

Mutual Receptiveness to Opposing Views

Bridges Ideological Divides in Network Formation

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October 2020

Author Note

Logan Berg provided invaluable research assistance. We also thank Jenny Chatman, Amir Goldberg, and Kathleen McGinn for helpful comments on prior drafts. The usual disclaimer applies.

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Abstract

We examine how an individual difference—receptiveness to opposing views—moderates the tendency for people to sort into ideologically homogeneous social groups. Although prior work has linked receptiveness to willingness to engage information from opposing ideological perspectives, its consequences for network formation have yet to be explored. Study 1 ($N = 1,793$) demonstrates in a lab setting that receptiveness is associated with forming relationships with ideologically opposed others. Yet preferences and relationship overtures are not always reciprocated. Study 2 ($N = 599$), a longitudinal field study conducted at three universities where students span the ideological spectrum, shows that individual receptiveness does not always translate into politically heterogeneous relationships. Instead, such relationships tend to form when two individuals are *mutually receptive*. Additionally, we find mutual receptiveness increases the likelihood that majority group members will initiate relationships with those in the minority. We discuss implications for research on personality and social networks.

Keywords: receptiveness, social networks, political ideology, homophily, group dynamics

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“By way of introduction, I’d told him, ‘I’m from Berkeley, California, a sociologist, and I am trying to understand the deepening divide in our country. So I’m trying to get out of my political bubble and get to know people in yours.’ Mike nodded at the word ‘divide,’ then quipped, ‘Berkeley? So y’all must be communist!’”

– Arlie Russell Hochschild, *Strangers in Their Own Land*

When do people form relationships with those who do not share their ideological perspective? Democratic governance, sound judgment, and effective working relationships all require that individuals thoughtfully engage with ideas they disagree with or even find offensive. Indeed, in many cases, collaborations representing diverse points of view lead to better judgments and decisions (Minson et al., 2011; Soll & Larrick, 2009; Sunstein & Hastie, 2015; Surowiecki, 2005; Tost et al., 2012). To improve the quality of decision making in the public and private sectors, we need people who are not only curious about how others’ perspectives differ from their own, but who are also willing to form close working relationships across their ideological differences.

In spite of the well-documented benefits of attitude diversity, people tend to splinter into groups of like-minded others who hold similar values, beliefs, and political preferences, which

leads people to interact in “echo chambers” (Baldassarri & Bearman, 2007; DellaPosta et al., 2015). As the likeminded also tend to live in similar parts of the country and are drawn to similar work, educational, civic, or leisure groups and organizations, they become less and less likely to be exposed to and potentially befriend people different from themselves (Blau & Schwartz, 1997; Kossinets & Watts, 2009; McPherson et al., 2001; Wimmer & Lewis, 2010).

Beyond such social-structural constraints, there are also psychological barriers to engaging on a sustained basis with people who hold divergent perspectives from our own. Most people believe they themselves are reasonable and relatively objective, and thus that other reasonable and objective people would agree with their views. The implication, then, is that those with opposing perspectives must be wrong-minded, blind, or corrupt (Hastorf & Cantril, 1954; Robinson et al., 1995; Ross et al., 1977; Ross & Ward, 1995, 1996). Partisan bias includes a propensity to exaggerate differences between ourselves and those whom we perceive as our “irrational” political or ideological opponents (Robinson et al., 1995). Indeed, the very prospect of exposing ourselves to perspectives that violate our deeply held beliefs is emotionally aversive (Dorison et al., 2019).

In light of the dual social-structural and psychological barriers to relationship formation across ideological divides, we explore the potential for a newly identified individual difference construct—receptiveness to opposing views (Minson et al., 2019)—to moderate the widely observed and well-documented tendency for people to sort into ideologically homogeneous social groups.¹ As discussed in more detail below, receptiveness is defined as the “willingness to

¹ Following Wimmer and Lewis (2010), we use the terms “homogeneity” or “heterogeneity” to describe the degree to which a relationship or network is characterized by sameness or difference, respectively. We use the terms “homophily” or “heterophily” to describe a preference to form social ties based on sameness or difference, respectively. Although the terms “homophily” and “heterophily” are sometimes used to describe the propensity to form similar or different ties by virtue of either preferences or structural opportunities, here we use the terms to refer only preferences—also referred to as choice homophily.

expose oneself to, process, and evaluate opposing views in an impartial manner” (Minson et al., 2019). Prior work has shown that receptiveness increases individuals’ willingness to consume and digest information from opposing ideological perspectives. We examine the implications of receptiveness for relationship formation with ideologically opposed (IO) others.

Previous research on personality and social networks has linked traits such as extraversion, agreeableness, openness to experience, and self-monitoring to the size and nature of the social networks people form (Feiler & Kleinbaum, 2015; Ajay Mehra et al., 2001; Selden & Goodie, 2018). However, in our review of the literature, we have uncovered no studies that examine the potential for personality to systematically influence the initiation and realization of relationships across ideological divides. Controlling for other potentially related personality traits, we first examine whether receptiveness relates to one’s *preferences* for forming relationships with IO others. In doing so, we contribute to research on social networks, which tends to infer preferences to interact with different or similar others based on relationships that are actually realized and without accounting for the potentially confounding role of social structure (e.g., the relationship opportunities available to a person) in tie formation (Kossinets & Watts, 2009; Wimmer & Lewis, 2010). We further contribute to the emerging research on receptiveness to opposing views, which, while having demonstrated that receptive people are more willing to engage with different ideologies, has not shown that receptive people are willing to form close relationships with those who hold such perspectives. In a laboratory study (Study 1) that manipulates exposure to individuals with varied ideological perspectives and personality traits, we test whether more (as compared to less) receptive individuals are more inclined to form relationships with IO others.

Although more receptive individuals might exhibit a stronger preference for relationships

with IO others, it is not axiomatic that they will form relationships that are ideologically heterogenous or at least less homogenous than those established by less receptive individuals. This is because relationship formation depends not only on a focal actor's preferences and actions but also on the preferences and responses of others. In particular, expressed preferences and relationship overtures to ideologically opposed others are not always reciprocated.² With this in mind, we conduct a longitudinal field study (Study 2) at three universities whose students collectively span the ideological spectrum and identify the important role of *mutual receptiveness*—that is, when two prospective interaction partners are both receptive to opposing views—in the formation of relationships that bridge ideological divides. Furthermore, given that social groups in our era of increasing political polarization often include majority and minority factions, and that majority and minority group members face differing incentives and opportunity structures to build intergroup relationships, we also consider whether mutual receptiveness affects the likelihood of majority group members making relationship overtures to those in the minority.

In combination, these two studies enable us to address the question of whether individual willingness to break out of one's own political bubble—as illustrated by our opening quote from Hochschild's (2016) *Strangers in Their Own Land*—is sufficient to form relationships across ideological divides or whether mutual receptiveness is required for the formation of reciprocated relationships. In our conclusion, we discuss implications for research on personality and social networks, as well as future extensions of this work to illuminate mechanisms of relationship

² Consider, for example, the stylized example of a highly receptive individual, A, in a setting in which all other individuals—B, C, and D—hold opposing views and are low in receptiveness. Attempts by A to form relationships with B, C, and D are likely to be rebuffed, while B, C, and D will not be inclined to make relationship overtures of their own to A. As a result, in spite of A's own disposition and preferences, none of the four individuals will form any relationships with ideologically opposed others. As we argue in greater detail below, relationship formation between ideologically opposed individuals depends fundamentally on their mutual receptiveness.

formation across partisan divides.

Receptiveness and the Willingness to Form Relationships with Opposing Others

Classic research in social and cognitive psychology, negotiation, and judgment and decision making has demonstrated that, by and large, individuals tend to give preferential treatment to ideas and people that support rather than oppose their prior beliefs (Hart et al., 2009; Lord et al., 1979; Nickerson, 1998; Ross & Ward, 1995). When given access to a balanced set of information, individuals systematically avoid arguments that challenge their prior beliefs, instead preferring to engage with data and perspectives that confirm their beliefs (Frey, 1986; Hart et al., 2009). Indeed, individuals are even willing to forego real money to avoid exposure to opposing views (Frimer et al., 2017).

However, recent work by Minson, Chen, and Tinsley (2019) shows that people vary in the extent to which they are unwilling to engage with ideas from the other side. Specifically, these researchers find that the willingness to expose oneself to opposing ideological views, carefully consider those views, and evaluate them in an even-handed manner varies from person to person and can be predicted with a self-report scale of *receptiveness to opposing views*. In laboratory studies, more receptive individuals have been more willing to consume information from political leaders in the opposing party, reported less mind wandering when watching a speech they disagreed with, and more impartially evaluated policy arguments regardless of whether they agreed or disagreed with the speaker's conclusions.

The receptiveness scale consists of 18 self-report Likert scale items, which reliably load onto four subscales: (1) a diminished propensity to experience negative emotions when exposed to opposing ideological views; (2) curiosity about the nature of such views; (3) willingness to make more positive inferences regarding holders of opposing ideological views; and (4) a

willingness to engage with seemingly “taboo” topics. (See Appendix for scale items.)

Importantly, receptiveness to opposing views has been distinguished from other well-known related constructs, including components of the Big Five Inventory, need for cognition, actively open-minded thinking, and others (e.g., Cacioppo et al., 1984; Davis, 1980; Gürçay-Morris, 2016; John & Srivastava, 1999; Roets & Van Hiel, 2011). These distinctions are both empirical and conceptual. Empirically, Minson et al. (2019) demonstrated that the receptiveness scale is a better predictor of individual engagement with opposing ideological views than numerous other broadly related personality measures (for list of comparators, see Minson et al., 2019 Table 3, page 3075). Conceptually, the distinction lies in the fact that receptiveness predicts the context-specific tendency to engage with *opposing* views on hotly contested, self-relevant issues. By contrast, other measures, such as agreeableness or openness to experience, capture more global individual differences, such as being forgiving and sympathetic, or curious and imaginative, respectively (John & Srivastava, 1999). Because receptiveness captures how people respond to ideologically opposing perspectives in particular, it is an ideal metric for testing the conditions that enable relationship formation across political divides.

