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Social media in Latin America: deepening or bridging gaps in protest participation?

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Abstract

Purpose – The purpose of this paper is to explore the relationship between social media use and protest participation in Latin America. It advances two questions. First, does social media increase the chances of protest participation at the individual level, as prior research shows for advanced democracies? Second, in a region with glaring economic and political inequalities, does social media deepen or reduce the gaps in protest participation that exist among men and women, the young and the old, different social classes, or people with varying levels of political engagement?

Design/methodology/approach – The paper uses cross-sectional Latin American Public Opinion Project survey data from 2012 representing the adult population of 17 Latin American countries. It presents binary logistic regression models with protest participation as the dependent variable, social media use for political purposes as the main independent variable, control variables, and interactions.

Findings – Using social media for political purposes significantly increases protest chances – it is the second strongest predictor. Additionally, social media reduces protest gaps associated with individuals' age, gender, psychological engagement with politics, and recruitment networks.

Originality/value – First, the paper shows that the contribution of social media to collective protest travels beyond advanced democracies – it also holds for more unequal regions with weaker democratic trajectories like Latin America. Second, it shows that social media may mitigate participatory inequalities not only, as shown by past research, regarding institutional participation (e.g. voting), but also regarding contentious tactics.

Keywords Social media, Latin America, Cross-national surveys, Political behaviour, Political inequality, Protest participation

Paper type Research paper

In recent years a growing number of scholars have explored the relationship between using social media such as Facebook or Twitter and participation in protest activities – including street marches, demonstrations, and petitions (Macafee and De Simone, 2012; Scherman *et al.*, 2015; Tufekci and Wilson, 2012). While survey data generally show

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that using these services and protest behavior are positively associated (Boulianne, 2015), it is unclear whether social media deepen or reduce the gaps in protest behavior that exist between different social groups (e.g. older and younger people, poor and rich, men and women, and so forth). The issue is of relevance, considering that scholars of democratic politics have long been troubled with inequalities in political behavior. If social media are the "weapon of the strong" (Schlozman *et al.*, 2010, p. 487), then the digital turn of political campaigns and social movements may mean that gaps in participation along social strata will only solidify – if not grow over time. Conversely, if social media become the weapon of the hitherto marginalized segments of the citizenry, the diffusion of these services may reduce extant political inequalities.

To date, the few studies that have addressed how social media relates to gaps in political behavior have focussed either on electoral forms of participation or studied protest among young citizens (Enjolras *et al.*, 2013; Gainous *et al.*, 2013; Morris and Morris, 2013; Xenos *et al.*, 2014). It does not come as a surprise, then, that the results of these studies are often conflicting. Furthermore, few studies consider regions outside North America and Western Europe (for exceptions, see Gainous *et al.*, 2015; Wagner and Gainous, 2013). This leaves open the question of how applicable are the findings of these studies to less developed democracies with markedly different cultures of political behavior and social media penetration levels. In other words, there is much to be known about the participatory inequalities associated with social media use.

This study is a first step in addressing some of these limitations. We analyze the relationship between social media use and protest participation along different political stratification variables, using nationally representative survey data from 17 countries in Latin America. We focus on this region because it combines deep political and socioeconomic inequalities with high levels of "contentious politics" (McAdam *et al.*, 2001; Tilly and Tarrow, 2015), as illustrated by the Chilean student protests of 2011, Mexico's #YoSoy132 movement of 2012, and the street demonstrations in Brazil prior to the 2014 World Cup. Furthermore, by employing a large, cross-national sample, we are able to produce more accurate, consistent, and generalizable estimates of the role played by social media on political inequalities than prior work.

Our interest in Latin America notwithstanding, we base our theoretical expectations from the well-known and widely applied civic voluntarism model (CVM) by Verba *et al.* (1995), which was originally developed to understand political behavior in the USA. We do this on purpose. First, past research has applied the CVM with success to understand citizen participation in Latin America (Klesner, 2007). Second, it is a model that incorporates not only electoral or conventional forms of citizen participation, but also protests and social movements. Third, the CVM is rather comprehensive, as it suggests a variety of political stratification variables that go beyond socioeconomic status, including cognitive resources, psychological engagement with politics, and social recruitment networks – which prior research has found are important predictors of protest activism in Latin American countries (Machado *et al.*, 2011; Navarro Yáñez and Herrera Gutiérrez, 2009).

Our results suggest that those Latin Americans using social media for political purposes are significantly more likely to protest than those who do not, even after controlling for several common predictors. Still, our cross-sectional data do not allow tracing individual trajectories across time (e.g. before and after the adoption of social media, as would be possible with panel data). More importantly, our results show that social media may be associated with reducing – albeit weakly – gaps in protest behavior associated with resources, psychological engagement, and recruitment networks.

