressing themselves politically.

Using the Internet and social media to seek information, including news, has been linked to greater political participation (Kwak, Lee, Park, & Moon, 2010, Shah, Cho, Eveland, & Kwak, 2005). But social media are used for much more than seeking information. In what other ways might social media contribute to new models of citizenship now emerging in younger generations (Bennett, Wells, & Freelon, 2011)? Research in this area has shown the importance of political expression in leading people to participate politically (Elin, 2003; Pingree, 2007), and we confirm these pathways using cross-lagged and concurrent tests from a two-wave panel survey of U.S. adults. Another key contribution of this study is to propose general social media use as a new antecedent of political expression. People keep in touch with friends and family, express themselves, and discuss various aspects of their lives on social media. In doing so, people tend to present a different aspect of themselves to each social group they encounter (Abercrombie & Longhurst, 1998), and the more groups they interact with, the more aspects of themselves they may develop (Papacharissi, 2012).

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Our findings suggest that even relational uses of social media may lead people to express themselves politically, thereby putting them on a pathway to participation. The results contribute to an understanding of expressive citizenship models now emerging in younger generations (Gil de Zúñiga, Bachmann, Hsu, & Brundidge, 2013). This understanding may aid engagement efforts and expand the range of activities that political communication researchers study.

Before adding this new leg to the model of influences leading to political participation, we first discuss online and offline political participation and the antecedents identified in previous literature (namely, social media use for news and online political expression). We then explain our rationale for suggesting that relational social media use may also set users on a pathway to political participation through online political expression.

Informational use of social media and political participation

Political participation is usually conceptualized along four dimensions: voting, campaign activity, contacting officials, and collective activities (Verba & Nie, 1972). But these traditional measures do not directly assess the influence of informational media use and mental elaboration about political issues on political participation. Jung, Kim, and Gil de Zúñiga (2011) found that the relationship is indirect, passing through knowledge and efficacy. Informational uses of many media types have been shown to lead directly and indirectly to political participation, including informational uses of newspapers (McLeod et al., 1999), television (Norris, 1996), the Internet (Shah, 2005), and mobile communication technologies (Campbell & Kwak, 2010). We expect that informational uses of other media, including social media in this case, will lead to political participation.

Political participation has taken new online forms with the rise of the Internet, particularly with the advent of social media (Gil de Zúñiga, Copeland, & Bimber, 2014). Although the production cycle for newspapers and television involves delays and is comparatively costly, social media are constantly updated and require significantly less time, money, and physical effort (Best & Krueger, 2005). People use social media not only to access online versions of offline content, but also to generate original content themselves, thus creating new forms of political participation.

People can pursue their political goals online by forwarding e-mails, sharing opinions about politics and current events, expressing dissatisfaction with governments by commenting on government officials' social media pages, and participating in online collective actions against certain policies (Di Gennaro & Dutton, 2006). All this can be done with far fewer resources than have generally been considered necessary for political participation (Verba & Nie, 1972). The ease of using and creating social media have spawned an explosion of grassroots participation, allowing individuals to express their opinions more openly and freely as well as to build a more active and significant relationship with official institutions (Rojas H & Gil de Zúñiga H, 2010, Gil de Zúñiga H. 2012). The Internet and social media in particular thus provide new forms of media consumption as well as new forms of political participation. We therefore

expect that using social media for news (Time 1) will be positively associated to both offline (H1a) and online (H1b) political participation (Time 2).

Informational use of social media and political expression

Observations of traditional media consumption found that hard news through radio, newspapers, magazine, and television increased political knowledge. As political knowledge increases, it encourages media reflection and elaboration among the audience, thus cultivating better informed citizens (Carpini, Cook, & Jacob, 2004), and fostering a sense of political efficacy and political participation (Eveland, Shah, & Kwak, 2003). People are more likely to be exposed to dissimilar political views when they consume news (Mutz, 2002). Using the Internet as a source for political news has dramatically increased the diversity and openness of information (Gimmler, 2001). Especially with social media platforms' flood of up-to-the-minute information, citizens are more likely to be exposed to political news and therefore given more opportunities for political expression (Kushin & Yamamoto, 2010). In particular, the interactive features of social media may amplify the impact of expression because they readily allow one's expression to be shared with many people simultaneously. The expressive potential of the average citizen has been transformed; individuals are now in a position to "post, at minimal cost, messages and images that can be viewed instantly by global audiences" (Lupia & Sin, 2003, p. 316). Although a greater use of social media may not be linked instantly to more intensive political expression, it does result in increased informal communication among individuals (Shah, Cho, Eveland, & Kwak, 2005). Social media as a user-friendly platform cultivates its users' political consciousness in their daily practice; therefore, it is believed to display political expression in a more accessible format and spirited condition (Geoff et al., 2012). Based on the above literature, this study proposes (H2) that social media use for news (Time 1) will be positively related to people's use of social media for political expression (Time 2).

Political expression and participation

"Political expression is conceptually distinct from political participation in the way that political talk is distinct from political action" (Gil de Zúñiga, Veenstra, Vraga, & Shah, 2010). Several studies have shown a consistent connection between political talk and political action (Huckfeldt & Sprague, 1995). Furthermore, some research suggests that having more opportunities for expression, including opportunities for expression online, may help mobilize people to take real-world actions (Elin, 2003).

   We expect that political expression becomes an antecedent for citizens to further engage in political participatory practices, up to and including various forms of participation offline (i.e., attended a public hearing, town hall meeting, or city council meeting, and called or sent a letter to an elected public official) and online (i.e., made a campaign contribution, and signed up to volunteer for a political campaign). In the

same way that talk precedes action, expression may work to enable political action by causing the expresser to alter his self-perception (Bem, 1967) from observer to participant.