As discussed above, prior research demonstrates that people often experience negative psychological effects when exposed to others who hold opposing views and thus seek to avoid such interactions (Dorison et al., 2019). Because higher receptiveness has been shown to predict more emotionally tolerant and cognitively even-handed processing of opposing ideas, we predict that receptiveness will mitigate the negative effect of ideological opposition on one’s interest in forming a relationship with someone holding ideologically opposed views. Thus, we expect:

H1: Individual receptiveness will moderate the negative effect of ideological opposition on the willingness to form a relationship, such that more receptive individuals will exhibit

less aversion to or even a preference for forming relationships with IO others.

While more receptive individuals may be more willing to form relationships with IO others, overtures to establish such relationships may not be reciprocated. In such cases, a relationship may fail to materialize despite a receptive individual's intentions and efforts. We turn next to considering the conditions under which receptiveness is likely to translate into actual relationship formation.

Receptiveness and the Formation of Close Relationships

We theorize that mutual receptiveness is the key to forming close relationships across ideological divides. Figure 1 provides a schematic representation of this argument. The three columns represent stages of relationship formation. In the first stage, a focal actor ('ego') makes a relationship overture to a set of individuals in their potential network ('alters'). Given time constraints, a given ego can make relationship overtures to only a subset of available alters. In the second stage, alters decide whether or not to respond affirmatively to relationship overtures. The third stage depicts the subset of overtures that result in the formation of a realized relationship (based on whether or not the overture was affirmed by the alter). The top and bottom rows depict two egos with identical opportunity structures for relationship formation: contrasting shades depict ideological alignment (white) or opposition (grey), while contrasting shapes indicate high receptiveness (squares) and low receptiveness (circles).

[Insert Figure 1 about here.]

The upper left-hand panel depicts an ego who is high in receptiveness. Per our first hypothesis, we expect this individual to seek to form relationships with ideologically opposed (IO), as well as ideologically aligned (IA), alters. The bottom left-hand panel depicts an ego who is low in receptiveness. Such an individual will predominately initiate relationships to IA alters.

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The middle two panels depict how ideologically aligned and opposed alters are likely to respond to the two egos' overtures for relationship formation, depending on their own degree of receptiveness. The right-hand panels illustrate the contrasting configurations of relationships the two egos form as a result of the overtures they make and their counterparts' responses to those overtures.

As the figure depicts, overtures made by receptive individuals to IO others who are themselves not receptive are not likely to be affirmed and may even elicit negative responses that erode the focal individual's interest in forming a relationship. Thus, we anticipate that individual receptiveness will, by itself, be insufficient to overcome the negative effect of ideological opposition on relationship formation. We expect that relationships that bridge ideological opposition will be those formed on the basis of *mutual receptiveness*. Stated differently, while we expect receptive individuals to be more likely to make overtures to IO others than non-receptive individuals are to do so (H1), forming realized relationships requires joint decisions. We therefore anticipate that:

H2: Mutual receptiveness will reduce the negative effect of ideological opposition on relationship formation.

Potential Structural Moderators of Receptiveness on Relationship Formation

Finally, we consider how situational factors—particularly, whether an actor is a member of the ideological majority or minority—could moderate our predictions. The arguments that follow apply to social groups in which there is a clear ideological majority and one or more minority factions. In an era of increasing political polarization, many social groups—including consequential ones such as legislative bodies, primary schools, universities, workplaces, and the U.S. Supreme Court—fit this profile.

We begin with the premise that the effects of personality differences tend to be dampened in situations that constrain individual choice (Mischel, 1977). Two factors that constrain actors' likelihood of realizing homogenous or heterogenous relationships are the availability of potential relationship partners and the distribution of valued social or material resources across groups (Blau, 1977; Burt et al., 2013). Members of a minority simply have less opportunity for homogenous relationship formation than do members of the majority (Blau, 1977; Currarini et al., 2009; Kleinbaum et al., 2013; Wimmer & Lewis, 2010). Moreover, minority group members are more likely than majority group members to need intergroup relationships to gain access to critical or desired resources (Ibarra, 1992; Kirgios et al., 2020; Stanton-Salazar & Spina, 2000), although both majority and minority group members sometimes experience pressures to distance themselves from the other (Johnson et al., 2006; Jost et al., 2004; Sidanius & Pratto, 2001) and to stick together (A. Mehra et al., 1998; Stanton-Salazar & Spina, 2000).

Because minority (as compared to majority) group members tend to be more constrained in their ability to avoid intergroup relationships, we predict that differences in mutual receptiveness will have less influence on minority (as compared to majority) group members' likelihood of initiating a relationship with IO others. Thus, we predict:³

H3: Mutual receptiveness will have a stronger influence on majority (as compared to minority) group members' propensity to form close relationships with IO others.

Study 1

The preregistered Study 1 was designed to test our first hypothesis, specifically whether greater receptiveness to opposing views will reduce the well-documented aversion to forming

³ Both Hypothesis 1 and Hypothesis 3 focus conceptually on the propensity to form a close relationship, although we operationalize them differently across Study 1 and Study 2. In Study 1, we focus on a person's preferences and intentions, while in Study 2, we focus on the unilateral indication that a close relationship exists.

relationships with IO others.⁴ To test this idea, we recruited a balanced sample of political liberals and conservatives and asked them to report their political orientation and respond to the receptiveness scale (Minson et al., 2019), as well as measures of agreeableness and openness to experience (John & Srivastava, 1999). Participants were then randomly assigned to view the personality profile of a target individual containing the same four measures they had just completed. The personality profiles were constructed from a large sample of prior survey takers who had completed these four measures in past research by Minson et al. (2019). We manipulated the political orientation of these profiles so that they were either aligned with or opposed to the participant's own political orientation. After reviewing the target profile, participants were asked to report their willingness to form a relationship with that person.

Randomly assigning participants to potential relationship targets enabled us to test the effects of receptiveness on the propensity to form relationships without the confounding effects of opportunity structures for interaction. By presenting participants with personality profiles of real individuals, we were able to maintain natural co-variation between the underlying personality dimensions. Moreover, including measures and manipulations of agreeableness and openness to experience afforded us an opportunity to distinguish the effects of receptiveness from two well-established personality measures that might also explain a propensity to bridge disparate communities (Selden & Goodie, 2018).

Method

Participants. We recruited a balanced sample of politically liberal and conservative participants for an online study about personality.⁵ In line with our pre-registration, we excluded

⁴ Our (blinded) pre-registration is available at <http://aspredicted.org/blind.php?x=5e36zz>.

⁵ We pre-registered collecting 2,000 participants with equal numbers of political liberals and conservatives before

participants who failed an attention check in the beginning of the survey or a comprehension quiz in the middle of the survey, as well as those who reported a different political orientation during the survey than they reported during the pre-screening on the survey platform. These exclusion criteria left us with a final sample of 1,793 participants ($M_{age} = 35.2$, 56.7% Female).

Procedure. Participants learned that they would complete several personality scales and then view the personality profile of another individual. We told them that the purpose of the study was to think about how “people with different personalities think about each other.” After reading survey instructions, participants reported their political orientation on a 7-point scale anchored at “1: Extremely liberal” and “7: Extremely conservative.” This measure, which is used in the American National Election Studies survey, has been shown to be highly correlated with partisan behavior and preferences (American National Election Studies, 2010). Participants further completed the receptiveness to opposing views scale (Minson et al., 2019) as well as the openness and agreeableness subscales of the Big Five Inventory (John & Srivastava, 1999).

Participants then read a page of information explaining the personality traits that each of the three scales measures. For example, the agreeableness subscale was explained in the following manner:

“**Agreeableness** measures the extent to which you are cooperative, polite, kind, and friendly. People high in agreeableness are more trusting, affectionate, and altruistic, and often do things for the benefit of others. They are particularly empathetic, show great concern for the welfare of others, and are the first to help those in need.”

After reading this information, participants answered three questions testing their comprehension of the three personality scales. Participants had to answer all three questions

exclusions. After beginning data collection on Prolific and easily attaining our target sample size of liberals, we realized that the Prolific participant pool did not have enough conservatives to meet our target. Thus, we augmented our Prolific sample of conservatives with conservatives from mTurk. We made this decision based on our pre-registration and without looking at the data. Conducting analyses with or without the additional sample of conservatives from mTurk did not materially change the results.

correctly to advance in the survey and received five opportunities to do so. In line with our pre-registration, we blocked participants who failed the comprehension quiz five times from providing further data.

We then presented participants with a personality profile of a target individual. These target personality profiles were based on a sample of 205 mTurk participants who had participated in an earlier study and had provided their responses to the same scales that participants in the current study had completed. Each personality profile consisted of calculated agreeableness, openness, and receptiveness scores for one of the 205 prior participants presented on a 1 to 5 scale.⁶

In addition to the scores on the personality measures, participants also learned about the target's political affiliation. Specifically, each participant viewed a profile purportedly belonging to a moderately conservative or moderately liberal individual. As a result, each of our participants saw one randomly selected personality profile out of a possible 410 (205 original profiles, each presented as belonging to a liberal or a conservative). This procedure ensured that half of our participants encountered a target who shared their political affiliation and half encountered a target with an opposing political affiliation. Because the profiles were drawn from real prior participants, we were able to preserve the natural covariation between the three personality variables of interest. Prior research has not found statistically significant differences in the receptiveness of liberals and conservatives (Minson et al., 2019).

We then asked participants to imagine meeting the target individual and to consider what it would be like to interact with them. Finally, participants responded to four items about their relationship-formation intentions toward the target, providing their responses on 5-point Likert

⁶ Although receptiveness is normally measured on a 1-7 scale, we transformed the responses of the target participants to a 1-5 scale to enable participants to more easily compare the three measures.

