

Social Media Uses, Political and Civic Participation in U.S. Election 2016

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Immediately after Election 2016, an online survey of 3,810 US college students in a "swing state" shows that the general use of Facebook has a small, negative effect on U.S. college students' online/offline political participation and civic engagement over and above six control variables and four demographic variables. The participants' political use of Facebook is a much more important and positive predictor than their general use of Facebook for online/offline political participation and civic engagement even after controlling for six relevant variables and four demographic variables.

Their online and offline political participation, and civic engagement were closely related. Their online social capital led to political use of Facebook but did not predict online/offline political participation and civic engagement. Additional interesting findings are also presented, theoretical and practical implications discussed.

Keywords: social media use, online and offline political participation, civic engagement, political self-efficacy, online social capital, trust

U.S. presidential candidates made full use of the potential of social media platforms in Election 2016: they turned social media into a powerful mechanism for motivating voters, discouraging the opponent's followers, and raising campaign funds, while transforming Facebook and Twitter into unfiltered sources of election news to the public. Both Donald Trump and Hillary Clinton's campaigns spent large amounts of money online to reach U.S. Internet users and voters. In October, Trump's digital team spent \$70 million (Green & Issenberg, 2016), while the Clinton campaign spent \$30 million (Lapowsky, 2016). Both candidates posted their messages on social media at similar rates, i.e. five to seven posts per day on Facebook and 11-12 posts per day on Twitter (Pew Research Center, 2016). As of December 19, 2016, Trump had more than 17.54 million followers on Twitter, while Clinton had 11.67 million followers (Keegan, 2016). Many of their followers were active consumers of presidential

campaign news and information. Pew Research Center (2016) found that 24% of U.S. adults turned to the social media posts of Trump or Clinton for news and information about the election. Digital fund raising has also become a norm since Election 2012. Trump's campaign raised \$280 million via social media (Slefo, 2017). In contrast, Clinton's campaign mainly relied on conventional fund-raisers and big donors to collect \$623.1 million (Narayanswamy, Cameron, & Gold, 2016).

The primary reason why practitioners and academicians value the use of social media for political purposes is the shared belief that most social media users are politically engaged and can be converted into online advocates, donors, and offline voters with digital campaigning efforts. Pew Research Center found that 44% of U.S. adults learned about the 2016 election in the past week from social networking sites (Gottfried et al., 2016). Forbes reported that about 128 million U.S. users on Facebook generated 8.8 billion likes, posts, comments and shares related to the 2016 presidential election from March 23, 2015 to November 1, 2016 (Feldman, 2016). According to the New York Times, by 10 pm on Election Day, 40 million tweets had been sent on Twitter about the election (Isaac & Ember, 2016). Studies show that citizens who use social media for political purposes are more likely to vote or to donate to a campaign (e.g., Bode, Vraga, Borah, & Shah, 2014; Kim & Geidner, 2008).

Research shows that well-educated young U.S. adults are more inclined to be heavy users of social media, and to become active participants of political and civic activities than their peers. A recent Pew survey reported that 82% of U.S. online adults with some college education used Facebook, compared to 77% of those with high school degree or less (Greenwood, Perrin & Duggan, 2016). Studies demonstrate that young adults with some college education are much more civically and politically engaged than their non-college counterparts (e.g., Cohen et al., 2012; Smith, 2013). In this regard, this paper explores whether social media uses have positively contributed to young U.S. college students' online/offline political participation and civic engagement in an extraordinary presidential election year.

Existing studies of social media and politics fall short of validating the powerful influence of social media on political communication and behavior. Many studies suggest that both general and political uses of social media will enhance Internet users' online and

offline political participation, and civic engagement (e.g., Gil de Zúñiga, Copeland, & Bimber, 2014; Gil de Zúñiga, Molyneux, & Zheng, 2014; Valenzuela, Park, & Kee, 2009). However, there is no clear connection between the general use of social media and political participation (e.g., Baumgartner & Morris 2010; Dimitrova & Bystrom, 2013; Groshek & Dimitrova, 2011; Gil de Zúñiga et al., 2012). Two meta-analytical studies revealed that over half of those positive effects were weak or negligible although there was a moderately positive relationship between social media use and citizen engagement on average (Boulianne, 2015; Skoric & Zhu, 2016). Few studies have found a link among online social capital, online social trust, online/offline political participation, and civic engagement directly. Additionally, whereas several studies have explored the motives behind young people's use of social media for political purposes (e.g., Gil de Zúñiga et al., 2014b), there is a lack of research examining how political use of social media leads to online/offline political participation and civic engagement (see for exceptions Bode et al., 2014; Yang & DeHart, 2016a). As of today, we could not retrieve any published study that illustrated the complicated relationships of general and political uses of social media, online social capital, political self-efficacy, online trust, political ideology, online/offline political participation, and civic engagement of U.S. college students in the 2016 election, although a few studies found a connection between social media use and online/offline political participation in the 2012 elections (Towner, 2013; Yang & DeHart, 2016a; Zhang, Seltzer, & Bichard, 2013).

The present study explores the complicated relationships among these key constructs of social media and politics (see Figures 1-3). It is intended to illustrate how the influences of the general use and political use of Facebook on online/offline political participation and civic engagement are mediated by online social capital, political self-efficacy, and online trust. It also aims to demonstrate to what extent the general use and political use of Facebook positively predict online/offline political participation and civic engagement over and above six control variables and four demographic variables. We use data gathered from an online survey of 3,810 college students in North Carolina, a southeastern "swing" state, immediately after Election Day 2016 to validate the conceptual model. In doing this, we build upon two previous studies on Election 2012 (Yang & DeHart, 2016a, Yang & DeHart, 2016b).

THEORETICAL FRAMEWORK

Online/offline political participation and civic engagement

Political participation is defined as the participation of citizens in activities that can influence the structure of government, the selection of officials, and policies (Himmelboim et al., 2012). It can be operationalized as the frequency of engaging in political activities such as attending a political rally, and participating in demonstrations, protests, or marches (Gil de Zúñiga et al., 2012).

We define online political participation as political activities that occur in an online context (Brady, 1999). These include but are not limited to (1) writing to a politician online, (2) making a campaign contribution online, and (3) signing up to volunteer for a campaign/issue online (Gil de Zúñiga et al., 2012). Increasingly, academic researchers have realized that online political participation should be identified as a distinctive type of political participation (e.g., Gibson & Cantijoch, 2013; Oser, Hooghe, & Marien 2013).

Civic engagement is the participation of citizens in various informal community-based associational activities that do not involve political organizations, parties, or officials, and that are conducted voluntarily for charitable or social purposes (Gil de Zúñiga et al., 2014a). It is operationalized by five civic activities such as doing voluntary work for nonpolitical groups and attending meetings to discuss neighborhood problems (Gil de Zúñiga et al., 2012).

