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Does Talking to the Other Side Reduce Inter-party Hostility? Evidence from Three Studies

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ABSTRACT

According to recent scholarship, citizens in various Western democracies show a growing sense of dislike and distrust toward members of opposing political parties. While political communication processes have been shown to influence inter-party hostility, the literature has so far focused mainly on mass-mediated communication. We argue here that affective polarization might also be determined by interpersonal political communication. Specifically, we hypothesize that “heterogeneous” political discussions – those transcending partisan and ideological boundaries – are associated with decreased hostility toward the other side. We test this hypothesis with three studies conducted in Canada: A cross-sectional survey ($N = 3,596$), a two-wave panel ($N = 3,408$), and an instrumental variable analysis ($N = 2,005$). We find that heterogeneous discussion indeed is associated with reduced polarization, a conclusion that holds across indicators of affect, obtains for both face-to-face and online discussions, and is consistent across studies. Having a heterogeneous (compared to homogeneous) discussion network predicts substantial decreases of up to 0.76, and no less than 0.09, standard deviations in out-party hostility. These findings inform scholarly debates about the antecedents of affective polarization and are consistent with the claim that cross-cutting political discussion can benefit democracy.

KEYWORDS

Affective polarization; interpersonal communication; political discussion; peer networks; intergroup contact

Introduction

Affective polarization is on the rise. There is growing evidence that supporters of political parties increasingly dislike and distrust political elites and supporters from opposing parties (Druckman & Levendusky, 2019; Iyengar et al., 2019, 2012). While evidence of affective polarization comes mainly from the US, an emerging comparative research agenda suggests that this process has also occurred in other Western democracies like Canada (e.g., Boxell et al., 2020b; Cochrane, 2015; Gidron et al., 2020).

In recent years, the literature has proposed not only descriptive analyses of trends in affective polarization but also explanatory tests of the antecedents of this phenomenon (for a review, see Iyengar et al., 2019). Among other explanations, past research has consistently indicated that political communication processes can influence inter-party hostility. So far, most scholarly attention has been devoted to *mass-mediated* forms of communication, such as partisan cable

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news (e.g., Levendusky, 2013) or information consumption on the internet (e.g., Lelkes et al., 2017). Yet we know from a large literature that citizens' political attitudes are also shaped through *interpersonal* communication. In the course of their daily lives, people discuss politics with their family members, friends, coworkers, and others, and these conversations often have strong effects on their political attitudes (Huckfeldt et al., 2004; Katz & Lazarsfeld, 1955; Mutz, 2002).

In the current study, we explore the relationship between political discussion and affective polarization. Our substantive focus is on the composition of people's discussion networks. Past research has repeatedly demonstrated that "heterogeneous" political discussions, in which people talk to others who hold different political views and support different political parties from their own, have largely positive implications for democracy (e.g., Mutz, 2002; Nir, 2017). In the more specific context of polarization, heterogeneous discussion has been associated with less polarized policy attitudes (Druckman et al., 2018; Huckfeldt & Sprague, 1995) and candidate evaluations (Huckfeldt et al., 2004; Hutchens et al., 2019). However, the relationship between heterogeneous political discussion and outgroup evaluations more broadly has not been fully clarified.

Drawing theoretically on the interpersonal communication literature, we hypothesize that heterogeneous political discussion is negatively associated with hostility toward political outgroups. In other words, we expect talking about politics with non-like-minded others to have a *depolarizing* effect on the electorate. We test this hypothesis with three complementary studies. First, we use data from cross-sectional surveys conducted during the 2019 federal election campaign in Canada ($N = 3,596$). Second, we report on a two-wave panel study ($N = 3,408$) conducted in Canada between March and May of 2020. The panel allows us to evaluate the *over-time effects* of political discussion networks (Sinclair, 2012). Third, we address potential endogeneity between discussion heterogeneity and affective polarization with an instrumental variable analysis using survey data collected in Canada in early 2021 ($N = 2,005$). We find that heterogeneous political discussion is associated with lower levels of affective polarization. This conclusion holds across indicators of affect, across contexts of political discussion (i.e., both face-to-face and online), and across studies.

Affective Polarization

One of the critical findings of American public opinion research over the past decade has been the growing affective gulf between supporters of the Republican and Democratic parties, known as *affective polarization*. Supporters of the two major parties increasingly dislike out-party political elites and supporters (Druckman & Levendusky, 2019; Iyengar et al., 2012). Recent research has extended this agenda cross-nationally, finding evidence of affective polarization in other countries as well (Boxell et al., 2020b; Gidron et al., 2020). In Canada, we see strong evidence of an affective polarization process where Conservative partisans increasingly dislike the Liberal Party, while Liberal and NDP partisans increasingly dislike the Conservative Party and become warmer towards one another (Cochrane, 2015; Johnston, 2019; Merkley, 2020).

Understanding the antecedents of affective polarization is vitally important. Scholars have shown it to have negative implications for the public's trust in government and institutions (Hetherington & Rudolph, 2015) and to influence economic perceptions and behavior (Healy & Malhotra, 2013). Out-party animus can also spill over into individuals'

social interactions by influencing their willingness to engage in relationships with out-party supporters (Iyengar et al., 2012) and tendency to discriminate against out-partisans (Sheffer, 2020).

