Geographic Sorting and Affective Polarization

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Abstract

American localities have become increasingly politically homogenous (Bishop & Cushing, 2008), with affective polarization, a form of animosity between political groups, concurrently on the rise (Iyengar et al., 2019). We hypothesized that individuals living in areas with little exposure to out-partisans will report higher levels of affective polarization. In Study 1, 2016 American National Election Study respondents (N = 2355) living in counties with more out-partisans averaged lower levels of *party*-directed affective polarization, controlling for partisan, policy, and demographic factors. In Study 2 (N = 362 recruited via Prolific), similar analyses revealed that American partisans with more cross-party exposure in their counties and precincts reported lower levels of social distance from out-party members and greater perceived cross-party contact, but not significantly lower *voter*-directed affective polarization. Cross-party interactions within communities are an important predictor of how members of opposing political parties relate to each other.

Statement of Relevance

Residential communities in the United States are increasingly politically homogenous and Republicans and Democrats have few opportunities to cross the aisle and engage with members of the opposite party. At the same time, affective polarization (hostility toward out-partisans), has increased, making partisan social identities and loyalties a salient obstacle to a well-functioning democracy. The current research draws upon Contact Theory to examine whether residential homogeneity is contributing toward affective polarization. Across two studies, one with a nationally representative sample, we find that individuals living in communities with greater proportions of out-partisans report lower levels of affective polarization and greater desire for contact with out-partisans. These relationships remain when accounting for partisanship, policy preferences, and demographic factors. The political make-up of our communities plays an important role in intergroup attitudes, and people who live in homogeneous areas are perhaps those most in need of contact interventions.

Geographic Sorting and Affective Polarization

From states, to counties, to neighborhoods, it is hard not to see the United States as clusters of red and blue. Voter registration data from 180 million Americans revealed that more than half of American partisans live in a neighborhood with less than 33% members from the out-party[1] (Brown & Enos, 2021). In the 2020 US presidential election, 79% of counties were won by 20 percentage points or more (Bishop, 2020), reflecting a sharp increase in political geographic sorting since 1976, in which only 36% of counties were won by the same margin in a closely contested presidential election (Bishop & Cushing, 2008).

We examine how geographic sorting of political partisans in the United States predicts affective polarization, defined as animosity and social distance between people of different political parties (Iyengar et al., 2019; Mason, 2018b). Specifically, we investigate whether partisans who are exposed to fewer out-party supporters in their communities are more affectively polarized. Understanding the determinants of affective polarization in the United States is of the utmost importance in an era characterized by political prejudice (Iyengar et al., 2019), government shutdowns, threats to democracy (Economist Intelligence Unit, 2022), and increasing support for political violence (Kalmoe & Mason, 2019, 2022).

Affective Polarization

As geographic sorting of American partisans has increased over the last 50 years, affective polarization has also increased (Iyengar et al., 2019; Mason, 2018b). Across this period, Americans report increasing negative feelings towards out-partisans (Iyengar et al., 2019), less cross-party friendships (Huber & Malhotra, 2017), and demonstrate strong implicit partisan bias (Iyengar and

[1] We refer to members of an individual's political party as "in-party" and a member of a different political party as "out-party." For example, for a Democrat, the Democratic Party is their in-party and the Republican Party is their out-party.

Westwood, 2015). The share of Americans endorsing violence against people from the opposing political party has increased (Kalmoe & Mason, 2019, 2022), and even partisans with moderate political views can harbor extreme levels of political hostility (Mason, 2018a). This heightened affective polarization stems in part because our political parties have become important social identities (Huddy & Bankert, 2017; Greene, 1999; West & Iyengar, 2020; Tajfel & Turner, 1979). Additionally, political partisanship overlaps considerably with other meaningful social identities such as race, ethnicity, and religion (Huddy & Bankert, 2017; Mason, 2018b). This convergence of identities, or "social sorting" predicts increased intergroup conflict (Roccas & Brewer, 2002), and within political parties, can exacerbate affective polarization (Mason, 2018b).

An extensive literature demonstrates that intergroup contact reduces prejudice between social groups (Pettigrew & Tropp, 2006), with prejudice reduction mediated by reduced anxiety, increased empathy, and, to a lesser degree, increased knowledge of the outgroup (Pettigrew & Tropp, 2008). Contact between partisans is no exception. Individuals with more direct and extended (i.e., friends of friends) out-party friends reported lower levels of affective polarization (Wojcieszak & Warner, 2020). Likewise, Canadians with more frequent cross-party political discussions reported lower levels of affective polarization (Amsalem et al., 2021). Experiments with US samples have found that cross-party face-to-face discussions can reduce affective polarization (Santoro & Broockman, 2022; Levendusky & Stecula, 2021). Taken together, cross-party interactions may reduce partisan prejudice.

If close proximity to out-partisans reduces partisan prejudice, this would provide a strong test of contact theory under uniquely adverse conditions that might be theorized to exacerbate, rather than reduce, animosity (Barlow et al., 2012). When people live in areas with higher proportion of out-partisans they face the reality of living with norms and policies enacted by out-

party representatives and enabled by out-party voters. Sometimes these norms and policies enact direct harm toward out-partisans, such as with laws and policies that restrict rights and freedoms (e.g., abortion policy, immigration laws, anti-LGBTQ laws, school policies). While cultural norms dictate that prejudice towards out-groups should be avoided, there is a lack of norms in the domain of partisan-directed prejudice (Westwood & Iyengar, 2015). Further, many partisans wear their group membership with pride (e.g., political signs and identities are expressed on property, vehicles, clothing), which might further highlight differences between groups. Evidence that contact theory operates successfully in such a heightened negative living context would provide strong support for the theory, as well as promise with respect to interventions to reduce affective polarization.

Across two studies, we examine the relationship between geographic sorting and affective polarization. In Study 1, we used a large nationwide dataset to examine how exposure to out-partisans at the county level is associated with affective polarization. In Study 2, we surveyed participants to examine the relationship between cross-party exposure (at the county and precinct levels) two different measures of affective polarization. We predict that Americans who live in localities with a higher proportion of out partisans will have lower levels of affective polarization, even when controlling for factors such as policy positions and partisan identity strength.

Study 1

Study 1 uses data from the 2016 American National Election Study (ANES; American National Election Studies, 2017) to examine whether county-level exposure to members of the out-party predicts lower levels of affective polarization. We hypothesize that higher levels of cross-party exposure will predict lower levels of affective polarization.

Method

Participants

We analyzed responses from the 2016 ANES (American National Election Studies, 2017) and associated location data from the restricted-access geocodes (American National Election Studies, 2021). ANES data collection occurred between September 2016 and January 2017. There were 4270 respondents before exclusions. However, we only included responses of those who identified with the Democratic or Republican parties, or who identified as independent but leaned towards the Democratic or Republican parties (14% excluded). Additionally, we excluded participants who did not provide an answer for one or more of the measures that we included in our model (see Fig. 4; additional 31% excluded). In total, we included responses from 2355 participants (51.6% women, 48.4% men; $M_{\text{Age}} = 49.78$, $SD_{\text{Age}} = 17.34$). The sample was relatively even in identification with the major political parties, with 52.0% Democratic party identifiers/leaners and 48.0% Republican party identifiers/leaners. The majority of participants were non-Hispanic White (75.6%), while 8.9% were non-Hispanic Black, 8.5% Hispanic, 2.7% Asian/Asian-American, 0.4% Native American/Alaska Native, and 3.8% multiracial or another race. Participants came from 795 different counties in the United States.