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scales. Specifically, we asked participants: “If you were to meet, how willing would you be to discuss important topics with this person?” and “If you were to meet, how willing would you be to become friends with this person?” on scales ranging from 1 = “Not at all” to 5 = “Very willing.” We also asked: “If you were to meet, how likely are you to enjoy working with this person?” and “If you were to meet, how likely would you be to form a relationship with this person?” on scales from 1 = “Very unlikely” to 5 = “Very likely.”

Participants finished by completing a set of demographic items, including gender, age, level of income, and level of education. They then exited the survey and received payment.

Results

As anticipated in our pre-registration, the four items we used to measure relationship formation intentions were highly correlated ($\alpha = .85$), so we averaged them into a single measure of *Propensity to Form a Relationship*. As planned, we also created a variable (*Ideologically Opposed*), indicating that the participant and the target had opposing political ideologies (0 = ideologically aligned [IA]; 1 = ideologically opposed [IO]). Table 1 reports descriptive statistics and correlations for Study 1 variables. The correlation between receptiveness and agreeableness ($r = -0.039$) and between receptiveness and openness to experience ($r = 0.012$) are small and not statistically significant.

[Insert Table 1 about here.]

Table 2 reports regression coefficients estimated through ordinary least squares. Model 1 is a minimal model regressing the measure of the propensity to form a relationship on IO, the participant’s self-reported level of receptiveness, and the target’s reported level of receptiveness. In Model 2, we introduce interactions of $IO \times Evaluator\ Receptiveness$ and $IO \times Target\ Receptiveness$. As expected, participants in general were less interested in forming relationships

with targets who had opposing (as compared to aligned) ideological perspectives ($b = -1.419$, $SE = 0.265$, $t = -5.354$, $p < 0.001$). More (as compared to less) receptive participants were more inclined in general to form relationships with the target ($b = 0.051$, $SE = 0.023$, $t = 2.170$, $p = 0.030$). Importantly, and in line with our theorizing, receptiveness moderated the negative effect of opposing ideology on relationship formation ($b = 0.260$, $SE = 0.036$, $t = 7.237$, $p < 0.001$). Participants were also more willing to form relationships with targets who were more receptive ($b = 0.215$, $SE = 0.048$, $t = 4.504$, $p < 0.001$); however, we did not find evidence that target receptiveness moderated the negative effect of IO ($b = -0.050$, $SE = 0.071$, $t = -0.699$, $p = 0.485$).

[Insert Table 2 about here.]

Figure 2 displays the effect of evaluator receptiveness on the propensity to form relationships with ideologically opposed, as compared to ideologically aligned, targets. The predicted propensity to form a relationship does not change significantly with changes in receptiveness but does vary substantially when participant and target ideologies differ. The predicted propensity to form a relationship with an ideologically opposed target is as low as 2.25 (11th percentile) at the lowest levels of receptiveness, while it is as high as 4.12 (67th percentile) at the highest levels of receptiveness.

[Insert Figure 2 about here.]

Model 3 extends Model 2 to include the participant's self-reported agreeableness and openness scores, the target's agreeableness and openness scores, and all other controls (participant gender, age, income level, education level, and indicators of the data source [Prolific vs. Amazon Mechanical Turk]). Our results are robust to including these additional controls.

Model 4 tests whether receptiveness predicts the propensity to form relationships with IO others above and beyond the effects of agreeableness or openness to experience. We extend

Model 3 to include four interactions of IO target with participant and target agreeableness and participant and target openness to experience. We continue to find support for Hypothesis 1, specifically that evaluator receptiveness positively moderates the negative effect of IO on the willingness to form a relationship with the target ($b = 0.238$, $SE = 0.036$, $t = 6.638$, $p < 0.001$). Participants who reported higher agreeableness were more willing to form relationships with the targets they evaluated ($b = 0.135$, $SE = 0.068$, $t = 1.998$, $p = 0.046$), as were participants who reported higher Openness to Experience ($b = 0.175$, $SE = 0.049$, $t = 3.609$, $p < 0.001$). Similarly, participants overall were more willing to form relationships with targets described as higher in agreeableness ($b = 0.208$, $SE = 0.032$, $t = 6.584$, $p < 0.001$) and openness to experience ($b = 0.078$, $SE = 0.033$, $t = 2.321$, $p = 0.020$). Importantly, however, we observed no significant interaction effects of these measures with our indicator of ideological opposition. In sum, one's own level of receptiveness to opposing views was the only variable that meaningfully impacted individuals' willingness to form relationships with holders of opposing views, and it did so while we controlled for other personality variables that prior researchers theorized to be relevant to this behavior.

Discussion

As predicted in Hypothesis 1, we found that more receptive participants were more willing to form relationships with holders of opposing views than their less receptive counterparts. We were able to demonstrate this effect while controlling for agreeableness and openness to experience, scales that predict a propensity for relationship formation but do not interact with ideological disagreement. By controlling for participants' exposure to targets' profiles and drawing those profiles from a naturally occurring sample, we are able to eliminate a

variety of alternative explanations that would arise in a strictly correlational design or a design featuring fictitious relationship partners.

Study 2

In Study 2, we conduct a longitudinal field study to examine whether one's preferences for forming relationships with ideological opponents translate into actual relationship formation. We collected measures of self-reported receptiveness from the incoming classes in three professional degree programs in three geographically and politically diverse U.S. universities. The initial measures were collected before students had started meeting with their new classmates. Several weeks into the semester, we asked participants to report on close relationships they had formed.

Method

Empirical setting and sample. We collected data from the entering cohorts of three professional schools that varied in political orientation—two majority liberal and one majority conservative. Our participant sample included 599 graduate students from these three institutions. This sample was well-suited to our research aims for two main reasons. First, the individuals we studied were mostly encountering one another for the first time. Thus, we could study the formation of *de novo* relationships. Second, newcomers to these programs were fully immersed in their new environments and focused on building relationships with others in their cohort. Thus, the boundaries of the network were clearly delineated (Marsden, 1990).

We collected data from all participants through surveys that were implemented at two points in time. The first survey was administered at the beginning of the students' first semester in their program. In this survey, individuals answered questions about their own receptiveness, political orientation, and two additional personality attributes associated with network formation:

extraversion (Feiler & Kleinbaum, 2015) and self-monitoring (Ajay Mehra et al., 2001). Several weeks later, we administered a second survey in which students identified the peers with whom they had formed a relationship. To mitigate recall bias, we used the roster method to elicit these contacts (Marsden, 2011). In this survey, we also collected additional measures (described below) that served as control variables in our analyses.

Measures: Dependent Variable

Consistent with our theoretical focus on close relationship formation as a function of mutual receptiveness, our main empirical analyses are conducted at the level of dyads (Mizruchi & Marquis, 2006). Our dependent variable was constructed from participants' responses to the second survey. At the beginning of the survey, participants viewed a screen with a roster of all students in their section (i.e., sub-cohort of their graduating class) and read the following prompt: "Please click on a name if you have formed a close or very close relationship with any of these classmates (e.g., you discuss with them matters that are personally important to you)." Participants then viewed rosters for each additional section—with sections ordered at random—until they had considered every classmate in their cohort.

The result of this second survey was a directed matrix of "relationship nominations," defined as follows: an entry (i, j) was set to 1 if participant i unilaterally indicated she had formed a relationship with participant j . We compared entries across the diagonal of this matrix—e.g., (i, j) and (j, i) —and constructed an indicator of whether both respondents had nominated the other as someone with whom they had formed a close relationship. We used this indicator of a mutually recognized relationship as our dependent variable in tests of Hypothesis 2—that mutual receptiveness will increase the propensity for relationships to form between ideologically opposed others. Hypothesis 3 focuses not on mutually recognized close

relationships but rather on whether a focal actor unilaterally nominates a relationship with a peer. Therefore, our tests of this hypothesis use the indicator of directed relationship nomination (rather than mutually recognized) relationship formation to test whether mutual receptiveness increased the likelihood that majority group members unilaterally reported a relationship with a minority group member.⁷

Measures: Independent Variables

Political orientation. In line with prior research (American National Election Studies, 2010; Dorison et al., 2019; Ehret et al., 2018; Minson et al., 2019), we again measured political orientation using a seven-point scale ranging from “Very Liberal” (1) to “Very Conservative” (7). On this scale, a response of four denotes someone who self-identifies as a political moderate who is neither conservative nor liberal.

Ideological opposed (IO). We constructed an indicator that was set to 1 for dyads from different sides of the political spectrum and set to 0 otherwise. A dyad was designated as IO if one individual self-identified as liberal—“Very liberal” (1) through “Slightly liberal” (3)—and the other self-identified as conservative—“Slightly conservative” (5) through “Very conservative” (7).

Majority vs. minority. For tests of Hypothesis 3, we used the measure of political orientation to construct a pair of indicators: first, an indicator that the focal participant was a member of her school’s ideological minority and the alter a member of her school’s ideological majority (denoted as *Minority* → *Majority*); and second, an indicator that the focal respondent was a member of her school’s ideological majority and the alter a member of her school’s

⁷ For these analyses, we focused on dyads in which both individuals were from the same school. In other words, the risk set of relationship nominations that an individual could make was restricted to peers in the same school (in line with the roster method we used to collect the network data).

ideological minority (denoted as *Majority* → *Minority*).

Mutual receptiveness. We measured receptiveness using the same 18-item scale as in Study 1 from Minson et al. (2019), and computed mutual receptiveness as the sum of receptiveness scores for both members of a dyad.

Measures: Control Variables

Given the sizable literature investigating the role of extraversion and self-monitoring orientation in social networks (e.g., Asendorpf & Wilpers, 1998; Fang et al., 2015; Feiler & Kleinbaum, 2015; Ajay Mehra et al., 2001; Sasovova et al., 2010), we included measures of these constructs as control variables.⁸ We measured extraversion using eight items from the Big Five Inventory (John & Srivastava, 1999) and self-monitoring orientation using thirteen items developed by Lennox and Wolfe (1984). As with mutual receptiveness, we compute dyad-level sums of these measures to control for mutual extraversion and mutual self-monitoring.

We control for the overall political conservatism of the dyad using the sum of dyad members' political orientations. We also controlled for gender and country of origin (United States or not). We also included school-section fixed effects, and in the analyses for Hypothesis 3, we account for whether the given alter nominated the focal ego.