And yet, the causes of affective polarization are still heavily contested. Some argue that it is the result of social sorting where ideological, partisan, and social identities come into closer alignment (Mason, 2016). Others see elite ideological polarization as the driving influence (Rogowski & Sutherland, 2016), a finding that has some support in Canada as well (Johnston, 2019). A different line of research, upon which we build here, focuses on the role of political communication. Most studies in this literature examine the effects of mass-mediated communication on affective polarization (e.g., Levendusky, 2013; Tsfati & Nir, 2017). Here, we explore the role of interpersonal communication.

Heterogeneous Political Discussion

Our investigation is motivated by the assumption that one's political information environment matters a great deal for polarization (Iyengar et al., 2019). Yet, while mass-mediated communication has been associated with affective polarization in a host of studies, the role of interpersonal communication remains understudied. We examine the possibility that the partisan and ideological composition of people's discussion network is linked to their affective evaluations of political outgroups.

The idea that interpersonal communication shapes citizens' political attitudes is not a new one. Landmark studies in the discipline have shown that informal conversations with those comprising one's social network – friends, neighbors, coworkers, and the like – can strongly influence political opinions and decisions (e.g., Katz & Lazarsfeld, 1955; Lazarsfeld et al., 1948). A great deal of more recent scholarship has confirmed the importance of political discussion. Within this large literature, numerous studies have investigated the effects of cross-cutting or *heterogeneous* discussions, whereby people talk about politics to others with divergent party attachments or ideological beliefs (Huckfeldt et al., 2004; Nir, 2017).

Over the past two decades, researchers have uncovered a variety of positive consequences of heterogeneous discussion for democracy. For example, it increases political tolerance by allowing people to learn about legitimate rationales for oppositional viewpoints (Mutz, 2002); promotes participation in politics by fostering media use (Scheufele et al., 2004); and enhances factual political knowledge by exposing people to information they were not aware of (Amsalem & Nir, 2021). Despite the richness of evidence on the democratic consequences of heterogeneous political discussion, research into its relationship with affective polarization – one of the most important phenomena in current politics – is limited in scope.

Discussion Heterogeneity and Affective Polarization

We expect discussion heterogeneity to be associated with decreased affective polarization for two theoretical reasons: the information political discussions provide, and their impact on the salience of political identities. The informational perspective we propose is based on the well-established finding that the social networks people are embedded in serve as important channels through which they gain political information (Eveland & Hively, 2009; Huckfeldt et al., 2004; Huckfeldt & Sprague, 1995). In the context of affective polarization, prior work suggests that the information voters hold about the political

outgroup shapes their affective evaluation of it. For example, Ahler and Sood (2018) find that misperceptions of the extent to which party supporters belong to party-stereotypical groups increase outgroup dislike. Other research finds that partisans who overestimate the ideological differences between the political parties show greater inter-party animosity (Wilson et al., 2020).

When political conversations occur in a homogeneous setting, consisting mainly (or only) of co-partisans and co-ideologues, the information people get exposed to is likely to be strongly skewed in favor of the ingroup and against the outgroup (Druckman et al., 2018). If this information was already known to discussion participants, repeating it can increase its salience in people's minds and, therefore, its influence on overall judgments of the outgroup (Zaller, 1992). If the pieces of information were unknown to discussion participants, they can serve as persuasive arguments against the outgroup (Druckman et al., 2018; Sunstein, 2002). In fact, even when they get exposed to counter-attitudinal information, partisans in a homogeneous network are likely to dismiss it by engaging in partisan-motivated reasoning (Klar, 2014). In contrast, individuals in *heterogeneous* networks get exposed to a more balanced set of messages during discussions. As a result, the attitudes they develop toward the outgroup incorporate both positive and negative assessments and thus become more ambivalent, and less polarized (Huckfeldt et al., 2004). Individuals in heterogeneous networks are also less likely to engage in partisan-motivated reasoning than people in homogeneous networks (Klar, 2014).

The second theoretical consideration relevant to anticipating the effect of heterogeneous discussion on affective polarization is the impact that political conversations have on the salience of partisan identity (Iyengar et al., 2012). When membership in a social or political group is made salient in people's minds, they tend to adopt attitudes and behaviors that are congruent with the identity that has been activated (Spears, 2011). One way in which such activation of partisan identity occurs is through political discussion in a homogeneous network (Levendusky et al., 2016; Parsons, 2015; Sinclair, 2012). Heightened salience of partisan identity, in turn, facilitates cognitive processes that are likely to exacerbate polarization, such as thinking about politics in terms of "us" versus "them," seeking to be prototypical ingroup members by displaying behaviors that are clearly distinguished from those of the outgroup, and engaging in partisan-motivated reasoning (Hutchens et al., 2019; Klar, 2014; Suhay, 2015).

Our expectation of a negative relationship between heterogeneous discussion and affective polarization is further supported by two prominent streams of research. The first is the extensive *group polarization* literature from social psychology. This line of research demonstrates, across many different contexts, that the modal outcome of group discussion is an enhancement of the initial tendency of group members. The polarizing influence of group discussion, this literature finds, is driven by both exposure to new information (Sunstein, 2002) and increased salience of group identity (Spears et al., 1990).