Measures

Outcome Variable: Affective Polarization (Party-Directed)[2]. Affective polarization was assessed with feeling thermometers, a common way of measuring affective polarization (Druckman & Levendusky, 2019). Participants indicated how warmly they feel towards each major political party on a scale of 0 (very cold) to 100 (very warm). To calculate an individual's level of affective polarization, participant's feeling thermometer rating of their in-party are subtracted from the feeling thermometer rating of their out-party. For example, if a Democrat's

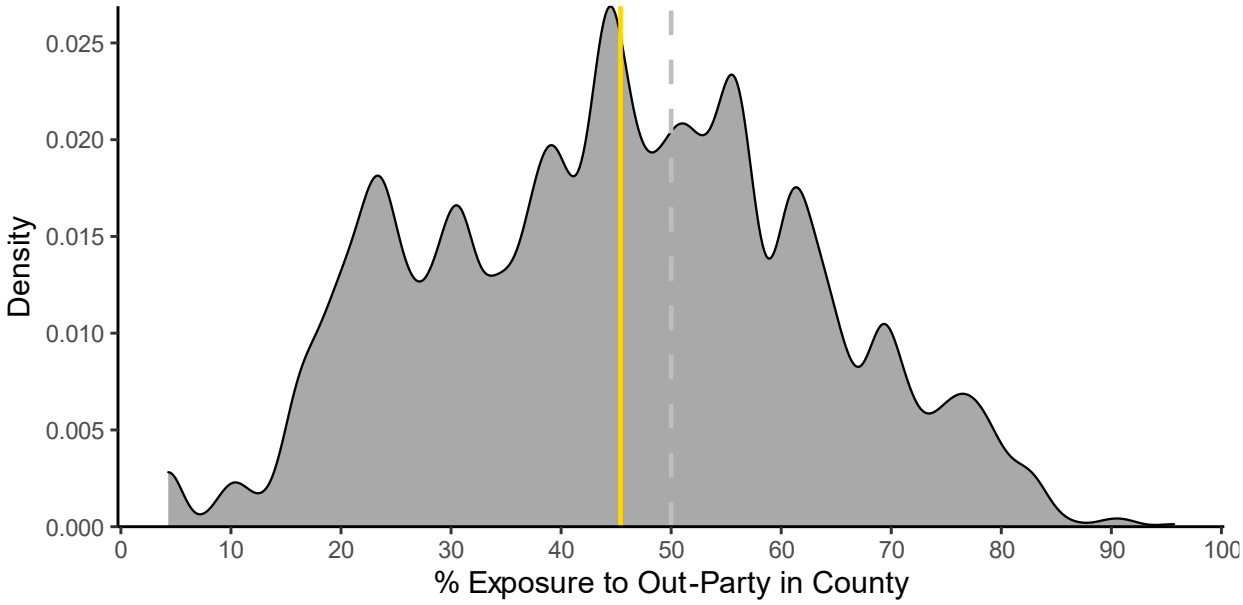
[2] In study 2 we also examine "voter-directed" affective polarization, that asks about warmth towards party voters rather than parties as a whole.

feeling thermometer rating for Democrats is 70 and rating for Republicans is 20, their level of affective polarization would be 50.

Primary Predictor Variable of Interest: Cross-Party Exposure (County Level). We determined a participant's level of cross-party exposure based on the proportion of voters in the participant's county who voted for the 2016 presidential candidate from the major party (Democrat/Republican) that the participant *does not* identify with. County level voting data was obtained from the MIT Election Data and Science Lab (2018). Third-party and write-in votes were excluded in this analysis, so that the "total" votes for a given county were the sum of votes for the Democratic party candidate (Hillary Clinton) and the Republican party candidate (Donald Trump). To demonstrate, if a Republican (or a Republican leaner) lived in a county where Hillary Clinton received 70% of the votes for major party candidates, then that individual's level of cross-party exposure would be 70%. However, if the participant was a Democrat (or Democrat leaner) in the same county, their level of cross-party exposure would be 30%. See Fig. 1 for a breakdown of participants' levels of cross-party exposure. This variable, like all other predictor variables in this analysis, was rescaled to a 0-1 scale so that 0 represents the smallest value (least exposed participant) and 1 represents the highest value (most exposed participant).

Figure 1

Density Plot of Participants' Cross-Party Exposure in their County of Residence.



Note. Unscaled values. The dashed grey line is at 50%, and the yellow line represents the median cross-party exposure.

Control Variables.

Issue Polarization. This measure reflects how closely respondents' policy views align with the more extreme views of their political party. Issue polarization measured the extent that participants' views on five policies were consistent with their political party. The five topics, which were selected to get a wide range of different types of policies, were: (1) government provided services, (2) government spending on healthcare, (3) citizenship/deportation for illegal immigrants, (4) abortion, and (5) government help to Black-Americans. If the participant selected the most extreme position aligned with their political party it was scored as a 1. If the participant indicated support for the most extreme position aligned with the opposing political party, this was scored as a 0. Policy positions not at the extremity were spaced evenly between 0 and 1 (there were four to seven options per question). To illustrate, if a Democrat indicated that abortion should be legal under all circumstances, they would score 1 for that question, as the Democratic party is pro-

choice. A Republican would score 0 if they indicated they supported abortion under all circumstances, as the Republican party is pro-life. Responses on all five questions were averaged, so that those scoring high on the 0-1 scale held policy views in line with their political party.

***Party ID Strength*.** This variable represents the extent to which participants identify with their political party. A value of 0 represents an independent that leans towards a party, .5 represents a moderate partisan (Democrat/Republican), and 1 represents a strong partisan.

Education. Level of education, with higher values representing more formal education. The five levels are (0) did not complete high school or GED, (.25) high school graduate or GED, (.5) associates degree or some college, (.75) bachelor's degree, and (1) graduate or professional degree.

Political knowledge. This variable represents the proportion of four political knowledge questions that were answered correctly, with a maximum score of 1 (all answers correct) and a minimum of 0 (all answers incorrect). The four questions (and correct answers) were the length of a senate term (6 years), party with the majority in the House of Representatives in 2016 (Republicans), party with the majority in the Senate in 2016 (Republicans), and which of the following receives the least funds from the federal government: foreign aid (correct answer), social security, defense spending, Medicare.

***White*.** This was a dummy coded variable with a score of 1 representing White (non-Hispanic) and 0 representing any other race/ethnicity.

Hispanic. This was a dummy coded variable with a score of 1 representing Hispanic and a 0 representing non- Hispanic.

Black. This was a dummy coded variable with a score of 1 representing Black (non-Hispanic) and a 0 representing any other race/ethnicity.

Male. This dummy coded variable for the participant's sex included male (1) or female (0). All participants in the sample identified as either male or female.

Income. Household income was designated as within one of 28 ranges. The lowest range, $5000 or less, was scored as 0, and the highest range, $250,000 or more scored, as 1.

Age. Respondents were at least 18 years of age. Respondents over 90 years of age were listed as "90 or above". Values were recoded to a 0-1 scale such that 0 represented 18-year-olds and 1 represented those 90 years of age or older.