In fact, Pingree posits that "Expression, not reception, may be the first step toward better citizenship," considering that expression can "motivate exposure, attention and elaboration of media messages" (Pingree, 2007). Expression may have an effect through several pathways, and at least one overall model has been proposed (Pingree, 2007). Effects may even occur before any message is expressed so long as one expects some future expression. Also, composing a message in preparation for expression reorganizes items in the mind as they are transformed into language (Greene, 1984). Composition may even cause reflection about one's own views, leading to new understanding (Bem, 1967). Expression may also cause effects once the message is released, strengthening a commitment to the views expressed (Tetlock, Skitka, & Boettger, 1989) or, perhaps importantly in a democracy, creating a feeling that the speaker's voice has been heard (Pingree, 2007). All three mechanisms (expectation of expression, composition, and message release) are potentially influential in the realm of social media, where there is always an audience (and therefore an expectation of expression) for whom messages can be composed and to whom they may easily be released. Indeed, social media may facilitate the process of expression by providing a convenient platform for it. This political talk, then, may work to change the person expressing it from observer to participant, leading to political action. In fact, there are some indications that this happens when people use media technologies in an effort to mobilize others. Rojas and Puig-i-Abril (2009) found that using cell phones and social media to mobilize others in support of a position led people to offline political participation. Their findings advanced the communication mediation model by suggesting that there is a sequence of behaviors that may lead to participation, including expression and mobilization. Taken together, this emphasis on expression as part of a political engagement model supports the alternate conception of citizenship advanced by Bennett et al. (2011) and Coleman (2008). They envision a spectrum of citizenship activities, with older generations more commonly adopting a managed, dutiful engagement with authorities and younger generations preferring autonomy and activism centered on expression. Both may be valid pathways to political participation, they argue. This study seeks to empirically shed light over this proposition. Political expression (Time 2) will be positively related to offline political participation (H3a) and online political participation (H3b; Time 2).

The pathway we propose here—with social media use for news leading to expression, which in turn leads to participation—is supported by another study of online political discussion. Price, Nir, and Cappella (2006) found that reading postings by other discussion group members predicted expression by the individual, and that individual expression contributed significantly to changes in opinion after the discussion. Taken together, the literature reviewed here suggests that expression mediates the effect of content consumed; that is, the pathway to political participation may

begin with content consumption, but it goes through expression as a key mediating construct.

A new connection to political expression

The pathway described above is based on people's reliance on social media as sources of news. But people use social media for much more than gathering news and information. They keep in touch with family and friends and interact socially in numerous other ways. Does this social interaction lead to any political expression, thereby connecting it to participation?

Some research suggests that it may. Papacharissi's (2011) work in understanding people's conception of themselves in a networked world is useful in making a new connection between general social media use and expressing oneself politically. A key attribute of social media, Papacharissi suggests, is that they allow multiple connections to varied and distinct social realms. Distinct social realms each represent an audience for the demonstration of self (Abercrombie & Longhurst, 1998), including aspects of the self that exist only for or are presented only to a specific audience (Papacharissi, 2012). Drawing on literature studying performance as a means of projecting and understanding one's self, Papacharissi (2012) suggests that networked technologies such as social media allow people to express multiple aspects of their personality. Because people create a face for each social group or audience they interact with (Goffman, 1959), and because social media allow them to maintain connections to several groups at once (Pagani, 2011), these media bring out more faces and enable people to express more parts of themselves. Gergen (1991) even saw this potential in earlier information communication technologies, calling them "technologies of social saturation."

Additional research has also confirmed the value of this perspective (Ostman, 2012), suggesting that repeated performance online helps users develop the confidence to express themselves more often and in more ways. This framework is key in Davis's (2011) study of "multiplicity" as young people confront various audiences in a networked world, especially as desires to express themselves differently to different audiences conflict with the desire to define a consistent self. In fact, social media users now confront so many different audiences that they must develop strategies to manage them (Papacharissi, 2012). Other studies have suggested that the desire for self-expression is a strong motivator for creating content online (Krishnamurthy & Wenyu, 2008), with expressive people being more likely to create content online (Pagani, 2011).

Still, for most people, politics is incidental to normal life and their "social life as communicators" is most important to them (Eveland, Morey, & Hutchens, 2011). Despite the potential that exists for people to develop a political self as they confront various groups on social media, there is no guarantee that anyone will interface with a politically oriented group or happen to develop a political self, simply by participating in social media interactions. Even so, because at least that potential exists, it's important to study not just politically motivated discussions, but any

interactions where there is at least the opportunity for politics to enter in. One study of user-generated content online (including any type of content, not only political postings) found it to be significantly correlated with online and offline political participation (Ostman, 2012).

It may not be likely that social media use for social interaction purposes is directly related to political participation. But we question whether it is related to political expression given that social media encourage various forms of expression, including potentially political ones. What is the effect (RQ1) of social media use for social interaction purposes (Time 1) on political expression (Time 2)?