Studies have established that online and offline political participation, and civic engagement are three closely and positively related concepts. Research shows that offline political participation will lead to online political participation (e.g., Jung, Kim & Gil de Zúñiga, 2011; Valenzuela, Kim, & Gil de Zúñiga, 2012; Yang & DeHart, 2016a), whereas online political participation will facilitate offline political participation (e.g., Vitak et al., 2011; Metzger et al., 2015; Yang & DeHart, 2016b). Studies also revealed a positive relationship of civic engagement and online/offline political participation (e.g., Hargittai & Shaw, 2013; Wicks et al., 2014; Yang & DeHart, 2016b). Therefore, the following hypotheses were proposed:

H1: The (a) offline political participation and (b) civic engagement of U.S. college students positively predict their online political participation.

H2: The (a) online political participation and (b) offline civic engagement of U.S. college students positively predict their offline political participation.

H3: The (a) online and (b) offline political participation of U.S. college students positively predict their offline civic engagement.

Social media, social capital, political participation and civic engagement

It is widely accepted that social networking services (SNS) are used by Internet users to accumulate online and offline social capital (e.g., Ellison et al., 2007). Putnam (2000) defined social capital as social networks, and the norms of reciprocity and trustworthiness that arise from them. In this study, we use Lin's (2001) definition of social capital as resources embedded in social networks accessible through one's direct or indirect ties.

Researchers demonstrate that social media use can significantly enhance Internet users' online and offline social capital, often operationalized as bonding and bridging social capitals (e.g., Hofer & Aubert, 2013; Kim & Geidner, 2008; Sajuria et al., 2015). Bonding social capital refers to resources embedded in close relationships (ties) such as family and close friends and available to achieve many personal goals. Bridging social capital, the utility of broad social networks, gained from loose connections (ties) between individuals, can provide useful information or new perspectives for one another (Ellison et al., 2007; Gil de Zúñiga, 2012). Recently, a meta-analysis revealed that the overall effect size of the relationship between the use of social network sites (SNS) and bridging social capital was $r = .32$, with the 95% CI of (.27, .37) in 50 studies, whereas the overall effect size between SNS use and bonding social capital was $r = .26$, with the 95% CI of (.22, .31) in 43 studies (Liu, Ainsworth, & Baumeister, 2016). Williams' (2006) measures of bridging and bonding social capitals were adopted by 19 studies and informed by Ellison et al.'s (2007) scales that were employed by 20 studies (Liu et al., 2016). Hence, we adopted Williams' (2006) scales to measure online bridging and bonding social capital.

Research indicates that 79% of U.S. adults were Facebook users (Greenwood et al., 2016). The use of Facebook is measured by the time spent using Facebook on a typical day as time spent on SNS sites is the most widely used measure of social media use intensity (e.g., Ellison et al., 2007; Valenzuela et al., 2009). It is expected that the time spent on Facebook positively predicts users' online social capital. In addition, research shows that

frequent social media users are more likely than others to engage in “casual” online political activities such as liking a political candidate or post, and signing an online petition (e.g., Hargittai & Shaw, 2013; Cohen et al., 2012, Yang & DeHart, 2016a), especially young, college-educated U.S. adults aged 18-29 (e.g., Smith, 2013). Thus, we hypothesized that:

H4: The more time U.S. college students spend on Facebook daily, the higher will be their online social capital (bonding and bridging).

H5: The more time U.S. college students spend on Facebook daily, the more frequent will be their political use of Facebook.

General use of social media served as a significant and positive predictor of online/offline political participation and civic engagement in the current research literature on social media and politics (e.g., Towner, 2013; Valenzuela et al., 2009; Xenos, Vromen, & Loader, 2014; Zhang et al., 2013; for the meta-analytic reviews see Skoric et al., 2016; Skoric & Zhu, 2016). Nevertheless, many studies could not validate the positive influence of general social media use on online/offline political participation and civic engagement (e.g., Baumgartner & Morris, 2010; Carlisle & Patton, 2013; Groshek & Dimitrova, 2011; Hyun & Kim, 2015; Theocharis & Lowe, 2016). Perhaps the time displacement theory applies. Time displacement theorists argue that a person’s use of time and money is a zero sum game in which media use competes with important activities in one’s life as consumers can only devote a limited amount of time and money to media consumption, and civic and political engagement. If a person spends too much time using media, he/she will have to cut his/her time spent studying, working, and getting involved in community services and political activities (e.g., Flannery & O’Donoghue, 2013; Putnam, 2000; Williams, 2007).

Hence, the study posed the first three research questions regarding the influence of general use of Facebook:

R1: To what extent does the time spent by U.S. college students on Facebook daily predict their (a) online political participation, (b) offline political participation, and (c) offline civic engagement?

Political use of social media

The political use of Facebook consists of the frequency of sharing anything about political issues, responding to friends' political posts, commenting on friends' political posts, and encouraging friends to vote.

Studies show that the political use of social media can significantly enhance offline political participation including protesting, voting intent, and voting behavior among adults (e.g., Bode et al., 2014; Gil de Zúñiga et al., 2012; Kim & Khang, 2014; Yamamoto, Kushin, & Dalisay, 2015; Yang & DeHart, 2016b). Similarly, the political use of social network sites and blogs can intensify online political participation, such as contributing money online to a candidate running for public office (e.g., Gil de Zúñiga et al., 2014b; Housholder & LaMarre, 2015; Kim & Chen, 2016; Towner, 2013; Vitak et al., 2011; Yang & DeHart, 2016a). Additionally, studies demonstrated the positive influence of political use of social media on offline civic engagement such as doing voluntary work for nonpolitical groups, and raising money for charity (e.g., Rojas & Puig-i-Abril, 2009; Shah et al., 2005). The above discussion leads us to the following hypotheses:

H6: U.S. college students' political use of Facebook positively predicts their (a) online political participation, (b) offline political participation, and (c) offline civic engagement.

Social capital, political participation, and civic engagement

Previous studies revealed a positive association of social capital and political participation online or offline (e.g., Gibson & McAllister, 2013; Gil de Zúñiga et al., 2017; Valenzuela et al., 2012). Moreover, research shows that online/offline social capital is positively associated with online/offline civic engagement (e.g., Collins, Neal, & Neal, 2014; Gil de Zúñiga et al., 2012; Warren, Sulaiman, & Jaafar, 2015; Zhong, 2014). So, we posited that

H7: U.S. college students' online social capital positively predicts their (a) political use of social media, (b) online political participation, (c) offline political participation, and (d) offline civic engagement.

Political self-efficacy and political participation

Political efficacy consists of two related but distinct components: (1) internal efficacy - the confidence in one's capabilities to understand politics, and to participate in political

activities effectively, and (2) external efficacy - the belief that government officials and political institutions care about what citizens want and need (Niemi, Craig, & Mattei, 1991). The success of a democratic government relies on citizens' confidence and competence in governing and being governed by others. Political self-efficacy has been consistently shown to positively predict traditional political participation (Chan, 2014; Scheufele & Nisbet, 2002), civic engagement (Chan & Guo, 2013; Zhong, 2014), and voting intent/behavior (Leshner & Thorson, 2000; Moeller et al., 2014).