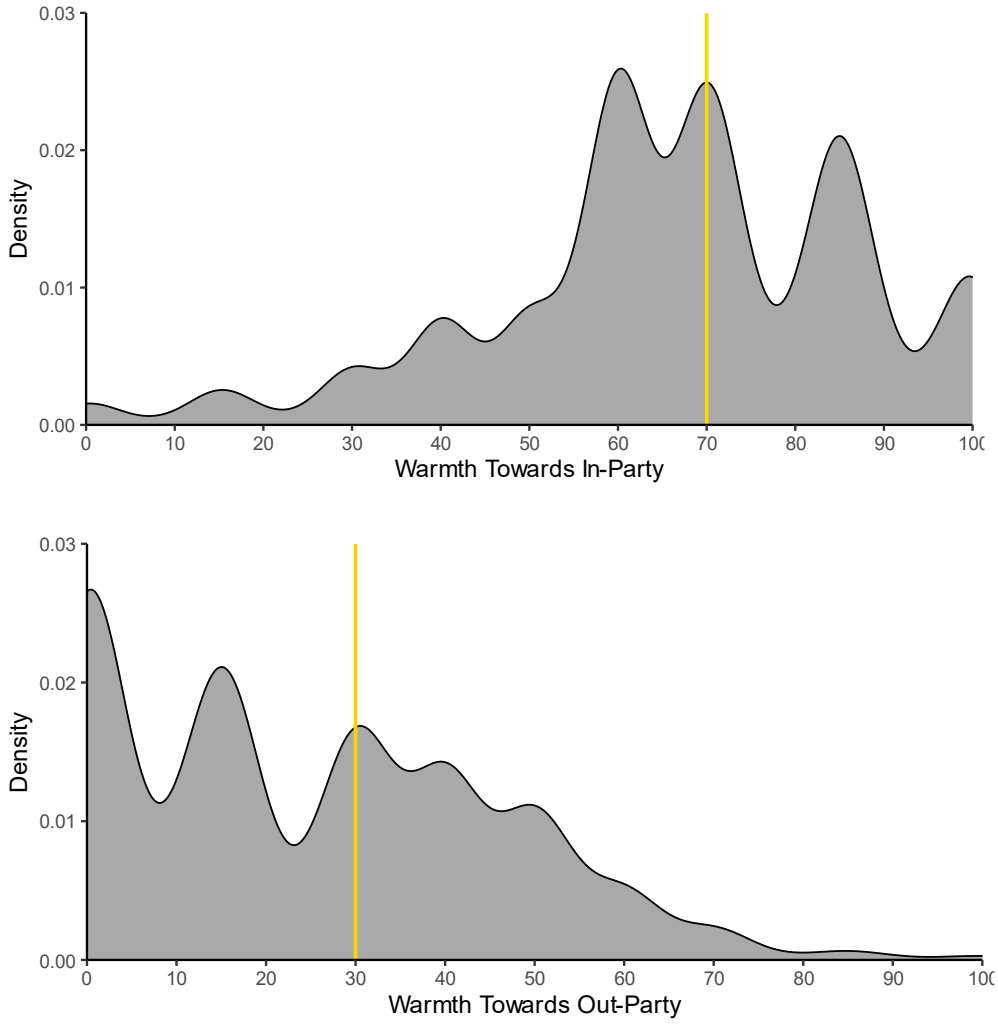
Church attendance. Higher scores on this variable represent more frequent church attendance, specifically (0) never, (.25) a few times a year, (.5) once or twice per month, (.75) almost every week, and (1) every week.

Results

On average, participants reported being affectively polarized (M = 41.79, SD = 31.32), reflecting warmer feelings towards the in-party (M = 66.48, SD = 21.03) than the out-party (M = 24.69, SD = 21.07). As demonstrated by the density plots in Fig. 2, many participants rated the out-party as 0 out of 100 on the feeling thermometer. Party-directed affective polarization was higher among Democrats (M = 44.95, SD = 30.78) than Republicans (M = 38.36, SD = 31.41), $t(2330.1) = 5.13$, $p < .001$, $d = .21$.

Figure 2

Density plots of in-party and out-party feeling thermometer ratings in Study 1.

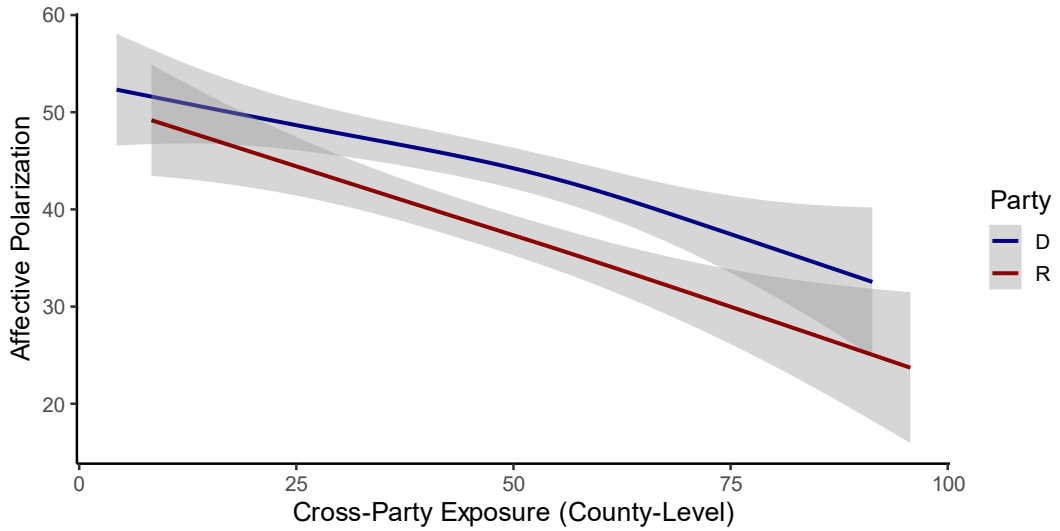


Note. The yellow line represents the median.

Without covariates, cross-party exposure at the county level predicted lower party-directed affective polarization ($r = -.15$, $t(2353) = -7.22$, $p < .001$, 95% CI = [−.19, −.11]), suggesting that those who lived in counties with more members of the out-party were less affectively polarized. As shown in Fig. 3, this was observed for both Democrats and Republicans.

Figure 3

Relationship Between County-Level Cross-Party Exposure and Party-Directed Affective Polarization in Study 1.

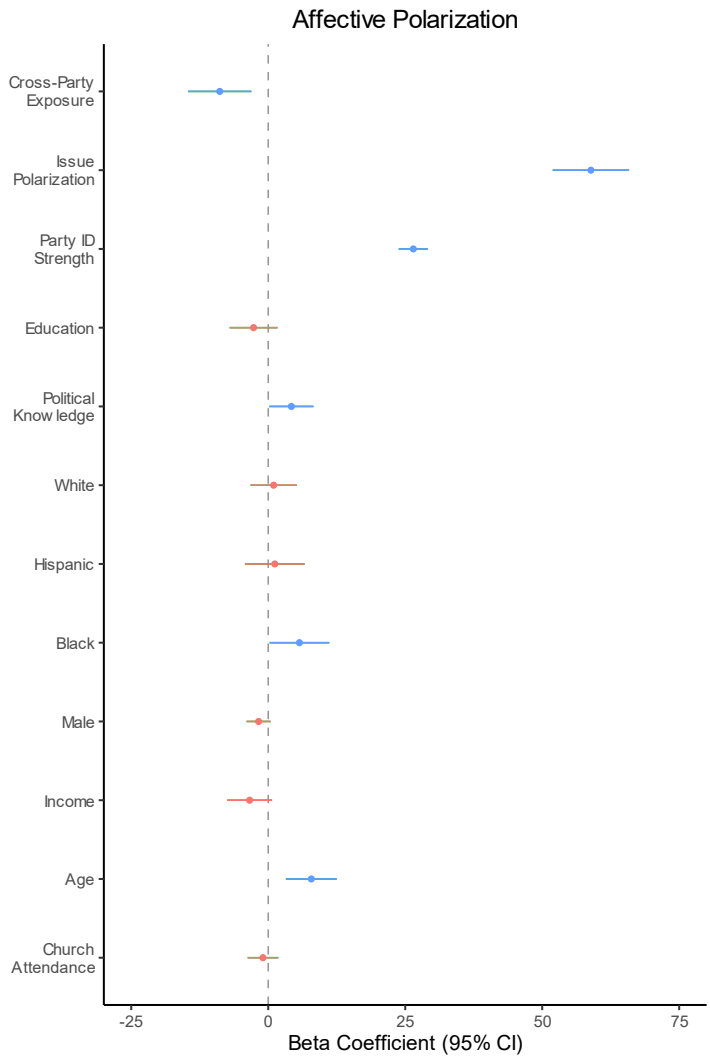


Note. Red and blue lines represent general additive models (GAM) for Republican and Democratic respondents respectively, with no covariates. The shaded area represents 95% CIs.