Conceptualizing political participation

Political participation is a central tenet of democracy and, thus, of central concern to scholars in communications, political science, and sociology. Typically, political participation has been studied as a process where citizens are involved in elections, although most of the literature agrees that it is more than electoral behavior – it involves different forms of expression and practices (e.g. deliberation) with the purpose of influencing authorities and the policymaking process (Brady, 1999). Thus, in addition to political behavior during elections, participation involves activities like protest, community work, boycotting, political consumerism, and the spread of political ideas and opinions on social media (Gil de Zúñiga *et al.*, 2015).

Given the broad set of activities that constitute political participation, it should not come as a surprise that a plethora of models and theories have been developed to understand its determinants. As aforementioned, perhaps the most widely applied is Verba *et al.*'s (1995) model of political participation. According to the CVM, the likelihood of participation is determined by three sets of variables: individuals' resources (e.g. time, money, and education); their psychological engagement with public affairs (e.g. political interest); and their involvement in voluntary organizations (e.g. unions, churches, and community groups). Thus, differences in any of these factors across social groups should lead to differences in participation.

Because democracy is based on the promise political equality (recall "one person, one vote"), it is important to study inequalities of political participation. In theory, political equality allows everybody's interests to be taken into account by the political system. It also means that influence over authorities' decisions is equally distributed (Dahl, 1971). However, recent evidence shows differences in citizens' levels of political participation, and those differences are not distributed randomly (Lijphart, 1997). For instance, in most western democracies, people with higher income and education level vote more often than people with lower income and education. This socioeconomic gap in participation has also been observed for other forms of participation, including protests (Lijphart, 1997).

Participation and inequality in Latin America

Latin America has a long tradition of "contentious politics" (McAdam *et al.*, 2001; Tilly and Tarrow, 2015) traceable even to colonial times. It includes different kinds of social and political movements resorting to both violent and pacific tactics (Schatzman, 2005) to obtain concessions from political authorities. Pacific protest campaigns, however, have been also vigorous in the last few years. For instance, in 2011 Chilean secondary and university students took to the streets their calls for a full-fledge reform of the educational system. In Mexico, in the context of the 2012 presidential election, university students organized protests across the country against then presidential candidate, Enrique Peña Nieto. And in Brazil, the massive protests that took place prior to the 2014 FIFA World Cup were a response to huge governmental spending and mismanagement of public funds on stadiums and infrastructure.

Collective protests in Latin America are deeply rooted in the political process. Public institutions' lack of capacity to solve citizens' demands evolve into a representation crisis which takes many forms, from decreasing levels of political interest and trust (Hagopian and Mainwaring, 2005), to lower turnout and an eroding identification with political parties (Fornos *et al.*, 2004). In this context, social movements provide an alternative channel to voice citizen demands and influence the public debate – often resorting for that end to online social media.

Contrary to advanced democracies in the west, the study of political participation in Latin American democracies is a relatively new phenomenon – in part because of the military dictatorships that spread through the region between the 1960s and 1980s. The third wave of democracy gained momentum in Latin America only in the 1990s (Hagopian and Mainwaring, 2005) – and with it, scholars began evaluating the determinants of participation across the region (Klesner, 2007). Interestingly, such research shows that several of the factors identified in the CVM hold true as well. For instance, Corral (2013) showed that in Latin American countries with similar levels of economic and political inequality, policymakers generally follow the preferences of higher income groups, at least on some issues. In a study comparing 26 countries, Hinton *et al.* (2012) found that political participation is considerably higher among rich groups with high educational levels. This also happens in the case of individuals' participation in political campaigns and their disposition to persuade other voters. Klesner (2007) found that in Chile, Argentina, Mexico, and Peru, the most important predictor of non-electoral political participation is education. Booth and Seligson (2008) reached similar conclusions for Central America. Since these results suggest the validity of the CVM for Latin America, our first expectation is as follows:

H1. Individuals with more resources, higher levels of psychological engagement with politics, larger recruitment networks, and more economic grievances are more likely to participate in protests.

Social media use and gaps in political participation

Social media are a variety of online services where users can create a public or semi-public individual profile, define a list of other users with whom they are connected, and use these networks of contacts for different purposes (Xenos *et al.*, 2014). Profiles allow users to obtain substantial information about the profile owners and their respective social networks, including personal trajectory, photos, networks of contacts, and literary and musical tastes. Furthermore, communication between users of social media can be either public (e.g. commenting on a user's Facebook wall) or private (e.g. chatting or internal messaging), which enables these media to fulfill a variety of users' needs (Bernal Triviño, 2015).