As well-informed and confident citizens tend to be politically active offline, it follows that these citizens should be more likely to get involved in online political activities than others. Actually, recent studies found that political self-efficacy positively predicted the political use of social media, online/offline political participation, and civic engagement (Gil de Zúñiga et al., 2012; Jensen, 2013; Jordan, Pope, Wallis, & Iyer, 2015; Jung et al., 2011; Kim, Lee, & Yoon, 2015; Yang & DeHart, 2016a). Therefore, we hypothesized that:

H8: U.S. college students' political self-efficacy positively predicts their (a) political use of social media, (b) online political participation, (c) offline political participation, and (d) offline civic engagement.

Social trust, social capital and political participation

This study defines general social trust as an individual's general attitudes toward human nature, especially, one's faith in people (Rosenberg, 1956). It is measured by the extent to which most people in a given community, region or nation can be trusted (Burns & Kinder, 2000). Many scholars consider social trust an integral component of social capital (e.g., Burns & Kinder, 2000; Putnam, 2000). For example, Putnam (2000) shows that the percentage of people agreeing that most people can be trusted was very highly correlated with his elaborate index of social capital ($r = .92$). Recent studies have identified a positive link between trust and online/offline bonding social capital (e.g., Bouchillon, 2014; Phua et al., 2017) but other studies have failed to corroborate the finding (e.g., Growiec & Growiec, 2014). Similarly, some researchers identified a positive correlation between generalized trust and online/offline bridging social capital (e.g., Growiec & Growiec, 2014; Mou & Lin, 2017), whereas other scholars did not find a positive association (e.g., Bouchillon, 2014).

Previous studies also found that generalized social trust was positively related to civic engagement (e.g., Brown, Hoye, & Nicholson, 2014; Valenzuela et al., 2009; Warren et al., 2015; Yang & DeHart, 2016b). However, other studies could not find a strong positive link between general trust and civic engagement (e.g., Bekkers, 2012; van Ingen & Bekkers; 2015). While researchers identified a weak, positive influence of social trust on political participation (e.g., Burns & Kinder, 2000; Matthes, 2013), others contradicted the connection of social trust and political participation (e.g., Uslaner & Brown, 2005; Yang & DeHart, 2016b). Thus, we posed the following question:

R2: How does U.S. college students' online general social trust predict their (a) online social capital, (b) online political participation, (c) offline political participation, and (d) offline civic engagement?

METHODS

An online survey was developed and fielded via Qualtrics.com on November 9, 2016 to recruit participants among college students at 14 higher education institutions in a southeastern battleground state in the United States. The use of a college student sample is appropriate because well-educated young adults are more likely to use social media (Greenwood et al., 2016). Young voters probably cast the decisive votes in 2008 and 2012 Presidential elections (Pew Research Center, 2012). CIRCLE (2016) estimated that about 23.7 million young voters (50% of U.S. citizens ages 18-29) participated in the 2016 presidential election.

In October, we requested 27,358 email addresses from 14 public state universities. After the initial contact of those prospective participants, 27,305 accounts were found to be valid because of 49 bounces and clerical errors. Two prizes of a \$50 Amazon gift card were announced to encourage student participation in our survey and a random drawing. After two reminders at a six-day interval, the survey was closed on November 23. Although 4,808 responses were received in 14 days, 3,810 cases were retained with little missing data. The response rate is 17.6%, whereas the completion rate is 13.95%, comparable to that of similar online surveys (e.g., Valenzuela et al., 2009; van Veen, Göritz, & Sattler, 2016).

The questionnaire consists of 64 questions including one measure of Facebook use (Ellison et al., 2007), a four-item scale of political use of Facebook developed by the

authors based on Pew surveys on social media and political engagement, one measure of online trust (Valenzuela et al., 2009), a seven-item scale of political self-efficacy (Niemi et al., 1991), a ten-item scale of online bonding and bridging social capitals (Williams, 2016), a six-item scale of online political participation (Gil de Zúñiga et al., 2012), an eight-item scale of offline political participation (Gil de Zúñiga et al. 2012), and a five-item scale of offline civic engagement (Gil de Zúñiga et al. 2012). Finally, a three-item scale of political ideology was also tapped (Lerman, McCabe, & Sadin, 2015). All major scales are shown in the Appendix.

RESULTS

The majority of 3,810 survey participants was female (70.7%) and white (59.2%) with 81% of them aged 18-29 (mean = 24.8). Their family annual income was quite evenly distributed. There were more light and medium users of Facebook than heavy users and non-users among our participants: 70.2% of them reported to have spent less than 2 hours using Facebook daily.

The reliability of 8 multi-item scales is satisfactory with all Cronbach values higher than 0.70 (Nunnally & Bernstein, 1994): political use of Facebook (0.864), online bonding social capital (0.798), online bridging social capital (0.895) political self-efficacy (0.760), political ideology (0.907), online political participation (0.876), offline participation (0.890) and civic engagement (0.715). In addition, the Average Variance Explained (AVE) of 6 constructs exceeded the recommended level of 0.50 (Fornell & Larcker, 1981), including political use of Facebook (0.634), online bridging social capital (0.640), political self-efficacy (0.760), political ideology (0.773), online participation (0.558), and offline participation (0.520). Results of a confirmatory factor analysis (CFA) demonstrated that the measurement model achieved satisfactory fit. All global fitness indexes have met four conventional standards and a new standard: the normed chi-square (4.98, $df = 607$) in the range of 1-5, the Root Mean Square Error of Approximation (RMSEA = 0.032) ≤ 0.06 , Tucker-Lewis Index (TLI = 0.963) ≥ 0.95 , Comparative Fit Index (CFI = 0.968) ≥ 0.95 (Byrne, 2010; Hu & Bentler, 1999), and Standardized Root Mean Square Residual (SRMR = 0.0424) ≤ 0.05 (Niemand & Mai, 2018). Thus, the measurement model was retained for model testing with structural equation modeling (SEM).

Partial correlations of 11 key variables were calculated and shown in Table 1 (see Appendix) for future validation and meta-analysis. Hierarchical multiple regression modeling was also used to determine what demographic, psychological and behavioral factors predict U.S. college students' online and offline political participation, civic engagement, online social capital and political use of social media. The results are presented in Tables 2-3. Five sets of multicollinearity statistics demonstrated that multicollinearity was not a problem with the independent variables in all regression models, as no tolerance was below .35 and no variance inflation factor (VIF) was higher than 3 (Cohen, Cohen, West, & Aiken, 2003). The common method bias was first checked by performing Harman's one-factor test. Our principle component factor analysis of all items measuring 11 key constructs did not yield one factor solution and no factor emerged to account for most of the covariance among measures. Due to several limitations of Harman's single-factor test (Podsakoff et al., 2003), we conducted a full collinearity assessment recommended by Kock (2015). We used WarpPLS to construct and test a SEM model in which 11 key latent variables predicted a dummy variable with random values. We found that VIF values ranged from 1.014 to 1.872. All the values are below the suggested VIF threshold of 3.3 (Kock & Lynn, 2012). Based on the results of the two tests, we concluded that common methods bias was not an issue in this study.