The second supportive line of research is *intergroup contact theory*. Studies consistently find that interaction with members of the political outgroup – both face-to-face and online – challenges stereotypes that develop in the absence of intergroup contact and increases the willingness to compromise with the outgroup (Bond et al., 2018; Wojcieszak & Warner, 2020). Applied to our context, inter-party conversations should reduce outgroup hostility by allowing partisans to see each other as individuals rather than out-party prototypes (Rossiter, 2020) and to identify commonalities with the outgroup (Wojcieszak & Warner, 2020).

Based on the theoretical perspectives described above, we make the following prediction:

H1: There is a negative relationship between face-to-face heterogeneous political discussion and affective polarization.

The majority of research on political discussion networks examines various forms of *face-to-face* communication, such as the workplace, the family, or interactions with close friends (e.g., Mutz, 2002). While *face-to-face* political conversations still exert substantial influences on political behavior (e.g., Druckman et al., 2018), in the past two decades or so, the internet has become an increasingly popular medium for political discussions (Baek et al., 2012). Acknowledging this significant development, scholars have begun in recent years to explore the nature and effects of online discussion. This literature, however, is still underdeveloped. As was recently noted by Tucker et al. (2018), compared to *face-to-face* discussion, there is much less research estimating the proportion of online political conversations that occur across partisan boundaries, and few studies compare the effects of online and *face-to-face* conversations.

We expect online discussion heterogeneity to also be negatively related to affective polarization. In terms of our first theoretical explanation (i.e., the informational effects of political discussions), numerous studies have shown that exposure to attitude-consistent political content on the internet results in stronger and more polarized political attitudes, whereas attitude-discrepant online content leads to depolarized, more ambivalent attitudes (Settle, 2018; Tsafati & Nir, 2017). One explanation for this depolarizing effect is that online communication, particularly on social media, exposes people to diverse perspectives to which they would not be exposed otherwise in their *face-to-face* interactions (Barberá, 2015).

Past research also provides reasons to expect our second theoretical explanation (i.e., the impact of political discussions on the salience of partisan identity) to be relevant in the online sphere. Studying the way citizens communicate about politics on Facebook, Settle (2018) argues that the defining elements of this platform, which include constant activation of social and political identities, are “uniquely suited to facilitate psychological processes of polarization” (Settle, 2018, pp. 7–8). Indeed, Settle (2018) finds that social media communication strongly activates political identities, thus increasing stereotyping of, and negative affect toward, out-partisans. Other studies have documented identity-enhancing dynamics in additional contexts of online political communication, such as political blogs (Lawrence et al., 2010) and Twitter (Yardi & Boyd, 2010).

Based on these theoretical considerations, we expect the following:

H2: There is a negative relationship between online heterogeneous political discussion and affective polarization.

How does the impact of online discussion on affective polarization compare with that of *face-to-face* discussion? On the one hand, online conversations may have *stronger* effects because they allow for anonymity (Spears et al., 1990) and are often uncivil (Rossini, 2020) – characteristics that exacerbate affective polarization (e.g., Skytte, 2020). On the other hand, online discussion may have *weaker* effects: many of people’s online discussion partners are individuals with whom they have weak social ties (Barberá, 2015; Settle, 2018), whereas *face-to-face* discussions mainly feature close others, such as friends and family members (Huckfeldt &

Sprague, 1995; Mutz, 2002). Since people with whom one has strong personal ties are more influential on one's political behavior (e.g., Bond et al., 2012), the impact of face-to-face discussion might be stronger. Due to these conflicting perspectives, we do not present a directional hypothesis. Yet, we report in the Results section formal tests comparing the effects of face-to-face and online discussion heterogeneity on affective polarization.

Method

Data

We test our hypotheses with three complementary studies.¹ Study 1 uses cross-sectional survey data from the Digital Democracy Project's (DDP) study of the 2019 Canadian federal election, which was a multi-wave cross-sectional survey of Canadian citizens 18 years and older preceding, during, and after the 2019 Canadian federal election. Our political discussion questions were included in three independent waves of this study fielded from August 28–September 5, 2019 ($N = 1,262$); October 14–20, 2019 ($N = 2,148$); and October 24–November 4, 2019 ($N = 1,869$). The non-probability opt-in online samples were provided by Qualtrics.

Sample quotas for Study 1 were set on gender (i.e., male, female), age (i.e., 18/34, 35/54, 55+), region (i.e., Atlantic, Quebec, Ontario, and West), and language (i.e., English, French) to match 2016 Canadian census population benchmarks. Table S1 of the online supplementary materials shows the comparison of these data to the census across these benchmarks. Our sample compares favorably. In the survey, we asked our respondents: "In federal politics, do you usually think of yourself as a(n) . . ." We use respondents who indicated their identification with the three major, national parties in Canada: the Liberal Party, the Conservative Party, and the New Democratic Party (NDP), whose supporters comprise 68% of the respondents ($N = 3,596$).

Study 2 uses data from a two-wave panel survey conducted by the Media Ecosystem Observatory (MEO) on adult Canadian citizens. Our political discussion battery was included in four waves of data collected between March 25 and April 19, 2020 ($N = 9,952$) from the online sample provider Dynata. The quota structure was identical to Study 1. Approximately half of these individuals were re-contacted between April 24 and May 27, 2020 ($N = 4,910$, of which 3,408 are partisans of the three major parties). Table S1 provides a comparison of the demographic makeup of the re-contacts with the cross-sectional study and with population benchmarks. The use of panel data allows us to minimize the threat of unobserved heterogeneity and selection bias (Mummolo & Peterson, 2018), though we were only able to include one of our three measures of affective polarization in this study, as is elaborated on below.