We next conducted a multiple linear regression predicting an individual's level of party-directed affective polarization from county-level cross-party exposure and the covariates described in the full model (see Fig. 4). Consistent with our hypothesis, there was a significant negative relationship between cross-party exposure and affective polarization, $\beta = -8.85$, $p = .003$, 95% CI = [−14.61, −3.08]. In other words, we would expect that respondents with very little cross-party exposure to be about nine points more affectively polarized than respondents with very high levels of cross-party exposure, all else being equal. This pattern is evident even when controlling for strong predictors that account for a large proportion of the variance, notably issue polarization ($\beta = 58.88$, $p < .001$, 95% CI = [51.91, 65.86]) and partisan ID strength ($\beta = 26.48$, $p < .001$, 95% CI = [23.80, 29.16]).

Figure 4

Coefficients for a Multiple Linear Regression Predicting Party-Directed Affective Polarization in Study 1.



Note. Dots represent the point estimate for each beta coefficient, while whiskers (lines) represent the 95% CI. Items in blue are significant with $p < .05$, while items in orange are not statistically significant. Affective polarization = in-party feeling thermometer rating – out-party feeling thermometer rating.

Discussion

Consistent with hypotheses, people with more exposure to out-partisans in their county had lower levels of party-directed affective polarization. Importantly, this effect holds even when controlling for individual-level variables such as issue polarization and partisan identity strength. In Study 2, we build upon this finding and include the precinct as an additional level of analysis for examining the relationship between cross-party exposure and affective polarization. Focusing on a smaller unit of measurement than county is beneficial as partisans can become clustered in small areas such as precincts or even single streets (Brown & Enos, 2021; Kaplan et al., 2022). We also add a measure of *social distance*, another component of affective polarization, which indicates how comfortable (or uncomfortable) individuals are having interpersonal relationships with out-partisans and may be particularly important for understanding behavioral outcomes such as discrimination (Druckman & Levendusky, 2019) and a willingness to interact with out-partisans.

Study 2

Study 2 is a pre-registered study using participants recruited through Prolific (pre-registration, study materials, raw data, and analytic syntax for Study 2: https://osf.io/8r6kz/). It builds upon Study 1 by examining exposure within precincts in addition to counties. Additionally, in Study 2 we use slightly different measures of affective polarization. We ask participants how warm (or cold) they felt towards the *voters* of the two major political parties, rather than the broader parties themselves, as evaluations of the party are less likely to reflect attitudes towards partisans one may encounter in everyday life (Druckman & Levendusky). In Study 2 we also measure social distance, which reflects the level of comfort individuals have interacting with out-partisans. Social distance measures are conceptually different from feeling thermometer ratings as it is possible to feel coldly towards a group of people but still feel comfortable having interpersonal relationships

with them. We hypothesize that greater cross-party exposure (at precinct and county levels) will be associated with lower levels of affective polarization (feeling thermometers and social distance).

Method

Participants

We recruited 401 participants through Prolific in May of 2022 who initially identified as Democrats or Republicans. We excluded seven states from recruitment (AK, AL, ID, KY, LA, MO, and VA) because of a lack of precinct-level voting data in those states.[3] In line with our pre-registration, six participants were excluded for not identifying with the Democratic or Republican party, and 33 were excluded for not providing an answer for one or more of the measures included in our models (see Figs. 8-11). In total, we included responses from 362 participants (46.4% women, 51.6% men, 1.9% non-binary; M_{Age} = 41.99, SD_{Age} = 14.75), with an even number of Democrats and Republicans (181 each). A post hoc power analysis conducted using G*Power (Faul et al., 2007) suggests that with our final sample size (N = 362), our primary analyses would have 76% power to detect a small effect size (f^2 = .02). Our sample was 77.9% White, 6.4% Asian/Asian American, 5.2% Hispanic/Latino/a, and 5.0% Black, while 5.5% of participants were multiracial. Participants lived in 241 different counties in the United States.

Measures

We used two main outcome variables in Study 2: voter-directed affective polarization (feeling thermometers) and social distance.

Outcome Variables.

[3] Results from absentee/mail-in ballots were reported at the county level in many of these states, rather than the precinct level, in 2020. The 2020 US Presidential election occurred during the COVID-19 pandemic, and as a result many voting and reporting procedures were altered.

Affective Polarization (Voter-Directed). Participants were asked how warm (or cold) they felt towards each major political party's *voters* on a scale of 0 (very cold) to 100 (very warm). To calculate an individual's level of affective polarization, participant's feeling thermometer rating of their in-party voters are subtracted from the feeling thermometer rating of their out-party voters.

Social Distance. Another way that affective polarization is often quantified is based on social distance measures (Druckman & Levendusky, 2019; see also Bogardus, 1933). We asked participants how comfortable they would be having a member of the opposite political party as a (1) close friend, (2) romantic partner, (3) neighbor, and (4) a close coworker. They responded on a 1 (extremely uncomfortable) to 7 (very comfortable) scale. Responses about these four relationships were averaged into a combined social distance score for each participant, and internal consistency was high ($\alpha = .93$). For analysis, we reverse coded this variable so that a higher score represented greater discomfort (i.e., social distance).

Primary Predictor Variables of Interest.

Cross-Party Exposure (County-Level). We determined a participant's level of cross-party exposure based on the proportion of voters in the participant's county who voted for the 2020 presidential candidate from the major party (Democrat/Republican) that the participant *does not* identify with. County level voting data was obtained from the MIT Election Data and Science Lab (2018). Third-party and write-in votes were excluded in this analysis, so that the "total" votes for a given county were the sum of votes for the Democratic party candidate (Biden) and the Republican party candidate (Trump). This variable was rescaled to a 0-1 scale so that 0 represents the smallest value (least exposed participant) and 1 represents the highest value (most exposed participant).

Cross-Party Exposure (Precinct-Level). Participants were instructed to follow a link to the *New York Times* "Extremely Detailed Map of the 2020 Election" (Park et al., 2021). This map shows the vote shares of each major presidential candidate in each precinct. They were instructed to enter their current address to find results for their precinct. They then reported the candidate who won in their precinct and his margin of victory. A cross-party exposure value was calculated from this information. When participants lived in precincts where their candidate *won*, their cross-party exposure score was the margin of victory multiplied by −1. When participants lived in precincts where their candidate *lost*, their cross-party exposure score was simply the margin of victory in that precinct. As a result, more positive values reflect participants living in precincts with more voters for the out-party in the 2020 presidential election, while those with negative values are living in areas with more voters from the in-party in 2020. Like other variables, this variable was scaled to a 0 (least exposed participant) to 1 (most exposed participant) scale before being used in regression models.

Control Variables. The control variables used in our pre-registered models were the same as those used in Study 1, with the exception of those detailed below (see full models in Figs. 6-9):

Democrat. We added a dummy coded variable for the participant's political party, with a 1 representing Democrats and 0 representing Republicans.

Party ID Strength. In Study 2, we did not include partisan leaners so Party ID Strength is now dummy coded, with 0 representing a self-identified "not very strong" partisan and a 1 representing a "strong" partisan.

Political knowledge. The four questions (and correct answers) in Study 2 were the length of a senate term (6 years), party with the majority in the House of Representatives in 2022

(Democrats), the current Chief Justice of the United States (John Roberts), and which domain receives the least funds from the federal government (same as Study 1).

