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Social Network Heterogeneity and Partisan Affect, Partisan Stereotyping, and Policy Preference Constraint

Paul Platzman

Columbia University

February 2023

Research over the past two decades has revealed a number of relationships between voters' political attitudes and the heterogeneity of their political discussion networks. In this paper, I test Lupton and Thornton's (2017) contention that social network heterogeneity is, in actuality, a combination of two independent network attributes: disagreement and diversity. Using three surveys administered between 2008 and 2020, I shed new light on the relationship between disagreement and diversity vis-à-vis their relationship to each other and to important political attitudes. Using both cross-sectional and panel data, I demonstrate that exposure to disagreement is associated with reduced partisan affective intensity, partisan stereotyping, and policy preference constraint. I distinguish this from the predominantly null relationships these attitudes possess to exposure to diversity. In addition, I demonstrate the moderating role that a voter's interest in politics plays on the influence of disagreement but not diversity. I conclude by reassessing the normative desirability of promoting social network disagreement if its cost is disengagement from political affairs and reduced policy preference consistency.

Introduction

Discussion and deliberation have long been upheld as cornerstone activities of functioning democracies (Habermas 1991; Fishkin 1991). For a democracy to flourish, both mass publics and legislators are expected to engage in reasoned evaluation of competing policy positions. Through

social networks and its relationship to political outcomes. Indeed, aspects of network heterogeneity and their relationships to ideological polarization (Pattie and Johnston 2016; Rawlings 2022), affective polarization (Sumaktoyo 2021), tolerance of political outgroups (Mutz 2002a), perceptual distortions (Butters and Hare 2022), political participation (Mutz 2002b; McClurg 2006), political knowledge (Hopp et al. 2020), and vote choices (Paulis and Ognibene 2022) have been explored. In general, this body of work has asserted that those with greater social network heterogeneity are more understanding of a greater array of viewpoints, more tolerant of those they disagree with, less ideologically extreme, and yet, less politically participatory.

If social network composition has the potential to produce wide-ranging effects, it is important to understand the extent to which Americans' social networks are heterogeneous. This question has been surprisingly difficult to answer. Baldassarri and Bearman (2007) suggested that people are predisposed to perceive their networks to be more politically homogeneous than they are because they are likeliest to talk about politics with those who are closest and most similar to them. Indeed, Mutz and Martin (2001) found survey evidence to support the view that few Americans perceive heterogeneity within their network of political contacts. Huckfeldt, Mendez, and Osborn (2004), on the other hand, found that more than half of American National Election Studies (ANES) survey respondents in 2000 encountered vote choice disagreement within their interpersonal network. Butters and Hare (2022) used the same data set and an additional set from 2016 to find that network heterogeneity decreased in the United States during the 16-year period between measures. Over a similar time frame, other researchers have shown that Americans have geographically segregated along political lines (Brown and Enos 2021) and that emotionally-driven social segregation has accelerated (Iyengar 2022; Webster, Connors, and Sinclair 2022).

Some of the literature's disparate estimates about the amount and effects of network heterogeneity may be attributed to differences in measurement. Some measures of network heterogeneity focused strictly on the overlap in network members' vote choices (e.g., Huckfeldt, Mendez, and Osborn 2004) while others took into account the similarity of network members' political views (e.g., Mutz 2002a, 2002b; Mutz and Martin 2001). Furthermore, some studies relied on

(Klofstad, Sokhey, and McClurg 2013). Perhaps, then, network disagreement fosters a propensity among its egos to politically *disengage*. Considered within this framework, it may be that those who are in high disagreement networks do not really feel more *warmly* towards outpartisans, as it appeared in Sumaktoyo (2021), but merely more *indifferent* as they increasingly disconnect from the political process. By extension, this rationale suggests that egos in high disagreement networks may be more likely to express less intense partisan affect towards partisans *of both sides*.

- Hypothesis 1: Network disagreement is associated with reduced partisan affective intensity for both inparty and outparty members. Specifically, more network disagreement is associated with more favorable outpartisan affect and less favorable inpartisan affect.

If the mechanism that links disagreement to partisan affective intensity is disengagement from

increasing diversity while holding disagreement constant requires more alters to be added to a network while maintaining the ratio of those who agree and disagree with the network's ego. The marginal effect of network diversity may, therefore, be a proxy for the marginal effect of network size, and controlling for network size may show that diversity's independent effect on partisan affective intensity is zero.

- Hypothesis 3: Network diversity has no relationship to partisan affective intensity once network disagreement and size are controlled for.

Without any independent effect, political interest is unlikely to be a moderator of diversity and partisan affective intensity.

- Hypothesis 4: Political interest is not a moderator of network diversity and partisan affective intensity.

Partisan Stereotyping

A construct closely related to partisan affect is partisan stereotyping. One line of research on partisan stereotyping concerns partisan perceptual distortions. Brady and Sniderman (1985) showed that perceptions of outparty policy positions depend on one's own positions and are exaggerated when partisan affect is heightened. More recently, Levendusky and Malhotra (2016) showed that Americans perceive more ideological polarization between the parties than there is, and that they are especially prone to exaggerating outpartisan positions. Perceptual distortions are not only ideological; Ahler and Sood (2018) showed that Americans disproportionately expect outpartisans to conform to demographic stereotypes, such as LGBTQ Democrats and wealthy Republicans.

Another line of research considers partisan differences in personal trait evaluations. Iyengar, Sood, and Lelkes (2012) showed that partisans ascribe more favorable traits to inpartisans than outpartisans, and they do so whether they are asked to characterize masses or elites (Druckman

and Levendusky 2019). These differences are not trivial; trait evaluations of partisan candidates contribute to voters' candidate evaluations (Laustsen and Bor 2017; Goren 2002).

Two papers have identified relationships between partisan stereotyping and aspects of social network composition. Butters and Hare (2022) showed that egos in more homogeneous networks perceive greater ideological distance between Democrats and Republicans than actually exists, and Sumaktoyo (2021) demonstrated that the number of disagreeing alters in an ego's network is related to more positive outpartisan trait evaluations.⁵ Because partisan trait evaluations and partisan affect are positively correlated (Druckman and Levendusky 2019), I expect the relationships among social network disagreement, diversity, and stereotyping to mirror those among disagreement, diversity, and partisan affect. Specifically, I expect that those whose networks contain little disagreement are prone to ascribing more favorable personality traits to inpartisans than outpartisans and to exaggerating the differences between them.

- Hypothesis 5: Network disagreement is associated with less discrepant trait evaluations of outparty and inparty members. Specifically, more network disagreement is associated with more favorable trait evaluations of outparty members and less favorable trait evaluations of inparty members.

As with partisan affect, this relationship may be moderated by political interest. If the mech-

- Hypothesis 7: Network diversity has no relationship to partisan stereotyping once network disagreement and size are controlled for.
- Hypothesis 8: Political interest is not a moderator of network diversity and partisan stereotyping.

Policy Preference Constraint

Another difference between disagreement and diversity may be found in their relationships to policy preference consistency. Some studies have shown that those who belong to homogeneous social networks are more ideologically "extreme" or "polarized" than those who do not (Pattie and Johnston 2016; Rawlings 2022). However, Broockman (2016) demonstrated that the appearance of ideological extremeness across multiple measurements may in fact be a display of ideological consistency. If those who belong to homogeneous networks are actually more ideologically consistent than those who belong to heterogeneous networks, should we expect different levels of consistency among egos in different types of heterogeneous networks?

In the face of disagreement, network egos may double down on their preexisting convictions

over time (Berelson, Lazarsfeld, and McPhee 1954). This evidence may support the hypothesis that network disagreement produces disengagement among its egos, and that those who are surrounded by dissenters are less likely to be invested in political affairs altogether. If so, egos in high disagreement networks may be less likely to report ideologically consistent (i.e., constrained) sets of policy preferences across issue domains, embodying the low levels of conceptualization first articulated by Converse (1964) that are thought to accompany political disengagement.

- Hypothesis 9: Network disagreement is associated with less ideological consistency (i.e., constraint) across issue domains.

If disengagement, rather than conformity or persuasion, is the explanatory mechanism linking disagreement to constraint, then an ego that belongs to a high disagreement network but nevertheless retains an interest in politics should be less susceptible to disagreement's disengaging influence.

- Hypothesis 10: The interaction between network disagreement and political interest on ideological constraint is positive. For fixed values of disagreement, greater political interest is associated with more ideological constraint.

With respect to diversity, it is conceivable that exposure to a variety of viewpoints, which a diverse social network is likely to supply, induces voters to assume a collection of ideologically inconsistent preferences or to vacillate between ideologically opposing views. But if exposure to disagreement induces voters to disengage from politics, and it is the component of network heterogeneity most responsible for the relationship to policy preference consistency, then network diversity should have no independent effect once disagreement and network size are controlled for. In addition, political interest should not moderate the relationship between network diversity and ideological constraint.

- Hypothesis 11: Network diversity has no relationship to ideological constraint once network disagreement and size are controlled for.

- Hypothesis 12: Political interest is not a moderator of network diversity and ideological constraint.

In the sections to follow, I will test Lupton and Thornton's (2017) contention that network disagreement and diversity are "independent predictors of political thought and action" (605) by showcasing their comparative relationships to partisan affect, partisan stereotyping, and policy preference constraint. First, I will identify three data sets that contain relevant measures of network heterogeneity and political attitudes. Second, I will define an array of measures to capture different aspects of these underlying concepts. Third, I will quantify the relationships among them in both cross-sectional and panel data. Ultimately, I will show that disagreement and diversity

tisan composition of their personal and online social networks.⁷ This distinction appears to be unique among recent studies that asked respondents to characterize their social networks' compositions. In addition, this survey contained substantially more respondents than the others I utilize and contained two waves of measurement, enabling not only cross-sectional but longitudinal analysis. Not only does this study contain measures relevant to characterizing network disagreement and diversity, partisan affect, and policy preference constraint, but it is also the only data set I use that captures partisan trait evaluations, which is my basis for measuring partisan stereotyping.

The second survey I use is the ninth wave of the 2008-2009 ANES Panel Study ("2008 ANES").⁸ The 21-wave survey was administered once per month for 21 months between January 2008 and September 2009, and ten of the waves concerned primarily political topics. The ninth wave, administered in September 2008, asked respondents a battery of questions about their personal relationships and their interactions with others about politics. 2,140 respondents participated in the ninth wave of the survey and completed the relevant section of the questionnaire. This study also measured partisan affect and policy preferences in the same or subsequent survey wave.

The third survey I use is the 2016 United States version of the Comparative National Elections Project ("2016 CNEP"), which is a multi-national survey initiative with customized implementations in 29 countries.⁹ The initiative is primarily focused on measuring aspects of "political intermediation processes," such as interpersonal discussion, and traces its roots to the paradigmatic elections work conducted by the early Columbia scholars. As a result, the 2016 CNEP possessed a variety of questions about the frequency of respondents' political discussions and vote choice agreement with members of their social networks, as well as partisan affect and policy preferences. It fielded in December 2016 and contains 1,274 respondents who provided sufficient information to conduct analysis.