Much research about the relationship between social media use and citizens' political participation has been oriented to understanding how these information and communication technologies facilitate (or not) individuals' engagement in political activities (Gil de Zúñiga *et al.*, 2015; Valenzuela *et al.*, 2012, 2014). In some respects, this work echoed the cyberoptimistic vs cyberpessimistic debate of the 1990s and 2000s on internet use in general, with most research concerned about demonstrating a positive correlation between online services and engagement. But, taking heed of a more nuanced perspective on media effects, recent studies explore the complexities of the relation between individuals and their uses of digital technologies, and recognize that these relationships are contingent upon individuals' social contexts, motivations, and traits (Bimber, 2003; Zheng and Wu, 2005). In other words, the individual consequences of social media use are mediated by specific uses (for instance, informational vs entertainment), and moderated by individuals' political preferences and background (Scherman *et al.*, 2015). For instance, when social network sites allow people accessing to information news, they become a factor that increase levels of participation. However, when entertainment news is the final destination of users of social network sites, the opposite effect is attained. Likewise, content creation on social media and talking to other people through these platforms can lead to participation contingent upon the type of

content that motivates people's actions (Bachmann *et al.*, 2012; Harlow, 2012; Igartua and Rodríguez-de-Dios, 2016).

As a consequence, researchers now speak of the affordances of social media that may be linked to greater participation in civic and political affairs, including protest behavior (Tufekci and Wilson, 2012; Valenzuela *et al.*, 2014). Social media, such as Facebook or Twitter, facilitate access to a large number of contacts – increasing the probability of reaching critical mass – and reduce the monetary cost involved in the mass distribution of information. These sites can also promote the construction of social and individual identities (Dalton *et al.*, 2009), enabling multiple channels for interpersonal feedback. Social media can also operate as information hubs, allowing users to create and join groups with common interests. Thus, the frequent participation of individuals helps to build trust among members, thus increasing the social media potential to stimulate commitment in protests (Kobayashi *et al.*, 2006). In addition, social media allow finding other persons with similar ideas (Fábrega and Paredes, 2013), and people uninterested in politics can engage with public affairs due to a casual or incidental exposure to social media (Xenos *et al.*, 2014, p. 154). For these reasons, we posit a second hypothesis:

H2. Individuals who use social media for political reasons have a higher likelihood of participating in protests.

Although there is robust evidence about the positive relation between social media use and citizens' political participation for advanced democracies, less is known about the topic for Latin America as a whole. Also, there are several unexplored issues remaining. For instance, we do not know which groups of the population are mobilized by the use of social media, even when they use social media for political purposes. The key question is whether usage of social media motivates otherwise passive individuals to become involved in politics or, on the contrary, reinforces interest in public affairs among individuals already inclined to participate (Schlozman *et al.*, 2010). In this sense, there are two hypotheses. The mobilization hypothesis suggests that social media favors to a greater extent the mobilization of otherwise disengaged social groups into political issues, like youth and lower income groups (Hur and Know, 2014). According to this hypothesis, social media helps to diminish the participatory gaps, therefore improving the quality of democratic life. On the other hand, the reinforcement hypothesis suggests the opposite process – social media use reinforces the interest to participate among individuals that are already active in political life, therefore expanding the gap between those that participate in the political processes and those who do not (Hur and Know, 2014; Schlozman *et al.*, 2010). There is, of course, a third possibility: that social media neither deepens nor bridges inequalities in political participation. Thus, we posit the following research question:

RQ1. Does the use of social media for political reasons moderate (positively or negatively) the relationship between participation in protests on the one hand, and resources, psychological engagement with politics, recruitment networks, and grievances on the other hand?

Methods

Data

To address the hypotheses and research question we will use the Latin American Public Opinion Project (LAPOP) surveys collected in 2012 (details available in www.vanderbilt.edu/lapop/). This is the most recent survey data source that asks about both protest participation and social media use in a wide array of Latin American countries.

It provides nationally representative samples of voting-age adults in 17 Latin American countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, México, Nicaragua, Panamá, Paraguay, Perú, Uruguay, and Venezuela. Sample sizes range from 1,497 to 3,029. Nevertheless, all analyses reported below are weighted with the built-in variable "weight1500," which equalizes all samples to $n = 1{,}500$, in order to give all countries the same weight.

Variables

Our dependent variable is a measure of protest participation with a value of 1 if the respondent has participated in a protest demonstration and/or signed a petition in the last 12 months, and 0 if she did not do any of them. Our main theoretical variable is also a dummy variable that measures social media use for political purposes (1 = "did read or share political information in a social media network such as Twitter, Facebook, or Orkut in the last 12 months"; 0 = "did not").

In all models we include independent variables from the CVM (Verba *et al.*, 1995) as well as others that have proven relevant for predicting protest participation in previous research (Barnes and Kaase, 1979; Dalton *et al.*, 2009). These are: gender (1 = female); age (measured in years); education (years of formal education completed, from 0 to 18 or more); monthly family income (scale of income intervals adapted to each country, ranging from 0 to 16); political ideology (a ten-point scale from 1 = "left" to 10 = "right"); satisfaction with personal economic situation (a five-point scale from 1 = "very good" to 5 = "very bad"); social trust (measured by asking about trust in the people of the respondent's community, where 1 = "very trustable" and 0 = "somewhat," "a little," or "not trustable at all"); interest in politics (1 = "a lot" or "somewhat,"; 0 = "a little" or "not at all"); and an additive scale of participation in several types of voluntary organizations (religious, PTA, community, professional, business, peasant, political, sport, and recreational organizations; 0 = no participation, 18 = maximum participation). Finally, there are important economic and political differences among Latin American countries that could affect protest rates beyond individual characteristics. For absorbing these effects in a parsimonious way, we also include 16 dummy variables that indicate the country of the respondent.