Methods

Sample

The data for this study were drawn from a two-wave U.S. national panel study conducted by the Community, Journalism & Communication Research unit in the School of Journalism at the University of Texas–Austin. Both waves of the survey were administered online using Qualtrics, a web survey software to which the authors have a university-wide subscription account. Respondents for the initial survey were selected from among those who registered to participate in an online panel administered by a media research lab at a Research I university. To overcome some of the limitations of using convenience samples, we specified a gender and age quota so that the sample would match the distribution of these two demographic variables as reported by the U.S. Census. The first wave was conducted between late December 2009 and early January 2009, and comprised 1,159 respondents over the age of 18. The response rate (AAPOR RR3)[1] for this survey was 23%, yielding comparable response rates to high-quality data collected via Internet panels (Iyengar & Hann, 2009) and similar to organizations that employ random digit dialing (American Association of Public Opinion Research, 2011). The second wave of data collection took place in July 2010. In this case, 312 original interviewees completed the questionnaire, for a retention rate of 27% (see Gil de Zúñiga & Hinsley, 2013; also for a detailed discussion on the importance of retention rate for web panels see Watson & Wooden, 2006). Compared to U.S. Census data, the second wave sample was older, had more females, and was slightly better educated. There was no evidence, however, of skewness with regard to income.[2]

Measures

The analyses in this study included five groups of variables: *demographics*, *political antecedents*, *media use*, and *discussion*. Then the study registered each subject's *social media uses* distinguishing between social media use for news, and a use that relates much more to social interactions. And finally, the study also includes three criterion variables that address people's political expression and participatory behaviors (online and off).[3]

Endogenous and exogenous variables

Social media use for news. Drawing from data based on the first wave of the panel data used in the model, and adapted from Gil de Zúñiga, Jung, and Valenzuela's (2012) work, four items composed this index measuring to what extent social network sites helped individuals to stay informed and get news "about current events and public affairs," "about their local community," "about current events from mainstream media," and "about current events through friends and family" (4 items averaged scale, Cronbach's α = .90, M = 3.34, SD = 2.48).[4]

Social media use for social interaction. Also from Wave 1, three items composed this index asking to what extent subjects relied on social network sites for social interaction purposes. We specifically asked, "Thinking about the social networking site you use most often, how would you classify the following statements, where 1 means never and 10 means all the time?" The statements were "I feel out of touch when I haven't logged onto it for a day," "I rely on it to stay in touch with friends and family," and "I do not rely on it to meet people who share my interests (recoded)" (3 items averaged scale, Cronbach's α = .79, M = 4.41, SD = 2.54).

Political expression in social media. Being part of the model's criterion variables, this composite variable draws on data from the second wave, and aimed to register people's use of social network sites to express themselves politically in a variety of ways, including "posting personal experiences related to politics or campaigning"; "friending a political advocate or politician"; "posting or sharing thoughts about politics"; "posting or sharing photos, videos, or audio files about politics"; and "forwarding someone else's political commentary to other people" (5 items averaged scale, Cronbach's α = .93, M = 8.21, SD = 6.45).

Political participation offline. Also drawing from the second wave of the panel data and using an 11-point scale with endpoints labeled "never" and "all the time," respondents were asked how often during the past 12 months they had engaged or not in any of the following activities: "attended a public hearing, town hall meeting, or city council meeting"; "called or sent a letter to an elected public official"; "spoken to a public official in person"; "attended a political rally"; "participated in any demonstrations, protests, or marches"; "participated in groups that took any local action for social or political reform"; and "been involved in public interest groups, political action groups, political clubs, or party committees." Responses to each statement were added into a single index (7 items averaged scale, Cronbach's α = .87, M = 3.19, SD = 1.94).

Political participation online. Similar to political participation offline, but centered on the online domain which entailed different behaviors, this variable taps the level of political engagement that subjects report on online activities. The questionnaire asked respondents how often in the past 12 months they had "written to a politician," "made a campaign contribution," "subscribed to a political listserv," "signed up to volunteer for a political campaign," and "written to a news organization." All responses were then added into a single index (5 items averaged scale, Cronbach's α = .82, M = 2.51, SD = 1.94).[5]

Residualized variables

Network size. The size of citizens' political discussion networks affects in a meaningful way the political engagement process online and offline (see for instance Mutz, 2002). Accordingly, the study controls for the effects of individual discussion network size to isolate potential confounding effects. Survey respondents were asked in open-ended fashion to provide an estimate of the number of people they "talked to face-to-face or over the phone about politics or public affairs," and "talked to via the Internet, including e-mail, chat rooms, and social networking sites about politics or public affairs" during the past month. As could be expected, the variable was highly skewed ($M = 6.21$, $Mdn = 3.00$, $SD = 43.19$, skewness $= 12.33$), so it was also transformed using the natural logarithm ($M = 0.61$, $Mdn = 0.54$, $SD = 0.48$, skewness $= 0.82$).[6]

Strength of party identification. Prior research has also identified that people's strength of partisanship exerts a positive effect on their participatory levels. Thus, our model included this measurement as a control (Lee, Shah, & McLeod, 2012). Respondents were asked to rate their party identification using an 11-point scale ranging from strong Republican (coded as 0; 7.1% of respondents) to strong Democrat (coded as 10; 15.1% of respondents), with the midpoint (coded as 5) being Independent (23.4% of respondents). This item was subsequently folded into a 6-point scale (i.e., scores 0 and 10 were recoded to 6, 1, and 9 to 5, 2, and 8 to 4, 3, and 7 to 3, 4, and 6 to 2, and 5 to 1), ranging from no partisanship to strong partisanship ($M = 3.3$, $SD = 1.5$).