7. As of the time of this writing, the Facebook behavioral data has not been released. In a private correspondence with the survey administrators, I was informed that the release is not expected to occur imminently.

8. <https://electionstudies.org/data-center/2008-2009-panel-study/>

9. <https://u.osu.edu/cnep/>

Disagreement and Diversity Measures

Consider a network that consists of two types of alters, one that is in accordance with its ego on some relevant consideration and the other that is in discordance with its ego on that consideration. There are a variety of ways that the disagreement and diversity of this network could be quantified. Lupton and Thornton (2017) argued that the best measures of network disagreement and diversity

increase diversity, while fewer numbers decrease diversity.

In order to map the agreeing-to-disagreeing alter convention to the majority-to-minority paradigm, I discretize the equation for network diversity. Where \geq :

$$= \frac{+}{2} - | - |. \quad (2)$$

Where $>$:

$$= \frac{+}{2} - | - |. \quad (3)$$

Like disagreement, diversity is an unbounded measure and its value is linearly related to the number of each type of alter in an ego's network.

Across the three surveys utilized in this paper, there were six measures each of network disagreement and diversity. No two were the same. Three of the six measures relied on the name generator question sequence, where respondents were asked to reflect on the characteristics of a few close contacts, while the other three asked respondents about attributes of the entirety of their networks. Among the three name generator measures, one gauged the extent of a respondent's shared partisanship with their contacts, one their shared vote choice, and one their shared opinions. Among the three whole-of-network measures, one asked respondents about the partisan composition of their personal network, another asked about the partisan composition of their Facebook network, and the third inquired about shared vote choice. The variety of measures available presents an opportunity to make a well-rounded assessment of the relationships among network features and political attitudes that is not reliant on any single context or dimension of comparison.

The three name generator measures solicited responses in a format that is directly applicable for use in the equations that define network disagreement and diversity. Simply quantify the number of agreeing and disagreeing alters in an ego's network and plug the values into Equation 1 and Equation 2 or 3. The whole-of-network measures tended to produce categorical outputs that need to be translated into numeric values to be inserted into the equations.

For example, the 2020 ANES contained two types of whole-of-network questions, in which respondents were asked to quantify the proportion of their network that is Democratic and the proportion that is Republican. For each partisan category, response choices ranged from "None or almost none" to "All or nearly all" on a five-point scale.¹⁰ I quantify the five values according to a range from zero to one, with quarter-point increments between each response choice.¹¹ A version of this question existed for each of two types of respondent networks, a "friends and family" network and a "Facebook friend" network.¹² For each question, agreement and disagreement is considered with respect to the respondent's own reported partisan identity.¹³ Each of these measures was recorded in each of the survey's two waves.

The 2008 ANES contained two types of name generator questions. Respondents were first asked to identify up to three associates with whom they discussed politics and then asked to reflect on the similarity of their political opinions with each of their named discussants.¹⁴ An associate is classified as one who disagreed with the respondent if the respondent reported that they perceived holding "Extremely different," "Very different," or "Moderately different" views than the associate. Conversely, an associate is classified as an agreeing alter if the respondent reported holding "Slightly different" or "Not different at all" views. For each respondent, the numbers of agreeing and disagreeing alters are computed and inserted into the disagreement and diversity Equations 1 to 3, and resulting distributions are each normalized to a zero-to-one scale.

Respondents were also asked to identify the likely partisanship of each named associate on

10. The three intermediate choices were "A few," "About half," and "A lot."

11. I remove from analysis respondents who reported having nonsensical network distributions, such as those comprised of more than half Democrats *and* more than half Republicans.

12. The "friends and family" question's text read: "Think about your friends and family. How many are Democrats, and how many are Republicans? Your best guess is fine." The "Facebook friends" question's text read: "Now think about your **Facebook 'friends.'** Among your 'friends' on Facebook, how many would you guess are Democrats, and how many are Republicans?"

13. Partisan identity was recorded on a seven-point scale, and the values corresponding to disagreement and agreement that fed into Equations 1 to 3 were weighted by partisan intensity. For example, "strong Democrats" who had a fixed share of Republicans in their networks experienced more disagreement than Democratic-leaning Independents who had the same share.

14. The initial two-question sequence read: "During the last six months, did you talk with anyone face-to-face, on the phone, by email, or in any other way about **government or elections**, or did you not do this with anyone during the last six months?" This was followed by: "What are the **first names** of the people who you talked with about government or elections during the past six months?" The political opinion similarity question's text read: "In general, how different are (NAME)'s opinions about government and elections from your own views?"

a seven-point scale.¹⁵ If an associate's partisanship, as perceived by the respondent, is on the same side of "Independent" on the scale as the respondent's own partisanship (e.g., a "Republican" and a "Strong Republican"), that associate is classified as one who agrees with the respondent. If an associate's partisanship is on the opposite side of "Independent" from the respondent's own partisanship, that associate is considered to be one who disagrees with the respondent. As before, the numbers of agreeing and disagreeing alters are totaled for each respondent. These values are inserted into Equations 1 to 3, and resulting distributions are each normalized to a zero-to-one scale.

The 2016 CNEP contained both a name generator sequence, in which respondents were asked to reflect on the vote choices of a few close contacts, and an alternative measure about the vote choices of various types of personal associates. In the name generator sequence, respondents were asked to specify the likely 2016 presidential election vote choice of each named associate and the frequency of political discussion with each associate.¹⁶ Single respondents were asked to name up to two associates, whereas married respondents or those cohabitating with a partner were also asked to name their spouse or partner, for a maximum of three.¹⁷ If a respondent's vote choice matches the perceived vote choice of a named associate, the associate is considered to agree with the respondent. If a respondent's vote choice does not match, the associate is considered to disagree with the respondent. The sum totals of agreeing and disagreeing associates for each respondent are weighted based on how frequently the respondent reported discussing politics with each associate. Weighted values are then inserted into Equations 1 to 3, and the resulting distributions of disagreement and diversity values are each normalized to a zero-to-one scale.

In another measure, respondents were asked to identify the likely vote choices and the fre-

15. Each named associate's partisanship was evaluated on a seven-point scale according to the standard two-question sequence that begins with: "Generally speaking, does (NAME) probably think of (himself/herself) as a Republican, Democrat, independent, or something else?"

16. Although variations of these questions existed across country questionnaires and the exact text of the US version is not reported, generic versions of the questions' texts read "How often did you talk to this person about the recent election?" and "Which party, if any, did he/she favor in the last election?"

quency of political discussion with each of four *types* of associates, rather than specific individuals: "family," "friends," "neighbors," and "coworkers."¹⁸ As in the name generator sequence, a respondent's vote choice is compared against an associate type's perceived choice and categorized as either being in agreement or disagreement with the perceived choice.¹⁹ Each respondent's totals of agreeing and disagreeing associate types are weighted based on the frequency of reported political discussion with each associate type. Weighted values are inserted into Equations 1 to 3, and the resulting distributions of values are each normalized to a zero-to-one scale.

In sum, the 2020 ANES provided two whole-of-network measures that evaluated ego-alter similarity on the basis of shared partisanship. One measure concerned the network composition of a respondent's "family and friends" network while the other concerned the composition of the re-

Outcome Variable Measures

I also utilize a range of measures for each of the three outcome variables. Questions measuring partisan affect, for example, appeared in each of the three surveys utilized. The 2020 ANES asked respondents to report their favorability towards Democrats and towards Republicans on 100-point feeling thermometer scales.²⁰ CNEP employed similar measures of partisan affect on 10-point scales.²¹ The 2008 ANES recorded partisan affect according to labeled seven-point scales ranging from "a great deal" of disliking to "a great deal" of liking.²² In each survey, raw responses are normalized to a zero-to-one scale so that regression coefficient estimates can be compared across data sets. A score of zero represents the minimum possible partisan affective response for each scale and a score of one represents the maximum possible response. Raw responses are also recoded into partisan affective intensity values. Normalized values of 0.5, which represent the median possible raw response selection on each scale, are assigned zero intensity, while raw values on either side of 0.5 are transformed into an affective intensity value equal to its absolute distance from 0.5. The range of raw affect in all three surveys is therefore zero to one, while affective

"smart" and "open-minded."²³ These traits resemble the "intelligent" and "close-minded" personality traits evaluated in Iyengar, Sood, and Lelkes (2012), who were among the first to characterize

2008).^{26,27} In each survey, I normalize each preference question to a scale ranging from zero to one, where zero reflects the most liberal response option available and one reflects the most conservative response option available. I then quantify policy preference inconsistency by computing the standard deviation of each respondent's set of normalized expressed preferences.

Analysis

Correlations

Lupton and Thornton (2017) argued that disagreement and diversity are "distinct components" (597) of network heterogeneity and showed that the two are uncorrelated in simulated data. In some contrast, they found a moderate positive relationship ($r = 0.37$) in observed 2000 ANES data, which they attributed to the tendency of survey respondents to report people with whom they agree in the name generator survey sequence, from which their data emerged.²⁸ If survey respondents are likely to call to mind congenial associates when asked to specify a few close individuals, might they be as likely to when asked to characterize their entire networks? If not, we may expect the correlation between disagreement and diversity to be closer to zero in whole-of-network measures if the two network dimensions are, in fact, distinct.

Table 1 shows the correlations between network disagreement and network diversity across the three data sets' six measures, only half of which were produced by the name generator survey sequence. (Note that there are eight reported correlations, rather than six, because both measures in the 2020 ANES were recorded in each of two waves.) In general, the findings are remarkably consistent across measures and show no clear relationship to the type of measure deployed. Disagreement and diversity are observed to correlate moderately to strongly, with a range of 0.39 to

26. As with the other two data sets, each policy preference question covered a unique issue area within the survey. For each of eight policy preferences, values are assigned based on a pair of responses to a two-question sequence. For

0.66 and a median correlation of 0.575. The median correlation among the three name generator measures is only nominally greater than the median correlation among the five whole-of-network measures (0.60 versus 0.55). The most direct comparison of measurement types takes place within the 2016 CNEP, where respondents evaluated their networks at two different levels according to the same political attribute (2016 presidential vote choice), and the correlation between disagreement and diversity is only 0.08 higher among the name generator measures than the whole-of-network measures. These results show that the tendency of respondents to nominate agreeing associates in the name generator sequence is not solely responsible for the significant and positive correlations between two network components that Lupton and Thornton (2017) posited are distinct. Either disagreement and diversity are not as distinct as they are argued to be, or the propensity of respondents to call to mind agreeing associates also influences their impressions of their entire social networks (see again the argument made by Baldassarri and Bearman 2007).