Our fixed effects panel analysis, however, does not allow us to rule out reverse causality: partisan affect may cause heterogeneity rather than the reverse. To shed more light on causal direction, we conducted Study 3 based on questions in MEO surveys fielded from January 19–February 1, 2021 ($N = 2,005$) using the sample provider Dynata. Sampling procedures were identical to Study 2, and Table S1 describes the demographic makeup of respondents in this study. Study 3 follows the two stage least squares (2SLS) approach of Scheufele et al. (2006) to sort out endogenous relationships between political discussion heterogeneity and political participation, but in our case, we are interested in affective

polarization. 2SLS allows for the construction of instrumental variables to be used in place of endogenous variables in the second stage estimation. Ideal instruments cause the endogenous variables, only influence the dependent variable through the endogenous variable, and are unrelated to the error term.

Affective Polarization Measures

As in prior work on affective polarization (e.g., Iyengar et al., 2012), we measure out-party animus in all three studies using 0–100 feeling thermometers. Our respondents were asked, “How do you feel about the political parties? Using a scale from 0–100 where zero means you really dislike the party and one hundred means you really like the party?” We average responses to the Liberal and NDP feeling thermometers for Conservative Party respondents, and use the Conservative Party thermometer for Liberal and NDP partisans. We make this coding decision because polarization dynamics in Canada are largely a result of the divergence of the major center-left parties, the Liberals and NDP, from the center-right Conservative Party. For example, Liberal and NDP partisans are increasingly ideologically similar and distinct from Conservative partisans (Merkley, 2020), and affective polarization is largely characterized by increasing animus of Liberal and NDP partisans toward the Conservative Party, and vice versa (Cochrane, 2015; Johnston, 2019).

Traditional feeling thermometers, while informative, have some problems. The 0–100 scale provides artificial precision, while it fails to measure dimensions of affective polarization related to feelings toward out-party *supporters* by focusing on broad political objects like parties. Thus, in Study 1 and Study 3, we supplement our feeling thermometers with two additional measures of individual-level out-party animus. First, we ask respondents to evaluate the applicability of certain traits to describe party officials or their supporters (Garrett et al., 2014): “Below, we’ve given a list of words that some people might use to describe [Conservative Party/Liberal Party/NDP] [candidates and elected officials/voters]. For each item, please indicate how well you think it applies to them.” The traits respondents rated were patriotic, intelligent, honest, open-minded, generous, hypocritical, selfish, and mean. The response categories for all traits were: extremely well, somewhat well, not very well, and not well at all. We randomized the battery such that some respondents received items that asked them to evaluate party officials, while others received the same questions as they related to voters of those parties. We sum up the responses for the positive and negative words separately and take the difference between them as a measure of net affect toward each party. Again, for a measure of out-party affect, we average responses to the Liberal and NDP measures for Conservative supporters, and use the Conservative Party measure for Liberal and NDP partisans. We rescale our measures from 0–100 for comparability with the feeling thermometers.

Second, we evaluate the social distance of our respondents from supporters of the out-party. This is a measure of social alienation that has been treated by scholars as a distinct dimension of affective polarization with different causes and consequences (Druckman & Levendusky, 2019). We ask our respondents how comfortable they would be having neighbors on their street and close friends that are supporters of each party. Response options for these questions were: not at all comfortable, not too comfortable, somewhat comfortable, and very comfortable. We also ask how upset they would be if their son or daughter married a supporter of each party: not at all upset, not too upset, somewhat upset,

and very upset. We sum responses to all three questions for each party. Again, we average responses to the Liberal and NDP measures for Conservative supporters, and use the Conservative Party measure for Liberal and NDP partisans. We rescale our measures from 0–100, where 100 is the largest social distance.²

In the analyses that follow, we rescale the feeling thermometer and character trait measures so that higher values *on all three affective polarization measures* indicate higher levels of out-party animus.

Discussion Heterogeneity Measures

The political communication literature proposes a variety of ways to assess discussion heterogeneity. One important conceptual distinction, suggested by Klofstad et al. (2013), is between heterogeneity based on respondents' perceptions of the partisan leanings of their discussion partners (which they label "partisan disagreement"), and heterogeneity based on respondents' perceptions of how much disagreement is occurring in their network ("general disagreement"). Here, we include items on both the perceived partisanship of one's discussants and the perceived disagreement in one's network. Although the main analyses presented below combine these items into a single index, we present supplemental analyses where the heterogeneity measure is broken down by type of disagreement.

In line with widely used and well-validated measures of discussion heterogeneity (Hutchens et al., 2018; Scheufele et al., 2004), we construct, in Study 1 and Study 2, an index summarizing respondents' answers to a series of items asking about their discussions with people who have various political characteristics: "Over the past week, did you talk about politics or public affairs [face-to-face/online] with the following people?"³ 1) People whose political views are different from yours; 2) People who support the Liberal Party; 3) People who support the Conservative Party; 4) People with extreme left views; 5) People with extreme right views." Response categories were: yes, no, or unsure. We created indices of heterogeneity that increment upward for each affirmative response. Respondents who scored above or below five on a 0–10 left-right scale were not credited with more heterogeneity if they discussed politics with people on the extreme right or left, respectively. Conservative partisans were not credited with discussing politics with Conservative supporters, while Liberal and NDP partisans were not credited with discussing politics with Liberal supporters.⁴

Since the distributions of these heterogeneity indices are highly right-skewed, we create categorical variables for face-to-face and online heterogeneity where '0' is for respondents with a homogeneous discussion network, '1' is for those who engaged in no discussion according to the frequency measures below, and '2' is for those with any discussion outside of their partisan or ideological group. Our interest is in the difference between those with homogeneous networks and those with some degree of heterogeneity.

