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on Social Media

Abstract

The perception of political disagreement is more prevalent on social media than it is in face-to-face communication, and it may be associated with negative affect toward others. This research investigates the relationship between interpersonal evaluations (i.e., perceived similarity, liking, and closeness) and perceived political disagreement in social media versus face-toface settings. Relying on a representative survey of adult internet users in the United States (N = 489), the study first examines the differences between social media and face-to-face settings in terms of interpersonal evaluations and relates them to parallel differences in perceived disagreement. Results are discussed in light of important, ongoing scholarly conversations about political disagreement, tolerance toward the other side in politics, and the "affective turn" in public communication about politics.

Social Affect and Political Disagreement

Keywords

social affect, interpersonal evaluations, political disagreement, social media, affective publics, political communication

The perception of political disagreement is more common on social media than it is in face-to-face communication, and it may be associated with negative affect toward others. Recent evidence suggests that political disagreement is relatively prevalent in social media settings (Bakshy, Messing, & Adamic, 2015; Barberá, 2014; Barnidge, 2015, 2017; Kim, 2011; Kim, Hsu, & Gil de Zúñiga, 2013). Furthermore, recent scholarship outlines how political expression on social media has an important affective dimension (Papacharissi, 2015), which is becoming more pronounced as people interact with agonistic sentiment about politics and public affairs.

This research engages these themes by investigating the relationship between interpersonal evaluations (i.e., perceived similarity, liking, and closeness) and perceived political disagreement in social media versus face-to-face settings. In doing so, it builds upon my prior research (Barnidge, 2017), which found that social media users perceive more disagreement in social media settings than they do in face-toface settings. While that study focused on cognitive explanations for this difference, this study explores how social affect may contribute to the perception of political disagreement.

Relying on a representative survey of adult internet users in the United States, the study first examines the differences between social media and face-to-face settings in terms of interpersonal evaluations. It then tests the relationship between interpersonal evaluations and perceived political disagreement in both social media and face-to-face settings. Finally, it examines whether differences in interpersonal

evaluations between settings are related to differences in perceived disagreement between settings. Results are discussed in light of important, ongoing scholarly conversations about the nature of political disagreement, tolerance toward the other side in politics, and the "affective turn" in public communication about politics.

Political Disagreement

Political disagreement is an important concept to democratic theory because it is believed to promote tolerance of the other side (Mutz, 2006), and it is thought to encourage people to think more deeply about previously held ideas (Price, Cappella, & Nir, 2002). Recent research suggests that social media largely increase perceived political disagreement relative to political talk in face-to-face settings. Evidence of this comparative difference comes from both surveys (Barnidge, 2015, 2017; Kim, 2011; Kim et al., 2013) and "big data" (Bakshy et al., 2015; Barberá, 2014).

This relative increase in perceived disagreement likely occurs because social media tend to diversify news networks (Kim et al., 2013). Specifically, social media promote exposure to

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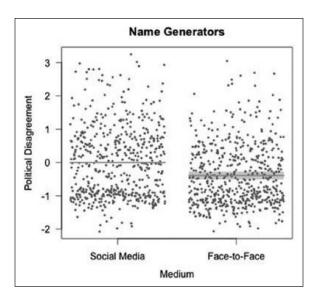


Figure 1. Mean differences in perceived political disagreement between social media and face-to-face settings. Reprinted with permission from Barnidge (2017).

cross-cutting information in comparison to face-to-face settings because the social norms of interaction on these platforms do not discourage the expression of opposing viewpoints (Barnidge, 2017). While both face-to-face and social media networks tend to sustain social connections characterized by overlapping dimensions of social affiliation (in fact, many people use social media to map face-to-face networks onto online platforms rather than to meet new people, see boyd & Ellison, 2007; Ellison, Steinfield, & Lampe, 2007), most individuals seek common ground in face-to-face discussion (Conover, Searing, & Crewe, 2002; MacKuen, 1990; Walsh, 2004), and social groups typically discourage disagreement (Eliasoph, 1998; Walsh, 2004). By contrast, social media promote information sharing and commenting (Bakshy, Rosenn, Marlow, & Adamic, 2012; Brundidge, 2010; Loader & Mercea, 2011), which means that social media do not necessarily discourage the expression of dissent in the same way that it is often discouraged in face-to-face settings.

My previously published research (Barnidge, 2017) demonstrates the comparative difference between face-to-face and social media settings in terms of perceived disagreement, and this study builds on that prior research using the same dataset. In that study, I found that average levels of perceived disagreement were higher in social media settings than in face-to-face settings. This finding is illustrated in Figure 1. That study also explored the cognitive processes associated with the perception of political disagreement on social media and theorized that reflection and cognitive elaboration stemming from cross-cutting news use ultimately leads to the perception of disagreement. Whereas that study examined cognitive process, this study explores a complementary and parallel affective process. In other words, it explores how affect toward specific individuals is associated in the perception of disagreement.