Table 1: Pairwise Correlations of Disagreement and Diversity Measures

Data Set	Type of Measure	Comparison Attribute	Pearson's R
2020 ANES (Wave 1)	Whole-of-Network	Personal Network Partisanship	0.63
2020 ANES (Wave 2)	Whole-of-Network	Personal Network Partisanship	0.66
2020 ANES (Wave 1)	Whole-of-Network	Facebook Network Partisanship	0.55
2020 ANES (Wave 2)	Whole-of-Network	Facebook Network Partisanship	0.53
2008 ANES	Name Generator	Partisanship	0.60
2008 ANES	Name Generator	Political Opinions	0.39
2016 CNEP	Whole-of-Network	2016 Presidential Vote Choice	0.52
2016 CNEP	Name Generator	2016 Presidential Vote Choice	0.60

Pairwise correlation values between disagreement and diversity across six unique measures spanning three data sets. The 2020 ANES measures were recorded in each of two waves.

Table 1 also shows that disagreement and diversity are moderately to strongly related irrespective of the political attribute under analysis. Whether respondents are compared to members of their networks on the basis of shared partisanship, political opinion, or vote choice, disagreement and diversity are positively associated.

Moreover, Table 1 shows that Lupton and Thornton's (2017) observed correlation appears to be on the low end of the observable range. The 2000 ANES compared respondents to members of

their networks on the basis of shared presidential vote choice, which is the same political attribute measured in the 2016 CNES, where observed correlations are higher. This may be a reflection of increased network homogeneity over time (Butters and Hare 2022).

To further probe the distinctiveness of network disagreement and diversity, Table 2 shows how the different measures of disagreement and the different measures of diversity are correlated with each other within each data set. Across the three data sets, each of the two measures of disagreement and of diversity differ according to different dimensions of comparison. In the 2020 ANES, a respondent's partisanship is compared against the partisan composition of their personal network in one measure and their Facebook network in the other. In the 2008 ANES, respondents are compared with their associates on the basis of partisan alignment in one measure and shared political opinions in the other. In the 2016 CNEP, presidential vote choice remains fixed as the basis of

measures are most weakly correlated within the 2016 CNEP ($r = 0.26$), where the two measures are recorded at different network scales.

The highest correlations between disagreement and diversity measures appear within the two waves of the 2020 ANES, in which the partisan compositions of personal and Facebook networks are considered. This finding is consistent with research that has compared the overlap in individuals' online and offline networks and found that the identities of an ego's online and offline ties largely overlap (Reich, Subrahmanyam, and Espinoza 2012; Subrahmanyam et al. 2008). Even in cases where an ego's online and offline network *members* differ, it is often true that the two networks' *structures* are similar (Bisbee and Larson 2017). Table 2 suggests that network measures of less similar political attributes are not as highly correlated.

Regression Modeling

In order to estimate the relationships between network disagreement and diversity and the outcome variables of interest, I fit a series of multivariate ordinary least squares regression models in which disagreement and diversity appear concurrently as predictors.²⁹ Where relevant, I also include models that contain interaction effects between disagreement and political interest and diversity and political interest. In all models, I include a number of control variables that are either network-oriented, demographical, or political that may have a relationship to network structure or to an outcome variable. Although the particular control variables vary slightly by data set, these typically include some measure of reported network size, age, gender, race, education, work status, geography (Butters and Hare 2022), access to the Internet, partisan identification, political ideology (Rawlings 2022), political participation (McClurg 2006), political knowledge (Butters and Hare 2022), placement knowledge (Freder, Lenz, and Turney 2019), and political interest or attentiveness (Lupton and Thornton 2017).

The majority of regression models are fit to cross-sectional data. However, the two waves of the 2020 ANES facilitate several longitudinal change analyses. In such cases, variables that are

29. For the sake of brevity, I do not report the estimates of models in which disagreement and diversity appear separately. These results are producible upon request.

measured in both survey waves are first-differenced and coefficients relating changes in explanatory variables to changes in outcome variables are estimated. As is typical of panel data analysis, relationships to time-invariant characteristics, such as race, are not estimable by this method and their parameters are dropped from regression equations.

Given the relatively high positive correlations between network disagreement and diversity presented in Table 1, concern for multicollinearity between these two variables in regression estimation may be warranted. To assess whether multicollinearity hampers the estimation of disagreement and diversity parameter coefficients, I compute variance inflation factors (VIFs) for both variables for each model in this analysis that do not contain interaction effects. Despite the moderately strong correlations between disagreement and diversity, multicollinearity between the pair of variables does not appear in any model (i.e., VIFs are never greater than 2.0 for either variable). A summary of these findings appears in Table A.1.

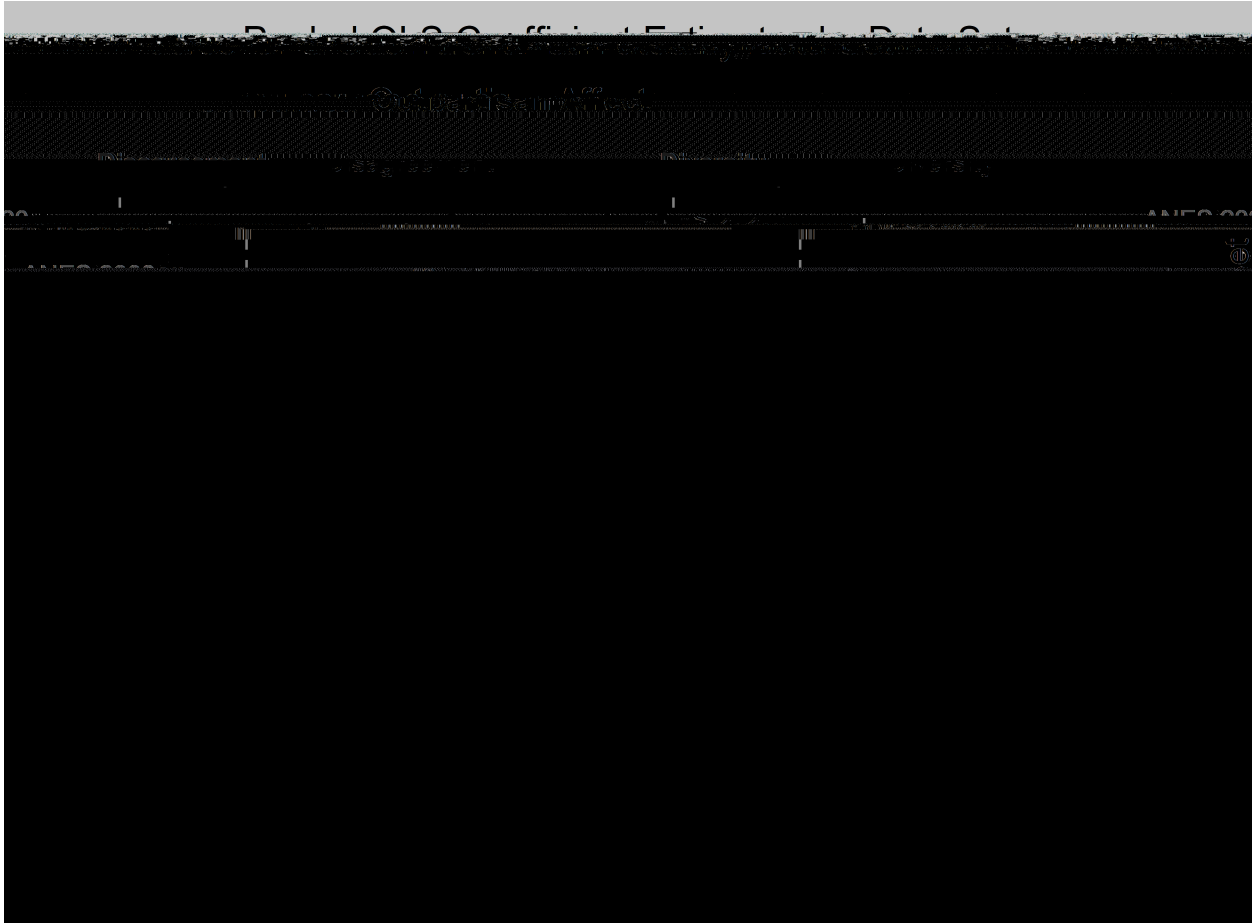
Due to the large number of regression models required for this analysis, an empirical strategy that relies on characterizing the balance of the observations would be subject to the critique of the multiple comparisons problem (Simmons, Nelson, and Simonsohn 2011). As an alternative, I conduct fixed-effects meta-analyses (i.e., precision-weighted averages of regression coefficients) for all like-kind estimates within each data set and, where applicable, for all data sets' pooled estimates combined (see Gerber and Green 2012, Chapter 11). I report only these results in the main text. For individual regression model estimates, see Tables A.2 through A.33.³⁰

The rest of this section will proceed as follows. I will present and discuss the pooled multivariate regression estimates for each of the three types of outcome variables in separate subsections. Within each subsection, I will present the cross-sectional and longitudinal findings separately and identify the ways in which the results speak to my hypotheses.

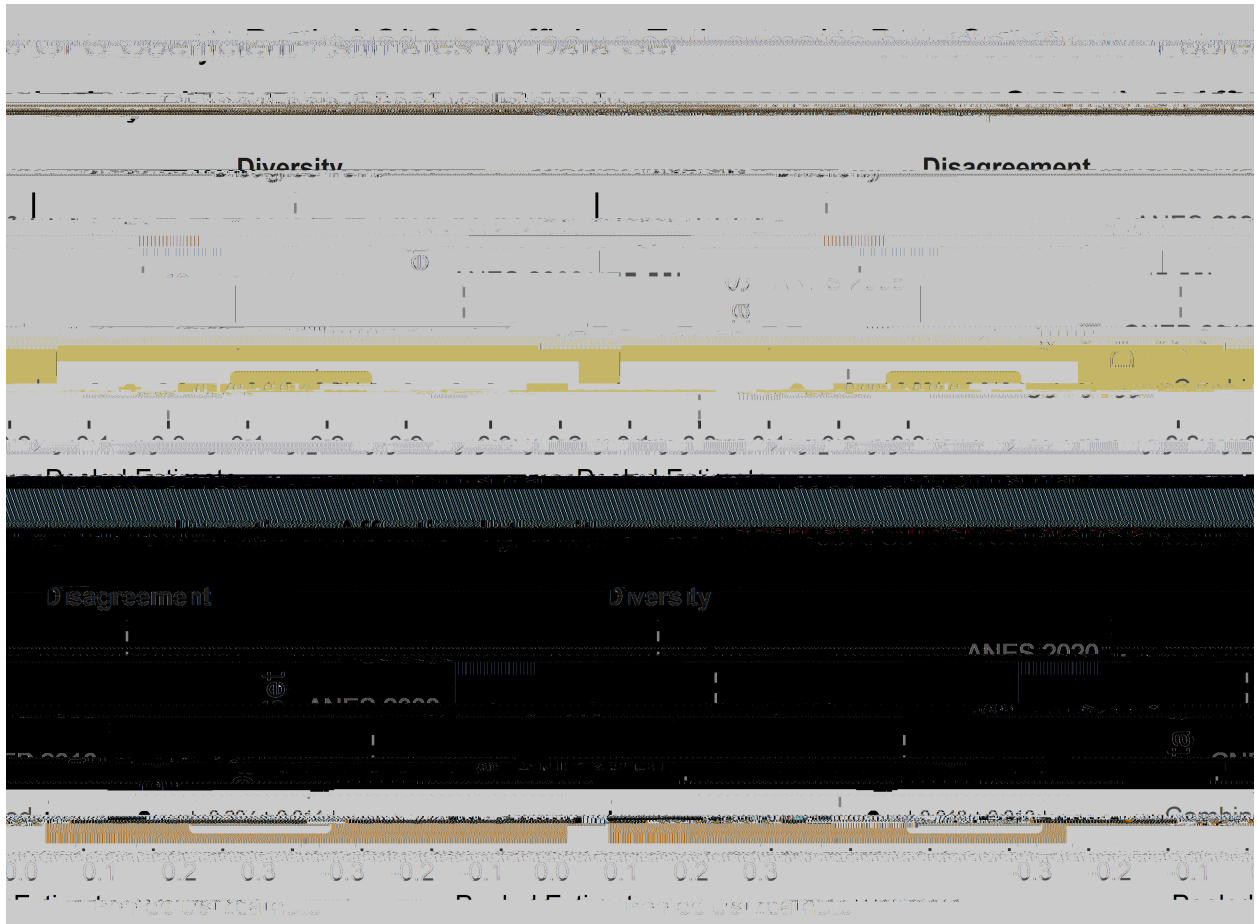
Partisan Affect

I start by exploring network disagreement's and network diversity's relationships to partisan