Gender. In Study 2, we asked about participants gender identities rather than sex; man was a dummy coded 1 and all other gender identities as 0.

For exploratory purposes, we also asked about participants levels of *perceived cross-party contact* with the question "In your community, do you interact with more Democrats or more Republicans on a regular basis?" The scale ranged from 0 (many more democrats) to 100 (many more Republicans). We coded this variable so that a higher score represented more cross-party contact and scaled the values between 0 and 1. We also asked several questions about participants relationships with in-party and out-party members. We asked participants how many "friends and good acquaintances" and family members they had from the two main political parties (none, a few, many, or very many). An attention check administered in the middle of the study instructed participants to select a specific answer choice if they were paying attention. See Supplemental Materials for complete question text.

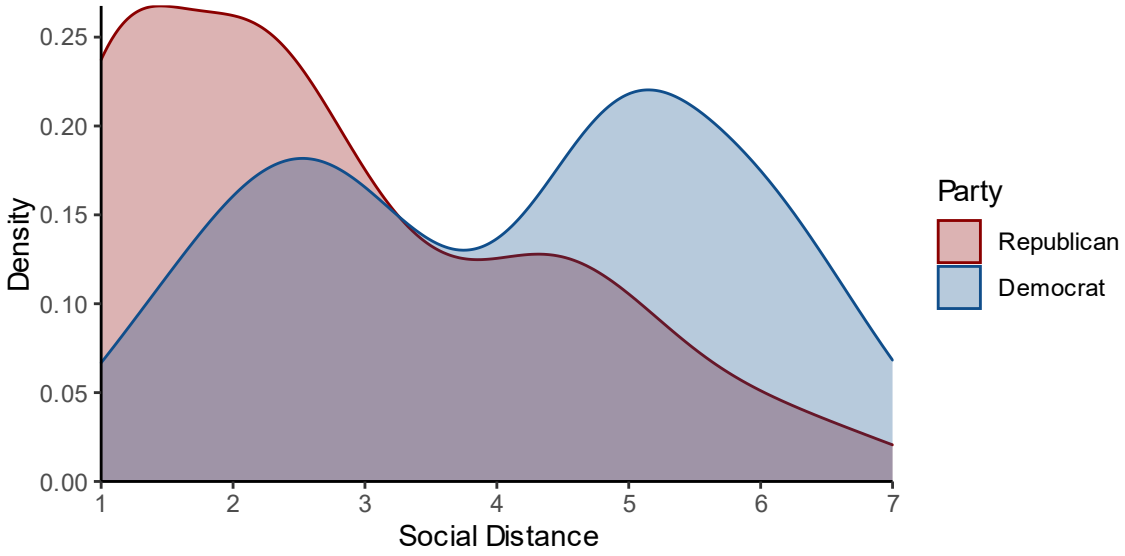
Results

The mean level of voter-directed affective polarization was 44.23 (SD = 31.36), reflecting warmer feelings towards in-party voters (M = 75.47, SD = 18.34) than out-party voters (M = 31.23, SD = 24.98). Voter-directed affective polarization was higher among Democrats (M = 49.69, SD = 30.54) than Republicans (M = 38.78, SD = 31.29), $t(359.79) = 3.35$, $p < .001$, $d = 0.35$. The mean level of social distance was 3.43 (SD = 1.76), slightly below the midpoint on the 1 (very comfortable) to 7 (very uncomfortable) scale, indicating that on average, participants did not express discomfort with interpersonal relationships with out-partisans. Social distance was higher for Democrats (M = 4.08, SD = 1.68) than Republicans (M = 2.77, SD = 1.58), $t(358.68) = 7.61$, p

< .001, d = 0.80 (see Fig. 5). County- and precinct-level cross-party exposures were highly correlated (r = .69).

Figure 5

Density plots of social distance ratings by party in Study 2.



Note. Democrat and Republican distributions are overlapping, not additive/stacked. Higher values denote greater social distance.

We calculated the zero-order correlation between cross-party exposure at the county and precinct level and voter-directed affective polarization and the social distance measures. Cross-party exposure did not significantly predict affective polarization at either the county (r = −.06, p = .23) or precinct-level (r = −.09, p = .10), though the patterns were consistent with hypotheses. Cross-party exposure did predict social distance at both the county (r = −.22, p < .001) and precinct levels (r = −.21, p < .001). This suggests that those who have more exposure to out-partisans in

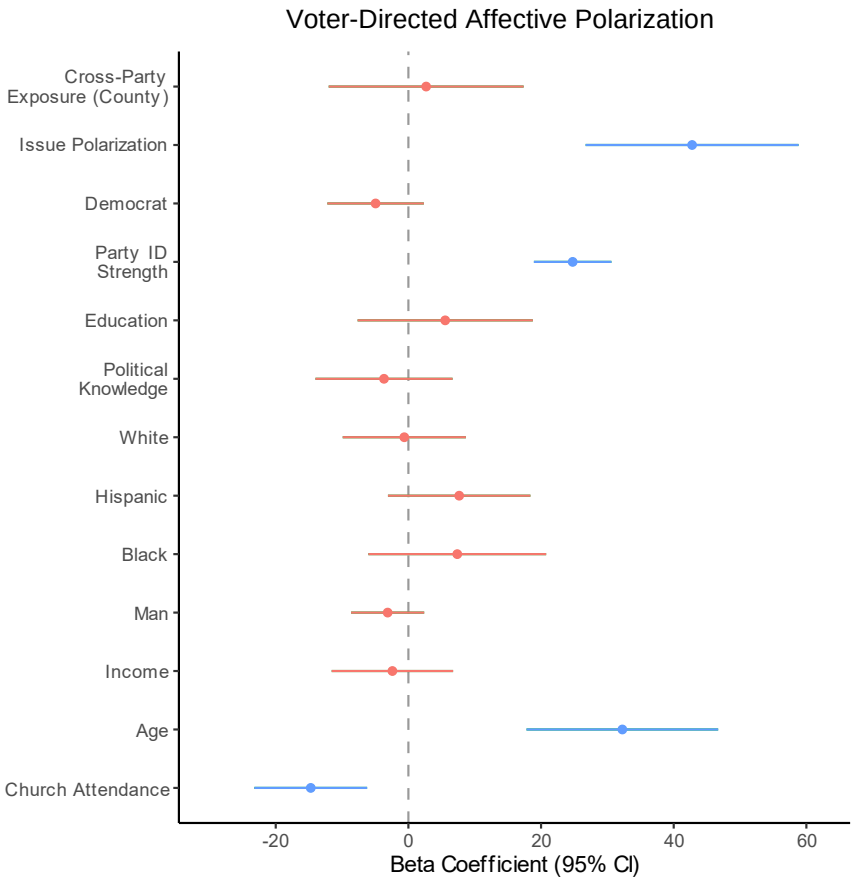
their counties and precincts are more comfortable interacting with the out-party, but that they don't harbor more negative feelings toward voters from the out-party relative to in-party.

Pre-Registered Analyses

Based on our pre-registered analysis plan, we conducted four multiple linear regression models. First, we examined the relationship between affective polarization on the feeling thermometers and county-level cross-party exposure as well as the covariates (see Fig. 6 for full model). Contrary to our hypothesis and the model in Study 1, we found no significant relationship between cross-party exposure and voter-directed affective polarization, $\beta = 2.67$, $p = .72$, 95% CI = [−12.02, 17.37]. The same model using precinct-level cross-party exposure similarly found no significant relationship between cross-party exposure and voter-directed affective polarization, $\beta = 0.40$, $p = .95$, 95% CI = [−12.34, 13.16] (see Fig. 7).