Internal political efficacy. The study also controls for the effect of people's political efficacy on participatory behaviors as this construct has also been observed as a proxy to political participation (i.e., Pingree, Hill, & McLeod, 2012). Researchers suggest that some items used to measure internal efficacy, such as "people like me don't have any say about what the government does," may be problematic because they could be measuring both internal and external efficacy at the same time (see Morrell, 2003). Drawing from this approach, some scholars (e.g, Bennett, 1997) have been inclined to utilize a single-item measure, such as "people like me can influence the government." Accordingly, this study follows the second approach. Thus, political efficacy was also introduced as a control to present the most stringent model possible. Responses ranged from 1 (*not at all*; 11.9% of respondents) to 10 (*all the time*; 8.0% of respondents) with $M = 5.14$, $SD = 2.65$.

News media use. Respondents were asked to rate on a 7-point scale ranging from 1 (*every day*) to 7 (*never*) how often they used the following media to get information about current events, public issues, or politics: network TV news, cable TV news, local TV news, print newspapers, online newspapers, online news magazines, and citizen journalism websites. The items were reverse-coded, so that a higher number indicated more news use, and combined into an additive index (Cronbach's $\alpha = 0.70$, $M = 13.97$, $SD = 5.39$).

Demographics. A variety of additional variables were included in the multivariate analysis to control for potential confounds, as these are variables that the literature

has found to be related to political participation online and offline (Norris, 1996). The respondent's gender (67% females), age ($M = 49.32$, $SD = 12.25$), and race (67% whites) were straightforward in their measurement. Education was operationalized as highest level of formal education completed ($M = 4.49$, $Mdn = 2$-year college degree). For income, each respondent chose one of 15 categories of total annual household income ($M = 6.18$, $Mdn = \$50,000$ to $\$59,999$).

Statistical analysis

To test the hypotheses posed by this research, first a series of hierarchical regressions were conducted. Structural equation modeling (SEM) and cross-lagged correlations to further test causal inference were also employed.

Social media use for news and social interactions are highly correlated (Pearson's $r = .75$). When introduced altogether as independent variables in a general linear regression model, a variance inflation factor test indicates a mild multicollinearity problem (VIF (Variance Inflation Factor) = 2.59). Thus, some authors argue that a specific type of SEM may be a more appropriate technique to avoid type II errors due to multicollinearity (Kelava, Moosbrugger, Dimitruk, & Schermelleh-Engel, 2008). Other authors introduce the independent variables in distinct regression models to avoid multicollinearity issues granted that the total variance explained by the controlling blocks in these different models is similar, or also in order to introduce interaction term of independent variables (Eveland & Scheufele, 2000). We have followed the approach by both lines of scholarship. First, the hierarchical regressions used in this study introduced both variables separately. Additionally, we have employed SEM to test the theoretical structure.[7]

Results

With the first two hypotheses, this study seeks to replicate and expand recent findings presented by Gil de Zúñiga and colleagues (2012) that suggest the positive effect of social media use for news in predicting political participation offline (H1a) and online (H1b). Consistent with this work but relying on panel data, results indicate a positive association between informational uses of social media and participating offline ($\beta = .278$, $p < .001$) and online ($\beta = .134$, $p < .05$). The presented regression models accounted for a total variance of 26.4% for political participation offline and 25.3% for the online engagement model (see Table 2, Models 1). Among the variables controlled in the model, age ($\beta = .139$, $p < .01$), political efficacy ($\beta = .208$, $p < .001$), media use ($\beta = .159$, $p < .05$), and the size of individuals' discussion network ($\beta = .270$, $p < .001$) were all positive predictors of offline political participation; whereas, political efficacy ($\beta = .271$, $p < .001$) and discussion network size ($\beta = .270$, $p < .001$) were also statistically significant in explaining online political involvement. Further causal inference analysis based on cross-lagged correlation tests (Locascio, 1982) indicates that social media use for news (Time 1) predicts political participation offline (Time 2; cross-lagged $r = .206$) and online (Time 2; cross-lagged $r = .205$) more strongly

Table 1 Zero-Order Correlations Among All Independent and Dependent Variables in the Study

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	—													
2. Gender	−.13[a]	—												
3. Education	.07	−.12[a]	—											
4. Race	−.12[a]	−.08	.03	—										
5. Income	−.01	.23[c]	.44[c]	.01	—									
6. Political Efficacy	.10	.07	.06	−.06	−.05	—								
7. Strength Partisanship	.08	−.02	.02	−.12	.04	.10	—							
8. Discussion Net. Size	−.01	−.12[a]	.13[a]	.01	.22[c]	.06	.01	—						
9. Media Use	.18[b]	.01	.03	.04	−.07	.21[b]	.15[b]	−.16[b]	—					
10. S.M. News Use	.07	.04	−.09	.05	−.13[b]	.08	−.08	.16[b]	.25[c]	—				
11. S.M. Social Interaction	.05	.09	−.07	.01	−.14[c]	.06	−.11	.07	.19[c]	.77[c]	—			
12. S.M. Pol. Expression	−.15[b]	.12[a]	−.11	−.06	−.15[c]	.10	.02	.21[c]	.25[c]	.36[c]	.33[c]	—		
13. Pol. Participation Online	.12[a]	−.01	.08	−.05	.10	.28[c]	.01	.31[c]	.33[c]	.23[c]	.15[a]	.46[c]	—	
14. Pol. Participation Offline	.08	−.02	.08	−.05	.02	.30[c]	.11	.30[c]	.28[c]	.19[c]	.12[a]	.45[c]	.76[c]	—

Note: Cell entries are two-tailed zero-order correlation coefficients. ($N = 312$). *Gender* and *race* are dichotomous variables and Pearson's point-biserial correlations were used.
[a]$p < .05.$ [b]$p < .01.$ [c]$p < .001.$

than the relationship that goes from political participation online (Time 1) and offline (Time 1) to the consumption of social media for news (Time 2; cross-lagged $r = .031$, and cross-lagged $r = .020$, respectively).[8]