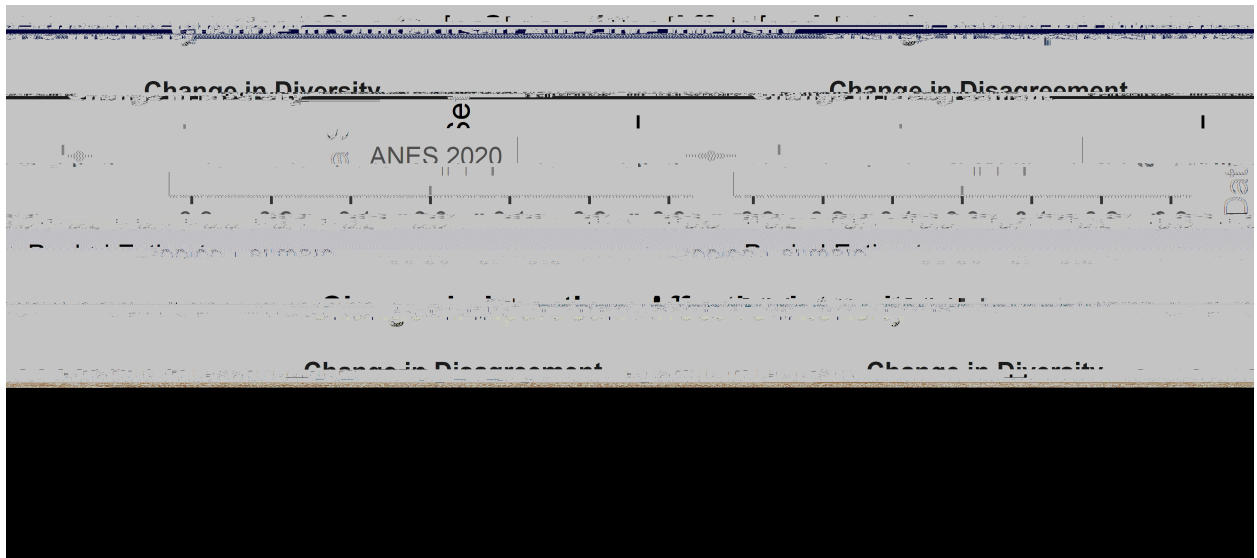
affect. Recall, Hypothesis 1 states that more disagreement in an ego's network is associated with less partisan affective intensity for both inpartisans and outpartisans. Moreover, it predicts that less intensity for each group is achieved by different means: warmer affect for outparty members and colder affect for inparty members. The first column of Figure 1a reports pooled regression



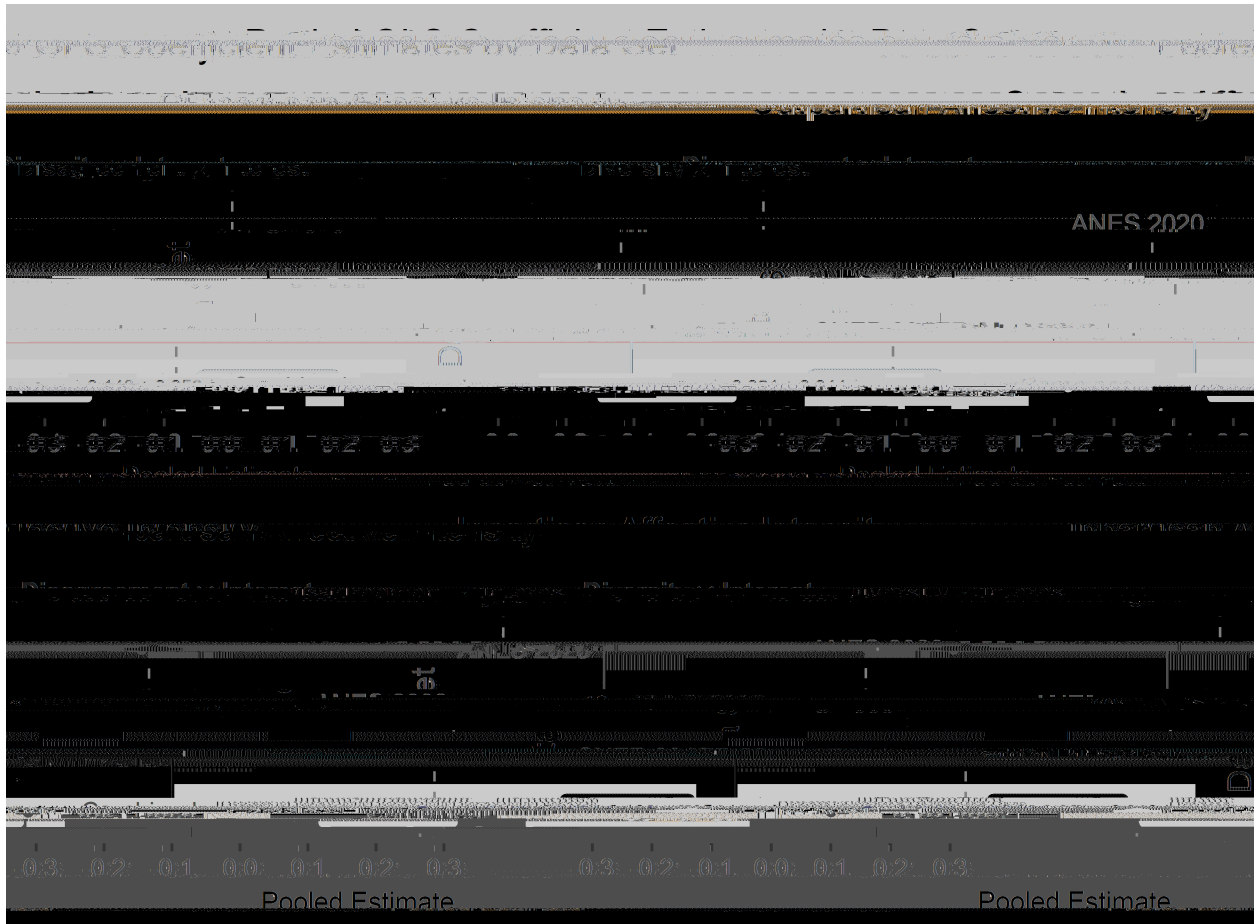
(a)



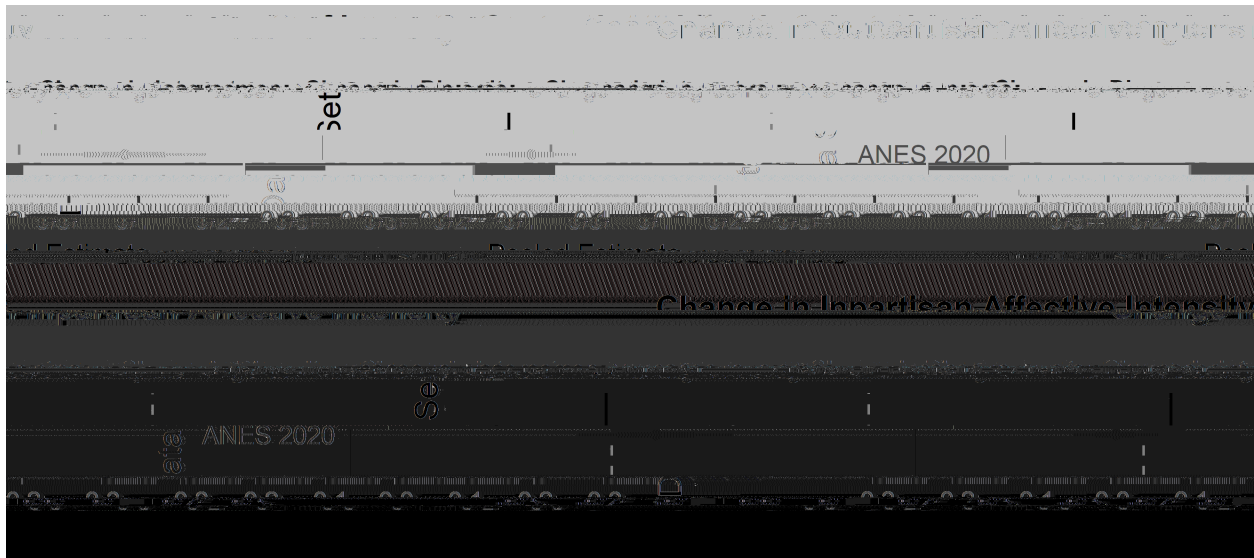
(a)



(b)



(a)



(b)

Figure 3: Pooled OLS coefficient estimates for disagreement's and diversity's interactions with political interest and interactions between their changes on outpartisan and inpartisan affective intensity and their changes are presented for each data set. Where possible, pooled estimates are combined into an overall estimate, and its 95% confidence interval is displayed.

are about as large as those in Figure 2b, reinforcing the notion that political interest counteracts most, if not all, of the disengaging influence of network disagreement.

Overall, the first columns of Figures 1 through 3 provide overwhelming support for Hypothesis 1 and very strong support for Hypothesis 2. Network disagreement is associated with warmer outparty affect, colder inparty affect, and less intense affect for both outpartisans and inpartisans. Moreover, those who maintain their political interest despite disagreement in their social networks exhibit a propensity to resist these tendencies. These relationships are corroborated by panel data analysis that shows that changes in disagreement predict directionally consistent changes in these outcomes. Importantly, these relationships pertain in the presence of a battery of relevant social network, demographic, and political control variables (see the tables in Appendix A for more details).