Interpersonal Evaluation

Interpersonal evaluation is a meta-concept that refers to the degree to which individuals rate others favorably in social relationships (Sprecher, Treger, & Wondra, 2013). As a multidimensional concept, scholars have examined interpersonal evaluations in the form of perceived similarity (Montoya, Horton, & Kirchner, 2008; Morry, 2007; Rabinowitch & Knafo-Noam, 2015; Sprecher, 2014; Sprecher, Treger, Fisher, Hilaire, & Grzybowski, 2015; Sprecher, Treger, & Wondra, 2013), liking (Morry, 2007; Sprecher, 2014; Sprecher & Hampton, 2017; Sprecher et al., 2015; Sprecher, Treger, & Wondra, 2013; Sprecher, Treger, Wondra, Hilaire, & Wallpe, 2013), and closeness (Rabinowitch & Knafo-Noam, 2015; Sprecher & Hampton, 2017; Sprecher, Treger, & Wondra, 2013). Research also shows that these dimensions are closely related to one another. For example, research on the similarity-attraction theory has demonstrated that perceived similarity is closely associated with both liking and closeness (Montoya et al., 2008; Morry, 2007; Sprecher, 2014).

There is at least one good reason to expect that interpersonal evaluations of face-to-face social contacts will be more positive than evaluations of social media contacts. To some extent, social media diversify social networks by affording users the ability to maintain a greater number of weak ties relationships than they can maintain offline. While most people use social media platforms to articulate existing social connections rather than to establish new connections (boyd & Ellison, 2007; Ellison et al., 2007), the maintenance of weak tie relationships keeps social connections intact that may otherwise dissipate, which means that social media networks may be relatively more diverse than offline social networks.

Social media also tend to diversify communication within those social networks. Social media articulate relationships across social and geographic boundaries that may act as obstacles for information sharing and discussion in face-to-face settings. Thus, social media make people more aware of what people in their networks are thinking and saying on a day-to-day basis than they otherwise would be, and in this way, social media make a wider range of political viewpoints salient to users (Kwon, Stefanone, & Barnett, 2014). Therefore, social media tend to diversify communication within social networks without necessarily diversifying those networks themselves.

This diversification of communication on social media can have an effect on how people evaluate their interpersonal contacts. According to social information processing theory (SIPT), people use available information to form impressions and evaluate others (Walther, 1992, 2011). The theory assumes that people are motivated to form impressions about and relationships with others, regardless of the medium of communication. In online platforms where non-verbal communication cues are "filtered out" (e.g., Postmes, Spears, &

Lea, 1998; Spears, Postmes, Lea, & Watt, 2001), people rely on other cues such as language, the timing of messages, and peripheral social information provided by the users (Walther, 2011). But whereas anonymous message boards filter out social cues, social media provide users with ample opportunities to disclose information about the self, often in multimodal form (Antheunis, Valkenburg, & Peter, 2010; Westerman, Van Der Heide, Klein, & Walther, 2008). These additional social cues increase the speed with which people are able to form impressions and learn about others (Westerman et al., 2008). Therefore, it follows that to the extent that social media diversify communication within social networks, that communication provides social cues that convey the presence of social difference between users and others. That is, social media afford users the ability to express their individuality, and this expression tends to convey social difference rather than social similarity. Because people tend to prefer homophily in social communication (Kandel, 1978), these differences should, on average, result in relatively lower levels of perceived similarity, liking, and closeness, and recent research demonstrates this difference between social media and face-to-face communication (Sprecher & Hampton, 2017). Therefore, perceived social difference communicated via social cues on social media should lower interpersonal evaluations in comparison to face-to-face communication. Thus, it is hypothesized that:

H1. Interpersonal evaluations of face-to-face contacts will be more positive than interpersonal evaluations of social media contacts.

Interpersonal Evaluation and Perceived Disagreement

The primary claim of this study is that the affective responses to impressions formed through social information processing can "spill over" into cognitive processes involved in the perception of political disagreement. The idea that affect influences cognition in political information processing is not new. For example, Conover and Feldman (1984, 1986) forwarded a dual processing model of economic information processing and political judgment in the 1980s. But social media offer an important opportunity to revisit this idea. As previously argued, social media arguably introduce higher levels of negative affect into social communication, and to the extent that political communication takes place in these venues, accounting for the role of affect in processing that communication poses a challenge and an opportunity to prevalent theories of social and political communication.

Two theories lend themselves to explaining how people perceive disagreement when they are exposed to cross-cutting political information (Barnidge, 2017). First, social judgment theory posits that if an idea falls outside of an individual's "latitude" of acceptance, they will be more likely to perceive disagreement (Sherif & Hovland, 1961). But research shows that affective processes also play a role in social judgment

(e.g., Forgas, 1992; Kaplan, 1991). Affect been shown to distort cognition by promoting selective attention to social information or by cueing previously stored social judgments (Anderson, 1989; Kaplan & Anderson, 1973). Thus, affect can influence social judgment processes, and negative affect toward an individual will make it more likely that disagreement with that individual will be perceived.