Figure 6

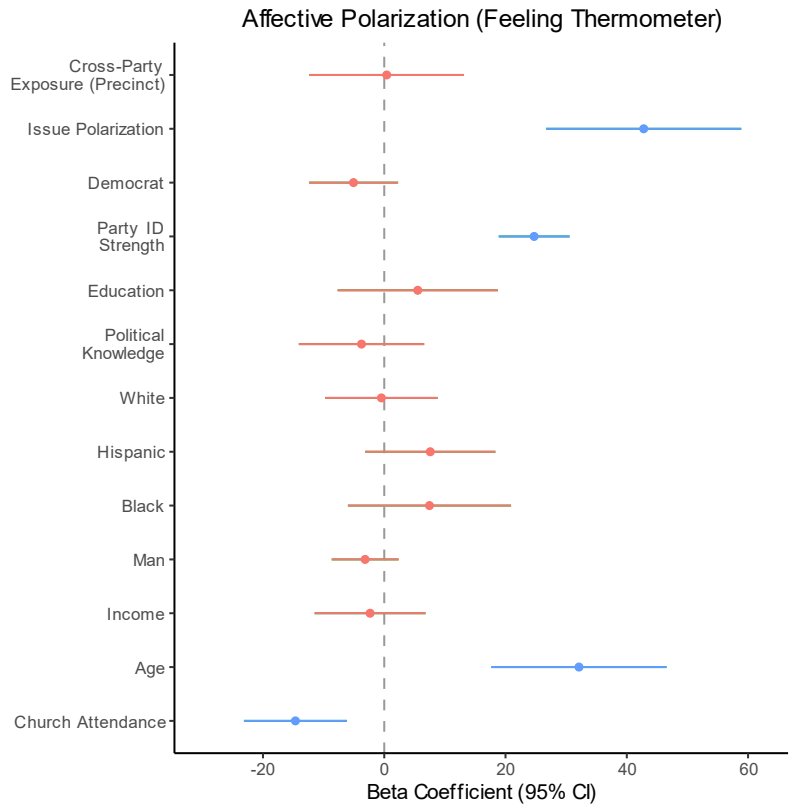
Predicting affective polarization using county-level cross-party exposure in Study 2.



Note. Dots represent the point estimate for each beta coefficient, while whiskers (lines) represent the 95% CI. Items in blue are significant with $p < .05$, while items in orange are not statistically significant.

Figure 7

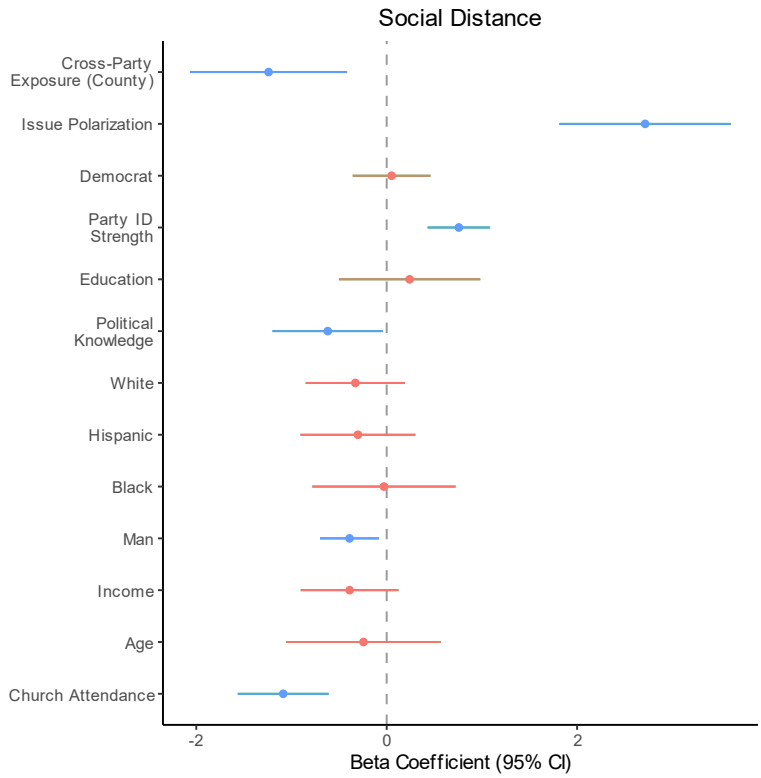
Predicting affective polarization using precinct-level cross-party exposure in Study 2.



Next, we examined whether cross-party exposure predicted social distance. In line with our hypothesis, we found a significant negative relationship between cross-party exposure at the *county*-level and social distance, $\beta = -1.24$, $p = .003$, 95% CI = [−2.07, −0.42] (see Figure 8). In other words, we would expect that respondents with very little cross-party exposure in their county to score more than a full point lower on the seven-point social distance scale than respondents with very high levels of cross-party exposure, all else being equal. Likewise, at the precinct level, there was a significant negative relationship between cross-party exposure and social distance, $\beta = -0.74$, $p = .044$, 95% CI = [−1.46, −0.02] (see Fig. 9).

Figure 8

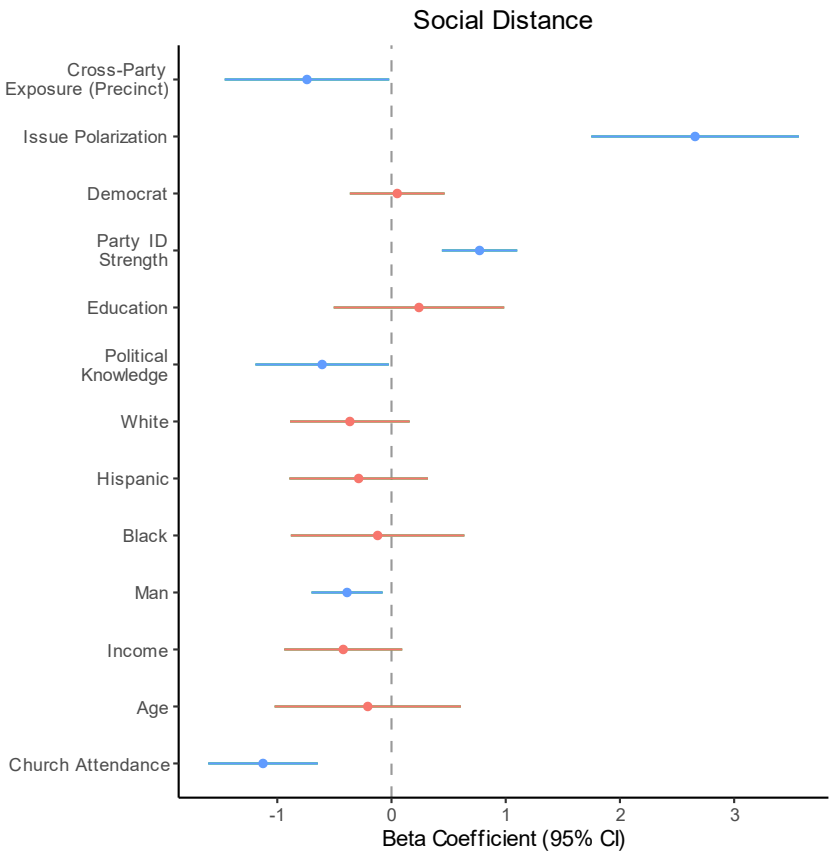
Predicting social distance using county-level cross-party exposure in Study 2.



Note. Dots represent the point estimate for each beta coefficient, while whiskers (lines) represent the 95% CI. Items in blue are significant with $p < .05$, while items in orange are not statistically significant.

Figure 9

Predicting social distance using precinct-level cross-party exposure in Study 2.



Note. Dots represent the point estimate for each beta coefficient, while whiskers (lines) represent the 95% CI. Items in blue are significant with $p < .05$, while items in orange are not statistically significant.