For exploring whether social media use deepens or reduces protest gaps among social groups, we include interaction terms between social media use and each of the following predictors (measured as noted above): female, age, education, income, personal economic dissatisfaction, political interest, political ideology, organizational activity, and social trust. Table I presents descriptive statistics for the variables used in the analysis. Given the dichotomous nature of our dependent variable, all models are estimated with binary logistic regressions (Long, 1997). All analyses were performed in Stata 14, including the plots of the statistically significant interactions.

Results

Our first hypothesis stated that the factors that prior research has found to determine protest participation at the individual level (i.e. resources, psychological engagement, recruitment networks, and grievances) are also applicable to Latin America. The results support the hypothesis. The first column of Table II (model 1) displays the results from a regression model predicting the likelihood of participation in protest activities. To facilitate substantive interpretation, the results are shown as average marginal effects, which measure the change in the predicted probability of participation in protests when each variable changes from 0 to 1. Robust z-statistics, in turn, are reported in parentheses and serve as a guide for measuring the strength of these associations.

Variable	*M*	SD	Min	Max
Protest participation	0.14	0.35	0	1
Social media use for politics	0.11	0.31	0	1
Female	0.61	0.49	0	1
Age	39.95	16.07	16	96
Education	9.19	4.53	0	18
Income	8.01	4.04	0	16
Personal economic dissatisfaction	2.90	0.77	1	5
Political interest	0.30	0.46	0	1
Political ideology	5.47	2.62	1	10
Organizational activity	3.26	2.77	0	18
Social trust	0.25	0.43	0	1

Source: Latin American Public Opinion Project (LAPOP) (2012)

Table I. Descriptive statistics of variables used in the analysis

	Predictive margins	
	Model 1	Model 2
Female	−0.01 (−1.11)	−0.01 (−1.03)
Age	−0.00 (−1.05)	0.00 (1.18)
Education	0.01 (7.38)***	0.00 (4.46)***
Income	0.00 (4.00)***	0.00 (2.47)**
Personal economic dissatisfaction	0.02 (5.14)***	0.02 (5.34)***
Political interest	0.06 (10.64)***	0.05 (8.35)***
Political ideology	−0.01 (−7.50)***	−0.01 (−7.35)***
Organizational activity	0.02 (22.99)***	0.02 (22.01)***
Social trust	0.01 (2.26)**	0.01 (2.21)**
Social media use for politics		0.12 (15.46)***
Pseudo R^2	0.09	0.11
n	16,214	16,076

Notes: Cell entries are average marginal effects from binary logistic regressions, with robust *z*-statistics in parentheses. All models include country dummy variables and a constant (not shown). *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

Source: LAPOP (2012)

Table II. Determinants of protest participation in Latin America

The results show that education, income, political interest, ideology, and organizational activity are strongly related to protest activities, in line with the predictions of the CVM. Protest is more likely among more educated and wealthy individuals, as well as among those more interested in politics, with a leftist political ideology, and more embedded in voluntary organizations. In addition, dissatisfaction with the personal economic situation – a variable we included to gauge economic grievances – also predicted participation in protest activities (more dissatisfaction breeds protest).

The *H2* posited that using social media for political purposes is positively and significantly associated with protest behavior. The test of this prediction appears in the second column of Table II (model 2). The regression results suggest that, even after taking into account all variables of model 1, the probability of protesting for those who regularly use social media is, on average for the 17 Latin American countries surveyed, 12 percent higher than those who do not, a statistically significant result at $p < 0.001$. The *z* -statistics suggest that, after organizational activity, social media use for politics is the second most important predictor of protest.

While interesting, the results of the first couple of hypotheses are rather confirmatory: prior research showing that resources, psychological engagement, recruitment networks, grievances, and social media do matter for explaining individual-level participation in protest politics, is vast and growing. More important for our purposes is to assess the degree to which social media may deepen or bridge the stratification of participation along economic, political, and social variables. Table III displays the predictive margins of interactions between social media use and each of the variables of model 1 in Table II (full results are displayed in Table AI). Of the nine interactions, five of them are statistically significant, that is, there are five instances where social media moderates the effects of underlying factors of protest behavior. To facilitate the interpretation of these interactions, changes in the probability of protest were plotted against social media use and each of the significant moderator variables (see Figures 1-5).