The second hypothesis seeks to establish the relationship between people's social media use for news and the extent to which this behavior would spur political expression via the same medium (H2). As shown in Table 3, individuals who engage in this type of social media use at some point in time (Wave 1) tend to express themselves politically at a later time (Wave 2; $\beta = .278$, $p < .001$), with the model explaining over 23% of the variable variance ($R^2 = 23.2\%$). It is also worth noting that among all the controls, age ($\beta = −.183$, $p < .01$) and income ($\beta = −.141$, $p < .05$) hold a negative and statistically significant relationship with expressing politically via social media which may elicit some bright picture for the future. That is, young people and less-privileged individuals tend to express their voice politically via social media (see Table 3).

The third set of hypotheses posed in this study addressed the relationship between political expression via social media and political participation offline (H3a) and online (H3b). As shown in Table 2 (Models 2), political expression via social media is the strongest predictor among all variables included in the political engagement models, explaining a fair size of variance for political participation offline ($\beta = .405$, $p < .001$; ΔR^2 for "political expression via social media" = 12.6%; model $R^2 = 40.2\%$) and online ($\beta = .435$, $p < .001$; ΔR^2 for "political expression via social media" = 14.1%; model $R^2 = 39.4\%$). Most importantly, the results also indicate that the effects of social media—informational and social interaction uses—on political participation may be mediated by individuals' political expression via social media.

Table 2 Regression Models of Offline and Online Political Participation

	Offline Political Participation Wave 2		Online Political Participation Wave 2	
	Model 1	Model 2	Model 1	Model 2
Step 1—Demographics				
Age	.139**	.211***	.096	.126*
Gender (female)	.023	.007	−.036	−.056
Education	.015	.047	.053	.086
Race (white)	−.037	.005	−.036	.007
Income	.071	.125*	.078	−.017
ΔR^2	4.8%	4.8%	1.7%	1.7%
Step 2—Political antecedents				
Political efficacy	.208***	.183***	.271***	.250***
Strength of partisanship	.051	.050	.073	.075
ΔR^2	7.3%	7.3%	11.1%	11.1%
Step 2—Media use and discussion				
Media use	.159**	.120*	.109[#]	.061
Discussion network size	.270***	.193***	.270***	.186***
ΔR^2	13.4%	13.4%	10.9%	10.9%
Step 3—Social media uses				
Social media use for news (Wave 1)	.280***	.093	.141*	.019
Social media use for social interactions (Wave 1)	.096	.033	.032	.021
ΔR^2	2.1%	2.1%	1.5%	1.5%
Step 3—Social media uses				
Social media political expression (Wave 2)	—	.405***	—	.435***
ΔR^2		12.6%		14.1%
Total R^2	26.4%	40.2%	25.3%	39.4%

Notes: Standardized regression coefficients reported. $N = 312$.
[#]$p < .10$. *$p < .05$. **$p < .10$. ***$p < .001$ (two-tailed).

The research question (RQ1) addressed the relationship between using social media for interactional purposes and expressing politically via social media. As presented in Table 3 those who use social media also for being in touch and interacting with others tend to express themselves politically ($\beta = .310$, $p < .001$; ΔR^2 for "social media use" = 6.6%; model $R^2 = 23.2$%), supporting our hypothesis. Nevertheless, to more stringently test the relationship of all our variables of interest as a structure, this study theorized a model (see Figure 1) by which the effect of informational and interactional social media uses on offline and online political participation is mediated through social media political expression. The MPLUS estimates of the structural relationships among all these variables are shown in Figure 2. Overall, this

Table 3 Regression Model of Political Expression via Social Media

	Social Media Political Expression (Wave 2)
Step 1—Demographics	
Age	−.183**
Gender (female)	.040
Education	.076
Race (white)	−.102[#]
Income	−.141*
ΔR^2	6.4%
Step 2—Political antecedents	
Political efficacy	.060
Strength of partisanship	.001
ΔR^2	1.4%
Step 2—Media use and discussion	
Media use	.101[#]
Discussion network size	.194***
ΔR^2	8.8%
Step 3—Social media uses	
Social media use for news (Wave 1)	.298***
Social media use for social interaction (Wave 1)	.310***
ΔR^2	6.6%
Total R^2	23.2%

Note: Standardized regression coefficients reported. $N = 312$.
[#]$p < .10$. *$p < .05$. **$p < .10$. ***$p < .001$ (two-tailed).

model fitted the data fairly well, yielding a χ^2 value of 1.69 with 3 degrees of freedom (RMSEA (Root Mean Square Error of Approximation) = 0.000, CFI (Comparative Fit Index) = 1.000, TLI (Tucker-Lewis Index) = 1.001, SRMSR (Standardized Mean Square Residual) = 0.012). Since all the control variables were residualized on our variables of interest, the variance explained for all three variables is smaller when compared to the regression analyses: political expression ($R^2 = 6.7\%$), offline political participation ($R^2 = 16.3\%$), and political participation online ($R^2 = 17.8\%$).