In Study 3, we measure political heterogeneity in a manner similar to Scheufele et al. (2006). We ask respondents, "On a scale from one to ten, where 'one' means never and 'ten' means all the time, how often do you talk to the following groups of people face-to-face or over the phone about political issues or candidates?" Options included people whose political views are different from your own, people who support the Conservative Party/Liberal Party, and those with extreme left/right views. We construct a measure of face-to-face discussion heterogeneity by averaging these scales together.⁵ In Study 3, we standardize

the face-to-face discussion heterogeneity measure, as well as the three measures of affective polarization, for ease of effect size interpretation.

Control Variables

Our models account for a variety of confounding factors that could be associated with both heterogeneous discussion and polarization. First, we control for the overall frequency of face-to-face and online discussion, which prior research shows should be controlled for (Eveland & Hively, 2009), by asking respondents how often they had face-to-face discussion with friends, family, and coworkers. A similar question measured online discussion frequency. Response categories were never, once, a few times, almost every day, daily, don't know. Second, we expect information consumption patterns to be correlated with political discussion. Individuals with a wider breadth of news and social media usage may also have a wider breadth of political discussion, and this information exposure could have implications for out-party affect. We measure news exposure with a logged index of exposure to a list of news outlets in the past week, and social media usage with a logged index of nine social media platforms used in the past week. Third, affective polarization is higher among those who are more interested in politics, and these political sophisticates are likely to have more homogeneous discussions. We control for political interest with a 0–10 measure where 10 represents those who are very interested in politics generally.

Fourth, individuals with stronger ideological views and partisan attachments are likely to have higher levels of out-party animus and more homogeneous discussion networks. We include a folded 0–10 left-right self-placement scale to measure ideological extremity, and a measure of partisan strength where respondents were asked whether their partisan attachment was “not very strong,” “fairly strong,” or “very strong.” Fifth, we control for ideology and partisanship. There may be asymmetries in out-party animus and discussion heterogeneity that could produce a spurious correlation between discussion and affective polarization. We include binary variables for Conservative and NDP partisanship (reference category = Liberal) and a 0–10 left-right self-placement scale.⁶ Sixth, we include socio-demographic controls for education, age, gender, language, and region. Finally, whenever relevant, we control for survey wave because we want to ensure temporal dynamics are not confounding our estimates. Descriptions of all measures can be found in Table S2 of the supplementary materials.

Models

In Study 1, we regress each of our out-party affect measures on the categorical measures of face-to-face and online discussion network heterogeneity and our controls (X) as follows:

$$\text{affect} = \alpha + \beta_1 \text{heterogeneous_facetoface} + \beta_2 \text{none_facetoface} + \beta_3 \text{heterogeneous_online} \\ + \beta_4 \text{none_online} + \beta X + \varepsilon$$

We include categories for no face-to-face and no online discussion to ensure that our coefficients of interest reflect a comparison between those with some heterogeneous discussion and those whose discussion was entirely homogeneous. To be consistent with $H1$ and $H2$, we expect negative significant coefficients on β_1 and β_3 , respectively.

Our reliance on covariates to address unobserved heterogeneity in Study 1 leaves us vulnerable to the possibility that our inferences are model dependent. We address this concern in two ways. First, we show that our estimates are robust to different specifications by drawing samples of our coefficients of interest for 20% of all possible covariate combinations. More information is provided in the supplementary materials (Figures S1–S3). Second, we use matching methods, which ensure greater balance among covariates in the treatment and control groups (Morgan & Winship, 2015). Full details on our matching procedures, which produce practically identical results as those reported below, can be found in the supplementary materials (Tables S4–S10).

In Study 2, we implement a fixed effects specification to isolate over-time variation in affect and discussion heterogeneity, thereby eliminating the threat posed by time-constant factors and selection bias. We regress the out-party feeling thermometer on the same controls (X , minus time-constant socio-demographics) and include respondent-level fixed effects (μ).⁷ Here, too, negative significant coefficients on β_1 and β_3 will be consistent with $H1$ and $H2$, respectively:

$$\begin{aligned} affect_{i,t} = & \alpha + \beta_1 heterogeneous_facetoface_{i,t} + \beta_2 none_facetoface_{i,t} \\ & + \beta_1 heterogeneous_online_{i,t} + \beta_4 none_online_{i,t} + \beta X_{i,t} + \mu_i + \epsilon \end{aligned}$$

In Study 3, we conduct our 2SLS analysis. Stage one involves the construction of the instruments for discussion heterogeneity using our context discussion measures. Scheufele et al. (2006) argue that there are certain contextual factors that cause political discussion heterogeneity, specifically the amount of political discussion at work, at church, or in nonchurch volunteer organizations. These situations, in effect, impose heterogeneous political discussion on individuals. Importantly, these variables are unlikely to be *caused* by out-party animus, so we use them to construct an instrument for political discussion heterogeneity. We conduct this analysis only for face-to-face heterogeneity because we are not confident these measures can serve as appropriate instruments for the online context.