The second plausible theory is social identity theory (Tajfel, 1982). According to this perspective, if visible or implicit social cues communicate that the source of perceived disagreement adheres to an oppositional political group—real or imagined—individuals become more likely to categorize that individual into a political outgroup and contrast their views with those of the source. As with social judgment theory, affect also plays an important role in social identity theory. Identification with an in-group leads to negative evaluations of out-group members (Brewer, 1999; Iyengar, Sood, & Lelkes, 2012). Therefore, to the extent that cognitive assessments of political discourse are influenced by in-group identification, it is possible that affective evaluations mediate the relationship between in-group identification and the perception of political disagreement. Therefore, it is hypothesized that, regardless of the communication setting, interpersonal evaluation and perceived disagreement will be negatively related.

H2. Interpersonal evaluation and perceived political disagreement will be negatively related.

If positive evaluation and perceived disagreement are negatively related, such that negative affect is associated with higher levels of perceived disagreement, it follows that differences in communication settings for both interpersonal evaluation and perceived disagreement would track with one another. In other words, if social media introduces negative affect and perceived disagreement into political communication within social networks, theory suggests that differences between social media and face-to-face communication for both evaluation and perceived disagreement should be related to one another. Thus, rather than predict a simple relationship between interpersonal evaluation and perceived disagreement, it is hypothesized that the increase in negative evaluations on social media will track with the increase in perceived disagreement in those settings.

H3. The difference in interpersonal evaluation in social media versus face-to-face settings will be related to the difference in perceived political disagreement in social media versus face-to-face settings.

Methods

Data

Data were collected between 26 March and 29 March, 2015, using an online survey panel administered by a private

company, Survey Sampling International (SSI). The sample was designed to reflect the population of adult (age 18+) internet users in the United States. Importantly, the population includes both social media users and non-users. SSI used a three-stage sampling process. First, subjects were randomly selected from an online panel constructed by SSI using geographic and demographic quotas based on age, gender, education, income, and place of residence, in such a way that they are comparable to the US Census statistics for the population of interest. Next, subjects were randomly presented with screening questions asking whether respondents are over the age of 18, whether they are U.S. residents, and whether they had internet access in order to determine their eligibility for the study. Finally, subjects were randomly invited to take the study based on their likelihood to complete it based on their past completion of surveys. This final step is taken to maximize the likelihood of obtaining complete responses. The cleaned dataset contained 649 complete responses (American Association of Public Opinion Research [AAPOR] RR3=32.7%). The sample reflects the US adult population in terms of social media use (76% in the current sample vs 74% in a recent Pew sample; see Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). About two-thirds of the sample is female (67%), reflecting recent reports that more females use social media than males (see Duggan et al., 2015). The sample tracks closely with U.S. Census population demographics for age (M=46.49, SD=16.90), education (35% bachelor's degree; average respondent [M=3.87, SD=1.65] has completed some college or associate's degree work), and income (average [M=2.57, SD=1.55] between US\$35,000 and US\$75,000 per year). Given the nature of the hypotheses, the subset of social media users (N=489) was used for analysis. Respondents were asked how often they "check" (a) Facebook and (b) Twitter (0=Never, 6=More than several times a day). Respondents with an average score of 0 on these two items were excluded from the analysis. Within this subset of the data, missing values were replaced via multiple imputation (50 iterations) using the "mice" package in R (van Buren, 2015).

Measures

Social Media Perceived Political Disagreement. Perceived political disagreement was measured using name generators (Mutz, 2006). Respondents were asked to name the three people in their social media networks who post the most about politics. For each name provided for social media, respondents were asked (a) whether their political views are much the same, somewhat different, or very different from that person's ($0=Much\ the\ same$, $4=Very\ different$); (b) that person shares more of their views, opposes them, or neither ($0=Shares\ most\ views$, $4=Opposes\ most\ views$); and (c) overall, do they think that person likely supports the same party as them, opposes the party they support, or neither ($0=Supports\ the\ same\ part$, $4=Opposes\ the\ party\ they$

support). These three items were averaged to create the final variable (Cronbach's alpha = .81, M = 1.67, SD = 1.00).

Face-to-Face Perceived Political Disagreement. The name generators portion of the survey also asked respondents to name the three people they talk to the most about politics in face-to-face settings. For each name provided, the same series of perceived disagreement items was asked: (a) whether their political views are much the same, somewhat different, or very different from that person's $(0=Much\ the\ same,\ 4=Very\ different)$; (b) that person shares more of their views, opposes them, or neither $(0=Shares\ most\ views,\ 4=Opposes\ most\ views)$; and (c) overall, do they think that person likely supports the same party as them, opposes the party they support, or neither $(0=Supports\ the\ same\ part,\ 4=Opposes\ the\ party\ they\ support)$. These items were averaged to create the final variable (Cronbach's alpha=.78, M=1.30, SD=1.07).