The relationships observed in Figure 2 support the view that both social media use for news and social interactions contribute to individuals' political expression via the same medium, which in turn spurs political engagement offline and online. Specifically, individual differences in social media use were positively associated with expressing politically via social media ($\beta = .164$, $p < .001$ for social media use for news; $\beta = .127$, $p < .05$ for social media use for social interaction). Social media use for news also has a direct positive effect in predicting offline political participation ($\beta = .107$, $p < .05$). Similarly, data show that expressing politically via social media is positively associated with participating politically offline ($\beta = .387$, $p < .01$) and online ($\beta = .432$, $p < .001$). That is, respondents who frequently engaged in a political
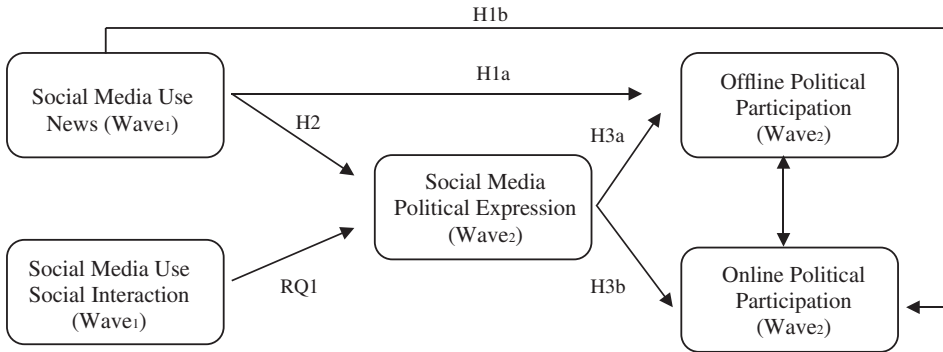
Figure 1 Theorized model of social media uses, social media political expression, and political participation.

expressive communicative action through social media were more likely to exhibit high levels of political engagement offline and on.

The SEM test also allowed us to shed light on the influence of social media uses on participatory behaviors by estimating direct and indirect paths through political expression to political participation outcomes. In contrast to social media use for news, which had a direct effect on political participation (offline), social media use for social interactions had no significant direct effect on either type of political participation. However, both types of goals had a significant indirect relationship with
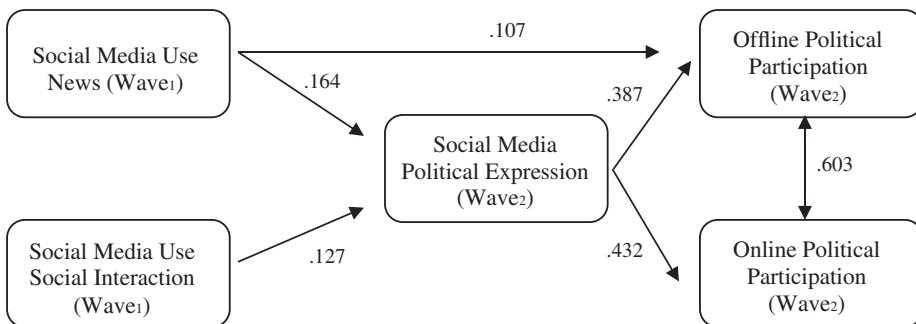

Figure 2 Results of SEM model of social media uses, social media political expression, and political participation. *Note:* Sample size = 312. Path entries are standardized SEM coefficients (betas) at $p < .05$ or better. The effects of demographic variables (age, gender, education, race, and income), political antecedents (political efficacy and strength of partisanship), media use, and discussion network size (online and offline), on endogenous and exogenous variables have been residualized. Model goodness of fit: $\chi^2 = 1.69$; $df = 3$; $p = .63$; RMSEA = 0.000, CFI = 1.000, TLI = 1.001, SRMR = 0.012. Explained variance of criterion variables: Political expression $R^2 = 6.7\%$; Offline political participation $R^2 = 16.3\%$; Political participation online $R^2 = 17.8\%$. This theoretical model was also bootstrapped based on the standard errors with 1,000 iterations, converging in 960 iterations and with a 95% confidence interval.

Table 4 Indirect Effects of Social Media Use on Political Participation

Indirect Effects	β
Social media news (Wave 1) → Political expression (Wave 2)→Political participation offline (Wave 2)	.059***
Social media news (Wave 1) → Political expression (Wave 2) → Political participation online (Wave 2)	.065***
Social media/Social interaction (Wave 1) → Political expression (Wave 2)→Political participation offline (Wave 2)	.046**
Social media/Social interaction (Wave 1) → Political expression (Wave 2)→Political participation online (Wave 2)	.051**

Notes: Standardized regression coefficients (β) reported. $N = 312$.
*$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed).

political participation offline and online through political expression. As reported in Table 4, social media use for news ($β = .059$, $p < .001$; $β = .065$, $p < .001$) and for social interaction ($β = .046$, $p < .01$; $β = .051$, $p < .01$) operated on political participation offline and online via citizens' expressive political participation behavior. These findings match for the most part our theorized model described in Figure 1, with the exception of the direct path drawn from social media use to political participation online, which is completely mediated through expression. In fact this path yielded the largest regression coefficient (beta) among all the indirect effects (see Table 4).

Discussion

As social media continue to seamlessly integrate in people's daily media choices, more research also focuses on parsing out the effects of such use within the democratic process. In particular, in the context of U.S. public opinion, some studies have already established a connection between social media use and participation (Gil de Zúñiga, Jung, & Valenzuela, 2012). These empirical connections have also been observed in international contexts (Bakker & de Vreese, 2011; Skoric, 2011; Valenzuela, Arriagada, & Scherman, 2012) with similar results.

Overall, these studies called for new avenues for research in this area which included (a) discerning between different patterns of use within different social media sources, as well as (b) observing more nuanced and complex models that would develop a deeper understanding of the relationship between social media and political engagement.