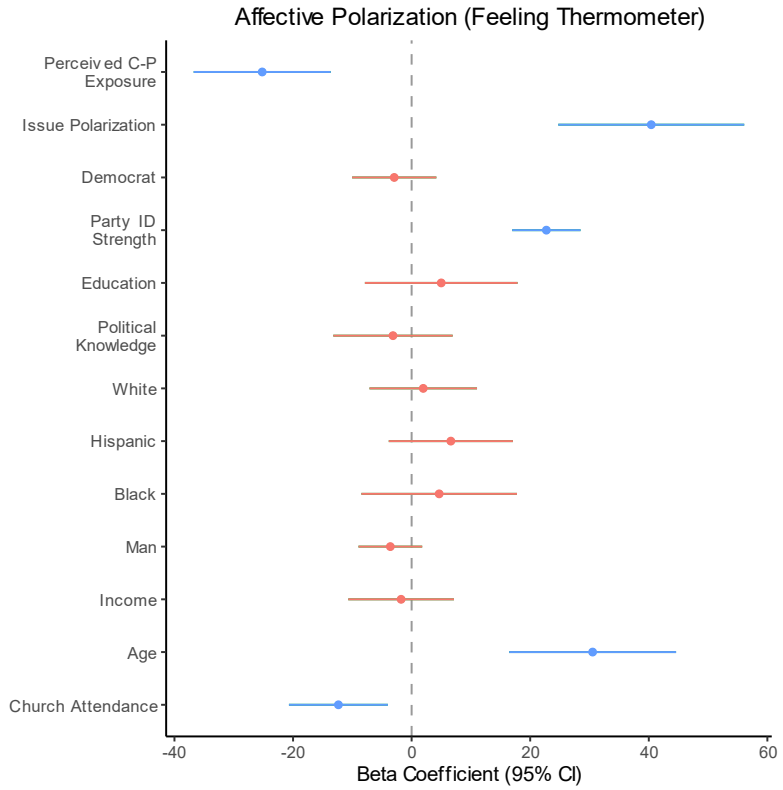
Exploratory Analyses: Perceived Cross-Party Contact

In addition to our more objective measures of cross-party exposure within communities (precinct-level and county-level voting), respondents also indicated the proportion of Democrats or Republicans they thought they interacted with in their communities on a regular basis. We examined how perceived contact predicted voter-directed affective polarization and social distance, using the same covariates as in the previously described pre-registered models. We found that perceived cross-party contact significantly predicted lower levels of voter-directed affective

polarization (β = −25.20, $p < .001$, 95% CI = [−36.76, −13.64], see Fig. 10) and in a separate model it also significantly predicted lower levels of social distance (β = −1.68, $p < .001$, 95% CI = [−2.33, −1.03], see Fig. 11).

Figure 10

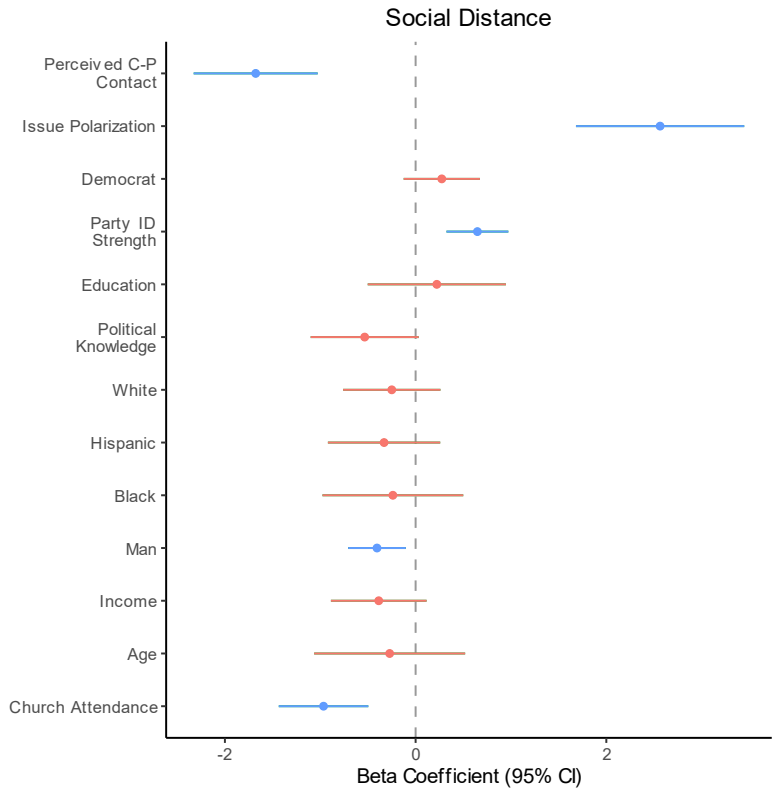
Predicting Voter-Directed Affective Polarization using Perceived Cross-Party Contact in Study 2.



Note. Dots represent the point estimate for each beta coefficient, while whiskers (lines) represent the 95% CI. Items in blue are significant with $p < .05$, while items in orange are not statistically significant. "C-P" = "cross-party."

Figure 11

Predicting Social Distance Using Perceived Cross-Party Contact in Study 2.

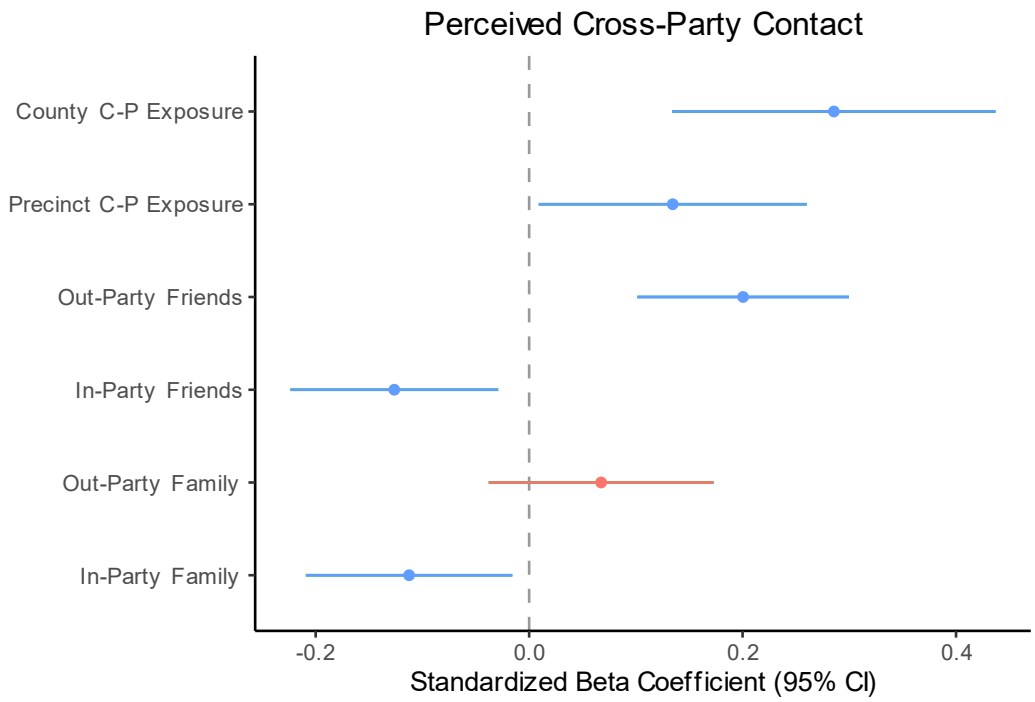


Note. Dots represent the point estimate for each beta coefficient, while whiskers (lines) represent the 95% CI. Items in blue are significant with $p < .05$, while items in orange are not statistically significant. "C-P" = "cross-party."