	Predictive margins interactions
Social media use × female	0.41 (3.31)***
Social media use × age	−0.01 (−2.15)**
Social media use × education	−0.03 (−1.45)
Social media use × family income	−0.01 (−0.40)
Social media use × personal economic dissatisfaction	0.03 (0.44)
Social media use × political interest	−0.26 (−2.19)**
Social media use × political ideology	−0.05 (−2.20)**
Social media use × organizational activity	−0.06 (−3.08)***
Social media use × social trust	−0.06 (−0.46)
Pseudo R^2	0.11
n	16,076

Table III.
Social media use for politics and protest participation in Latin America

Notes: Cell entries are average marginal effects from binary logistic regressions, with robust z-statistics in parentheses. All models include the variables from model 2 in Table I, plus, country dummy variables and a constant (not shown). Interactions were entered one at a time. *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$
Source: LAPOP (2012)

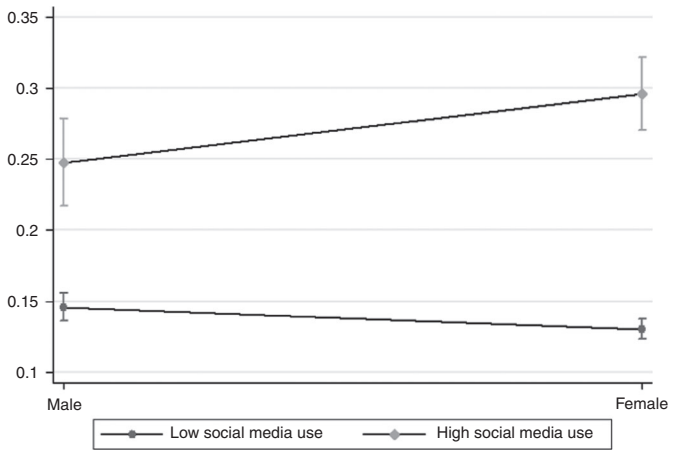

Figure 1.
Probability of protest participation by social media use for politics and gender

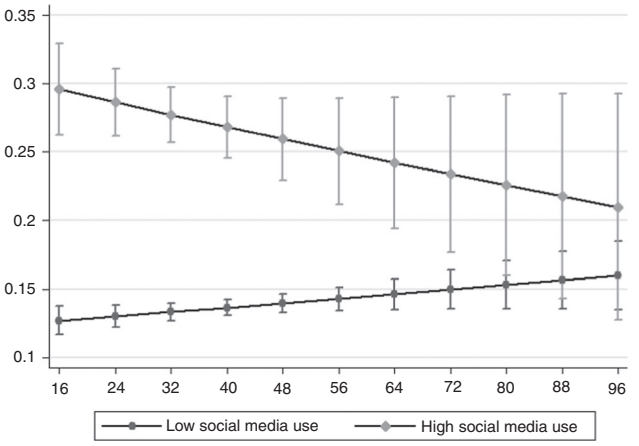

Figure 2.
Probability of protest participation by social media use for politics and age

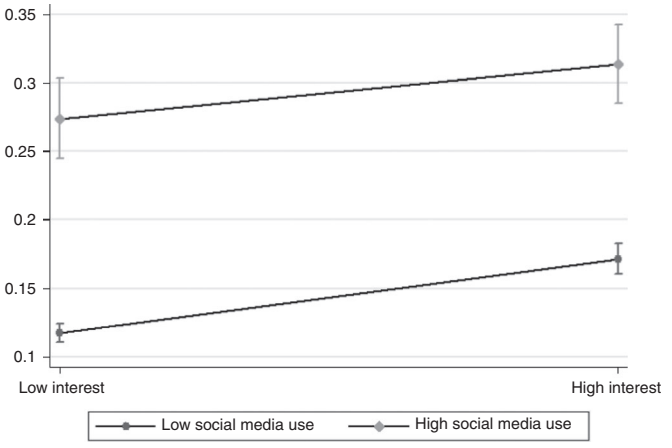

Figure 3.
Probability of protest participation by social media use for politics and political interest

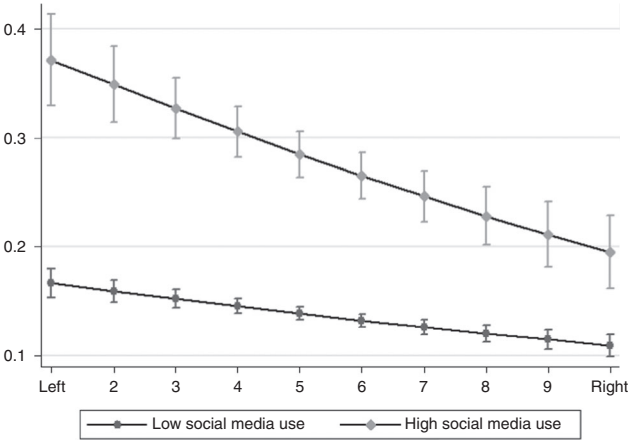

Figure 4.
Probability of protest participation by social media use for politics and left-right ideology