H1, H2 and H3 were firmly supported by the hierarchical regression results shown in Table 2. As shown in Table 3, H4 was supported firmly. Results in Table 3 strongly supported H5.

As demonstrated by Table 2, H6a was not supported, regarding the political use of Facebook as a predictor of U.S. college students' online political participation. H6b was supported, as the political use of Facebook positively predicted their offline political participation. H6c was rejected because students' political use of Facebook was not a positive predictor of their civic engagement.

H7a was evidently supported as our participants' online social capital positively predicted their political use of Facebook (see Table 3). H7b and H7c were rejected, whereas H7d was supported by results in Table 2.

The hypotheses concerning political self-efficacy were tested by Tables 2-3. H8a, H8c and H8d were all supported but H8b was rejected by the findings.

Results in Table 2 were used to answer three research questions about the general use of Facebook. No evidence supported any positive influence of general Facebook use on online/offline political participation, and civic engagement. Conversely, general Facebook use was identified as a negative predictor of civic engagement.

We examined the results in Tables 2-3 (see Appendix) to answer the last four research questions about the influence of online general social trust. We found online trust to be a strong positive predictor of students' online social capital in Table 3. Table 2 revealed that online trust positively predicted students' online political participation but had no influence on offline political participation and civic engagement.

Figures 1-3 have displayed three best fitting Facebook models to predict U.S. college students' online & offline political participation, and civic engagement when demographic and other control variables were not included. The covariance-based SEM (CB-SEM) with maximum likelihood estimation was adopted via AMOS 22 to identify these three best fitting models after testing many alternative models nested within the proposed model. After allowing reasonable error terms to correlate, these three models had all yielded satisfactory fit: their normed chi-square values are below 5, their RMSEAs < 0.06, their TLIs > 0.95, their CFIs > 0.95 (Byrne, 2010; Hu & Bentler, 1999), and their SRMR < 0.05 (Niemand & Mai, 2018). Hence, these three models were retained and recommended for validation by future researchers.

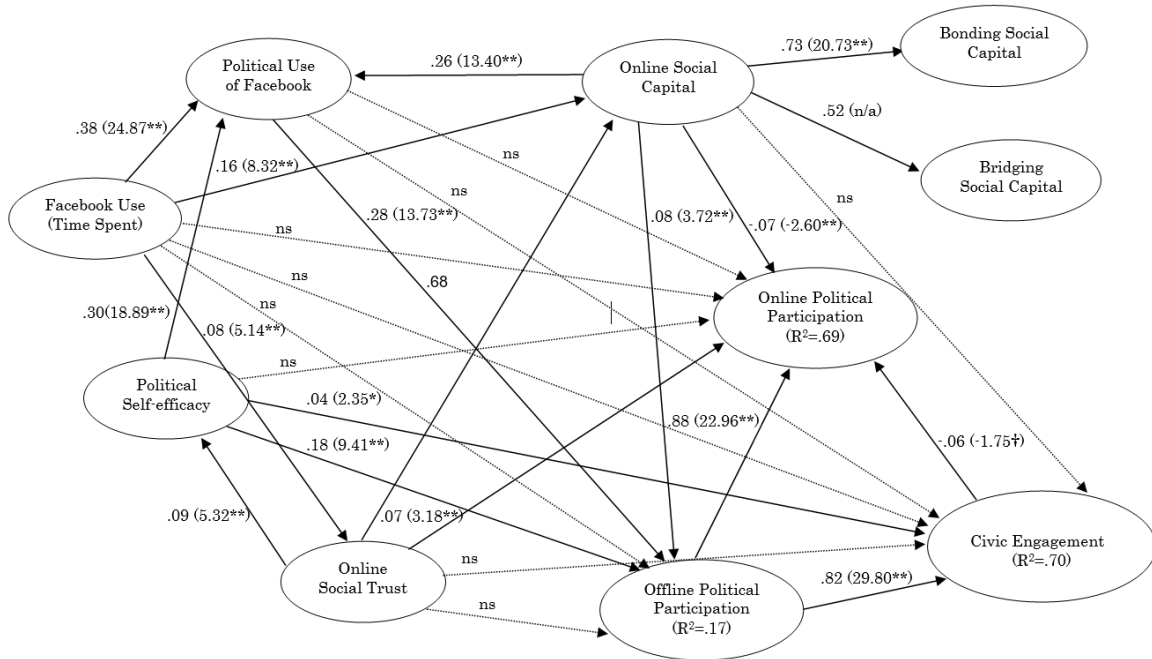


Figure 1. The tested model of Facebook use, political and civic engagement (predicting online political participation). Note. N = 3,810. Significance of the standardized path estimates are shown in parentheses (critical ratio). † $p < .10$, * $p < .05$, ** $p < .01$, ns = not significant, n/a = not applicable. Model fit: $\chi^2 = 3352.76$, $df = 684$, $p = .000$; $\chi^2/df = 4.902$; RMSEA = 0.032; TLI = 0.961; CFI = 0.966; SRMR = 0.0385. The dotted paths were removed.