Analytical strategy. Although both hypotheses require analysis at the dyad level, the hypotheses differ in whether or not the outcome variable is symmetric between the two parties of a dyad. In particular, our outcome of interest in Hypotheses 2 is a *mutually recognized relationship*, and we do not distinguish between the individuals in the dyad. Thus, analyses based on undirected dyads are appropriate for Hypothesis 2. In contrast, Hypothesis 3 considers

⁸ In robustness checks, we directly examined whether these individual differences attenuated political homogeneity effects in a similar manner as receptiveness. As reported below, we find receptiveness contours network formation in a manner that is independent and distinct from that of these constructs.

potential asymmetry in majority and minority members' willingness to connect and thus focuses on the *nomination* of one actor by another. Here, the distinction between members of the dyad is important; thus, analyses based on directed dyads are appropriate.

We tested Hypotheses 2 using models with the following form:

$$\begin{aligned} \Pr\{Relationship\} \\ = \beta_0 + \beta_1 Mutual_Receptiveness + \beta_2 + \beta_3 IO \times Mutual_Receptiveness \\ + Controls\Gamma_1 + \epsilon \end{aligned}$$

where *IO* is the binary indicator that members of the dyad are ideologically opposed (set to 1 for dyads in which one member identifies as liberal and the other as conservative and to 0 otherwise) and ϵ represents the error term. In some models, we include indicators of (a) one member of the dyad being highly receptive while the other is not and (b) both members of the dyad being highly receptive.

We tested Hypothesis 3 using a similar set of models:

$$\begin{aligned} \Pr\{Nomination\} = \beta_0 + \beta_1 Mutual_Receptiveness \\ + \beta_2 Minority \rightarrow Majority + \beta_3 Majority \rightarrow Minority \\ + \beta_4 Minority \rightarrow Majority \times Mutual_Receptiveness \\ + \beta_5 Majority \rightarrow Minority \times Mutual_Receptiveness + Controls\Gamma_1 + \epsilon \end{aligned}$$

where *Minority* \rightarrow *Majority* is an indicator that ego is a member of the minority political orientation group considering a member of the majority group, and *Majority* \rightarrow *Minority* is an indicator that ego is a member of the majority group considering a member of the minority group.

In the Appendix, we report the results obtained from a different modeling approach—polynomial regression—in which individual-level variables (e.g., ego receptiveness, alter

receptiveness) are entered in the model separately and in interactions with one another (Edwards, 1994). Across modeling approaches that incorporate individual-level variables in dyad-level analyses in different ways—for example, in dyad-level sums, in indicators of different dyad configurations, and in polynomial regressions—we find a consistent pattern of results.⁹

Estimation. Because the dependent variable in all models is dichotomous, we estimate logistic regression models. Recognizing the potential difficulties in interpreting interactions in nonlinear models (Norton et al., 2004), we present average partial effects plots for interactions to ensure our interpretation of coefficients is correct. These plots also allow us to interpret effects in terms of changes in probabilities. In our models, we account for the non-independence of dyadic interactions using two-way-cluster-robust standard errors (Cameron et al., 2011), following common practice in prior studies (Biancani et al., 2014; Kleinbaum et al., 2013; Srivastava, 2015). In robustness checks, we alternatively use the Multiple Regression Quadratic Assignment Procedure (MRQAP; see Hubert & Schultz, 1976; Krackhardt & Kilduff, 1999) to account for the non-independence of observations and obtain results that are substantively similar.

Results

Descriptive statistics. Table 3 presents descriptive statistics and correlations for the individual-level variables. While receptiveness is positively and significantly correlated with extraversion ($r = 0.140, p < 0.001$) and self-monitoring ($r = 0.121, p = 0.003$), these correlations are not large in magnitude. Also, while extraversion and self-monitoring are each positively and significantly correlated with the number of mutually recognized relationships, receptiveness is not ($r = 0.025, p = 0.549$), suggesting that more receptive individuals do not necessarily cultivate

⁹ In another version of our Study 2 results, we estimated models following the approach of Fafchamps and Gubert (2007), which includes both dyad-level sums variables and absolute-value differences of individual-level variables. We obtained an identical pattern of support for our hypotheses using this approach.

larger networks. We find a modest and significant positive correlation between political orientation (scaled from 1: “Very Liberal”, to 7: “Very Conservative”) and individual-level receptiveness ($r = 0.193, p < 0.001$), indicating that more conservative individuals in our sample tended to be more receptive.

[Insert Table 3 about here]

We conducted a preliminary analysis of the raw data to see if dyads exhibiting high levels of mutual receptiveness formed a greater proportion of relationships that bridged ideological divides. The stacked percent plot in Figure 3 provides descriptive evidence that they indeed do. The figure was prepared using dyads with mutually recognized relationships. For each of these dyads, we computed a continuous measure of ideological opposition as the absolute value of the difference in political orientation. We plotted the distribution of this variable for each quintile of mutual receptiveness. As Figure 3 shows, the overwhelming majority (79%) of dyads in the lowest quintile of mutual receptiveness differ by zero or one on the political orientation scale. As mutual receptiveness increases, the share of highly homogeneous dyads decreases, with 45% of dyads in the highest receptiveness quintile exhibiting a political orientation (absolute) difference of two or greater. In sum, Figure 3 provides descriptive evidence that mutual receptiveness bridges ideological divides.

[Insert Figure 3 about here]

Table 4 presents descriptive statistics for the dyad-level variables used to test Hypothesis 2. As described above, the “mutual” variables are sums of dyad members’ values of a given variable. The variable *Relationship Formed* is the indicator set to one if both members of a dyad indicated they had formed a close relationship with the other. We see from the mean of this indicator variable (0.034, or 3.4%) that only a small fraction of the total possible relationships

are realized. This value reflects the unconditional probability of a given dyad forming a mutually recognized relationship. We use this value as a benchmark for interpreting the moderating effects of receptiveness reported below.

[Insert Table 4 about here]

Mutual Receptiveness and Relationship Formation with IO Others

Table 5 reports coefficients obtained from logistic regression models. Model 1 is a minimal model in which the indicator of relationship formation is regressed on IO and mutual receptiveness, as well as school-section fixed effects. In this model, we find a negative, statistically significant main effect for IO ($b = -0.203$, $SE = 0.081$, $z = -2.498$, $p = 0.013$), affirming baseline expectations that individuals with different political beliefs are less likely to form a close relationship.

[Insert Table 5 about here]

Model 2 of Table 5 extends Model 1 and includes an interaction of IO \times Mutual Receptiveness, which is positive and statistically significant ($b = 0.278$, $SE = 0.075$, $z = 3.724$, $p < 0.001$). Figure 4 presents a partial effects plot corresponding to Model 2.¹⁰ The figure illustrates how the average partial effect of being ideologically opposed (change in predicted probability of a relationship forming) varies over the range of mutual receptiveness. For dyads with low or moderate levels of receptiveness, having opposing ideologies is negatively associated with relationship formation—as much as a 6.04% decrease in the predicted

¹⁰ Figures 4 and 5 were prepared using the margins package in R (Leeper, 2019). Partial effects plots generally show how the response variable (Y) changes as an independent variable (X) changes, conditional on values of covariates. Here, we extend partial effects plots by considering how the partial effects (i.e., the effects of X on Y) change across the range of another variable, Z (in our case, mutual receptiveness). The effects reported in each figure are “average” partial effects in that we have computed the partial effect at every observation in our data, altering the value of mutual receptiveness to a 25-quantile of mutual receptiveness. Thus, a partial effect is computed for each of our 63,775 (undirected) or 127,550 (directed) observations, 25 times. Variances were computed using the delta method.

probability of relationship formation. However, this negative effect is entirely attenuated as mutual receptiveness increases, even becoming positive for the highest levels of mutual receptiveness—as much as a 3.47% increase in the probability of relationship formation. In all, the average partial effect of ideological opposition varies a total of 9.51% across the range of mutual receptiveness. In view of a baseline unconditional probability of relationship formation of 3.4% from Table 4 above, this range in predicted probability change is substantive. In all, we find support for Hypothesis 2.

[Insert Figure 4 about here]

To further explore the nature of the relationship between mutual receptiveness and relationship formation across ideological divides, we identified school-specific medians of individual receptiveness and distinguished among three dyad receptiveness profiles: neither dyad members have above-median receptiveness (low-low), only one dyad member has above-median receptiveness (low-high / high-low), and both dyad members have above-median receptiveness (high-high). We entered indicators of the latter two profiles in the regression—i.e., the omitted category is “Neither Dyad Member Is Highly Receptive”—and interacted these indicators with IO. Model 3 of Table 5 includes both indicators and an interaction of IO × Only One Half of Dyad Highly Receptive. This interaction is negative and not statistically significant ($b = -0.157$, $SE = 0.137$, $z = -1.142$, $p = 0.254$). Model 4 includes instead the interaction of IO × Both Halves of Dyad Highly Receptive. Similar to the interaction in Model 2, this interaction is positive and statistically significant ($b = 0.381$, $SE = 0.145$, $z = 2.634$, $p = 0.008$). When both interactions are included in Model 5, the interaction for “Only One Receptive” is again not statistically significant ($b = 0.171$, $SE = 0.211$, $z = 0.812$, $p = 0.417$), and the interaction for “Both Highly Receptive” remains statistically significant ($b = 0.505$, $SE = 0.226$, $z = 2.230$, $p = 0.026$). In line

with our theorizing, Models 3 through 5 suggest that having one member of the dyad highly receptive is insufficient to bridge ideological divides.

Models 6 and 7 of Table 5 extend Model 2 and Model 5, respectively, by including the additional controls described above. Our results are robust to including these additional controls. In all, Hypothesis 2 remains supported, and we continue to find evidence that although individual receptiveness is by itself insufficient to bridge ideological divides, mutual receptiveness does so.