These findings shed new light on those reported in Sumaktoyo (2021), who found that a greater number of connections to outparty members is associated with warmer outparty feelings. The outpartisan affective estimates in the first column of Figure 1 reaffirm an association between network disagreement and higher outparty affective ratings (though with a more nuanced measure

network disagreement and inpartisan affect and disagreement and inpartisan affective intensity, but their magnitudes are approximately one-quarter to one-third as large.

Under the assumption that network diversity is not related to partisan affective intensity, Hypothesis 4 states that political interest is not a moderator of diversity and affective intensity. Indeed, the interaction effects between diversity and political interest displayed in the second column of Figure 3a show almost no evidence of moderation; although all three pooled estimates and the

asymmetric influence over an ego's affective response towards outpartisans and inpartisans. Second, the general directionality of the relationship between diversity and partisan affect stands in opposition to the directionality of the relationship between disagreement and partisan affect. Third, the mechanism underpinning the relationship with respect to diversity does not appear to be related to political interest. Taken in total, network diversity may have more than just residual influence on partisan affect once network disagreement and network size are controlled for in a way that my hypotheses did not anticipate.

Collectively, Figures 1 through 3 strongly support Hypotheses 1, 2, and 4 (though the premise motivating Hypothesis 4 is not supported). Network disagreement appears to subdue partisan affective intensity by moderating affective evaluations of both outpartisans and inpartisans, and political interest is resistant to disagreement's disengaging influence. However, network diversity appears to exert an additional influence in the opposite direction, at least among egos' affective evaluations of inpartisans.

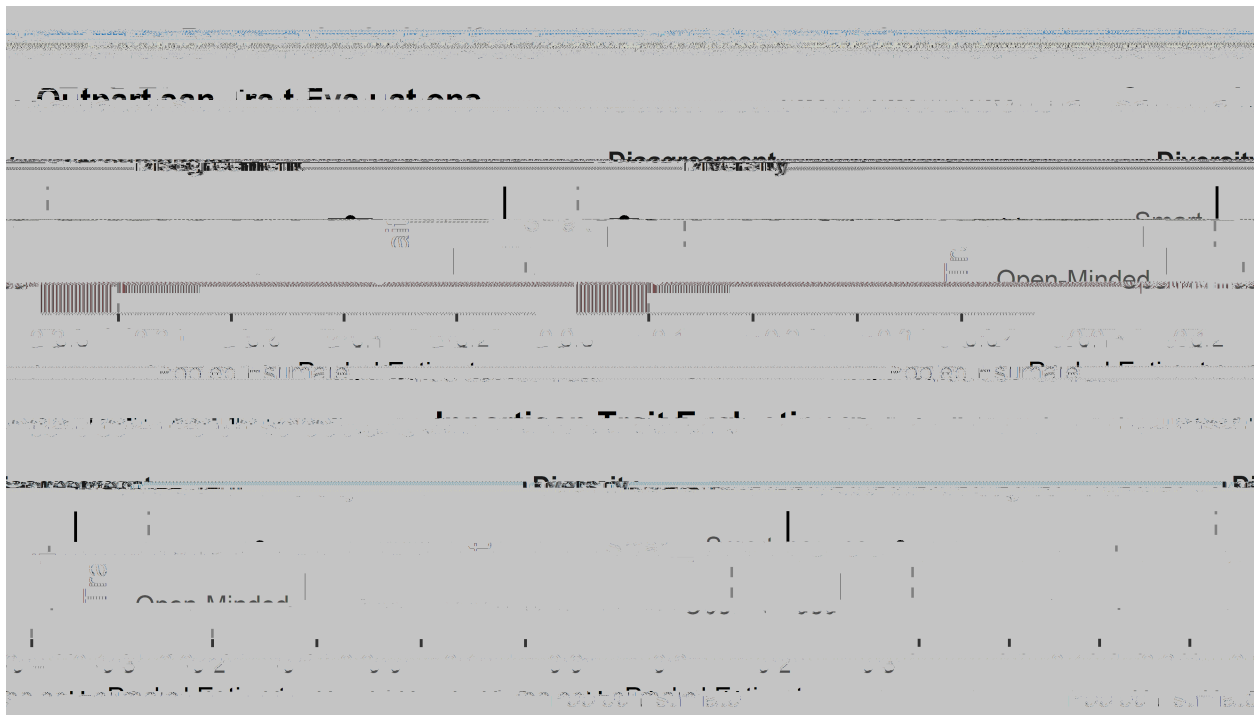
Partisan Stereotyping

Next, I turn to evaluating Hypotheses 5 through 8, which concern network disagreement's and network diversity's relationships to partisan stereotyping. Mirroring the construction of Hypotheses 1 through 4, these hypotheses predict that greater disagreement is associated with reduced stereotyping, that the mechanism forging this relationship is political disengagement, and that network diversity has no independent relationship to stereotyping.

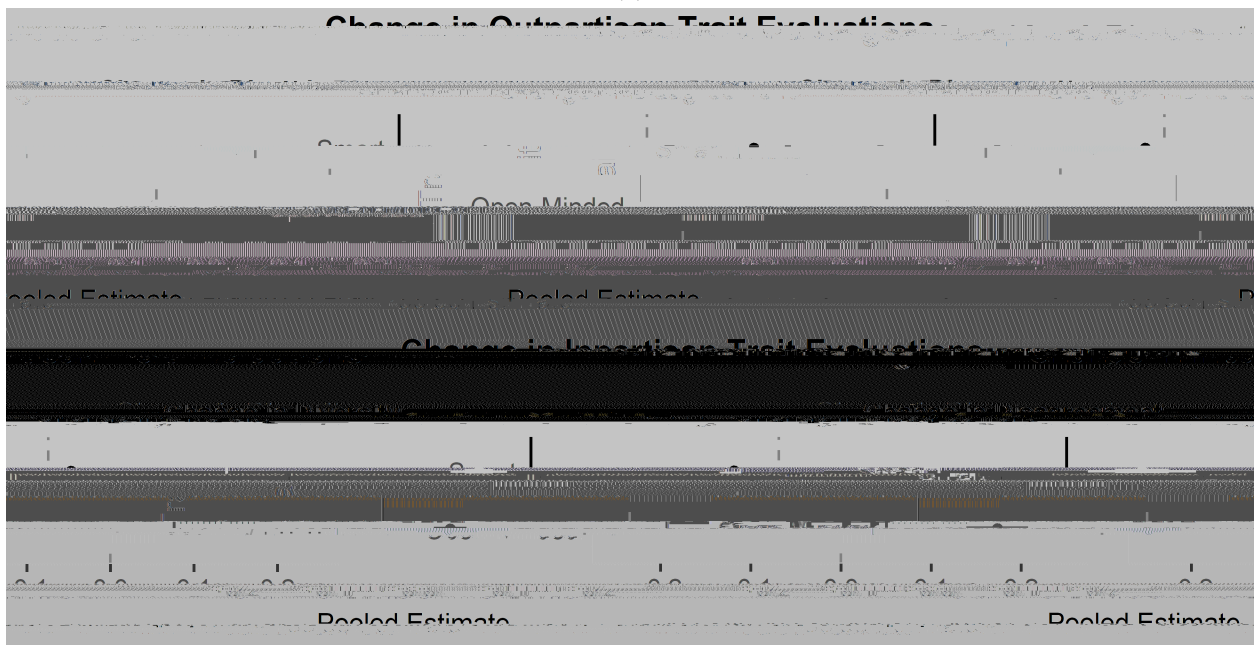
To begin, the first column of Figure 4a shows network disagreement's relationship to partisan trait evaluations. Consistent with Hypothesis 5, both pooled estimates of the relationship between disagreement and outpartisan trait evaluations are significant and positive, and both pooled estimates of the relationship between disagreement and inpartisan evaluations are significant and negative. As with partisan affect, these magnitudes are substantial, ranging from approximately one-quarter to two-fifths of the length of a scale. The first column of Figure 5a reinforces these observations: both pooled estimates of the relationship between disagreement and the difference between outpartisan and inpartisan trait evaluations are significant and negative (at a magnitude of

approximately 30% of a scale's length). In other words, the more that egos encounter disagreement in their networks, the more favorably they evaluate outpartisans, the less favorably they rate inpartisans, and the less differently they rate outpartisans and inpartisans. These tendencies pertain whether the personality trait under evaluation is "smart" or "open-minded," whether an ego's network is comprised of personal or Facebook contacts, or whether the survey was conducted before or after the 2020 election.³²

Hypothesis 6 predicts a moderating influence of political interest on the relationship between network disagreement and partisan stereotyping. If disagreement mitigates stereotyping via a disengaging influence, then an ego's retention of political interest at a fixed level of network disagreement should exacerbate stereotyping. There is modest evidence to point to this conclusion. Both interaction terms between disagreement and political interest in the first column of Figure 6a are positive and approach the threshold for statistical significance. The magnitudes of these estimates are substantial, though they are only about one-third as large as the estimates of disagreement that appear in Figure 5a. It appears that political interest does not overcome as much of the influence of

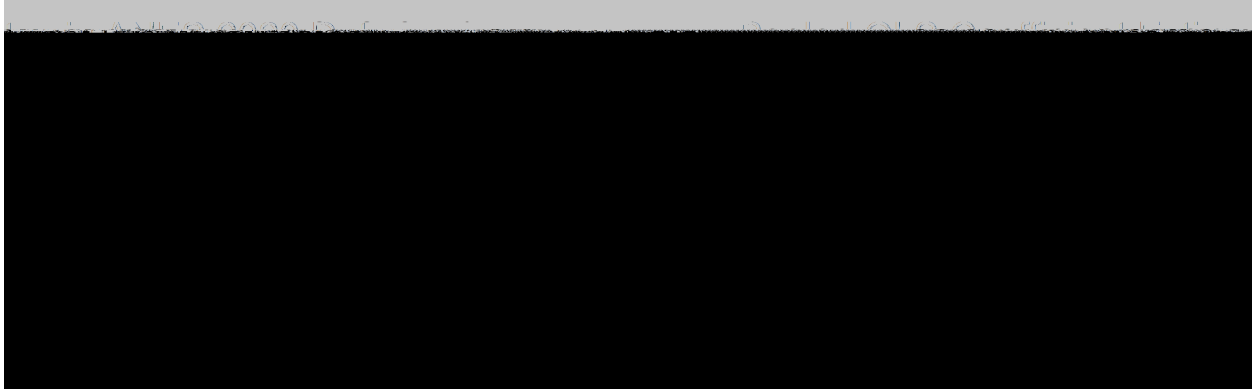


(a)

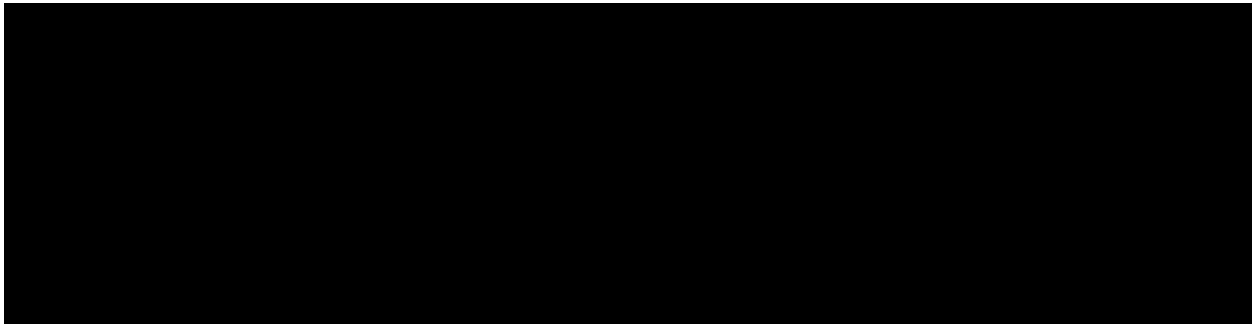


(b)

Figure 4: Pooled OLS coefficient estimates for disagreement, diversity, change in disagreement, and change in diversity on outpartisan and inpartisan "smart" and "open-minded" trait evaluations and changes in outpartisan and inpartisan trait evaluations are presented for ANES 2020 data.