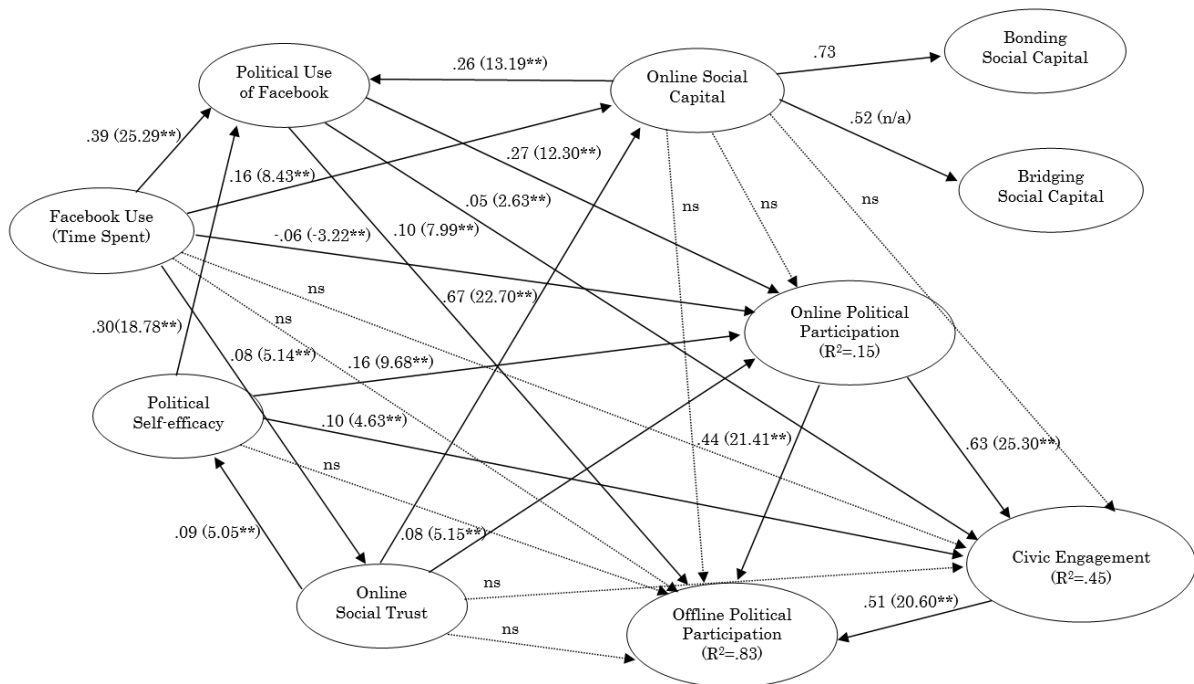


Figure 2. The tested model of Facebook use, political and civic engagement (predicting offline political participation). Note. N = 3,810. Significance of the standardized path estimates are shown in parentheses (critical ratio). † $p < .10$, * $p < .05$, ** $p < .01$, ns = not significant, n/a = not applicable. Model fit: $\chi^2 = 3138.26$, $df = 679$, $p = .000$; $\chi^2/df = 4.622$; RMSEA = 0.031; TLI = 0.964; CFI = 0.969; SRMR = 0.0382. The dotted paths were removed.

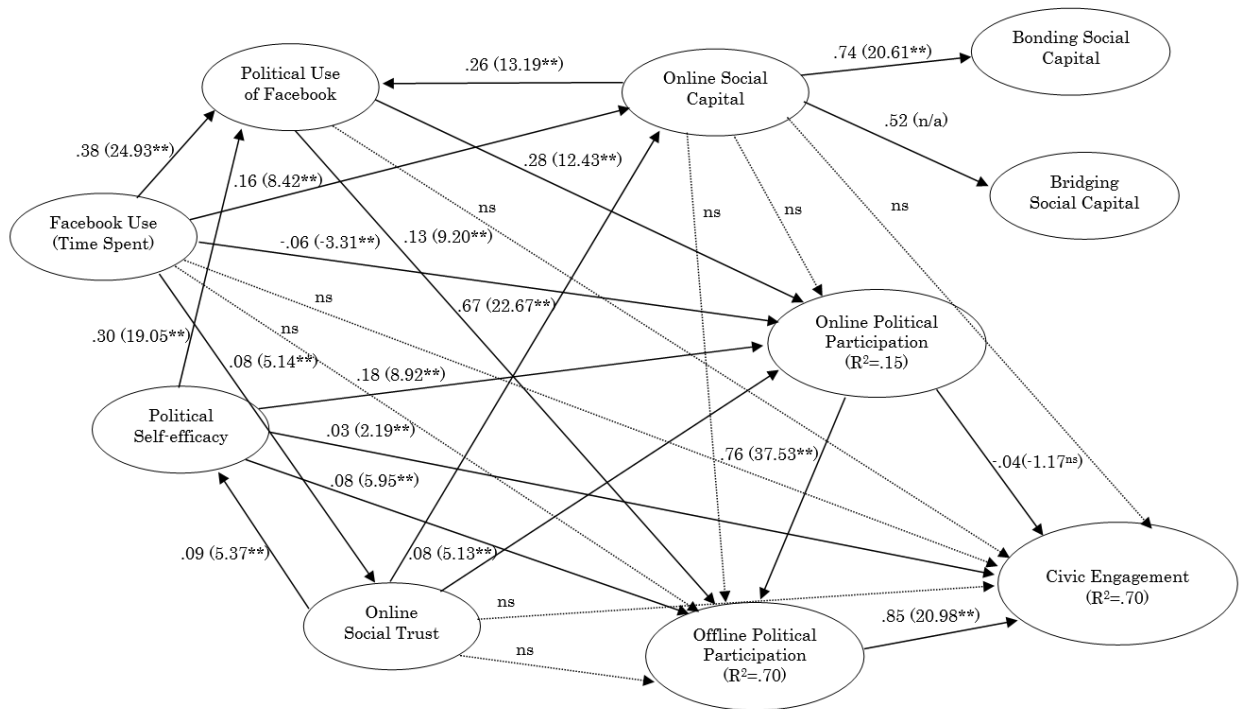


Figure 3. The tested model of Facebook use, political participation and civic engagement (predicting civic engagement). Note. N = 3,810. Significance of the standardized path estimates are shown in parentheses (critical ratio). † $p < .10$, * $p < .05$, ** $p < .01$, ns = not significant, n/a = not applicable. Model fit: $\chi^2 = 3214.25$, $df = 680$, $p = .000$; $\chi^2/df = 4.727$; RMSEA = 0.031; TLI = 0.963; CFI = 0.968; SRMR = 0.0387. The dotted paths were removed.

DISCUSSION AND IMPLICATIONS

We examined the influence of the general use and political use of Facebook on U.S. college students’ online/offline political participation, and civic engagement over and above four demographic variables and six control variables, and mediated by online social capital, political self-efficacy, and online trust in Election 2016. We also investigated the predictors of political use of Facebook and online social capital. This study offers four major findings on the impact of Facebook usage on political participation and civic engagement, among other things. First, the general use of Facebook has a small, negative effect on U.S. college students’ online/offline political participation and civic engagement over and above six control variables and four demographic variables.

Second, the political use of Facebook is a much more important and positive predictor than the general use of Facebook for our participants’ online/offline political participation and civic engagement even after controlling for six relevant variables and

four demographic variables. Third, the general use of Facebook does not influence our respondents' online/offline political participation but its small, negative effect on civic engagement persists in the final model. Finally, the positive impact of the political use of Facebook on students' offline participation endures but its positive effect on online participation and civic engagement is subsumed by offline political participation in the final model. Our findings carry important implications for political scientists, communication scholars, political strategists, campaign organizers, and politicians. We explain the implications of each finding in further detail below.

We provided additional empirical evidence to support the close, positive relationships of online political participation, offline political participation, and offline civic engagement. We identified a strong bi-directional influence between online political participation and offline political participation in our 2016 survey data, which is consistent with previous studies (e.g., Jung et al., 2011; Metzger et al., 2015; Valenzuela et al., 2012; Vitak et al., 2011; Yang & DeHart, 2016b). Our study also revealed a strong bi-directional influence of offline political participation and civic engagement and a weak but positive bi-directional influence of online political participation and civic engagement, corroborating past research (e.g., Hargittai & Shaw, 2013; Wicks et al., 2014). These relationships did not change from 2012 to 2016 (see previous studies of Election 2012). Our findings suggest that, for college students, online political participation may enhance offline political participation sometimes, whereas, their offline political participation can often extend into cyberspace. Offline civic engagement is more likely to lead to offline political participation than online political participation. Offline political participation is a better predictor of offline civic engagement than is online political participation. Political campaign organizers, educators, and policy makers should encourage college students to participate in political and civic activities offline. If students are willing to invest their time, energy and resources on political and social causes in person, they will be valuable assets for political and social movements, and will be more likely to become influential opinion leaders and mobilizers online.