Receptiveness and Majority versus Minority Group Status

We turn next to test our third hypothesis, namely that receptiveness will have a stronger effect on majority (as compared minority) group members' propensity to initiate close relationships with IO partners. As noted above, the models in Table 6 use directed rather than undirected dyads. Changing the dependent measure to directed relationship nomination affects both sample sizes and the interpretation of results. Inspecting the number of observations for these models, we see in Table 6 that this shift naturally results in a doubling of the sample size from 63,775 to 127,550 because we have an observation for each side of the dyad.

[Insert Table 6 about here]

Model 1 of Table 6 includes mutual receptiveness, the Minority → Majority indicator, the Majority → Minority indicator, and their interactions, as well as school-section fixed effects and a control for whether alter (reciprocally) nominated ego. The comparison group is dyads in which the focal actor and the alter are ideologically aligned. While the main effect and interaction for the Minority → Majority indicator are not statistically significant ($b = -0.256$, $SE = 1.185$, $z = -0.216$, $p = 0.829$; $b = -0.008$, $SE = 0.128$, $z = -0.059$, $p = 0.953$), the main effect for Majority → Minority is negative and statistically significant ($b = -3.232$, $SE = 0.830$, $z = -3.896$, $p < 0.001$), and the interaction with mutual receptiveness is positive and statistically significant

($b = 0.326$, $SE = 0.088$, $z = 3.721$, $p < 0.001$).

Figure 5 corresponds to Model 1 of Table 6 and presents average partial effects of Minority → Majority and Majority → Minority across the range of mutual receptiveness. This figure clarifies that the average main effects of both dyad profiles are effectively zero (i.e., values on the y-axis are centered around zero); however, the effect for Majority → Minority is intriguingly contoured by levels of mutual receptiveness. When mutual receptiveness is low, Majority → Minority has a negative effect on the probability of nomination, decreasing as much as 8.20%. When mutual receptiveness is instead high, this structural arrangement actually has a positive effect on nomination: the predicated probability of nomination increases as much as 6.76%. Given the unconditional probability of relationship nomination is 6.74%, this range of change is substantive.

[Insert Figure 5 about here]

Model 2 of Table 6 introduces additional controls. We obtain the same pattern of results as reported in Model 1.

Overall, this pattern of results is consistent with Hypothesis 3, although the reversal of the negative Majority → Minority effect for dyads with high levels of mutual receptiveness (as reflected in Figure 5) is intriguing. This finding provides stronger evidence for our general assertion that mutual receptiveness to opposing views contributes to more diverse networks. However, it also suggests that minority-group members are less likely to nominate majority-group members, even in the context of mutual receptiveness. We consider implications of these results below.

Supplemental Analysis: Decomposing Results by the Subscales of Receptiveness

To further understand the role of receptiveness in mitigating the tendency for people to

form politically homogeneous relationships, we repeated our analyses using each of the four receptiveness subscales in the place of the aggregate receptiveness scale. These subscales include decreased negative emotions associated with exposure to opposing views (subscale 1), intellectual curiosity about opposing views (subscale 2), a diminished tendency to derogate opponents (subscale 3), and a greater willingness to engage in consideration of taboo issues (subscale 4). Table 7 presents tests of Hypothesis 2 using these four subscales.

[Insert Table 7 about here]

As in our prior tests of Hypothesis 2 (see Table 3), the dependent variable is an indicator that the given undirected dyad has a mutually recognized relationship, and we estimated coefficients using logistic regression. Models 1 through 4 are minimal models that include IO, one of the four receptiveness subscales, interactions with IO, and school-section fixed effects. Models 5 through 8 extend these minimal models to include additional controls and all receptiveness subscales. Model 9 is a saturated model that includes all subscale interactions simultaneously. In Models 1 through 4, we see initial evidence that each receptiveness subscale positively moderates the negative effect of ideological opposition on relationship formation: each interaction coefficient is positive, three are statistically significant, and one (subscale 4: taboo issues—reversed) is marginally significant. As we add controls in Models 5 through 8, we see the same pattern of results. However, in Model 9, we find that only the interaction for subscale 1 (i.e., negative affect) is statistically significant ($b = 0.095$, $SE = 0.045$, $z = 2.104$, $p = 0.035$), while the interaction for subscale 3 is marginally significant ($b = 0.099$, $SE = 0.059$, $z = 1.680$, $p = 0.093$). These supplemental analyses provide suggestive evidence that the ability to suspend negative emotional reactions to opposing views is particularly important in enabling the formation of close relationships across ideological divides. However, qualitative comparisons of

the magnitude of the effects indicate that the evidence based on the complete receptiveness scale (e.g., Table 5) remains the most compelling.

Lastly, we retested Hypothesis 3 using the receptiveness subscales. In Table 8, we find evidence that subscale 1 (negative emotions – reversed), subscale 3 (opponent derogation – reversed) and subscale 4 (taboo issues - reversed) each positively moderate negative effects of Majority → Minority, with subscale 1 displaying the highest magnitude moderation effect (Models 1, 3, and 4). In models that include additional controls (Models 5 through 8), the same subscale generally remains significant; however, when all subscale interactions are included simultaneously (Model 9), only the interaction with subscale 1 retains statistical significance ($b = 0.206$, $SE = 0.058$, $z = 3.589$, $p < 0.001$). These findings provide further suggestive evidence of the importance of negative affect in the formation of relationships that bridge ideological divides.

[Insert Table 8 about here]

Additional analyses and robustness checks are described in the Appendix, including an analysis of the relative role of extraversion and self-monitoring in bridging ideological divides and an alternative modeling approach that uses polynomial regression.

General Discussion

The ability to build positive cooperative relationships with holders of opposing positions is a pervasive challenge facing all human social endeavors, from families to nations. In this research, we have shown that individual differences in receptiveness to opposing views (Minson et al., 2019) increase individuals' willingness to form relationships with ideological opponents and that mutual receptiveness at the dyadic level has the potential to counteract the divisive effects of partisanship on relationship formation. Supplemental analyses suggest that the emotional component of receptiveness—that is, the ability to regulate affective reactions such as

anger, frustration, disgust, and annoyance when confronted with antithetical perspectives—may play an especially important role in counteracting people’s tendencies to congregate in politically homogeneous social networks. Affective components of the psychology of partisanship are an understudied and important direction for future research. More broadly, identifying a self-reported individual difference that helps to explain close relationship formation between ideological opponents in a field setting is an exciting discovery that opens up urgently needed avenues for research and practice in combatting ideological polarization and intolerance.

Contributions

Our first contribution is to show that previously demonstrated effects of receptiveness on individuals’ willingness to engage with opposing perspectives extend beyond laboratory settings and are perseverant enough to survive the challenges of social relationship formation across ideological divides. Our findings broaden the literature on micro-to-macro links between individual differences and social structure (Burt et al., 2013; Coleman, 1990; Feiler & Kleinbaum, 2015; Gosling et al., 2011; Hedström & Swedberg, 1998; Sasovova et al., 2010; Selden & Goodie, 2018; Srivastava & Banaji, 2011). Beyond adding receptiveness as an influential trait in the development of social networks, we extend this literature by looking beyond individual effects to examine the role of pair-level compatibility of traits (viz., mutual receptiveness) on homogenous and heterogenous relationship formation. We find that receptiveness inheres not only within individuals but also between pairs of prospective interaction partners. This broadening of the scope of the construct opens the door to theorizing about and measuring the construct at the level of social groups, organizations, and even nations.

Our tests of the moderating effect of majority (as compared to minority) status on the role of receptiveness in heterogenous relationship initiation shed further light on how social-structural

factors constrain the role of the personality on relationship formation (see also, Burt et al., 2013; Wimmer & Lewis, 2010). The finding that the receptiveness of majority members was more influential than the receptiveness of minority members in building intergroup relationships reinforces the importance of majority outreach for breaking down echo chambers. Whereas many canonical studies focused on the actions minority group members can take to influence the majority (e.g., Nemeth, 1986; Ridgeway, 1978, 1982), our results highlight the importance of the majority's readiness (i.e., receptiveness) to engage with minority viewpoints. This finding also fits with and reinforces the literature on inclusive leadership, which prescribes actively soliciting minority viewpoints to improve the quality of decision making in diverse groups (Hackman, 2011; Sunstein & Hastie, 2014).

Finally, we contribute to the theoretical advancement of the role of preferences in the formation of ideologically homogeneous or heterogeneous relationships (Kossinets & Watts, 2009; Wimmer & Lewis, 2010). Rather than simply inferring preferences from the unexplained variance in realized ties, we were able to test in a controlled laboratory setting whether receptiveness predicts one's relative preferences for forming politically heterogeneous relationships using a research design in which targets were derived from a naturally occurring population and that allowed us to control for other potentially related personality factors. We theorize further (in Figure 1) how individual preferences may require reciprocation to be realized and find empirical support for the importance of mutual receptiveness in a longitudinal field study.

Limitations and Directions for Future Research

The study is not without limitations, which also point to avenues for future research. First, although we drew upon data from both online panels and three different field settings that

varied in political orientation, the sample was largely North American. Moreover, while our online and university samples were inclusive of a fairly broad distribution of incomes and education levels, we conducted no systematic tests of socioeconomic status on our results. It is also important to note that the conservative students who choose to enroll in a liberal university and the liberal students who opt to join a conservative university likely differ in important respects from the general populations of conservatives and liberals. Replications of this design across a wide range of social groups would assess robustness and identify potential scope conditions of these effects.

In our longitudinal study, we collected survey data on receptiveness before network relationships began to form, but we cannot make claim to causal effects. Prior work has demonstrated that receptiveness remains stable over time (Minson et al., 2019), and our own efforts have confirmed that receptiveness is quite difficult to experimentally manipulate. Thus, as with many prior investigations of individual differences, we are led to rely on correlational evidence collected with appropriate controls and robustness checks. Finally, our research design relied on survey-based measures of network formation, which are known to suffer from various forms of self-report bias (Feld & Carter, 2002; Marsden, 2011). Future work could address this limitation by pairing a network survey with network measures derived from electronic communications among group members (Goldberg et al., 2016; Kossinets & Watts, 2009; Quintane & Kleinbaum, 2011). Such data would also allow researchers to examine the extent to which mutual receptiveness leads to the formation of relationships between ideologically opposed others that are prone to persisting, rather than decaying, over time.