Respondents were asked, “On a scale from one to ten, where ‘one’ means never and ‘ten’ means all the time, how often do you talk to the following groups of people about political issues or candidates?” Options included people at work, people at your church or place of worship, and people at a nonchurch community/volunteer group. We use these 1–10 scales to create instruments for face-to-face discussion heterogeneity. The instrument for face-to-face discussion heterogeneity is very highly correlated with the endogenous variable ($r = 0.75$, $p < .001$).

The second stage uses the constructed instrument in place of face-to-face discussion heterogeneity. We include the same controls (X) as in Study 1 but omit partisanship, ideology, partisan strength, and ideological extremity because we have little expectation that they serve as confounds for the instrumental variables. The second-stage equation we estimate is as follows:

$$affect = \alpha + \beta_1 instrument + \beta X + \epsilon$$

Results

Our model estimates for Study 1 are shown in the first six columns of Table 1. The coefficients for heterogeneous discussion, as noted, can be interpreted as the effect of

Table 1. OLS estimation results (Study 1 and Study 2).

Affective polarization =	Study 1						Study 2	
	Thermometer		Character Traits		Social Distance		Thermometer	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Heterogeneous Face-to-Face Discussion	-2.47**	1.04	-1.75**	0.88	-5.37***	0.87	-2.38***	0.77
No Face-to-Face Discussion	-5.59***	1.58	-1.37	1.33	-4.22***	1.31	-0.36	1.34
Heterogeneous Online Discussion	-3.83**	1.52	-2.50*	1.29	1.58	1.27	-2.80***	0.92
No Online Discussion	6.11***	2.00	3.76**	1.70	0.61	1.69	-0.83	1.26
Online Discussion Frequency	3.10***	0.92	3.08***	0.79	0.86	0.78	-0.37	0.53
Face-to-Face Discussion Frequency	-0.79	0.67	0.06	0.57	0.08	0.56	0.22	0.44
News Exposure	-2.95***	0.59	-2.52***	0.50	-1.10**	0.49	1.23	0.87
Social Media Exposure	-1.55**	0.72	-0.55	0.61	1.36**	0.60	0.7	0.85
Political Interest	0.33	0.23	0.50***	0.19	0.20	0.19	-0.62**	0.29
Ideological Extremity	2.88***	0.32	2.18***	0.28	3.00***	0.27	0	0.40
Partisan Strength	5.52***	0.76	2.40***	0.65	2.81***	0.63	0.96	0.74
Ideology	-2.62***	0.21	-1.05***	0.18	-1.35***	0.17	-0.57**	0.26
Conservative PID	5.05***	1.08	-2.71***	0.91	-0.29	0.90	4.77**	1.95
NDP PID	3.07**	1.25	1.89*	1.07	3.73***	1.05	-1.33	2.02
Education	0.55**	0.22	0.30	0.19	0.43**	0.19		
Age	0.22***	0.03	-0.05**	0.03	-0.03	0.02		
Female	2.46***	0.91	-0.81	0.78	0.39	0.76		
French	1.46	2.65	-1.45	2.25	-0.44	2.21		
Quebec	1.25	2.89	-4.13*	2.47	7.76***	2.42		
Ontario	1.05	1.82	-1.55	1.55	3.52**	1.52		
West	-0.62	1.86	-1.84	1.58	3.94**	1.55		
Wave 2	1.46	1.16	-0.96	0.98	0.38	0.96		
Wave 3	2.95**	1.17	-3.18***	0.99	-0.15	0.98		
Social Distance Average					0.87***	0.02		
Constant	46.31***	5.05	52.95***	4.30	-1.40	4.27	69.86***	3.32
<i>R</i> ² (within)							0.03	
<i>R</i> ²	0.20		0.12		0.48		0.03	
<i>N</i> (groups)							3,266	
<i>N</i>	2,648		2,702		2,702		5,579	

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Note: reference category for heterogeneous and no discussion is homogeneous discussion. Higher values on all dependent variables indicate more affective polarization.

heterogeneous discussion compared to homogeneous discussion. We find strong support for *H1* in Study 1. Respondents who engaged in heterogeneous face-to-face discussion are expected to have out-party feeling thermometer evaluations 2.5 points warmer than those whose discussion occurred in a homogeneous network, which is approximately 0.10 standard deviations on this measure or 5.8% of the gap between in-party and out-party feeling thermometers ($p < .05$). They are also expected to have trait evaluations 1.8 points warmer ($p < .05$) and social distance scores 5.4 points lower ($p < .01$) than those with homogeneous networks, which are the equivalent of 0.09 and 0.21 standard deviations on these measures, or 7.7% and 40.2% of the gaps between in-party and out-party evaluations, respectively.⁸

The results of Study 1 also provide support for *H2*. Heterogeneous online discussion is associated with less animus on two of our three measures. Respondents who engaged in heterogeneous online discussion have out-party feeling thermometers 3.8 points warmer than those whose discussion occurred in a homogeneous network ($p < .05$), which is approximately 0.16 standard deviations on this measure or 8.9% of the gap between in-party and out-party feeling thermometers. They are also expected to have trait evaluations 2.5 points warmer ($p < .10$) than those with homogeneous networks, which is the equivalent

of 0.13 standard deviations on this measure or 11% of the gap between in-party and out-party trait evaluations. There is no association between online discussion heterogeneity and social distance.⁹