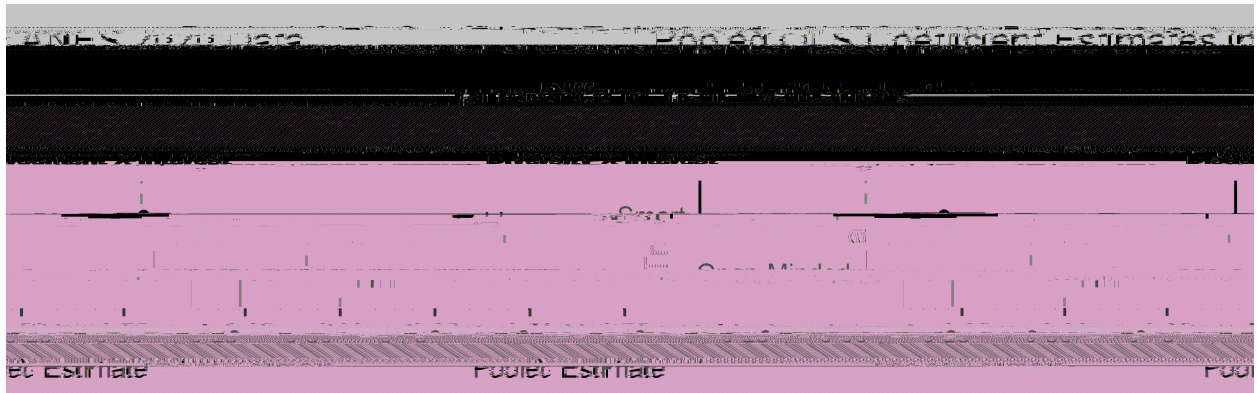


(a)



(b)

Figure 5: Pooled OLS coefficient estimates for disagreement, diversity, change in disagreement, and change in diversity on the difference between outpartisan and inpartisan "smart" and "open-minded" trait evaluations and changes in the difference between outpartisan and inpartisan trait evaluations are presented for ANES 2020 data.



(a)



(b)

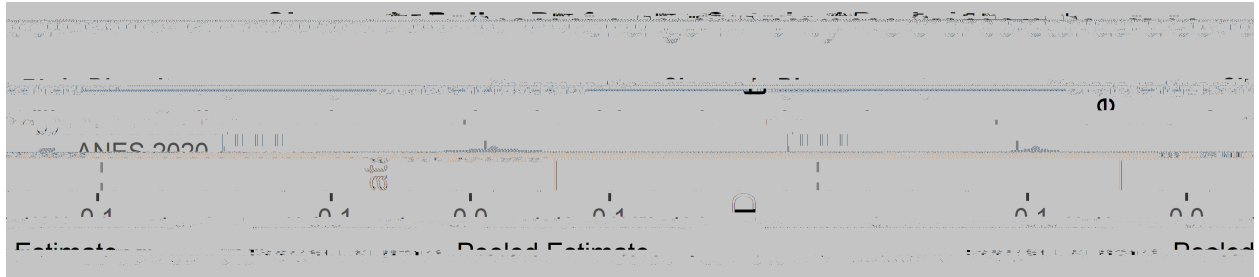
Figure 6: Pooled OLS coefficient estimates for disagreement's and diversity's interactions with political interest and interactions between their changes on the difference between outpartisan and inpartisan "smart" and "open-minded" trait evaluations and changes in the difference between outpartisan and inpartisan trait evaluations are presented for ANES 2020 data.

sistent across conditions, and the cross-sectional results are generally corroborated by longitudinal findings.

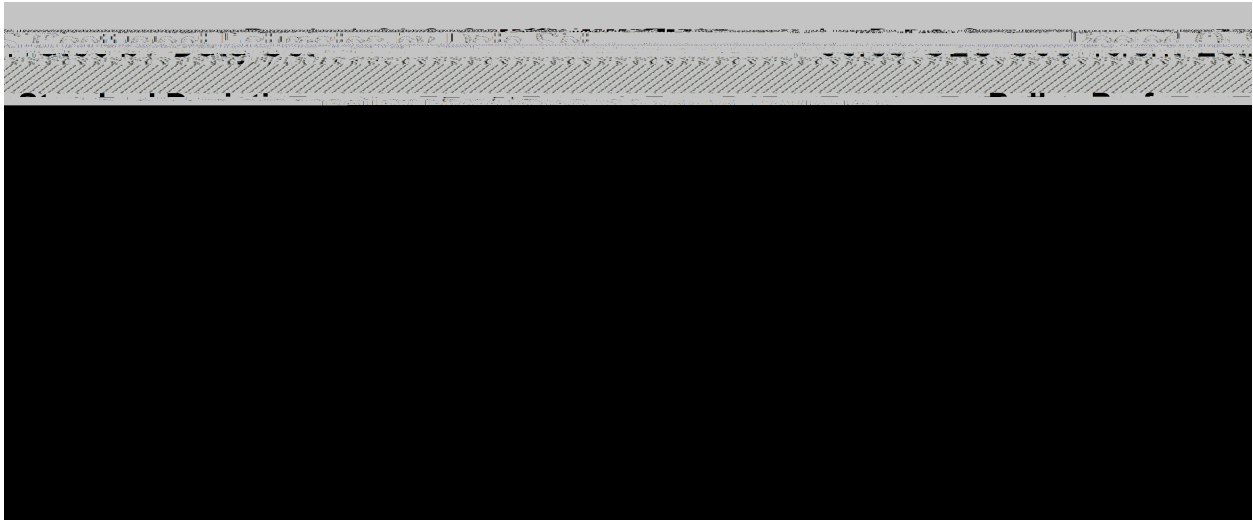
Hypothesis 7 asserts no relationship between network diversity and partisan stereotyping once network disagreement and size are controlled for. The second columns of Figures 4a and 5a show that this is not fully supported by the evidence. Although diversity presents a mostly negligible relationship to outpartisan trait evaluations, Figure 4a shows that it possesses a distinct positive relationship to inpartisan trait evaluations (both pooled estimates exceed 10% of the length of a scale). Figure 5a presents evidence that diversity also predicts accentuated differences in parti-



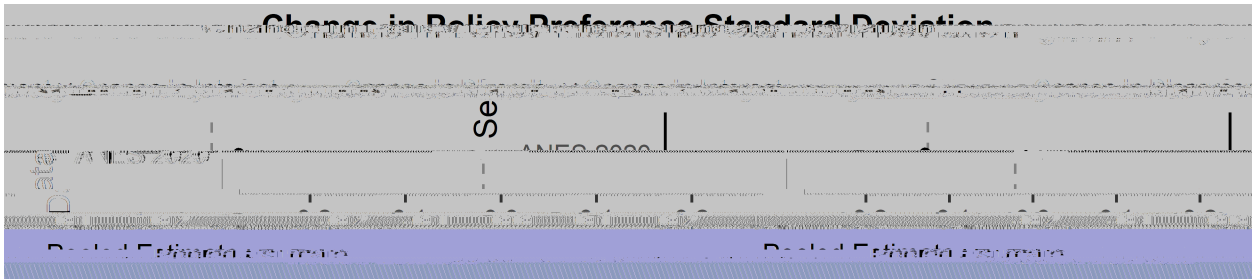
(a)



(b)



(a)



(b)

Figure 8: Pooled OLS coefficient estimates for disagreement's and diversity's interactions with political interest and interactions between their changes on policy preference standard deviation and its change are presented for each data set. Where possible, pooled estimates are combined into an overall estimate, and its 95% confidence interval is displayed.

between changes in disagreement and changes in political interest are shown to relate to changes in policy preference standard deviation.

Overall, the first column of Figure 7 presents modest support for Hypothesis 9; although a relationship exists within cross-sectional data, it does not recur within change analysis of panel data. Moreover, there is comparatively little support for Hypothesis 10 in the first column of Figure 8, which is designed to identify political disengagement as the underlying mechanism. Together, these results suggest that network disagreement may be related to less policy preference consistency, but there is insufficient evidence to suggest that political disengagement is the driving force.

Hypotheses 11 and 12 predict no empirical relationship between network diversity and policy preference constraint. Indeed, none of the pooled estimates of diversity's relationship to constraint that are presented in the second column of Figure 7a are significantly different from zero. More-

diversity and inpartisan affect and trait evaluations are not. If there is a single conclusion to be drawn from the entirety of results presented in Figures 1 through 8, it is that network disagreement and diversity do appear to operate differently, in accordance with Lupton and Thornton's (2017) prediction.

Discussion

The past two decades saw a blossoming of research on social network heterogeneity and its political consequences. Amid the bevy of conflicting and offsetting findings, scholars in more recent years began to speculate that a conflation of distinct aspects of heterogeneity had beset the literature. In this paper, I have answered Lupton and Thornton's (2017) call to explore two features

likeliest alternative, the results are useful for discounting some of them. For example, the observed relationships are clearly inconsistent with theories of motivated reasoning, which would require more disagreement to correlate with more constraint, rather than less.

The nature of the relationships between network diversity and political attitudes are less often significant and rarely symmetrical. Although there are no discernible relationships to constraint or to partisan affect and stereotyping with respect to outpartisans, relationships with respect to inpartisans are observed. Tellingly, the estimated relationships between diversity and inpartisan affect and trait evaluations point in the opposite direction of their relationships with disagreement. This suggests that network disagreement and diversity sometimes operate in tension with each other; as one pushes, the other pulls. However, it is not so easy as to say that disagreement fosters disengagement while diversity fosters engagement – political interest was never shown to moderate

conversations reduces partisan animosity, they also suggest that such exposure is not sufficient to render a political panacea. In fact, the context in which exposure to disagreement occurs and its dosage is likely to influence the outcomes it produces. Exposure to disagreement may be helpful for someone who exists in a partisan bubble and rarely encounters dissent, but too much exposure to disagreement, or any exposure to disagreement for those who rarely encounter agreement in their network, may result in disengagement from political dialogue. In short, exposure to disagreement may be a useful treatment to certain individuals in certain doses, but its administration should be considered within the broader context of its subject's portfolio of interactions.