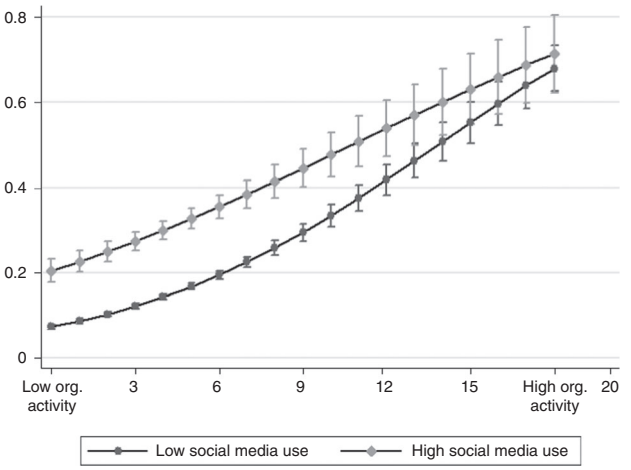

Figure 5.
Probability of protest participation by social media use for politics and organizational activity

We begin with the interaction between social media and gender, which shows that at low levels of social media use, males have a slightly higher probability of protesting than females, whereas at higher levels of social media use, the relationship is completely reversed (see Figure 1). These findings suggest that social media use may help in closing the gender gap in protest in Latin America (the implications of this finding are discussed in the next section).

Another statistically significant interactive effect refers to the impact of age on the relationship between social media use and protest behavior. As Figure 2 shows, at low levels of social media use, there is a weak positive effect of age on the probability of protesting. At higher levels of social media use, in contrast, the opposite seems true: younger respondents have a higher probability than older ones of having engaged in protest activities in the past 12 months. Nevertheless, this bridging-gap effect of age-related differences in protest participation is rather weak (z statistic $= -2.15$, $p < 0.05$). For instance, the average marginal effect of social media for 70-year old respondents is 24 percent for users and 15 percent for non-users. In the case of 19-year old respondents, the effect is 29 and 13 percent, respectively – not a dramatic difference.

The result of the analysis of the interactive effects of social media use and political interest on protest behavior is illustrated in Figure 3. The plot suggests that social media can help reduce the stratification on participation based on psychological engagement. At low levels of social media use, there is a statistically significant difference on protest activity between those with lower and higher levels of interest in politics. This average difference (12 and 17 percent of change in the probability of protesting) dissipates for regular users of social media – both groups now have a similar probability of protesting, hovering around 29 percent (see the overlapping confidence intervals at high levels of social media use in Figure 3). This result is consistent with the equalizing function of online networks for political behavior. But, again, the initial difference in participation for low vs high interest individuals is not dramatic. The closing of the gap enabled by social media should not be overstated.

Another statistically significant interaction refers to social media use and political ideology. Figure 4 shows that over the range of the sample distribution, respondents with a left-wing orientation (with a score between 1 and 4 in the ten-point ideological scale) are more likely to protest than respondents with a right-wing orientation

(i.e. with a score of 7-10). In this case, social media appears to deepen this gap in participation. Specifically, left-wing individuals who use social media for political motives on a regular basis have a 31 to 37 percent higher probability of protesting compared to other individuals. In contrast, the probabilities of protesting for right-wing individuals who happen to use social media as often as left-wingers are in the 19-25 percent range.

What about organizational activity, which the analysis for *H1* showed was the most important predictor of protest activity? As shown in Figure 5, social media use can make a positive impact on protest behavior at lower levels of organizational activity, whereas for those who are most involved in organizational activities, the effects of social media use are negligible. Of all the interactions, this one is the most robust (z statistic $= -3.08$, $p < 0.002$). But we should not exaggerate its substantive significance. Less than 1 percent of respondents score 12 points or more in the scale of organizational activity, the level at which social media really starts closing the participation gap. In other words, for the remaining 99 percent of the distribution, higher use of social media for politics does not dramatically change the impact of organizational activity on protest behavior.

Finally, we refer to the gaps in protest behavior that social media use does not seem to affect in any noticeable way. As reported earlier, the relationship of education and income with protest behavior was robust. Yet, the interaction of these variables with social media use was far from reaching statistical significance. Thus, the stratification of protest behavior along socioeconomic differences is neither diminished nor augmented by using social media for politics more often. At the same time, economic grievances as a trigger of protest behavior were also unaffected by social media: the interaction of personal economic dissatisfaction and social media use was not statistically significant. And although social trust had a weak relationship with protest behavior, this relationship was not altered by the use of social media for politics. The importance of these results is discussed in the next section.

Discussion

Although social media have become a prominent object of study for research on social movements and political participation in Latin America and elsewhere, there are vast segments of the population that remain excluded from these platforms altogether. In the 17 countries surveyed by LAPOP that we studied, an average of 51 percent of respondents declared they never used the internet, and only 11 percent admitted to having read or shared political information on Twitter, Facebook, or other social media in the past 12 months. On the other hand, protesting is not necessarily the most common type of political behavior: whereas an average of 76 percent of respondents declared having voted in their country's last presidential election, only 14 percent participated in a demonstration or signed a petition.