Conclusion

Social worlds are prone to fragmenting into ideologically homogeneous echo chambers,

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and social networks frequently act as catalysts for this splintering. Yet this process is not inexorable: The mutual receptiveness of individuals in a social group can interrupt the regularities of network formation. Programs and interventions that either channel ideologically opposed but receptive individuals into the same social groups or train members of polarized groups to be more receptive to opposing views have the potential to dampen the echo in these chambers.

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Table 1

Descriptive Statistics and Pairwise Pearson Correlations (Study 1)

Variable	<i>M</i>	<i>SD</i>	<i>Median</i>	<i>Min.</i>	<i>Max.</i>	1	2	3	4	5	6	7	8	9	10	11	12
1. Propensity to Form a Relationship	3.450	0.808	3.500	1.000	5.000												
2. Political Orientation	3.725	2.135	3.000	1.000	7.000	0.041											
3. Receptiveness	3.996	0.970	4.000	1.000	6.944	0.222	0.179										
4. Agreeableness	3.288	0.361	3.222	1.778	4.667	0.081	-0.121	-0.039									
5. Openness to Experience	3.682	0.498	3.700	1.700	5.000	0.097	-0.137	0.012	0.168								
6. Female	0.567	0.496	1.000	0.000	1.000	0.000	-0.114	-0.113	0.012	-0.016							
7. Age	35.152	13.219	32.000	16.000	80.000	0.017	0.350	0.031	-0.167	-0.100	0.052						
8. Income Level	3.228	1.858	3.000	1.000	7.000	0.048	0.145	0.097	-0.022	-0.018	-0.092	0.236					
9. Education Level	4.403	1.467	5.000	1.000	8.000	0.053	-0.044	0.004	-0.063	0.019	0.006	0.159	0.358				
10. Target Liberal	0.500	0.500	1.000	0.000	1.000	0.101	-0.001	-0.003	-0.027	0.037	0.000	-0.026	0.008	0.000			
11. Target Receptiveness	3.175	0.468	3.200	1.900	4.400	0.122	-0.014	0.026	0.005	-0.022	0.012	0.010	-0.006	-0.040	-0.017		
12. Target Agreeableness	3.746	0.736	3.800	1.400	5.000	0.181	0.006	-0.025	0.045	0.005	0.028	0.018	-0.017	0.000	0.000	-0.124	
13. Target Openness to Experience	3.695	0.716	3.700	1.800	5.000	0.120	-0.013	-0.013	0.015	0.019	0.022	0.005	-0.014	0.000	0.012	0.149	0.147

Note. *N* = 1793. Correlations greater than 0.047 in absolute magnitude are statistically significant at *p* < 0.05. Political orientation ranges from “Very Liberal” (1) to “Very Conservative” (7).

MUTUAL RECEPTIVENESS BRIDGES IDEOLOGICAL DIVIDES

Table 2

OLS Regressions: Propensity to Form a Relationship (Study 1)

	Model 1	Model 2	Model 3	Model 4
Ideological Opposed (IO)	-0.538*** (0.035)	-1.419*** (0.265)	-1.245*** (0.265)	-1.193* (0.501)
Evaluator Receptiveness	0.175*** (0.019)	0.051* (0.023)	0.063** (0.023)	0.062** (0.023)
Target Receptiveness	0.196*** (0.036)	0.215*** (0.048)	0.259*** (0.046)	0.262*** (0.047)
IO × Evaluator Receptiveness		0.260*** (0.036)	0.235*** (0.036)	0.238*** (0.036)
IO × Target Receptiveness		-0.050 (0.071)	-0.075 (0.069)	-0.079 (0.070)
Evaluator Agreeableness			0.172*** (0.051)	0.135* (0.068)
Target Agreeableness			0.209*** (0.022)	0.208*** (0.032)
Evaluator Openness to Experience			0.132*** (0.037)	0.175*** (0.049)
Target Openness to Experience			0.080*** (0.024)	0.078* (0.033)
IO × Participant Agreeableness				0.073 (0.101)
IO × Target Agreeableness				0.001 (0.045)
IO × Participant Openness to Experience				-0.085 (0.073)
IO × Target Openness to Experience				0.006 (0.047)
Additional Controls	No	No	Yes	Yes
R^2	0.173	0.198	0.271	0.272
Adj. R^2	0.172	0.195	0.259	0.258
Num. obs.	1793	1793	1793	1793

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Note. Robust standard errors appear in parentheses. Additional controls include gender, country of origin (U.S. vs. non-U.S.), political orientation, age, income level, education level, and indicators of the source of data collection (e.g., Prolific vs. Amazon Mechanical Turk).

MUTUAL RECEPTIVENESS BRIDGES IDEOLOGICAL DIVIDES

Table 3

Descriptive Statistics and Pairwise Pearson Correlations – Individual Level (Study 2)

	<i>M</i>	<i>SD</i>	<i>Med.</i>	<i>Min.</i>	<i>Max.</i>	1	2	3	4	5	6
1. Number of Relationships	7.346	5.063	6.000	0.000	33.000						
2. Receptiveness	4.616	0.820	4.611	1.889	7.000	0.025					
3. Political Orientation	3.002	1.730	2.000	1.000	7.000	0.016	0.193				
4. Female	0.404	0.491	0.000	0.000	1.000	-0.072	-0.145	-0.269			
5. From U.S.	0.715	0.452	1.000	0.000	1.000	0.124	-0.159	0.050	-0.014		
6. Extraversion	3.429	0.837	3.500	1.250	5.000	0.273	0.140	-0.026	0.013	-0.031	
7. Self-monitoring	3.606	0.586	3.615	1.154	5.231	0.200	0.121	-0.114	-0.002	-0.027	0.220

Note. $N = 599$. Correlations greater than 0.1 in absolute magnitude are statistically significant at $p < 0.01$. Political orientation ranges from “Very Liberal” (1) to “Very Conservative” (7).

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Table 4

Descriptive Statistics – Undirected Dyads (Study 2)

	<i>M</i>	<i>SD</i>	<i>Med.</i>	<i>Min.</i>	<i>Max.</i>
Relationship Formed	0.034	0.183	0.000	0.000	1.000
Mutual Receptiveness	9.227	1.180	9.222	3.833	13.722
Mutual Conservatism	5.574	2.576	5.000	2.000	14.000
Both Male	0.342	0.474	0.000	0.000	1.000
Both Female	0.183	0.386	0.000	0.000	1.000
Both from U.S.	0.490	0.500	0.000	0.000	1.000
Neither from U.S.	0.094	0.291	0.000	0.000	1.000
Mutual Extraversion	6.849	1.183	6.875	2.500	10.000
Mutual Self-monitoring	7.305	0.932	7.308	3.077	10.385

Note. $N = 63,775$.

MUTUAL RECEPTIVENESS BRIDGES IDEOLOGICAL DIVIDES

Table 5

Logistic Regressions: Relationship Formation in Undirected Dyads (Study 2)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Mutual Receptiveness	0.005 (0.033)	-0.035 (0.034)				-0.061 [†] (0.035)	
Ideologically Opposed (IO)	-0.203* (0.081)	-2.842*** (0.717)	-0.133 (0.103)	-0.339*** (0.100)	-0.462* (0.192)	-2.610*** (0.645)	-0.445* (0.186)
IO × Mutual Receptiveness		0.278*** (0.075)				0.263** (0.066)	
Only One Half of Dyad Highly Receptive			-0.059 (0.075)	-0.078 (0.073)	-0.098 (0.076)		-0.113 (0.073)
Both Halves of Dyad Highly Receptive			0.057 (0.096)	-0.003 (0.099)	-0.016 (0.100)		-0.136 (0.106)
IO × Only One Highly Receptive			-0.157 (0.137)		0.171 (0.211)		0.291 (0.198)
IO × Both Highly Receptive				0.381** (0.145)	0.505* (0.226)		0.566** (0.217)
Additional Controls	No	No	No	No	No	Yes	Yes
AIC	18128.669	18105.088	18123.288	18116.003	18117.011	17499.021	17514.147
BIC	18382.436	18367.918	18395.182	18387.896	18397.967	17825.294	17858.545
Log Likelihood	-9036.334	-9023.544	-9031.644	-9028.001	-9027.505	-8713.511	-8719.073
Deviance	18072.669	18047.088	18063.288	18056.003	18055.011	17427.021	17428.147
Num. obs.	63775	63775	63775	63775	63775	63775	63775

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$.

Note. Two-way-cluster-robust standard errors appear in parentheses. All models include school-section fixed effects. Additional controls include gender (indicators both male, both female), country of origin (both U.S., neither U.S.), mutual conservatism, mutual extraversion, and mutual self-monitoring.

MUTUAL RECEPTIVENESS BRIDGES IDEOLOGICAL DIVIDES

Table 6

Logistic Regressions: Relationship Nomination in Directed Dyads (Study 2)

	Model 1	Model 2
Mutual Receptiveness	0.012 (0.040)	-0.022 (0.039)
Minority → Majority	-0.256 (1.185)	-0.272 (1.106)
Majority → Minority	-3.232** (0.830)	-3.176*** (0.915)
Minority → Majority × Mutual Receptiveness	-0.008 (0.128)	-0.004 (0.118)
Majority → Minority × Mutual Receptiveness	0.326*** (0.088)	0.321*** (0.098)
Additional Controls	No	Yes
AIC	46896.205	46199.141
BIC	47208.405	46569.879
Log Likelihood	-23416.102	-23061.570
Deviance	46832.205	46123.141
Num. obs.	127550	127550

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Note. Two-way-cluster-robust standard errors appear in parentheses. All models include school-section fixed effects and an indicator whether the alter nominated the given ego. ‘Minority → Majority’ indicates that the focal actor is in the minority group, considering someone in the majority group; ‘Majority → Minority’ is an indicator that the focal actor is in the majority group, considering someone in the minority group. Additional controls include gender (indicators both male, both female), country of origin (both U.S., neither U.S.), mutual extraversion, and mutual self-monitoring.