By extension, researchers would be wise to consider the normative implications of attempting to reduce partisan animosity and stereotyping. Although certain consequences of heightened

different permutations of the number of competing parties and their shares of support in voters' networks influence the relationships between network heterogeneity and partisan evaluations in manners that are not observable in American survey data? Future scholars may wish to explore how many of the dynamics reported in this paper are native to the American context.

Ultimately, this paper leaves little doubt that "heterogeneity," or any single term, insufficiently captures the extent of political differences that permeate Americans' social networks. What is less clear, however, is under what conditions and according to which mechanisms each dimension of heterogeneity produces an independent response. Although disagreement appears to foster political disengagement, the influence of diversity is harder to characterize. Researchers must now seek to understand why network diversity exerts less independent influence over egos than network

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Appendix A: Social Network Heterogeneity and Partisan Affect, Partisan Stereotyping, and Policy Preference Constraint

Table A.1: Variance Inflation Factor Distributions by Data Set

Data Set	Disagreement			Diversity		
	Minimum	Median	Maximum	Minimum	Median	Maximum
2020 ANES	1.53	1.67	1.95	1.47	1.57	1.86
2008 ANES	1.18	1.38	1.58	1.16	1.37	1.58
2016 CNEP	1.47	1.64	1.80	1.44	1.52	1.60

Variance inflation factor (VIF) minima, medians, and maxima for disagreement and diversity among OLS regression model estimates for each data set.

Table A.2: Outparty Affect (ANES 2020)

Table A.3: Inparty Affect (ANES 2020)

Personal Network		Facebook Network	
Wave 1	Wave 2	Wave 1	Wave 2

Table A.4: Partisan Affect (ANES 2008)

	Opinion Measure		Partisanship Measure	
	Outparty	Inparty	Outparty	Inparty
	(1)	(2)	(3)	(4)
Disagreement	0.150 (0.018)	-0.171 (0.018)	0.178 (0.024)	-0.215 (0.024)
Diversity	-0.010 (0.015)	0.007 (0.020	-0.041

Table A.5: Partisan Affect (CNEP 2016)

	Whole Network		Close Network	
	Outparty	Inparty	Outparty	Inparty
	(1)	(2)	(3)	(4)
Disagreement	0.168 (0.039)	-0.477 (0.051)	0.110 (0.036)	-0.305 (0.047)
Diversity	-0.028 (0.035)	0.118 (0.045)	0.046 (0.037)	0.010 (0.049)
Network Size			0.010 (0.009)	-0.015 (0.012)
Age	-0.001 (0.000)	0.001 (0.000)	-0.001 (0.000)	0.000 (0.000)
Male	-0.023 (0.011)	-0.050 (0.015)	-0.022 ⁺ (0.011)	-0.053 (0.015)
White	-0.019 (0.014)	0.023 (0.019)	-0.019 (0.014)	0.019 (0.019)
College Degree	-0.017 (0.013)	-0.038 (0.017)	-0.018 (0.013)	-0.035 (0.017)
Working	0.011 (0.012)	-0.025 (0.016)	0.010 (0.012)	-0.021 (0.016)
Swing State	-0.016 (0.012)	0.007 (0.015)	-0.015 (0.012)	0.003 (0.015)
Metro Area	-0.004 (0.011)	0.010 (0.015)	-0.004 (0.011)	0.010 (0.015)
Married	-0.013 (0.011)	0.002 (0.015)	-0.014 (0.014)	-0.000 (0.018)
Partisanship	-0.008 (0.021)	-0.143 (0.027)	-0.011 (0.021)	-0.134 (0.027)
Conservatism	0.011 (0.027)	0.100 (0.035)	0.015 (0.027)	0.094 (0.035)
Political Participation	0.013 (0.008)	0.006 (0.010)	0.015 ⁺ (0.008)	0.004 (0.010)
Placement Knowledge	-0.126 (0.022)	-0.038 (0.028)	-0.129 (0.021)	-0.025 (0.028)
Political Interest	-0.167 (0.020)	0.023 (0.026)	-0.165 (0.021)	0.021 (0.027)
Constant	0.420 (0.036)	0.815 (0.047)	0.403 (0.038)	0.796 (0.051)

Table A.8: Partisan Affective Intensity (ANES 2020)
Facebook Network: Wave 1

	Outparty		Inparty	
	(1)	(2)	(3)	(4)
Disagreement	-0.235 (0.021)	-0.433 (0.062)	-0.266 (0.020)	-0.385 (0.059)
Diversity	0.022 (0.014)	0.054 (0.041)	0.099 (0.013)	0.095 (0.039)
Network Size	0.004 (0.012)	0.003 (0.012)	0.001 (0.011)	0.001 (0.011)
Age	0.001 (0.000)	0.001 (0.000)	0.001 (0.000)	0.001 (0.000)
Male	0.011 (0.005)	0.011 (0.005)	-0.012 (0.005)	-0.012 (0.005)
White	0.020 (0.006)	0.021 (0.006)	-0.026 (0.005)	-0.025 (0.005)
College Degree	-0.001 (0.006)	-0.001 (0.006)	-0.023 (0.005)	-0.022 (0.005)
Working	0.003 (0.006)	0.003 (0.006)	-0.005 (0.005)	-0.005 (0.005)

Table A.9: Partisan Affective Intensity (ANES 2020)
Facebook Network: Wave 2

	Outparty		Inparty	
	(1)	(2)	(3)	(4)
Disagreement	-0.186 (0.019)	-0.330 (0.060)	-0.241 (0.017)	-0.251 (0.056)
Diversity	-0.010 (0.013)	-0.012 (0.042)	0.062 (0.012)	0.050 (0.039)
Network Size	-0.004 (0.010)	-0.005 (0.010)	0.007 (0.009)	0.007 (0.010)
Age	0.000 ⁺ (0.000)	0.000 ⁺ (0.000)	0.001 (0.000)	0.001 (0.000)
Male	0.004 (0.005)	0.004 (0.005)	-0.023 (0.005)	-0.023 (0.005)
White	0.017	0.		

Table A.10: Partisan Affective Intensity (ANES 2008)
Opinion Measure

	Outparty		Inparty	
	(1)	(2)	(3)	(4)
Disagreement	-0.119 (0.016)	-0.126 (0.052)	-0.151 (0.015)	-0.153 (0.049)
Diversity	0.009 (0.013)	0.039 (0.044)	0.021 ⁺ (0.012)	0.045 (0.041)
Network Size	-0.009 (0.010)	-0.009 (0.010)	-0.010 (0.009)	-0.010 (0.009)
Age	-0.001 ⁺ (0.000)	-0.001 ⁺ (0.000)	-0.001 ⁺ (0.000)	-0.001 ⁺ (0.000)
Male	0.029 (0.010)	0.029 (0.010)	-0.014 (0.009)	-0.014 (0.009)
White	0.005 (0.014)	0.005 (0.014)	-0.037 (0.013)	-0.037 (0.013)
College Degree	0.014 (0.010)	0.013 (0.010)	0.007 (0.010)	0.007 (0.010)
Working	-0.013 (0.011)	-0.013 (0.011)	-0.025 (0.010)	-0.025 (0.010)
Internet Household	0.032 ⁺	0.032 ⁺	0.01982455 ^b	.

Table A.12: Partisan Affective Intensity (CNEP 2016)
Whole Network

	Outparty		Inparty	
	(1)	(2)	(3)	(4)
Disagreement	-0.086 (0.032)	-0.228 (0.088)	0.027 (0.033)	-0.178 ⁺ (0.091)
Diversity	-0.015 (0.028)	0.025 (0.088)	-0.087 (0.029)	-0.053 (0.091)
Age	0.001 (0.000)	0.001 (0.000)	0.000 (0.000)	0.000 (0.000)
Male	0.030 (0.009)	0.030 (0.009)	-0.016 (0.010)	-0.016 ⁺ (0.009)
White	0.026 (0.012)	0.027 (0.012)	0.010 (0.012)	0.011 (0.012)
College Degree	0.009 (0.011)	0.010 (0.011)	-0.019 ⁺ (0.011)	-0.017 (0.011)
Working	-0.007 (0.010)	-0.007 (0.010)	-0.020 (0.010)	-0.020 (0.010)
Swing State				

Table A.13: Partisan Affective Intensity (CNEP 2016)

Table A.15: Change in Partisan Affective Intensity (ANES 2020)
Personal Network

	Outparty		Inparty	
	(1)	(2)	(3)	(4)
Disagreement	-0.078 (0.021)	-0.139 (0.055)	-0.104 (0.020)	-0.159 (0.051)
Diversity	0.016 (0.012)	-0.002 (0.034)	0.031 (0.012)	0.069 (0.031)
Network Size	-0.014 (0.010)	-0.014 (0.010)	-0.016 ⁺ (0.009)	-0.017 ⁺ (0.009)
Partisanship	0.036 (0.016)	0.036 (0.016)	0.020 (0.015)	0.020 (0.015)

Table A.16: Change in Partisan Affective Intensity (ANES 2020)
Facebook Network

	Outparty		Inparty	
	(1)	(2)	(3)	(4)
Disagreement	-0.099 (0.025)	-0.242 (0.064)	-0.048 (0.023)	-0.065 (0.059)
Diversity	0.030 (0.014)	0.104 (0.039)	-0.000 (0.013)	0.017 (0.036)
Network Size	-0.016	-0		

Table A.17: Outparty Stereotyping (ANES 2020)
Personal Network

	Smart		Open-Minded	
	Wave 1	Wave 2	Wave 1	Wave 2
	(1)	(2)	(3)	(4)
Disagreement	0.246 (0.037)	0.262 (0.038)	0.233 (0.036)	0.192 (0.038)
Diversity				

Table A.18: Outparty Stereotyping (ANES 2020)
Facebook Network

	Smart		Open-Minded	
	Wave 1	Wave 2	Wave 1	Wave 2
	(1)	(2)	(3)	(4)
Disagreement	0.299 (0.045)	0.278 (0.042)	0.285 (0.045)	0.233 (0.042)
Diversity	0.025 (0.031)	0.030 (0.029)	-0.026 (0.031)	0.032 (0.029)
Network Size	0.037 (0.034	-0.031	0.005

Table A.21: Difference in Partisan Stereotyping (ANES 2020)
 Personal Network: Smart