Social Media Interpersonal Evaluation. Name generators were also used to measure interpersonal evaluation (Mutz, 2006). For each name provided, respondents were asked questions about perceived similarity and liking (Kandel, 1978), including (a) how much they think they have in common with that person ($0=Nothing\ or\ almost\ nothing,\ 6=A\ great\ deal$); (b) aside from politics, how similar they think they are to that person $(0=Not \ at \ all, \ 6=Very \ similar)$; (c) how much they like that person $(0=Not \ at \ all, \ 6=A \ great \ deal)$; and (d) whether they would like working with that person (0=Probably dislike, 6=Probably like). In addition, respondents were asked to (e) place their relationship with the other person on the Inclusion of Other in the Self (IOS) scale (a validated measure of closeness; Aron, Aron, & Smollan, 1992), which depicts a series two circles with varying degrees of overlap $(0=No\ overlap,\ 6=Near\ complete\ overlap)$. To create the final variable, these five items were averaged (Cronbach's alpha=.85, M=3.57, SD=1.17).

Face-to-Face Interpersonal Evaluation. The same series of interpersonal evaluation questions was asked for each name given in the face-to-face portion of the name generators: (a) how much they think they have in common with that person $(0=Nothing\ or\ almost\ nothing,\ 6=A\ great\ deal)$; (b) aside from politics, how similar they think they are to that person $(0=Not\ at\ all,\ 6=Very\ similar)$; (c) how much they like that person $(0=Not\ at\ all,\ 6=A\ great\ deal)$; (d) whether they would like working with that person $(0=Probably\ dislike,\ 6=Probably\ like)$; and (e) the IOS self-in-other scale $(0=No\ overlap,\ 6=Near\ complete\ overlap)$. The five items were again averaged to create the final variable (Cronbach's alpha=.78, M=4.25, SD=1.31).

Social Media Political Messaging. Social media political messaging (see Eveland & Hivey, 2009) was measured using 16 questionnaire items about the (a) number of people and (b) frequency (0=never and 4=very often) with which

they discuss politics on social media with four categories of people: (a) family members, (b) friends, (c) coworkers or classmates, and (d) other acquaintances on (a) Facebook and (b) Twitter. The number of people was multiplied by the frequency of talk within each category (for Facebook, .17 < r < .26 and for Twitter, .24 < r < .44), then averaged pairwise across media so that like categories were combined (.34 < r < .88), and then finally averaged pairwise across categories (.38 < r < .76; M = 41.52, SD = 281.03).

Face-to-Face Political Talk. The face-to-face political talk variable (see Eveland & Hivey, 2009) mimicked the method used for social media political messaging, with the exception that it only includes one medium (whereas the social media variable measured messaging on both Facebook and Twitter) and therefore uses eight items instead of 16. Once again, network size and frequency were multiplied within social tie categories (.16 < r < .35). These scores were then averaged pairwise (.21 < r < .51; M = 17.27, SD = 34.41).

Social Media News Use. The social media news use measure was based on prior research (e.g., Barnidge, 2015; Kim et al., 2013; Lee, Choi, Kim, & Kim, 2014), and it was measured with four items-two apiece for Facebook and Twitter, respectively—asking (a) how many days in the past week respondents read news or political commentary and (b) how much attention they paid when they did $(0=not \ at \ all \ and$ 5=a great deal; see Eveland, Hutchens, & Shen, 2009) to combine dimensions of news use (i.e., exposure and attention) within specific media. Reception of these items was filtered based on social media use. For example, respondents who indicated they do not use Twitter did not receive any subsequent items asking about Twitter. Respondents who do not use social media (about 24%) skipped these items entirely. The items exhibited moderately strong intermedium correlations (for Facebook, r=.50 and for Twitter, r=.73). The items were multiplied within media and then averaged across media (M=8.14, SD=10.03).

Online News Use. To measure online news use (see Eveland et al., 2009), the survey asked respondents how many days in the past week they watched, read, or listened to news online, not including news they saw on social media. Respondents who answered more than zero were asked how much attention they paid to that news $(0 = not \ at \ all \ and \ 5 = a \ great \ deal)$. These items were multiplied to obtain the final measure (M=10.15, SD=11.13).

Offline News Use. A similar method (Eveland et al., 2009) was used to measure offline news use on (a) television news use and (b) newspaper news use. Items were multiplied within media (for television, r=.60, and for newspapers, r=.53) and then averaged to obtain the final measure (M=11.36, SD=9.56).