MUTUAL RECEPTIVENESS BRIDGES IDEOLOGICAL DIVIDES

Table 7

Logistic Regressions: Relationship Formation in Undirected Dyads (Study 2)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Ideologically opposed	-1.571*** (0.342)	-1.988* (0.808)	-1.540 (0.487)	-0.863* (0.367)	-1.278*** (0.325)	-1.836* (0.820)	-1.557*** (0.462)	-0.681† (0.356)	-2.408** (0.871)
Mutual Recept. (Subscale 1: Negative Affect – Reversed)	-0.033† (0.019)				-0.045* (0.023)	-0.021 (0.021)	-0.018 (0.021)	-0.022 (0.022)	-0.035 (0.023)
Mutual Recept. (Subscale 2: Intellectual Curiosity)		0.042 (0.032)			-0.007 (0.032)	-0.027 (0.033)	-0.008 (0.031)	-0.007 (0.032)	-0.014 (0.033)
Mutual Recept. (Subscale 3: Opponent Derogation – Reversed)			-0.030 (0.023)		0.005 (0.027)	-0.001 (0.026)	-0.026 (0.027)	-0.001 (0.027)	-0.012 (0.028)
Mutual Recept. (Subscale 4: Taboo Issues – Reversed)				-0.017 (0.020)	0.007 (0.018)	0.008 (0.018)	0.006 (0.018)	-0.002 (0.019)	0.007 (0.019)
IO × Mutual Receptiveness (Subscale 1)	0.164*** (0.039)				0.139*** (0.036)				0.095* (0.045)
IO × Mutual Receptiveness (Subscale 2)		0.148* (0.067)				0.144* (0.067)			0.054 (0.073)
IO × Mutual Receptiveness (Subscale 3)			0.151** (0.053)				0.163** (0.050)		0.099† (0.059)
IO × Mutual Receptiveness (Subscale 4)				0.080† (0.044)				0.069† (0.042)	-0.002 (0.043)
Additional Controls	No	No	No	No	Yes	Yes	Yes	Yes	Yes
AIC	18102.516	18113.306	18115.749	18125.182	17506.242	17518.770	17508.692	17512.146	17506.092
BIC	18365.346	18376.136	18378.579	18388.013	17859.703	17872.231	17862.154	17874.608	17886.743
Log Likelihood	-9022.258	-9027.653	-9028.874	-9033.591	-8714.121	-8720.385	-8715.346	-8721.573	-8711.046
Deviance	18044.516	18055.306	18057.749	18067.182	17428.242	17440.770	17430.692	17443.146	17422.092
Num. obs.	63775	63775	63775	63775	63775	63775	63775	63775	63775

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Note. Two-way-cluster-robust standard errors appear in parentheses. All models include school-section fixed effects. Additional controls include gender (indicators both male, both female), country of origin (both U.S., neither U.S.), mutual conservatism, mutual extraversion, and mutual self-monitoring.

MUTUAL RECEPTIVENESS BRIDGES IDEOLOGICAL DIVIDES

Table 8

Logistic Regressions: Relationship Nomination in Directed Dyads (Study 2)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Minority → Majority	-0.035 (0.551)	-1.870 (1.486)	-0.285 (0.711)	-0.087 (0.589)	-0.001 (0.534)	-1.897 (1.503)	-0.374 (0.693)	-0.037 (0.575)	-1.667 (1.620)
Majority → Minority	-2.062*** (0.490)	-1.575 (1.090)	-1.438* (0.572)	-1.160* (0.499)	-1.972*** (0.490)	-1.538 (1.095)	1.441* (0.615)	-1.086* (0.519)	-2.040 [†] (1.081)
Mutual Recept. (Subscale 1: Negative Affect – Reversed)	-0.001 (0.023)				-0.017 (0.023)				-0.019 (0.026)
Mutual Recept. (Subscale 2: Intellectual Curiosity)		0.041 (0.033)				-0.012 (0.032)			-0.005 (0.031)
Mutual Recept. (Subscale 3: Opponent Derogation – Reversed)			0.000 (0.026)				-0.010 (0.026)		0.002 (0.029)
Mutual Recept. (Subscale 4: Taboo Issues – Reversed)				0.003 (0.022)				-0.004 (0.022)	0.003 (0.022)
Minority → Majority × Mutual Recept. (Subscale 1)	-0.036 (0.066)				-0.038 (0.062)				-0.062 (0.075)
Majority → Minority × Mutual Recept. (Subscale 1)	0.232*** (0.055)				0.222*** (0.056)				0.206*** (0.058)
Minority → Majority × Mutual Recept. (Subscale 2)		0.129 (0.125)				0.133 (0.126)			0.175 (0.126)
Majority → Minority × Mutual Recept. (Subscale 2)		0.119 (0.092)				0.117 (0.092)			-0.035 (0.087)
Minority → Majority × Mutual Recept. (Subscale 3)			-0.005 (0.082)				0.008 (0.078)		0.008 (0.085)
Majority → Minority × Mutual Recept. (Subscale 3)			0.146* (0.065)				0.148* (0.071)		0.037 (0.071)
Minority → Majority × Mutual Recept. (Subscale 4)				-0.029 (0.073)				-0.033 (0.070)	-0.038 (0.068)
Majority → Minority × Mutual Recept. (Subscale 4)				0.121* (0.058)				0.113 [†] (0.061)	0.035 (0.064)
Additional Controls	No	No	No	No	Yes	Yes	Yes	Yes	Yes
AIC	46887.475	46900.601	46914.964	46915.948	46187.095	46217.710	46213.570	46215.966	46196.762
BIC	47199.675	47212.801	47227.164	47228.148	46557.833	46588.448	46584.308	46586.704	46655.306
Log Likelihood	-23411.737	-23418.301	-23425.482	-23425.974	-23055.548	-23070.855	-23068.785	-23069.983	-23051.381
Deviance	46823.475	46836.601	46850.964	46851.948	46111.095	46141.710	46137.570	46139.966	46102.762
Num. obs.	127550	127550	127550	127550	127550	127550	127550	127550	127550

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$.

Note. Two-way-cluster-robust standard errors appear in parentheses. All models include school-section fixed effects. Additional controls include gender (indicators both male, both female), country of origin (both U.S., neither U.S.), mutual extraversion, and mutual self-monitoring.

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Figure 1

Receptiveness to Opposing Views and Relationship Formation

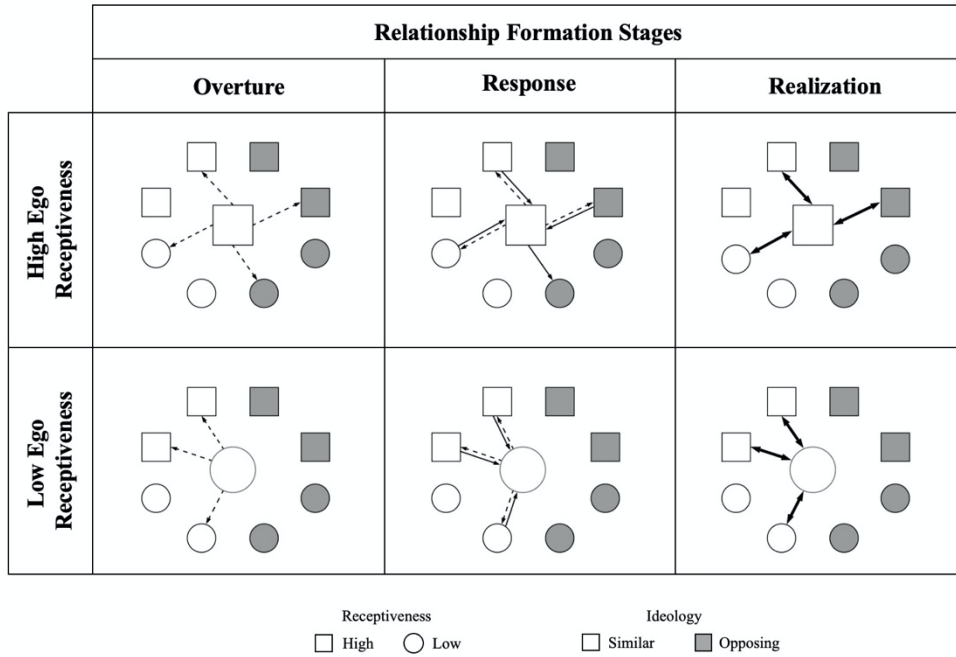


Figure 2

Predicted Relationship Initiation by Evaluator Receptiveness and Ideology Profile (Study 1)

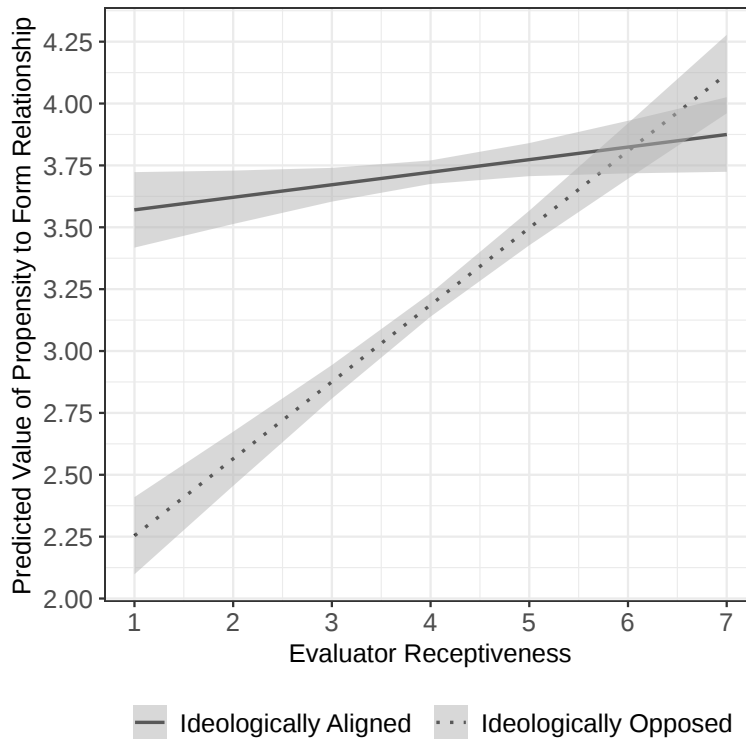


Figure 3

Percentage of Mutually Recognized Relationships with Varying Degrees of Ideological Difference by Quintiles of Mutual Receptiveness (Study 2)