We discovered that U.S. college students' Facebook use contributed to their online social capital, which in turn facilitated their political use of Facebook. Our findings substantiated that the SNS use, especially Facebook, can increase one's online social

capital, the claim of previous studies (e.g., Ellison et al., 2007; Liu et al., 2016). More importantly, we found that U.S. college students' online social capital led to their political use of Facebook, whereas political use of Facebook benefited their online social capital. This suggests that U.S. college students may be emboldened to discuss political/social issues on Facebook after accumulating considerable online social capital. Perhaps political interactions on Facebook have become increasingly acceptable in the echo chamber of Facebook friends. These political interactions among like-minded people on Facebook may enrich their online social capital.

This study does not support the positive influence of online social capital on U.S. college student's online/offline political participation, although it shows that online social capital positively predicted their civic engagement. The findings are inconsistent with some previous studies (e.g., Gibson & McAllister, 2013; Valenzuela et al., 2012; Warren et al., 2015; Zhong, 2014) but corroborate other studies (e.g., Collins et al., 2014; Gil de Zúñiga et al., 2012; Yang & DeHart, 2016b). The findings suggest that rich online capital of U.S. college students does not directly leads to their active online and offline political participation. Although some college students have thousands of online friends from different walks of life, these social contacts do not automatically transform them into political activists online or offline. On the other hand, students with plenty of online social capital are more likely to share political news or information, respond to or comment on political posts, and urge their friends to vote on Facebook. The mixed results suggest that college students' broad online social networks may benefit online casual political communications and civic engagement. Loose online social ties may facilitate offline social activism of college students. It is also likely that students who actively engage in civic activities will have a broader online social network than others.

We found that the general use of Facebook did not positively predict online/offline political participation and civic engagement of U.S. college students in 2016, consistent with previous studies of Election 2012 (e.g., Yang & DeHart, 2016a). It is further evidence to support the time displacement theory that many heavy users of Facebook spend too much time and energy building social relationships with their online friends so that they have to neglect political participation and civic engagement. In fact, Facebook use negatively predicted their online/offline political participation and civic engagement after

controlling for four demographic variables and six control variables. Its negative effect on civic engagement persists in the final model. Just like Putnam (2000) blamed TV being partly responsible for the strange disappearance of social capital, we may blame the heavy use of social media for political and civic disengagement among digitally savvy youths. Indeed, many studies could not find any positive influence of social media use on political participation (e.g., Baumgartner & Morris 2010; Carlisle & Patton, 2013; Groshek & Dimitrova, 2011; Hyun & Kim, 2015). Our findings suggest that political communicators, campaign organizers, and fund-raisers should not target messages to heavy users of Facebook unless they frequently use Facebook for social and political purposes.

Our survey has validated the positive influence of the political use of Facebook on online/offline political participation and civic engagement over and above four demographic variables and six control variables, as shown in previous studies (e.g., Bode et al., 2014; Gil de Zúñiga et al., 2012, Yamamoto et al., 2015; Yang & DeHart, 2016b). In addition, the direct effect of the political use of Facebook on offline political participation endures even after online participation and civic engagement are entered into the regression model. Finally, we found that the number of political figures followed on Facebook positively predicted U.S. college students' online and offline participation, whereas Facebook friends positively predicted their civic engagement. It is hard for a cross-sectional survey to determine whether their political use of Facebook preceded offline political participation or whether their offline political activities extended into Facebook. Likely, those Facebook discussants and followers of political figures are more interested in politics than others. They might have been more involved participants in political activities on and off the campus before they took their political causes to Facebook. Nevertheless, the correlation between the political use of Facebook and offline political participation proves to be consistently positive and stable over time. Therefore, we recommend that political campaign organizers tailor messages to online adults who tend to use social media for political purposes. It will be more effective and efficient to reach out to those online political participants through social media than others as it is more likely to convert them into political mobilizers, volunteers, activists, and donors in reality. Political campaigns could also utilize them as viral agents by feeding mobilizing messages to these political actors on social media.

It is not surprising to find that U.S. college students' political self-efficacy positively predicted their political use of Facebook, offline political participation, and civic engagement in 2016. The result has confirmed that political self-efficacy can encourage traditional political participation and civic engagement as shown in many studies (e.g., Chan, 2014; Chan & Guo, 2013; Scheufele & Nisbet, 2002; Zhong, 2014). However, our survey did not identify political self-efficacy as a positive predictor of online political participation, inconsistent with past research (e.g., Gil de Zúñiga et al., 2012; Jensen, 2013; Jordan et al., 2015; Jung et al., 2011; Yang & DeHart, 2016a). It is possible that the effect of political self-efficacy on online political participation was fully mediated by offline political participation, civic engagement and political use of Facebook. We found that political self-efficacy positively predicted the political use of Facebook. This means that college students will participate in politics casually via Facebook, and get involved in offline political and civic activities if they have adequate knowledge, interests, and faith in participatory democracy and electoral politics. If educators and parents keep college students well-informed about political and social issues, and if campaign organizers and fund raisers bring relevant issues to the attention of college students, the students may be motivated to take political actions online and offline. Moreover, if we convince students that they can make a difference regarding political and social issues, they may become politically active and civically engaged.

Interestingly, the online social trust of U.S. college students served as a positive predictor of their online political participation but failed to predict their offline political participation and civic engagement. In addition, their online trust positively contributed to their online social capital. Confirming some studies (e.g., Bouchillon, 2014; Burns & Kinder, 2000; Phua, Jin, & Kim, 2017; Matthes, 2013), our results are inconsistent with other studies (e.g., Brown et al., 2014; Warren et al., 2015; Uslaner & Brown, 2005; Yang & DeHart, 2016b). Our results suggest that online social trust is a distinct construct, compared to offline social trust, and that two kinds of trust influence online/offline political participation and offline civic engagement differently. It is likely that building online social trust can encourage online political participation among U.S. college students.

Our additional findings on the influence of demographics and control variables suggest that it will be more cost-efficient and effective to focus political messages on minority and/or younger college students to encourage offline political participation. Online campaigns may work better for male and/or older college students, as they reported more active online political participation than their female and younger counterparts. It is good to know that social media can be used to reach male and older college students. To recruit change agents for social causes, we should consider female and/or white and/or older college students with higher family income in the U.S. Moreover, community organizers and social activists should solicit the help of Facebook users with broad social networks for their campaigns to expand their marketing reach online/offline. Political ideology negatively predicted U.S. college students' online/offline political participation and civic engagement after controlling four demographic variables and 7 predictors, whereas liberal students seem to be more likely to use Facebook for political purposes than conservative students.