	Wave 1		Wave 2	
	(1)	(2)	(3)	(4)
Disagreement	-0.619 (0.046)	-0.615 (0.143)	-0.611 (0.048)	-0.988 (0.150)
Diversity	0.049 (0.034)	-0.043 (0.099)	0.034 (0.034)	0.233 (0.108)
Network Size	0.053 (0.027)	0.055 (0.027)	0.003 (0.032)	-0.003 (0.032)
Age	0.001 (0.000)	0.001 (0.000)	0.001 (0.000)	0.001 (0.000)
Male	-0.021 ⁺ (0.012)	-0.020 ⁺ (0.012)	-0.017 (0.012)	-0.016 (0.012)
White	0.026 ⁺ (0.014)	0.026 ⁺ (0.014)	0.026 ⁺ (0.014)	0.027 ⁺ (0.014)
College Degree	-0.051 (0.012)	-0.051 (0.012)	-0.030 (0.013)	-0.030 (0.013)
Working	-	-	-	-

Table A.22: Difference in Partisan Stereotyping (ANES 2020)
 Personal Network: Open-Minded

	Wave 1		Wave 2	
	(1)	(2)	(3)	(4)
Disagreement	-0.655 (0.051)	-0.629 (0.157)	-0.594 (0.053)	-1.031 (0.168)
Diversity	0.129 (0.037)	0.102 (0.109)	0.089 (0.038)	0.178 (0.121)
Network Size	0.083 (0.029)	0.084 (0.029)	0.070 (0.035)	0.065 ⁺ (0.035)
Age	0.002 (0.000)	0.002 (0.000)	0.001 (0.000)	0.001 (

Table A.23: Difference in Partisan Stereotyping (ANES 2020)
Facebook Network: Smart

	Wave 1		Wave 2	
	(1)	(2)	(3)	(4)
Disagreement	-0.705 (0.056)	-0.760 (0.164)	-0.552 (0.054)	-0.695 (0.170)
Diversity	0.110 (0.038)	-0.026 (0.110)	0.068 ⁺ (0.038)	0.088 (0.119)
Network Size	0.024 (0.030)	0.027 (0.030)	-0.015 (0.028)	-0.015 (0.028)
Age	0.002 (0.000)	0.002 (0.000)	0.001 (0.000)	0.001 (0.000)
Male	-0.026 ⁺ (0.014)	-0.026 ⁺ (0.014)	-0.028 ⁺ (0.014)	-0.028 ⁺ (0.014)
White	0.010 (0.015)	0.010 (0.015)	0.017 (0.016)	0.017 (0.016)
College Degree	-0.055 (0.015)	-0.053 (0.015)	-0.033 (0.015)	-0.033 (0.015)
Working	0.000 (0.015)	0.000 (0.015)	-0.004 (0.016)	-0.004 (0.016)
Swing State	0.010 (0.016)	0.010 (0.016)	0.017 (0.017)	0.018 (0.017)
Metro Area	-0.026 (0.018)	-0.026 (0.018)	0.004 (0.018)	0.003 (0.018)
Internet Household	-0.004 (0.022)	-0.004 (0.022)	0.002 (0.023)	0.002 (0.023)
Partisanship	-0.072 (0.027)	-0.072 (0.027)	-0.056 (0.027)	-0.055 (0.028)
Conservatism	0.025 (0.033)	0.025 (0.033)	0.019 (0.034)	0.017 (0.034)
Political Participation	0.037 (0.007)	0.037 (0.007)	0.039 (0.007)	0.039 (0.007)
Political Knowledge	0.005 (0.011)	0.005 (0.011)	-0.020 ⁺ (0.011)	-0.020 ⁺ (0.011)
Placement Knowledge	-0.004 (0.025)	-0.006 (0.025)	-0.034 (0.028)	-0.034 (0.028)
Political Interest	0.127 (0.030)	-0.012 (0.093)	0.169 (0.032)	0.102 (0.090)
Disagreement* Interest		0.066 (0.214)		0.197 (0.223)
Diversity* Interest		0.190 (0.147)		-0.030 (0.158)
Constant	0.311 (0.054)	0.414 (0.085)	0.317 (0.056)	0.366 (0.083)
Observations	2,013	2,013	1,955	1,955
Adjusted R ²				

Table A.24: Difference in Partisan Stereotyping (ANES 2020)
Facebook Network: Open-Minded

Wave 1	Wave 2
(1)e 2	

Table A.25: Change in Outparty Stereotyping (ANES 2020)

	Personal Network		Facebook Network	
	Smart (1)	Open-Minded (2)	Smart (3)	Open-Minded (4)
Disagreement	0.113 (0.046)	0.103 (0.047)	0.126 (0.053)	0.018 (0.054)
Diversity	-0.021 (0.026)	-0.015 (0.027)	-0.026 (0.030)	0.007 (0.031)
Network Size	0.014 (0.020)	-0.004 (0.021)	0.059 (0.021)	0.005 (0.021)
Partisanship	0.001 (0.035)	0.003 (0.036)	-0.014 (0.041)	-0.032 (0.041)
Conservatism	-0.040 (0.031)	-0.121 (0.032)	-0.032 (0.036)	-0.092 (0.037)
Political Participation	-0.025 (0.025)	-0.025 (0.025)	-0.025 (0.025)	-0.025 (0.025)

Table A.26: Change in Inparty Stereotyping (ANES 2020)

	Personal Network		Facebook Network	
	Smart	Open-Minded	Smart	Open-Minded
	(1)	(2)	(3)	(4)
Disagreement	-0.123 (0.039)	-0.147 (0.045)	0.051 (0.046)	-0.158 (0.053)
Diversity	0.038 ⁺ (0.022)	0.040 (0.026)	0.012 (0.026)	0.078 (0.030)
Network Size	0.022 (0.017)	0.020 (0.020)	0.035 ⁺ (0.018)	-0.005 (0.021)
Partisanship	-0.045 (0.030)	-0.166 (0.035)	-0.067 ⁺ (0.035)	-0.171 (0.041)

Table A.27: Change in Difference in Stereotyping (ANES 2020)
Personal Network

	Smart		Open-Minded	
	(1)	(2)	(3)	(4)
Disagreement	-0.236 (0.056)	-0.375 (0.140)	-0.246 (0.065)	-0.517 (0.163)
Diversity	0.059			

Table A.28: Change in Difference in Stereotyping (ANES 2020)
Facebook Network

	Smart		Open-Minded	
	(1)	(2)	(3)	(4)
Disagreement	-0.077 (0.064)	0.007 (0.167)	-0.177 (0.075)	-0.456 (0.197)
Diversity	0.038 (0.036)	-0.016 (0.102)	0.071 ⁺ (0.042)	0.153 (0.120)
Network Size	-0.025 (0.025)	-0.024 (0.025)	-0.010 (0.029)	-0.010 (0.029)
Partisanship	-0.053 (0.049)	-0.052 (0.049)	-0.139 (0.057)	-0.141 (0.057)
Conservatism	-0.033	-0.033	-0.035	-0.

Table A.29: Policy Preference Standard Deviation (ANES 2020)
Personal Network

	Wave 1		Wave 2	
	(1)	(2)	(3)	(4)
Disagreement	0.048 (0.015)	0.050 (0.047)	0.028 ⁺ (0.016)	0.143 (0.051)
Diversity	-0.018 ⁺ (0.011)	0.005 (0.032)	-0.003 (0.011)	-0.047 (0.036)
Network Size	0.007 (0.009)	0.007 (0.009)	-0.013 (0.011)	-0.011 (0.011)
Age	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Male	-0.004 (0.004)	-0.004 (0.004)	-0.002 (0.004)	-0.003 (0.004)
White	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.005)	-0.006 (0.005)
College Degree	-0.004 (0.004)	-0.004 (0.004)	-0.008 ⁺ (0.004)	-0.008 ⁺ (0.004)
Working	-0.000 (0.004)	-0.000 (0.004)	0.003 (0.004)	0.003 (0.004)
Swing State	-0.005 (0.005)	-0.004 (0.005)	0.002 (0.005)	0.002 (0.005)
Metro Area	0			

Table A.30: Policy Preference Standard Deviation (ANES 2020)

Table A.32: Policy Preference Standard Deviation (CNEP 2016)

	Whole Network		Close Network	
	(1)	(2)	(3)	(4)
Disagreement	0.025 (0.019)	-0.054 (0.054)	0.047 (0.018)	-0.022 (0.045)
Diversity	-0.023 (0.017)	-0.043 (0.054)	-0.008 (0.018)	0.006 (0.052)
Network Size			0.008 ⁺ (0.004)	0.008 ⁺ (0.004)
Age	0.000 ⁺ (0.000)	0.000 ⁺ (0.000)	0.000 (0.000)	0.000 (0.000)
Male	-0.009 (0.006)	-0.009 (0.006)	-0.009 ⁺ (0.006)	-0.009 (0.006)
White	-0.014 (0.007)	-0.014 ⁺ (0.007)	-0.016 (0.007)	-0.015 (0.007)
College Degree	-0.016 (0.006)	-0.015 (0.006)	-0.017 (0.006)	-0.016 (0.006)
Working	-0.005 (0.006)	-0.005 (0.006)	-0.006 (0.006)	-0.006 (0.006)
Swing State				

Table A.33: Change in Policy Preference SD (ANES 2020)				
	Personal Network		Facebook Network	
	(1)	(2)	(3)	(4)
Disagreement	0.012 (0.021)	0.009 (0.053)	-0.004 (0.024)	0.003 (0.061)
Diversity	-0.004 (0.012)	-0.018 (0.033)	0.034 (0.014)	0.000 (0.037)
Network Size	0.017 ⁺ (0.009)	0.018 ⁺ (0.009)	-0.002 (0.010)	-0.002 (0.010)
Partisanship	0.014 (0.015)	0.014 (0.015)	0.031 ⁺ (0.018)	0.031 ⁺ (0.018)
Conservatism	0.025 ⁺ (0.014)	0.025 ⁺ (0.014)	0.023 (0.016)	0.023 (0.016)
Political Participation	-0.006 ⁺ (0.003)	-0.006 ⁺ (0.003)	-0.005 (0.004)	-0.005 (0.004)
Political Knowledge	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)
Placement Knowledge	-0.011 (0.008)	-0.011 (0.008)	-0.014 (0.009)	-0.015 ⁺ (0.009)
Political Interest	-0.016 (0.011)	-0.028 (0.024)	-0.013 (0.013)	-0.037 (0.032)
Disagreement* Interest		0.003 (0.067)		-0.011 (0.079)
Diversity* Interest		0.020 (0.042)		0.048 (0.049)
Constant	0.003 (0.002)	0.003 (0.002)	0.006 (0.003)	0.006 (0.003)
Observations	4,992	4,992	3,527	3,527
Adjusted R ²	0.002	0.001	0.004	0.004

Statistical Significance Indicators: ⁺p<0.1; p<0.05; p<0.01; p<0.001

First-differenced panel data linear regression model estimates of change in policy preference standard deviation on change in network measures across the two waves of the 2020 ANES.