This study represents a step further in this direction. It attempts to pursue both suggestions by exploring new theoretical grounds that include distinguishing between social media use for news seeking (i.e., being informed about current events and public affairs), and using the medium for more socially oriented behavior (i.e., interacting with friends and family or to feel more in touch with others in general). Furthermore, the proposed theoretical model in this study also accounts for the effect of people's

political expression through social media (i.e., posting personal experiences related to politics or campaigning).

We first theorized that, as expected according to previous research, individuals who use social media to be informed will also tend to be involved in politics, as a direct effect. In fact, drawing on cross-lagged correlation results, the notion of a virtuous circle might be taken for granted: People who get informed via Social Network Sites tend to participate more, and participation also leads to information-seeking behaviors. Nevertheless, according to these findings from panel data, the causal relationship that goes from social media news use to participation is stronger than vice versa. This indicates an asymmetrical reciprocal causation between media use and participation (Rojas, 2006; Shah et al., 2005).

We also theorized that this relationship will be mediated via political expression in social media, considering studies showing that the act of expression tends to have an effect on the one expressing a message. But perhaps more interestingly, this study introduces another theoretical advancement. Although the use of social media for social interaction may not have a direct effect on political participation, we posit it would do so via political expression instead—a fully mediated relationship. The rationale was that social media today allow for multiple connections to varied and distinct social realms. Each social group a person interacts with represents an audience for the demonstration of self (Abercrombie & Longhurst, 1998), including aspects of the self that exist only for or are presented only to a specific audience (Papacharissi, 2012). One of these notions of self could therefore be expressing your political self as one more aspect of people's digital personality and identity. The mechanism of this effect is in the process of expression, wherein the expectation of expression and the composition and transmission of a message may lead to changes in cognition (Pingree, 2007) and participation (Rojas & Puig-i-Abril, 2009).

The results of this study, especially the SEM test, show significant connections between social media use, political expression, and political participation. All proposed pathways proved significant except one, the direct connection between social media use for news and online political participation. There may be at least two possible explanations for this result. First, this study was constructed in a conservative manner, using many controls to isolate the effects of one variable on another with two waves of panel data, which also lower considerably the sample size. The smaller sample size may have left open a possibility for significant effects to not be observed. But we rather take the risk of committing a type II error than leaving important controls out of the equation. A larger sample size or fewer or different controls may have produced a significant direct relationship between social media use for news and online political participation as well.

Another alternative possibility is that this particular relationship, of all those described in the model, is exceptionally prone to being mediated by political expression online. All three concepts (social media use for news, online political expression, and online political participation) although theoretically distinct seem to be complementary rather than exclusive. Because all these events occur in the same

context, and even potentially use the same tools (i.e., social media), it is likely that the connection between social media use for news and online political participation is more prone to mediation than other pathways in the model. In fact, an examination of the direct effects of political expression on online participation registered the most robust relationship in the SEM ($\beta = .432$, $p < .001$), and the indirect effect shows this pathway (news→expression→participation) to be the strongest of all the mediated pathways, giving strength to this argument ($\beta = .065$, $p < .001$).

One more point to discuss may be one of the most theoretically noteworthy links presented in this model. That is the novel link between social media use for social interaction, and online political expression. This suggests that even relational use of social media may be able to set users on a pathway toward political expression, which in turn may lead to participation. Previous research has focused on informational uses of media as the beginning of a pathway to participation, but this study suggests that other uses of social media are connected to political expression. The key elements of social media platforms that allow this relationship to occur are their ability (a) to provide a space for people to express themselves and create their own identity (which may include political expressiveness), and (b) to introduce people to new social groups and to maintain connections to many groups and individuals at once, something that is much more taxing to accomplish in a world without digital connections. With this larger number of interpersonal connections and connections to groups, users are likely to express more aspects of their personalities, and even potentially develop new aspects in order to fit into a larger number of social settings online. For many people, one of these "faces of expression" that is performed (and thereby developed) for others is a political face. And the more often that practice is given, the more a person may develop their political self, eventually leading to political action, even outside the context of social media.

These findings are particularly important in an age of concern over the lack of political interest and motivation to participate, especially among the youngest generations. Interestingly, it is these same generations who are the largest users of social media and for whom it is a normal part of social life. Political discussion in person and offline expression, while not being less important, may now be complemented by supplemental paths to political involvement via social media. This supplementary connection to political expression in social media use is promising for the development of a politically active future, especially for younger people.

Overall, these findings help to shed some light on the effects of social media use in the democratic process. Nevertheless, there are a number of limitations to this study that also merit attention. The data employed in this study is based on two-wave panel data that may elicit a better causal inference. Even so, it also made our data somewhat less representative as respondents from the second wave are not exactly the same subjects included in the first wave who were selected to fairly represent the U.S. population (Wave 1: $N = 1,159$ vs. Wave 2: $N = 312$). It is a trade-off we were willing to accept, given the importance of setting causal benchmarks for these types of relationships in the context of literature scarcity when it comes to studies about social media

and politics. A related point to discuss lies on the relatively low retention rate between data collection points (27%). The potential problem being that the dropouts may be significantly different than those who remained in the sample. Although we made every effort to obtain the highest retention rate possible we understand this is a limitation to this study. On the other hand, there was over a year's difference between Wave 1 and Wave 2. Similar studies found the longer the period between data collections, the more likely attrition becomes. In retrospect, our study compares very well in terms of retention rates with similar studies and time spans between waves (Wong, Culhane, & Kuhn, 1997).