Strength of Party Identity. Finally, strength of partisanship variable (Stroud, 2008) was constructed using two survey items. The first asked which party respondents identified with (Green, Democratic, Republican, Libertarian), and the second asked how strong that identification is $(1=not\ that\ strong\ and\ 2=strong)$. Respondents who did not identify with a party received a score of 0 on the final variable, while the strength of partisanship score was taken for those who did identify with a party (M=1.27, SD=0.73), resulting in a 3-point scale where 0=non-identifier, $1=weak\ identifier$, and $2=strong\ identifier$.

Ideological Extremity. Strength of political ideology used standard measures (e.g., Garrett & Stroud, 2014), which asked respondents to place themselves on an 11-point scale where 0=liberal and 10=conservative. This item was recoded with 0 at the midpoint. The absolute value was then taken as the final measure (M=2.03, SD=1.79).

Political Interest. Political interest was measured with two questionnaire items (Verba, Schlozman, & Brady, 1995) asking respondents how interested they are in local or regional politics and national politics (0=not at all and 5=very). These items were averaged (r=.78, M=2.89, SD=1.50).

Political Knowledge. Political knowledge was measured with four items based on prior literature (Delli Carpini & Keeter, 1996). Scores were coded as either right (1) or wrong (0; category includes "don't know" answers) and added together (M=2.12, SD=1.18).

Political Efficacy. Political efficacy was measured with two items taken from the classic political science scale (Niemi, Craig, & Mattei, 1991). These two items were highly correlated (r=.78) and therefore averaged (M=2.01, SD=1.10).

Demographics. Analyses controlled for annual household income (0=Less than US\$15,000 and 6=US\$150,000 or more), education (0=None and 7=Postgraduate degree), age, and gender. Descriptive statistics for the subset of social media users are similar to those reported for the full dataset above, although the subsample is slightly younger and more educated than the full sample (household income: M=2.51, SD=1.51; education: M=3.81, SD=1.61; age: M=44.34, SD=16.82; gender: 70% female).

Repeat Names. Finally, the analyses controlled for the extent to which respondents named the same person(s) in both sets of name generators (social media and face-to-face, respectively). For each name provided in the face-to-face section, respondents were asked whether the person they named was one of the three people they previously named in the social media section (1 = Yes, 0 = No). A summative index was created from the three items (M = .76, SD = .97).

Table 1. Mean Differences in Interpersonal Evaluation by Medium.

	Interpersonal evaluation
Intercept (M _{Social Media})	3.568** (0.053)
Reference group (M _{Face-to-Face})	0.682** (0.057)
Social media political talk	-0.000 (0.000)
Face-to-face political talk	0.002 (0.002)
Social media news use	0.005 (0.005)
Online news use	0.005 (0.005)
Offline news use	0.008 (0.006)
Strength of partisanship	0.093 (0.072)
Ideological extremity	0.007 (0.028)
Political interest	0.108* (0.048)
Political knowledge	0.055 (0.046)
Political efficacy	0.059 (0.059)
Household income	-0.019 (0.032)
Education	-0.019 (0.033)
Gender (I = Female)	0.186 (0.101)
Age	-0.001 (0.003)
Repeat names	0.039 (0.048)
SD	0.595
N	489
Observations	978
Log likelihood	-1,498.900

Cell entries are coefficients and standard errors from linear mixed-effects (LME) models with random intercepts.

Analysis

First, a repeated-measures, linear mixed-effects (LME) model is used to test H1, which predicts that interpersonal evaluations will be higher for face-to-face contacts than for social media contacts. Because each respondent rated both social media contacts and face-to-face contacts, the data were "stacked" for repeated-measures analysis. Thus, the model accounts for within-subjects variation while assessing the difference-inmean-differences between responses for social media and faceto-face contacts. This model controls for social media political messaging, face-to-face political talk, social media news use, online news use, offline news use, strength of party identity, ideological extremity, political interest, political knowledge, political efficacy, annual household income, education, age, gender, and repeat names. All controls were mean-centered. A parallel LME model estimated similar differences in perceived political disagreement.²

Next, ordinary least squares (OLS) regression is used to test H2, which predicts a negative relationship between interpersonal evaluation and perceived political disagreement. Separate models are fit for social media and face-to-face settings, respectively. These models account for the same set of controls variables as the models described above.

Finally, two OLS models are used to test H3, which predicts that the *difference* in interpersonal evaluation across

communication contexts will be related to the difference in perceived political disagreement. In the first model, difference scores are calculated for each variable (face-to-face scores were subtracted from social media scores; for interpersonal evaluation, M=-.68, SD=1.26; for perceived political disagreement, M=.37, SD=1.19), and these difference scores are then used as independent and dependent variables, respectively, in an OLS model that includes all the same controls as the models above. In the second model, the predicted values from the LME models for interpersonal evaluation and perceived political disagreement (described above) are saved as new variables (the mean predicted value for interpersonal evaluation is 3.91, SD = .79; the mean for perceived political disagreement is 1.49, SD=.48). These variables are then entered into an OLS model without controls (because the controls are already part of estimating the predicted values in the original LME models).