When comparing the effects of face-to-face and online heterogeneous discussion on affective polarization in Study 1, we find that they mostly do not differ. A Wald test examining the null hypothesis that $\beta_1 = \beta_3$, estimated independently for each outcome, indicates that the face-to-face and online coefficients are indistinguishable from each other in both the feeling thermometer model ($F = 0.47, p = .49$) and the character traits model ($F = 0.20, p = .66$). In the social distance model, however, the coefficients are significantly different ($F = 17.56, p = .00$), which confirms that face-to-face – but not online – discussion is associated with greater social distance from out-party supporters.

Next, we present the results of our fixed effects specification for Study 2, which are shown in the final two columns of [Table 1](#). Having a heterogeneous face-to-face discussion network is associated with out-party feeling thermometers that are 2.4 points warmer over time, compared to having a homogeneous network ($p < .01$). This effect is approximately 0.10 standard deviations or 7% of the gap between in-party and out-party feeling thermometers in this study. Similarly, heterogeneous online discussion is associated with out-party feeling thermometers that are 2.8 points warmer over time, compared to homogeneous discussion ($p < .01$), which is approximately 0.12 standard deviations or 8% of the gap between in-party and out-party feeling thermometers. There is no significant difference between the face-to-face and online coefficients in Study 2 ($F = 0.10, p = .75$).

One issue with fixed effects models is that the within-unit variation in the treatment (in our case, the within-subject variation in discussion heterogeneity) is often smaller than the overall variation in the independent variable. We thus follow the recommendations of Mummolo and Peterson (2018) and use a one standard deviation shift in the residual variation in discussion heterogeneity, net of all other model covariates, as an alternative counterfactual. We find that a 1 SD change in the within-subject residual variation in heterogeneous discussion (compared to homogeneous discussion) over time is associated with out-party feeling thermometers that are 0.52 points warmer for both face-to-face and online discussion.

Finally, [Table 2](#) reports the results of the two-stage least squares (2SLS) model from Study 3. The full estimates can be found in the supplementary materials (Table S12). The estimates for face-to-face discussion heterogeneity reveal that our instrument is consistently associated with lower affective polarization across all three dimensions of affect – thermometers, character traits, and social distance – with impressive effect sizes. A one standard deviation increase in face-to-face discussion heterogeneity is associated with 0.76 and 0.60 standard deviations warmer out-party thermometers and trait scores, respectively ($p < .001$), as well as a 0.10 standard deviation reduction in social distance ($p < .10$).

There is one key difference in the above results from what we observed in Study 1: the effect sizes are much larger for the feeling thermometer and trait batteries as compared to

Table 2. 2SLS second-stage estimates (Study 3).

	DV = Feeling Thermometer	DV = Character Traits	DV = Social Distance
Heterogeneous Face-to-Face Discussion	-0.76*** (0.08)	-0.60*** (0.08)	-0.10* (0.06)

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Note: standard errors in parentheses. The models control for face-to-face and online discussion frequency, news exposure, social media exposure, political interest, education, age, gender, language, region, and average nonpolitical social distance (social distance models only). Full estimates can be found in Table S12 of the supplementary materials. Higher values on all dependent variables indicate more affective polarization.

social distance. This might be a sign that endogeneity is more of a threat on some dimensions of polarization than others. That is, the association between social alienation from out-party members and face-to-face discussion heterogeneity is more driven by the former's effect on the latter, compared to feeling thermometers and trait evaluations. Mapping out the causal relationships between different dimensions of affective polarization and types of discussion would be a fruitful avenue for future research.

Discussion

This study presents robust evidence that heterogeneous political discussion is associated with lower levels of out-party animus. Our results are remarkably consistent. First, we find that heterogeneous discussion predicts lower levels of three indicators of affective polarization. Second, we find that both face-to-face and online discussions have depolarizing effects. Third, our conclusions hold across a variety of samples and methods, including (a) a cross-sectional study complemented by rigorous matching procedures; (b) a two-wave panel study examining over-time effects; and (c) an instrumental variable approach addressing potential endogeneity between discussion and polarization.

Our findings contribute to the rapidly growing affective polarization literature in three main ways. First, we add to vitally important debates on the antecedents of affective polarization (Iyengar et al., 2019). Our results are consistent with the view that political communication effects shape citizens' levels of out-party animus (e.g., Lelkes et al., 2017; Levendusky, 2013). We extend this theoretical perspective by establishing that not only mass-mediated but also *interpersonal* communication is associated with inter-party hostility. The findings of the panel study are especially noteworthy given that the two waves of our panel were separated by only a few weeks. This suggests that a causal effect between political discussion and polarization can occur within a relatively short time frame.

Second, our results join a growing literature suggesting that contact with out-party members can reduce partisan hostility (e.g., Hutchens et al., 2019; Rossiter, 2020). In a recent contribution, Wojcieszak and Warner (2020) have shown that both direct (e.g., having friends from the out-party) and indirect interparty contact (e.g., observing a positive interaction between rival partisans) can reduce affective polarization. We extend this perspective by establishing that conversations about politics, both face-to-face and online, are an important form of interparty contact that can reduce partisan hostility. Translating our findings into effective interventions for mitigating polarization might be challenging, however, since many citizens are turned off by partisanship in general, and by partisan disagreement in particular (Klar & Krupnikov, 2016).