Our explanation of the overall model of theorized effects is limited by what measures were available at Time 1 and Time 2. Ideally, the model would use a measure of political expression in Time 1 to predict political participation in Time 2, but such a measure was not available. The model would ideally treat expression as an antecedent of participation, not merely as a concurrent effect. However, other studies have shown this link effectively (Elin, 2003; Gil de Zúñiga, Veenstra, Vraga, & Shah, 2010; Ostman, 2012), and this study aims to strengthen a different leg of the model: the link between relational social media use and political expression online. For this reason it was important to measure relational social media use at Time 1 and political expression at Time 2.

Another limitation to this study relates to the inherent multicollinearity problem between our independent variables. Social media use for news and social interaction were highly correlated. When introduced altogether as independent variables in a general linear regression model, a variance inflation factor test indicated a mild multicollinearity problem. Thus, we followed the suggestion of two distinct lines of scholarship to prevent further issues of interpretation in our findings. First, we introduced the independent variables in distinct regression models to avoid multicollinearity issues granted that the total variance explained by the controlling blocks in these different models is similar, or also in order to introduce interaction term of independent variables (Eveland & Scheufele, 2000). Additionally, we employed a SEM test, which may also be a more appropriate technique to avoid type I and II errors due to multicollinearity (Kelava, Moosbrugger, Dimitruk, & Schermelleh-Engel, 2008). Despite its limitations, this article advances our understanding of the effects of social media uses in relation to political antecedents and participatory behaviors offline and online.

Future research would do well to investigate precisely how the connection between relational social media use and political expression works. A survey or other more contextual observation of users' actual activity (i.e., natural experiments) might produce alternative explanations for this connection. Furthermore, political expression on social media sites may be different than expression in other settings. Users may easily forward or pass along messages that others have prepared, potentially eliminating or at least limiting the effects of message composition. And even more subtle forms of expression exist: Does liking someone's post on Facebook constitute an expressive act, and does it have the same effect as composing an original message and transmitting it to others? Also, transmission and reception are decoupled in an online environment

in a way that they are not during face-to-face communication, which may change the effects of perceived reception and identifiability (Pingree, 2007). In short, future research should focus on the unique setting of online social media to determine pathways and mechanisms of effect in that realm.

This study provides answers to current questions in relation to how social media use affects the political realm, and in doing so, it also opens some new quandaries that will need to be solved by future studies. For instance, what other mediating mechanisms exert an influence on participation? It is plausible to think that political expression may lead individuals to further discuss politics, which in turn should also spur further participation.

Social media are part of life for most Americans today. This study attempted to register the effect of a medium that not only grows in popularity and penetration, but also has a prominent position in explaining and influencing the democratic process.

Notes

1 The formula for RR3 is (complete interviews)/(complete interviews + eligible nonresponse + *e* (unknown eligibility)), where *e* was estimated using the proportional allocation method, that is, (eligible cases)/(eligible cases + ineligible cases).

2 For even more details on these datasets see *authors'* publications based on data of wave 1 such as 2010, 2011, 2012, or wave 2, 2012).

3 When conducting the analyses with MPLUS we also allow the software to handle missing data encountered in our data by estimating means and intercepts for those missing cases (for detailed explanations on how to work with missing values with structural equation modeling SEM see Acock, 2005).

4 An avid reader of this study may note that our measurement for *social media use for news* (4 items) included two items that may not entirely tap on sheer news consumption behavior as they may be potentially registering users' gratifications. The four items (with Cronbach $\alpha = .90$) are as follows: (a) I use it to get news about current events from mainstream media (such as CNN or ABC), (b) It allows me to stay informed about my local community, (c) I use it to get news about current events through my friends and family, and (d) It helps me stay informed about current events and public affairs. To further investigate the validity of this index, we conducted several analyses which pointed a highly empirically and theoretically valid measurement (Clark & Watson, 1995). First, data reduction tests resulted in a unique factor loading (with 78.9% of the variance being explained). Additionally, an index reliability test showed that the scale would lose structure validity if any of the items were to be deleted. Individual interitem correlations also showed a robust correlation between them (i.e., $r = .76$ between items a and b; or $r = .77$ between items a and d).

5 Both of the above participation measures include items that may be understood as expression (items 2 and 3 in offline, and 1 and 5 in online), but they are used as participatory measures for two reasons. First, they have been frequently used in previous research as measures of political participation (see for instance McLeod et al., 1999; Campbell & Kwak, 2010). Second, we reason that interaction through official channels fits better conceptually with Bennett's "dutiful citizenship" model rather than the more expressive "actualizing" model (2011).

6   The authors also tried recoding the values over a specific threshold into a single category. For four different thresholds (10, 20, 25, and 30), the relationship between the transformed variable and the dependent variables did not change significantly. To avoid the inherent arbitrariness of picking a threshold value, we opted for a logarithmic transformation, although we recognize that this makes the numbers of the variable less interpretable. Additionally, this variable was incorporated into our theoretical model (residualized in the structural equation modeling) to control for potential confounding effects.

7   Please also note that another alternative method to overcome problems in a regression model with highly correlated independent variables is based on partial least squares (PLS) regression analyses or *projection of latent structures*, which prevent potential multicollinearity issues. However, this study does not include this alternative strategy since it may be less interpretable, as it is solely based on independent latent variables, which are based on cross-product relations with the response variables, not based on covariances among the manifest independents (Wold, 1980).

8   Since offline participation was measured with different scales between Time 1 and Time 2, we converted both variables into z-score indexes to compare equally constructed variables. Online political participation and social media use for news were identically measured.

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