Results

Table 1 summarizes the LME model estimates for interpersonal evaluation. Consistent with the prediction (H1), results indicate that face-to-face contacts are evaluated more positively than social media contacts. The fixed intercept is 3.57 (SE=.05, p<.001), which, because the controls have been mean-centered, can be interpreted as the mean for social media adjusted at the mean of all control variables. This mean varies between subjects with a standard deviation of .59. The comparison coefficient is B=.68 (SE=.06, p<.001), which can be interpreted as the mean difference between face-to-face and social media. Thus, if the mean for social media is 3.57, the mean for face-to-face is .68 higher, or 4.25, and this difference is statistically significant. These results support H1, and they are visualized in Figure 2.

Table 2 presents the results for H2. The first model in this table estimates the relationship between interpersonal evaluation and perceived political disagreement in social media settings, and the second model estimates the parallel relationship in face-to-face settings. Consistent with predictions, the relevant coefficient is negative in both models (for social media, B=-.30, SE=.04, p<.001; for face-to-face, B=-.32, SE=.04, p<.001). These results therefore support H2 and indicate a negative relationship between interpersonal evaluation and perceived political disagreement regardless of communication setting. Results are visualized in Figure 3.

Table 3 summarizes the results relevant to H3. The first column displays estimates from the difference score model, and the second column displays results from the predicted values model. Results from these two models are also quite similar. In the first model, results indicate that the difference scores are negatively related (B=-.42, SE=.04, p<.001). Likewise, in the second model, the predicted

^{*}p<.05, **p<.001.

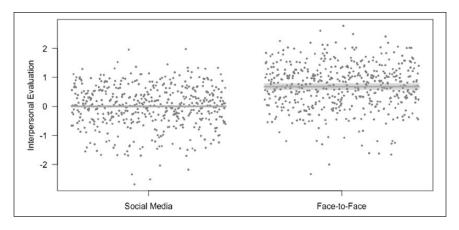


Figure 2. Mean difference in interpersonal evaluation between social media and face-to-face settings.

Table 2. The Relationship between Perceived Political Disagreement and Interpersonal Evaluation in Social Media and Face-to-Face Settings.

	Perceived political disagreement (social media)	Perceived political disagreement (face-to-face)
Intercept	2.735*** (0.220)	2.850*** (0.231)
Interpersonal evaluation (social media)	-0.303*** (0.038)	,
Interpersonal evaluation (face-to-face)		-0.317*** (0.036)
Social media political talk	0.000 (0.000)	0.000 (0.000)
Face-to-face political talk	-0.004* (0.001)	0.001 (0.002)
Social media news use	-0.003 (0.005)	-0.002 (0.005)
Online news use	0.004 (0.005)	-0.011* (0.005)
Offline news use	0.008 (0.005)	0.009 (0.006)
Strength of partisanship	0.006 (0.067)	-0.198** (0.070)
Ideological extremity	-0.037 (0.026)	-0.024 (0.027)
Political interest	0.085 (0.044)	-0.004 (0.047)
Political knowledge	-0.044 (0.042)	-0.018 (0.044)
Political efficacy	-0.031 (0.055)	0.166** (0.058)
Household income	0.070* (0.030)	-0.017 (0.031)
Education	-0.038 (0.030)	-0.031 (0.032)
Gender (I = Female)	0.050 (0.094)	0.063 (0.099)
Age	-0.004 (0.003)	-0.002 (0.003)
Repeat names	-0.111* (0.045)	0.029 (0.046)
N	489	489
R^2	0.177	0.211

Cell entries are coefficients and standard errors from ordinary least squares (OLS) regression models.

values are negatively related (B=-.28, SE=.02, p<.001). These relationships are visualized in Figure 4. In both cases, results support H3 and indicate that the difference in perceived political disagreement across communication settings is negatively related to the difference in interpersonal evaluation.^{3,4}

Discussion

To briefly summarize the results, respondents rated face-to-face social contacts more positively than they did social media contacts. Meanwhile, they also report more perceived disagreement on social media than in face-to-face settings. These variables are negatively related to one another regardless of communication setting, but the cross-medium differences are also negatively related, meaning that less favorable interpersonal evaluations on social media are related to perceiving more disagreement on social media.

These results point toward two specific conclusions. First, social media introduces more negative affect into social networks. Social media use tends to diversify communication within social networks by making people aware of what others think and feel about political and social issues (Kwon et al., 2014). They also provide ample opportunities for the self-disclosure of social cues (Walther, 1992, 2011), and people use these cues to form impressions about others in their social networks. Thus, social media enhance the perception of difference, and interpersonal contacts in these environments are typically rated less positively than interpersonal contacts in face-to-face communication (Sprecher & Hampton, 2017).