LIMITATIONS

Despite the contributions made by this paper, it suffers from a few limitations that can be addressed in future studies on this topic. First, since we used a survey to gather data, it is likely that more politically engaged participants were interested in taking the survey. As a result, the sample might be skewed to reflect the opinions of those college students who are more interested in politics on Facebook. Subsequent studies could avoid this by using field experiments that can better replicate real-world settings. Future researchers could also utilize a bigger, random sample across the country to strengthen external validity. More male students could be included in the sample, as women were overrepresented in our sample. New research should examine other social media platforms such as Twitter, and other important factors that influence online/offline political participation and civic engagement, such as political interest, political knowledge, and partisanship. Our data analyses are based on a cross-sectional survey data and this study is correlational by nature. Hence, longitudinal panel studies are also recommended to establish causality.

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Appendix: UNC 2016 Survey on Social Media and Civic Engagement

Facebook Usage ¹	On a typical day, about how much time do you spend on Facebook? (1) 0. (2) 1-30 minutes. (3) 30 minutes - 1 hour. (4) 1- 1.5 hours. (5) 1.5-2 hours. (6) 2-2.5 hours. (7) 2.5-3 hours. (8) 3-3.5 hours. (9) 3.5-4 hours. (10) 4-4.5 hours (11) 4.5-5 hours (12) More than 5 hours.
Facebook Friends ²	About how many total Facebook friends do you have? (1) 0. (2) 1-50 friends. (3) 51-100 friends. (4) 101-150 friends. (5) 151-200 friends. (6) 251-300 friends. (7) 351-400 friends. (8) 451-500 friends. (9) 501-550 friends. (10) 551-600 friends. (11) 601-650 friends. (12) 651-700 friends. (13) 701-750 friends. (14) 751-800 friends. (15) 801-850 friends. (16) 851-900 friends. (17) More than 900 friends.
Political Figures Befriended on Facebook ³	How many political figures have you befriended on Facebook? Such as present and past presidents, presidential candidates, senators, congressmen, news commentators, journalists, and activists etc. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, more than 30
Political Use of Facebook ⁴	1. On Facebook, how often did you share anything about political issues (such as a photo, video or an article etc.) in 2016? (1) Never. (2) Rarely. (3) Sometimes. (4) Usually. (5) Always. 2. How often did you respond to your friends' posts about any political issues on Facebook by clicking "like" or other emojis in 2016? (1) Never. (2) Rarely. (3) Sometimes. (4) Usually. (5) Always. 3. How often did you comment on your friends' posts about any political issue on Facebook in 2016? (1)Never. (2) Rarely. (3) Sometimes. (4) Usually. (5) Always. 4. How often did you encourage your friends to vote on Facebook in 2016? (1)Never. (2) Rarely. (3) Sometimes. (4) Usually. (5) Always.
Online Bonding Social Capital ⁵	1. There are several people online I trust to help solve my problems. 2. There is someone online I can turn to for advice about making very important decisions. 3. There is someone online who I can turn to for an emergency loan of \$500. 4. The people I interact with online would put their reputation on the line for me. 5. I do not know people online well enough to get them to do anything important. (reversely coded)
Online Bridging Social Capital ⁶	1. Interacting with people online makes me feel connected to the bigger picture. 2. Interacting with people online makes me curious about other places in the world. 3. Interacting with people online makes me want to try new things. 4. Interacting with people online makes me interested in things that happen outside of my town. 5. Interacting with people online makes me feel like part of a larger community.
General Online Social Trust ⁷	Generally speaking, I would say that people online can be trusted.

<p>Political Ideology⁸</p>	<ol style="list-style-type: none"> 1. Regarding political issues, where would you place yourself on a scale from 1 to 10 where 1 means <i>overall</i> very politically liberal and 10 means <i>overall</i> very politically conservative? (1) 1 (2) 2. (3). 3 (4).4. (5). 5. (6) 6. (7) 7. (8) 8. (9) 9. (10). 10 2. Regarding social issues, where would you place yourself on a scale from 1 to 10 where 1 means <i>overall</i> very socially liberal and 10 means <i>overall</i> very socially conservative? (1) 1 (2) 2. (3). 3 (4).4. (5). 5. (6) 6. (7) 7. (8) 8. (9) 9. (10). 10 3. Regarding economic issues, where would you place yourself on a scale from 1 to 10 where 1 means <i>overall</i> very economically liberal and 10 means <i>overall</i> very economically conservative? (1) 1 (2) 2. (3). 3 (4).4. (5). 5. (6) 6. (7) 7. (8) 8. (9) 9. (10). 10
<p>Political Self-efficacy⁹</p>	<ol style="list-style-type: none"> 1. I consider myself well-qualified to participate in politics. 2. I feel that I have a pretty good understanding of the important political issues facing our country. 3. I feel that I could do as good a job in public office as most other people. 4. I think that I am better informed about politics and government than most people. 5. Sometimes, politics and government seem so complicated that a person like me can't really understand what's going on. 6. People like me don't have any say about what the government does. (reversely coded) 7. I don't think public officials care about what people like me think. (reversely coded)
<p>Online Political Participation¹⁰</p>	<p>During 2016, how often have you participated in the following activities online?</p> <ol style="list-style-type: none"> 1. Written to a politician online 2. Made a campaign contribution online 3. Participated in a political listserv you subscribed 4. Signed up to volunteer for a campaign online 5. Sent a political message via email 6. Written a letter to the editor of a news website <p>(1) Never. (2) Once or twice in a year. (3) About once a month. (4) Several times a month, but not every week. (5) About once a week. (6) Several times a week. (7) Every day.</p>
<p>Civic Engagement¹¹</p>	<p>During 2016, how often have you participated in the following activities offline?</p> <ol style="list-style-type: none"> 1. Done voluntary work for nonpolitical groups 2. Raised money for charity 3. Attended a meeting to discuss neighborhood problems 4. Purchased products for the social values advocated by the company 5. Boycotted a certain product or service because you disagreed with the social values of the company <p>(1) Never. (2) Once or twice in a year. (3) About once a month. (4) Several times a month, but not every week. (5) About once a week. (6) Several times a week. (7) Every day.</p>
<p>Offline Political Participation¹²</p>	<p>During 2016, how often have you participated in the following activities offline?</p> <ol style="list-style-type: none"> 1. Attended a public hearing, town hall meeting, or city council

	<p>meeting</p> <ol style="list-style-type: none"> 2. Called or sent a letter to an elected public official 3. Spoken to a public official in person 4. Posted a political sign, banner, button or bumper sticker 5. Attended a political rally 6. Participated in any demonstrations, protests, or marches 7. Participated in groups that took any local action for social or political reform 8. Been involved in public interest groups, political action groups, political clubs, or party committees <p>(1) Never. (2) Once or twice in a year. (3) About once a month. (4) Several times a month, but not every week. (5) About once a week. (6) Several times a week. (7) Every day.</p>
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Note: All response options ranged from 1, “strongly disagree” to 7, “strongly agree” if not provided.

^{1, 2} Adapted from Ellison et al. (2007).

³ Developed by the authors based on previous studies.

⁴ Developed by the authors based on Pew surveys on political uses of social media.

^{5, 6} Adopted from Williams (2006).

⁷ Adapted from Valenzuela et al. (2009).