Yet, protest behavior remains a prominent mechanism for influencing the political agenda in Latin America – as highlighted by the examples of Brazil in 2014, Chile in 2011, and Mexico in 2012 – and social media have played a role in these demonstrations. Our results show that using social network sites for political purposes is the most predictive factor, after participation in voluntary organizations, of engaging in protest activities. This result is remarkable on several accounts. Whereas social, economic, and political inequalities have been historically prevalent in the region, social media have less than a decade of presence. For instance, Facebook launched its Spanish-language version as recently as 2008. Furthermore, our measure of social media use, although in line with research showing that only informational or relational

uses of social media matter for political behavior, lumps together Facebook and Twitter, which may obscure differential patterns of participation associated with each (Valenzuela *et al.*, 2014). And the assessment of the relationship between social media use and protest activity was conservative, for we controlled for all time-invariant factors about each country (i.e. differences in institutional and democratic levels) as well as for most of the variables implied by the CVM of participation, including education, income, political interest, and social recruitment networks.

Still, the direct association of social media and political participation was not the primary purpose of the current study. Instead, we sought to examine the role played, if any, by new digital platforms such as social media on the inequalities that characterize protesting in Latin America. Do social media augment or diminish these inequalities? We find that social media help reducing some participatory gaps – gaps that, inasmuch as protest is a form of political influence, creates dilemmas for reaching the ideal of political equality implicit in most notions of democracy. Below we tease out some implications of these findings.

As elsewhere, Latin American politics have traditionally been a male affair. However, women's protest movements have played an important role in the past decades (e.g. the Mothers of the Plaza de Mayo in Argentina, and the CoMadres in El Salvador). Also, Latin America could be the world region making the most rapid progress in terms of female political elected officials. In 2014, four countries in the continent had women as heads of state (Argentina, Brazil, Chile, and Costa Rica). In this context, our finding that social media help to reverse the gender gap in protest participation is noticeable. This is also in line with qualitative studies that show that internet is particularly useful for empowering women, feminist, and lesbian groups who feel disengaged with mainstream politics (Friedman, 2005; Hilbert, 2011).

Social media also help reducing, although not dramatically, age gaps in protest participation. Why are younger Latin Americans more capable of taking advantage of the mobilization opportunities offered by social media? It may result from a life cycle effect: as younger people had less time to be socialized into politics, social media adds more marginal value to their political repertoires than to those of older people. But generational replacement may also be at play. So-called digital natives may be more skillful for interweaving politics and social media than older people (but see Correa, 2014). If the latter is the case, the compensatory function of social media may change in the future, as these services diffuse in the population.

The only protest gap that social media tends to deepen in our study is related to political ideology. Not only are Latin Americans who self-identify with the left more likely to protest, but they are also better at taking advantage of social media when it comes to protest than centrists and rightists. This is consistent with the literature on digital activism in Latin America, which is filled with case studies of successful left-leaning movements and organizations (see Somma, 2015, for an overview). A possible explanation for this finding relates to the homophily of political networks, that is, the tendency to build social ties with those who think and behave politically as we do (Fowler *et al.*, 2011). Leftist users of social media are surrounded by other leftists, who in turn are more prone to protest. They may be more motivated to take advantage of social media's mobilization capabilities than centrists and rightists who, even if connected to Facebook or Twitter, may have less protest-inclined friends with whom to organize a march or stage a street demonstration.

We also found that social media is less consequential for protest participation among those highly embedded in voluntary organizations. Why? A possible

explanation emphasizes the redundancy of social ties (Granovetter, 1973). People with a very intense organizational life will already have sufficient offline information, motivation, and recruitment opportunities to move to the streets disregarding whether they use social media or not. But social media may be decisive among those with more tenuous links to the civil society and the public sphere – in extreme cases social media may be their only connection with the outside world, thus making a difference when it comes to protest.

We also wonder why socioeconomic protest gaps (those based on income and education) are so resistant to the otherwise compensatory influence of social media. First, this result is not unique to Latin America; Hur and Know (2014) found the same in South Korea, as did Schlozman *et al.* (2010) in their study of the 2008 US election. The answer is no doubt a complex one, but the starting point may lie at the rigid nature of the Latin American stratification system and its deep inequalities. After all, we are studying one of the most unequal regions of the world in terms of income and education.

Lastly, we found that there is a statistically significant, albeit weak, reduction in the protest gap associated with different levels of political interest that is related to social media use. Why is this? One explanation is that social media enables users to have political discussions with peers, which increases political interest and drives them to protest. Likewise, users with low levels of political interest may nevertheless stumble upon political content, in a process of incidental exposure (Kim *et al.*, 2013). Thus, social media users need not be as politically interested as non-users for engaging in political communications that are a more immediate antecedent of protesting.