Second, this relative increase in negative affect complements existing explanations for the comparative increase in perceived political disagreement across communication settings. Whether through social judgment (Sherif & Hovland, 1961) or social identity (Tajfel, 1982) processes, affective interpersonal evaluations play an important role in how people come to perceive political disagreement on social media. Negative affect can distort cognitive information processing (Anderson, 1989; Kaplan & Anderson, 1973), and it can result from in-group identification such that it influences subsequent cognition and perception (Brewer, 1999; Iyengar et al., 2012).

These conclusions are related to several important, ongoing scholarly conversations. First, the results speak to ideas about deliberative democracy and previous understandings

^{*}p<.05, **p<.01, ***p<.001.

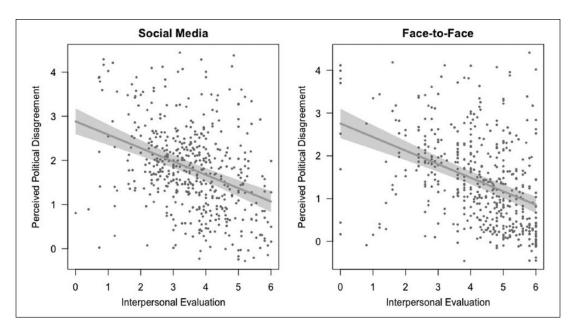


Figure 3. The negative relationship between interpersonal evaluation and perceived political disagreement in social media (left) and face-to-face (right) settings.

Table 3. The Relationship between Perceived Political Disagreement and Interpersonal Evaluation in Social Media and Face-to-Face Settings.

	Perceived political disagreement (difference)	Perceived political disagreement (predicted)
Intercept	-0.100 (0.213)	2.582*** (0.068)
Interpersonal evaluation (difference)	-0.416*** (0.039)	
Interpersonal evaluation (predicted)		-0.281*** (0.017)
Social media political talk	0.000 (0.000)	
Face-to-face political talk	-0.005** (0.002)	
Social media news use	-0.002 (0.006)	
Online news use	0.016** (0.005)	
Offline news use	-0.002 (0.006)	
Strength of partisanship	0.195** (0.074)	
Ideological extremity	-0.021 (0.029)	
Political interest	0.075 (0.049)	
Political knowledge	-0.032 (0.047)	
Political efficacy	-0.125* (0.061)	
Household income	0.078 (0.033)	
Education	-0.008 (0.034)	
Gender (I = Female)	-0.033 (0.104)	
Age	0.000 (0.003)	
Repeat names	-0.119* (0.050)	
N	489	978
R^2	0.286	0.217

Cell entries are coefficients and standard errors from ordinary least squares (OLS) regression models.

of the nature of political disagreement. According to this perspective, which gained popularity among scholars during the "deliberative turn" of the 1980s and 1990s, disagreement is largely beneficial for society because it represents rational engagement with the other side in politics (e.g., Gutmann & Thompson, 1998; Mansbridge, 1999). But these results suggest there may be more the disagreement than a simple misalignment of ideas. Rather, this study shows that affective evaluations of others may have an influence on the perception of disagreement. Thus, rather than treating disagreement as a purely cognitive and rational process among adults who can and should ultimately "agree to disagree," future research should focus on elaborating on the ways that affect shapes disagreement and its outcomes.

One of these outcomes is political tolerance and, by extension, intergroup prejudice and discrimination. Prior research suggests that disagreement promotes political tolerance (Mutz, 2006), and this is often touted as one of its primary democratic benefits. However, it seems an important and valid concern to wonder if disagreement motivated by negative affect may erode, rather than build, political tolerance. Indeed, perhaps this erosion is one of the reasons that scholars have noted an increase in affective polarization, or dislike for the other side in politics, in response to social identity or political group identification processes (e.g., Iyengar et al., 2012). The biggest concern for scholars of democracy, of course, is whether this decline in political tolerance leads to intergroup prejudice and discrimination (Tajfel, 1982).

These discussion points are also related to the general themes outlined by Papacharissi (2015), whose work on social media suggests that political expression has taken an

^{*}p<.05, **p<.01, ***p<.001.

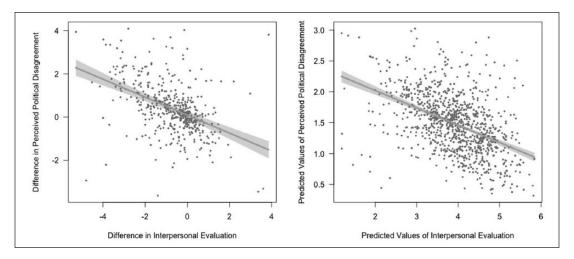


Figure 4. The negative relationship between the cross-medium differences in interpersonal evaluation and perceived political disagreement.