Because this measure of perceived cross-party contact is a strong predictor of both voter-directed affective polarization and social distance, and because it is subjective in nature, we examined how it relates to other measures of partisan exposure and contact. We ran a linear regression predicting perceived cross-party contact based on county and precinct level cross-party exposure, in-party and out-party friendships, and in-party and out-party family members (see Fig. 12). We found that perceived cross-party contact was significantly predicted by five of the six variables, suggesting that respondents were likely considering many facets of their lives when evaluating the proportion of Democrats and Republicans they interact with in their everyday lives.

Figure 12

Predictors of perceived cross-party contact in Study 2.



Note. Dots represent the point estimate for each beta coefficient, while whiskers (lines) represent the 95% CI. Items in blue are significant with $p < .05$, while items in orange are not statistically significant. "C-P" stands for "cross-party."

Furthermore, we examined whether perceived cross-party contact mediated the relationship between cross-party exposure (county and precinct levels) and social distance as well as voter-directed affective polarization (feeling thermometers). To do this, we tested four mediation models using the "Mediation" package in R (Tingsley et al., 2014). We found significant indirect effects of cross-party exposure (county and precinct level) via perceived cross-party

contact on both social distance and voter-directed affective polarization (see Table 1). When using social distance as a dependent variable, cross-party exposure (both precinct and county level) predicted higher perceived cross-party contact, which predicted lower social distance. The direct and total effects were significant in these mediation models as well. Similarly, when using voter-directed affective polarization as a dependent variable, cross-party exposure (both precinct and county level) predicted higher perceived cross-party contact, which predicted lower social distance. However, the direct and total effects were non-significant in these mediation models.

Table 1

Mediation Analyses with Perceived Cross-Party Contact as a Mediator in Study 2.

Level of Cross-Party Exposure (IV)	DV	Indirect Effect (ACME)	Direct Effect (ADE)	Total Effect	Proportion Mediated
County	Social Distance	–0.94*** [–1.38, –0.47]	–1.15* [–2.20, –0.09]	–2.09*** [–3.04, –1.17]	0.45*** [0.19, 0.93]
Precinct	Social Distance	–0.72*** [–1.16, –0.36]	–0.93* [–1.76, –0.09]	–1.65*** [–2.41, –0.91]	0.44*** [0.21, 0.93]
County	Feeling Therm. Diff.	–21.84*** [–31.49, –13.60]	11.24 [–7.77, 29.67]	–10.60 [–28.38, 5.61]	2.06 [–11.15, 27.13]
Precinct	Feeling Therm. Diff.	–15.03*** [–22.13, –8.68]	2.78 [–11.44, 17.15]	–12.26 [–26.78, 1.46]	1.23 [–7.26, 6.48]

Note. This table displays the results of mediation analyses examining the role of perceived cross-party contact on the relationship between cross-party exposure (county and precinct levels) and

measures of affective polarization (voter-directed feeling thermometer ratings and social distance). Brackets denote bootstrapped 95% confidence intervals. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Discussion

Consistent with hypotheses, both county and precinct-level measures of cross-party exposure predicted significantly less affective polarization in the form of social distance. Likewise, perceived cross-party exposure was linked with less affective polarization on this measure. These findings suggest that individuals who live in communities with more out-partisans feel more comfortable having interpersonal relationships (coworkers, neighbors, close friends, romantic partners) with members of the opposite party. This pattern emerges even after controlling for the effects of strong predictors of social distance including partisan identity strength and issue polarization.

Inconsistent with hypotheses, cross-party exposure did not significantly predict voter-directed affective polarization. This null result held for both county-level and precinct-level measures of cross-party exposure, and for both multiple linear regressions and zero-order correlations. Although cross-party exposure did not predict voter-directed affective polarization, we found that more perceived cross-party exposure was associated with significantly lower levels of voter-directed affective polarization. This finding is consistent with experiments which demonstrate that cross-party contact can reduce affective polarization (Santoro & Broockman, 2022). Our measure of perceived cross-party contact appears to capture elements of the partisan makeup of counties and precincts in which respondents live, but also their social circles (family and friends). As a result, this measure is likely better at tapping into the level of actual *contact* with out-partisans than our measures of exposure based purely on voting patterns. Further

highlighting the importance of contact, mediation analyses revealed that perceived cross-party contact mediated the relationship between cross-party exposure and affective polarization, as well as cross-party exposure and social distance.

General Discussion

Across two studies, we used ANES and original data to examine the role that geographic sorting plays in affective polarization. We found that living in areas with more exposure to out-partisans was associated with lower levels of *party-directed* affective polarization. Similarly, greater cross-party exposure/contact measured in three different ways (county-level, precinct-level, and perceived contact) predicted lower levels of social distance from out-partisans. However, contrary to our hypotheses, cross-party exposure at the precinct and county levels did not significantly predict *voter*-directed affective polarization. Yet, greater *perceived* cross-party contact was a significant predictor of voter-directed affective polarization, suggesting that interacting with members of the opposite party may reduce this form of affective polarization as well. Further, perceptions of cross-party contact mediated the relationship between geographic sorting and affective polarization, suggesting that geography is linked with contact experiences, and that these experiences are related to lower levels of partisan bias.

Communities within the United States have become increasingly politically homogenous over the last several decades (Bishop & Cushing, 2008; Bishop 2020), while affective polarization has also increased during this period (Iyengar et al., 2019). Our research demonstrates that geographic sorting is *directly* linked to affective polarization. By examining how individuals' cross-party exposure is related to their evaluations of the out-party and its voters, we show that where people live matters for how they think about political parties. Further, geography matters above and beyond core partisan beliefs, and reduces animosity despite the strong normative

negative environment surrounding partisanship groups, providing a strong, naturalistic test of contact theory.

Although our research program highlights the relationship between cross-party exposure and affective polarization and we control for party identity strength and policy views, it could be posited that affective polarization causes geographic sorting. However, Mummolo and Nall (2017) cast doubt on the idea that the political composition of communities is an important factor for where people move. They note that while research has shown that Democrats and Republicans often differ in community preferences (Bishop & Cushing, 2008), people do not actually move to places with a greater proportion of in-party members. They find that even those who would have the most interest in moving to a community with more in-party members (e.g., those with strong ideologies) and those with the most ability to move (e.g., the young, the rich) do not usually end up doing so. Instead, other factors such as cost of living, job opportunities, and safety are much more important considerations which dwarf the importance of a community's partisanship. Based upon this research and experimental findings that suggest that more cross-party contact can reduce affective polarization (e.g., Santoro & Broockman, 2022), we have good reason to believe that exposure to the out-party can lead to less partisan bias.

Living under out-party policies, leadership, and cultural norms could lead to hostility against the out-party. Nevertheless, we find that living in localities with greater proportions of out-partisans tends to be associated with decreased affective polarization. As demonstrated by the mediation analyses in Study 2, the relationship between cross-party exposure (at the county and precinct levels) is explained in part by the perception of cross-party contact.

Conclusion

Our research suggests that the increasingly politically divided geography of the United States has implications for political attitudes and how people engage across party lines. More specifically, we found that when people live amongst larger proportions of out-partisans that they tend to have lower levels of party-directed affective polarization and social distance (but not voter-directed affective polarization), even when controlling for factors such as party identity strength and policy views. We argue that the ameliorating effect of intergroup contact explains why individuals who have more cross-party exposure in their communities generally have more favorable views of the out-party. The United States' increasingly divided geography is reducing opportunities for cross-party contact, and without creating more intentional opportunities for cross-party exposure, political animosity may continue to grow and harm the country's ability to cross the aisle and work together in solving problems that strengthen the nation. American partisans living in politically homogenous communities set apart from out-partisans may be the most in need of contact interventions.

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