⁸ Adopted from Lerman, McCabe, & Sadin (2015)

⁹ Adopted from Niemi et al. (1991).

^{10, 11, 12} Adapted from Gil de Zúñiga et al. (2012).

Table 1

Partial correlation matrix of key variables with four demographic variables controlled

	Facebook Use	Facebook Friends	Political Figures	Political Use of Facebook	Online Social Capital	Online Trust	Political Self-efficacy	Political Ideology	Online participation	Offline Participation	Civic Engagement
Facebook Use	—										
Facebook friends	.311***	—									
Political Figures followed on FK	.225***	.223***	—								
Political Use of Facebook	.386***	.294***	.372***	—							
Online Social Capital	.187***	.144***	.165***	.345**	—						
Online General Social Trust	.106***	.063***	.082***	.218***	.542***	—					
Political Self-efficacy	.022	.053**	.196***	.298***	.161***	.128***	—				
Political Ideology	-.017	.031	-.045**	-.152***	-.151***	-.133***	-.025	—			
Online Political Participation	.058***	.076***	.238***	.266***	.125***	.152***	.198***	-.102***	—		
Offline Political Participation	.070***	.119***	.261***	.351***	.160***	.151***	.274***	-.114***	.714***	—	
Offline Civic Engagement	.031	.117***	.200***	.267***	.157***	.111***	.228***	-.089***	.493***	.630***	—

Note. N = 3,810. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 2

Factors predicting US college students' online & offline political participation, and civic engagement in Election 2016

Variable	Predictors of online political participation				Collinearity Statistics		Predictors of offline political participation				Collinearity Statistics		Predictors of offline civic engagement				Collinearity Statistics	
	Model 1	Model 2	Model 3	Model 4	Tolerance	VIF	Model 1	Model 2	Model 3	Model 4	Tolerance	VIF	Model 1	Model 2	Model 3	Model 4	Tolerance	VIF
Gender	-.057***	-.087***	-.066***	-.048***	.946	1.057	-.013	-.052**	-.029	-.002	.942	1.062	.030	.003	.020	.041**	.944	1.059
Race	.075***	.052**	.065***	.010	.890	1.123	.096***	.067***	.086***	.060***	.898	1.114	-.017	-.037*	-.020	-.072***	.897	1.115
Age	.078***	.070***	.055***	.056***	.913	1.095	.019	.008	-.007	-.052***	.914	1.094	.064***	.056***	.052**	.050***	.911	1.097
Family Income	-.014	.010	.000	-.003	.895	1.117	-.012	.019	.001	-.011	.896	1.116	.032	.054**	.035*	.034**	.897	1.115
Facebook Use		-.054**	-.055**	.003	.746	1.340		-.078***	-.078***	-.019	.747	1.339		-.086***	-.095***	-.048**	.749	1.336
Facebook Friends			.000	-.023	.804	1.243			.029	.010	.804	1.244			.058**	.042**	.805	1.242
Political Figures Followed on FK			.157***	.059***	.811	1.233			.139***	.026*	.808	1.238			.103***	.015	.807	1.240
Political Use of Facebook		.291***	.180***	.000	.581	1.721		.387***	.256***	.105***	.591	1.691		.306***	.181***	.028	.581	1.720
Online Social Capital			-.034	-.030*	.637	1.570			-.012	-.011	.636	1.572			.047*	.057***	.638	1.566
Online General Social Trust			.102***	.057***	.697	1.435			.068***	.010	.694	1.441			.020	-.026	.694	1.440
Political Self-efficacy			.108***	-.010	.818	1.222			.166***	.063***	.825	1.212			.146***	.048***	.821	1.219
Political Ideology			-.058***	-.015	.929	1.077			-.061***	-.015	.929	1.077			-.048**	-.011	.928	1.077
Offline Civic Engagement				.070***	.589	1.697				.334***	.713	1.402						
Online Political Participation										.504***	.705	1.419					.476	2.100
Offline Political Participation				.653***	.544	1.839											.445	2.250
<i>R</i> ²	.016	.088	.134	.527			.011	.137	.191	.635			.006	.083	.124	.414		
<i>F</i> (<i>df</i>) for change in <i>R</i> ²		150.39(2)***	33.62(6)***	1575.9 (2)***				279.5 (2)***	42.16 (6)***	2304.86 (2)***				159.48 (2)***	29.35(6)***	941.33 (2)***		

Note. Hierarchical multiple regression results. N = 3,810. **p* < .05. ***p* < .01. *** *p* < .001. Gender was dummy coded as 1 = male and 2 = female. Race was dummy coded as 1 = whites and 2 = non-whites.

Table 3
Factors predicting US college students' online social capital and political use of Facebook in Election 2016

Variable	Predictors of online social capital				Collinearity Statistics		Predictors of political use of Facebook				Collinearity Statistics	
	Model 1	Model 2	Model 3	Model 4			Model 1	Model 2	Model 3	Model 4		
	β	β	β	β	Tolerance	VIF	β	β	β	β	Tolerance	VIF
Gender	.048**	-.003	.010	.006	.942	1.062	.129***	.074***	.080***	.081***	.952	1.051
Race	-.010	-.048**	-.037**	-.032*	.891	1.122	.096***	.050***	.069***	.052***	.894	1.119
Age	-.059***	-.065***	-.046**	-.046**	.911	1.098	.031	.039**	.031*	.030*	.909	1.100
Family Income	-.044**	-.009	-.013	-.015	.896	1.116	-.098***	-.070***	-.077***	-.074***	.903	1.107
Facebook Use		.053**	.046**	.048**	.748	1.336		.279***	.256***	.259***	.817	1.224
Facebook Friends		.032	.041**	.038**	.805	1.242		.146***	.134***	.121***	.820	1.219
Political Figures Followed on FB		.033*	.030*	.032*	.807	1.238		.271***	.203***	.167***	.839	1.192
Political Use of Facebook		.310***	.185***	.185***	.600	1.668						
Online Social Capital									.177***	.169***	.657	1.523
Online General Social Trust			.479***	.481***	.928	1.078			.027	.013	.694	1.441
Political Self-efficacy			.036*	.034*	.819	1.221			.210***	.168***	.852	1.174
Political Ideology			-.058***	-.058***	.933	1.072			-.105***	-.089***	.940	1.064
Online Political Participation				-.040*	.474	2.111				.000	.473	2.113
Offline Political Participation				-.019	.365	2.738				.167***	.372	2.690
Offline Civic Engagement				.062***	.588	1.701				.028	.586	1.706
R^2	.007	.131	.361	.364			.045	.286	.390	.419		
$F(df)$ for change in R^2		135.33 (4)***	455.24(3)***	5.70 (3)**				429.66 (3)***	160.80(4)***	63.74 (3)***		

Note. Hierarchical multiple regression results. N = 3,810. * $p < .05$. ** $p < .01$. *** $p < .001$. Gender was dummy coded as 1 = male and 2 = female. Race was dummy coded as 1 = whites and 2 = non-whites.