The third contribution of our study is highlighting the importance of measuring affective polarization comprehensively (Druckman & Levendusky, 2019). We supplement the traditional feeling thermometers with two indicators directly measuring feelings toward out-party *supporters*. The use of three measures not only increases the generalizability of our conclusions but also allows us to detect two inconsistencies. First, in Study 1, we find that face-to-face discussion heterogeneity is associated with less social distance, but online discussion is not. This may be because social distance closely maps onto respondents' face-to-face (i.e., friends, neighbors, and in-laws) rather than online relationships. Second, in Study 3, our effect sizes on social distance are much smaller than the effects on feeling thermometers and character traits, suggesting endogeneity may be more of a concern for

the former than the latter two. These two somewhat divergent results on social distance are in line with Druckman and Levendusky's (2019) claim that thermometers and trait ratings measure general attitudes about parties, whereas social distance taps distinct, more behavioral aspects of affective polarization.

Our study has some limitations worthy of mention. First, our estimated effects might be biased upward because of the effect of affective polarization on discussion heterogeneity. Reciprocal effects, whereby high levels of affective polarization increase discussion with like-minded partners, which in turn increases affective polarization, remain a possibility (Hutchens et al., 2019). While we cannot rule out this possibility altogether, our instrumental variable analysis helps mitigate this threat. A second concern is our use of survey-based measures. Such measures may be inaccurate due to limitations in respondents' recall ability or systematically biased due to social desirability. Third, the data for Study 2 and Study 3 were collected during the COVID-19 pandemic, a generational crisis that may have changed, if temporarily, the causal relationships between some important concepts in social science. Perhaps the unprecedented crisis of COVID-19 weakened the link between discussion networks and out-party animus. While our data cannot directly address this concern, there is little evidence that affective polarization levels have changed consistently during the pandemic (Boxell et al., 2020a), and various studies have documented partisan polarization in pandemic response (Pennycook et al., 2020). Polarized politics is business as usual during the pandemic, so we have little grounds to anticipate a weakened link between discussion and polarization. Finally, while Canada has a well-established affective polarization trend (Cochrane, 2015), it remains unclear whether our results hold in countries with different political systems and varying baseline levels of affective polarization.

Future research can extend our results in several ways. First, our observational findings can be complemented by experiments that manipulate discussion heterogeneity – in both face-to-face and online settings – to determine the direction of causality with even more confidence. Second, comparative studies examining the link between discussion heterogeneity and affective polarization across countries can shed further light on the generalizability of the results reported here. Finally, future studies can empirically evaluate the mechanisms of influence theorized here to be responsible for the depolarizing effects of cross-cutting interpersonal interaction. Such studies could examine whether the information people are exposed to, as well as the salience of their partisan identity, indeed mediate the link between heterogeneous discussion and affective polarization.

Notes

1. The data sets and code necessary to replicate all empirical analyses in this article are available at <https://osf.io/vutw4>.
2. The three measures of affective polarization used in Study 1 and Study 3 do not scale together well. The Cronbach's alpha is 0.56 and 0.59, respectively. In light of this, we estimate models treating each affect measure as a separate outcome.
3. The question wording for Study 2 was "face-to-face or over the phone," owing to its fielding during the COVID-19 pandemic. A similar approach was taken in Study 3.
4. The correlation between the indices for face-to-face and online discussion heterogeneity is $r = 0.5$ in Study 1 and $r = 0.48$ in Study 2. These moderate correlations indicate that while face-to-face and online discussion heterogeneity are closely related constructs (as one would expect), they are far from being identical.

5. We omit online discussion heterogeneity from the 2SLS analysis because we are not confident the instruments for discussion heterogeneity (i.e., discussion at work, church, or volunteer organizations) can adequately proxy for this dimension of heterogeneity. Future work should use the 2SLS approach and identify instruments that can be equally suitable for both online and face-to-face discussion heterogeneity.
6. In our social distance model, we also control for the average social distance toward nonpartisan social groups. General alienation toward society may be associated with both social distance toward out-party supporters and discussion network composition.
7. We omit time fixed effects because two-way fixed effects models – in their combination of overtime and cross-sectional variation – are more difficult to interpret (Kropko & Kubinec, 2020). The short interval between waves also mitigates the threat of time-varying confounders. Either way, a two-way fixed effects model recovers similar estimates, shown in Table S11 of the supplementary materials.
8. Respondents were randomly assigned versions of the trait battery that were either about party elites or voters. We find no significant interactive effects (see Table S3).
9. We also estimate these models using separate components of the heterogeneity index in lieu of a combined measure. The coefficients are presented in Figure S4 of the supplementary materials. The partisan component of this measure is doing the heavy lifting, as expected.

Disclosure Statement

No potential conflict of interest was reported by the authors.

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Data availability statement

The data described in this article are openly available in the Open Science Framework at <https://doi.org/10.17605/OSF.IO/VUTW4>.

Open Scholarship



This article has earned the Center for Open Science badges for Open Data, Open Materials and Preregistered. The data and materials are openly accessible at <https://doi.org/10.17605/OSF.IO/VUTW4>

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