As any empirical study, there are some limitations that need to be addressed. Our findings stem from an international cross-sectional survey. While the data allow us to generalize our findings beyond a single country and to cover a rather unexplored geographical area, we cannot take into account the temporal dynamics of both social media and protest behavior. There is evidence that the effects of social media on political protests are not constant over time (Valenzuela *et al.*, 2014). Add to that the rapid nature of diffusion of social media among the population, particularly within emerging economies. Thus, our results are necessarily transient and should be interpreted cautiously. Furthermore, we measure individuals' self-reporting about their protest involvement as well as their social media use, which may yield inaccurate information due to social desirability bias and inaccurate recall. In addition, there is always the possibility that the inclusion of additional covariates in the regression could alter some of the results reported. We included economic grievances, a variable that is not part of the CVM, but other important drivers of protest behavior and social media use, such as political emotions, were not available. As aforementioned, our measure of political uses of social media use is a single item, measured in binary terms. While this makes sense considering the rather small proportion of respondents who report using social media, it prevents us from making a more fine-grained analysis. Future research, then, needs to address these limitations.

Limitations notwithstanding, this study makes several contributions to the existing literature. We show that in Latin America there is a rather robust relationship between social media use and protest behavior that is not restricted to specific segments (e.g. youth) but applies to the general adult population as well. Whether this relationship is causal or not, we cannot tell with the current data. But it suggests that future research needs to probe this relationship using longitudinal and/or experimental data – which, to the best of our knowledge, is not available (yet) for the region as a whole. We also

demonstrate that social media use can moderate the effects not only of the typical predictors of participation, such as age and gender, but also of the political-psychological antecedents of engagement – including political ideology and interest – and of participation in voluntary organizations. Most of these interactive effects are small, to be sure, but are nevertheless intriguing and merit additional attention in future research.

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Appendix

Table AI.
Full results for Table III

	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Female	−0.14 (0.06)**	−0.05 (0.05)	−0.05 (0.05)	−0.05 (0.05)	−0.05 (0.05)	−0.05 (0.05)	−0.05 (0.05)	−0.05 (0.05)	−0.05 (0.05)
Age	0.00 (0.00)	0.00 (0.00)**	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Education	0.03 (0.01)***	0.03 (0.01)***	0.03 (0.01)***	0.03 (0.01)***	0.03 (0.01)***	0.03 (0.01)***	0.03 (0.01)***	0.03 (0.01)***	0.03 (0.01)***
Income	0.02 (0.01)**	0.02 (0.01)**	0.02 (0.01)**	0.02 (0.01)**	0.02 (0.01)**	0.02 (0.01)**	0.02 (0.01)**	0.02 (0.01)**	0.02 (0.01)**
Personal economic dissatisfaction	0.17 (0.03)***	0.17 (0.03)***	0.17 (0.03)***	0.17 (0.03)***	0.17 (0.03)***	0.16 (0.04)***	0.17 (0.03)***	0.17 (0.03)***	0.17 (0.03)***
Political interest	0.41 (0.05)***	0.41 (0.05)***	0.41 (0.05)***	0.41 (0.05)***	0.41 (0.05)***	0.41 (0.05)***	0.41 (0.05)***	0.47 (0.05)***	0.41 (0.05)***
Political ideology	−0.07 (0.01)***	−0.07 (0.01)***	−0.07 (0.01)***	−0.07 (0.01)***	−0.06 (0.01)***	−0.07 (0.01)***	−0.07 (0.01)***	−0.07 (0.01)***	−0.07 (0.01)***
Organizational activity	0.18 (0.01)***	0.18 (0.01)***	0.18 (0.01)***	0.18 (0.01)***	0.18 (0.01)***	0.18 (0.01)***	0.18 (0.01)***	0.18 (0.01)***	0.19 (0.01)***
Social trust	0.12 (0.05)**	0.12 (0.05)**	0.12 (0.05)**	0.12 (0.05)**	0.12 (0.05)**	0.12 (0.05)**	0.13 (0.06)**	0.12 (0.05)**	0.12 (0.05)**
Social media use for politics	0.72 (0.10)***	1.31 (0.17)***	1.30 (0.23)***	1.04 (0.17)***	1.24 (0.13)***	0.89 (0.21)***	1.00 (0.07)***	1.12 (0.09)***	1.22 (0.10)***
Social media use × female	0.41 (0.12)***								
Social media use × age		−0.01 (0.00)**							
Social media use × education			−0.03 (0.02)						
Social media use × income				−0.01 (0.02)					
Social media use × personal economic dissatisfaction					0.03 (0.07)				
Social media use × political interest						−0.26 (0.12)**			
Social media use × political ideology							−0.05 (0.02)**		
Social media use × organizational activity								−0.06 (0.02)***	
Social media use × social trust									−0.06 (0.14)
Pseudo R^2	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
n	16,076	16,076	16,076	16,076	16,076	16,076	16,076	16,076	16,076

Notes: Cell entries are average marginal effects from binary logistic regressions, with robust standard errors in parentheses. All models include country dummy variables and a constant (not shown). *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

Source: LAPOP (2012)