"affective turn" as people largely seek to "feel" their connection to politics through individualized, often plaintive, expression about politics and political events. The findings of this study support the idea that social media may alter the social structures that govern political expression and civic engagement, and reinforce the notion that affect, specifically negative affect, plays a major role in political discourse in these venues. Overall, these changes to public communication may contribute to the general feeling that politics has grown more contentious in recent times (Wells et al., 2017).

The conclusions outlined above are limited in several important ways. First, the article relies on self-reported survey measures of perceived political disagreement and interpersonal evaluation. While this limitation is common to survey research, these types of self-reported measures are prone to bias. Future research could combine survey measures with observational data to triangulate on the problem of disagreement and interpersonal evaluation. Second, a related limitation involves the subtle difference in question wording of the social media and face-to-face name generators. The social media name generators ask respondents to name a person who posts about politics, while the face-to-face name generators ask respondents to name someone they have talked to. The choice to word these items differently was made deliberately in order to maximize realism. However, while this choice maximizes realism, it also sacrifices a degree of comparability, and readers should exercise caution when interpreting those comparisons for that reason. Third, the survey does not distinguish between specific social media sites, such as Facebook, Twitter, or Instagram, opting for the more generic language "social media." Because differences among these platforms could be important, future research could focus on examining differences in the processes outlined above across social media platforms. Fourth, cognitive processes such as reflection and elaboration are not directly measured in this study, but rather treated as unobserved

mechanisms. Therefore, cognitive and affective processes cannot be directly compared. Future research could directly measure these processes. Fifth, the opt-in, internet panel survey is not, strictly speaking, a probability sample, which means the sample may not be representative of the target population. However, the sample is comparable to the target population in terms of demographics and, importantly, social media use. Finally, these data are cross-sectional and therefore cannot be used to make causal inferences. While a snapshot of relationships has been assembled based on theory, it is plausible that interpersonal evaluation results from perceived disagreement rather than vice versa. Future research is needed to establish the causal order in this important relationship. Future research could also focus on the differences between conservatives and liberals in terms of both interpersonal evaluations and perceived political disagreement, as prior research has shown that conservatives are less likely to perceive disagreement on social media, and, therefore, interpersonal evaluations could also differ between these groups.

Despite these limitations, this study has provided evidence that social media contribute to the growth of negative affect in political communication. Moreover, this negative affect is related to the comparatively high degree of perceived political disagreement that people encounter in social media settings. Thus, to a certain extent, perceived disagreement in social media settings has its roots in affective communication processes.

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Notes

- The three dimensions of interpersonal evaluation (perceived similarity, liking, and closeness) are very highly correlated.
 For the social media variables, r ranges from .45 to .76. For the face-to-face variables, r ranges from .45 to .75. The three dimensions were therefore combined.
- 2. A similar model using the same dataset was previously published (Barnidge, 2017; see Figure 1). For this reason, the results are not presented in this article. Rather, a similar model is fit for this study, and the predicted values are used later in the analysis. The model estimated in this study differs slightly from the previously published model due to variable construction, model specification, and the multiple imputation procedure. Despite these minor alterations, estimates of difference in mean differences are remarkably similar (B=-.38 in this study and -.39 in Barnidge, 2017). The full model formula for this study is as follows: perceived disagreement=1.672 (.046)-.373 (.054) + .000 (.000) Social Media Political Messaging -.002 (.001) Face-to-Face Political Talk -.004 (.004) Social Media News Use -.005 (.004) Online News Use +.006 (.005) Offline News Use -.125 (.059) Strength of Party Identity -.033 (.023) Ideological Extremity +.006 (.039) Political Interest -.048 (.038) Political Fificacy +.030 (.027) Household Income -.029 (.027) Education -.002 (.083) Gender (1=Female) -.003 (.003) Age -.052 (.040) Repeat Names -. The fixed intercept varies between subjects with a standard deviation of 0.321. N=489. Observations=978.
- 3. Tests for differences between liberals and conservatives were conducted for both interpersonal evaluations and perceived political disagreement. First, the mean on the raw ideology variable (0=Liberal, 10=Conservative) is -.09 (SD=2.72) is slightly to the left of center, but not statistically different from 0 (t (642)=.27, p=.784). Second, ordinary least squares (OLS) linear regression was used to test the correlation between the raw ideology variable and interpersonal evaluation (B=.03, SE=.02, p=.106) and perceived political disagreement (B=.00, SE=.01, p=.897), respectively. As you can see, neither of these betas were statistically significant, indicating no difference between liberals and conservatives for each of these variables.
- 4. The same analyses were also run on the subset of respondents who repeated at least one name. These respondents should have less difference in terms of tie strength between their face-to-face and social media networks, because at least one of the named individuals is the same. Thus, analyzing the same models in the subset of individuals who repeated at least one name helps me control, to a certain extent, for the potential that tie strength is driving the relationships depicted in this article. Results, which are available upon request, are substantively identical to the reported results.

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