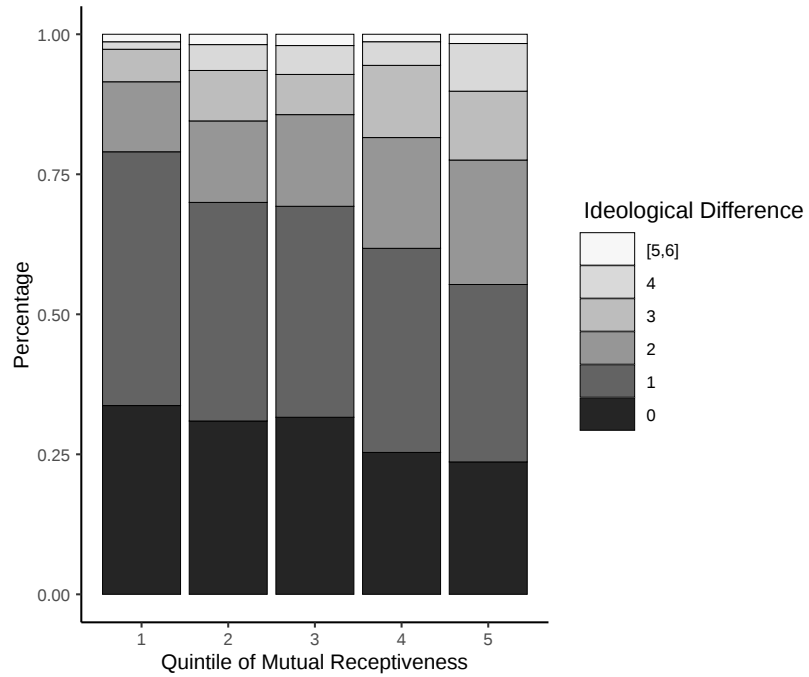


Figure 4

Average Partial Effects of Being Ideologically Opposed on Probability of Relationship Formation, by Mutual Receptiveness (Study 2)

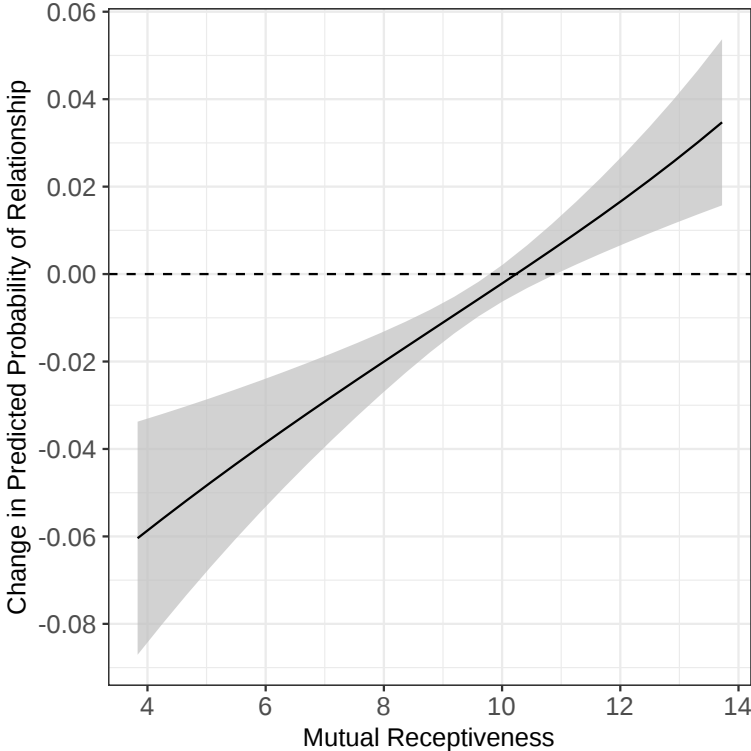
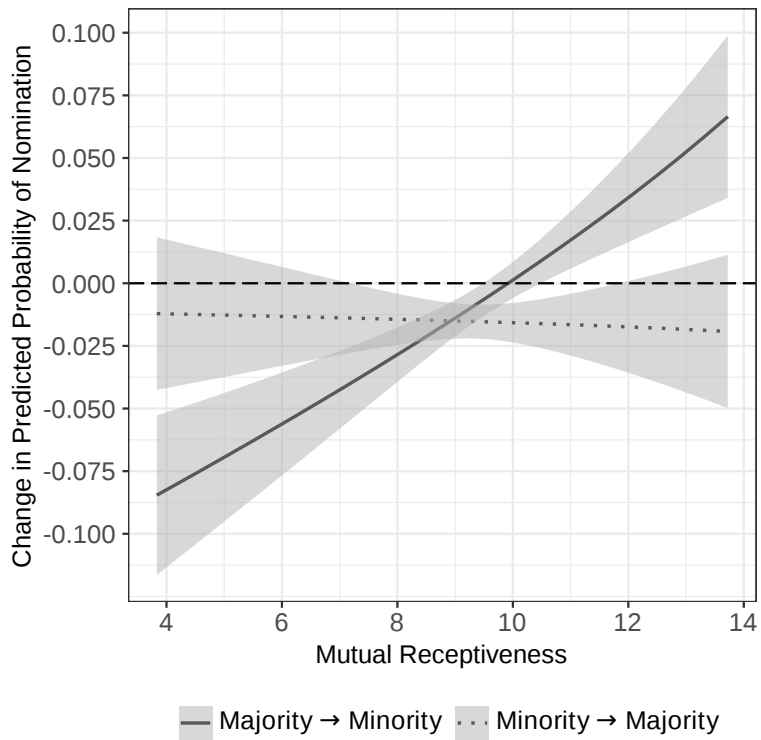


Figure 5

Average Partial Effects of Majority vs. Minority Group Status on Probability of Inter-group Nomination by Mutual Receptiveness (Study 2)



Appendix

Receptiveness to Opposing Views Scale

The following section describes the receptiveness to opposing views scale.

Instructions to Participants

“The questions below address the manner in which you deal with contrary views and opinions on social and political issues that are important to you. When answering these questions think about the hotly contested issues in current social and political discourse (for example: universal healthcare, abortion, immigration reform, gay rights, gun control, environmental regulation, etc.). Consider especially the issues that you care about the most.

“Please click the radio button below each statement to indicate the extent to which you agree or disagree with that statement.”

Items and Scoring

Table A1 summarizes the receptiveness items. Items 6-18 are reverse coded (R); responses on the 18 items are then averaged to create a total receptiveness index. Subscale 1 (Negative Emotions) is comprised of items 15-18. Subscale 2 (Intellectual Curiosity) is comprised of items 1-5. Subscale 3 (Derogation of Opponents) is comprised of items 6, 7, 8, 13, and 14. Subscale 4 (Taboo Issues) is comprised of items 9-12.

[Insert Table A1 about here]

The Relative Role of Extraversion and Self-monitoring in Bridging Ideological Divides

An alternative explanation for our results is that receptiveness partially reflects one’s propensity to be more outgoing (extraversion) or to exercise chameleon-like adaptability in engaging with diverse interaction partners (self-monitoring). To assess these alternative explanations for our results, we performed analyses similar to those reported in Tables 5 and 6

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using extraversion and self-monitoring instead of receptiveness. Specifically, we assessed whether mutual extraversion and mutual self-monitoring countered the negative effect of ideological opposition on relationship formation to a similar degree as mutual receptiveness. We also examined whether mutual receptiveness bridges ideological divides above and beyond any bridging effect of these traits.

Table A2 reports results from logistic regressions similar to those used to test Hypothesis 2 (compare Table 5). While we find positive main effects for mutual extraversion (Model 1; $b = 0.253$, $SE = 0.027$, $z = 9.694$, $p < 0.001$) and mutual self-monitoring (Model 2; $b = 0.279$, $SE = 0.055$, $z = 5.119$, $p < 0.001$), neither interaction with *Ideologically Opposed* is statistically significant ($b = 0.046$, $SE = 0.062$, $z = 0.736$, $p = 0.462$; $b = 0.036$, $SE = 0.093$, $z = 0.385$, $p = 0.701$). And yet, when mutual receptiveness to opposing views is introduced and its interaction with *Ideologically Opposed*, we continue to find support for Hypothesis 2 that mutual receptiveness reduces the negative effect of ideological opposition on relationship formation: the interaction is positive and statistically significant ($b = 0.281$, $SE = 0.072$, $z = 3.899$, $p < 0.001$). Models with additional controls provide consistent evidence of the bridging role of receptiveness (Models 4-6) above and beyond that performed by mutual extraversion and mutual self-monitoring. Also, we do not find evidence that either mutual extraversion or mutual self-monitoring reduce ideological divides.

[Insert Table A2 about here]

We also examined whether majority-group members were more likely to initiate relationships with minority-group others when the dyad exhibited high mutual extraversion or high self-monitoring. Table A3 reports the results of logistic regressions similar to those used to test Hypothesis 3. We find positive, statistically significant main effects of mutual extraversion

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(Model 1; $b = 0.184$, $SE = 0.038$, $z = 4.846$, $p < 0.001$) and mutual self-monitoring (Model 2; $b = 0.190$, $SE = 0.053$, $z = 3.611$, $p < 0.001$) on relationship nomination, but no variation in the effect of *Minority* \rightarrow *Majority* or *Majority* \rightarrow *Minority* with either of these traits. When we add receptiveness to opposing views and interact with indicators of majority-minority profiles (Models 3-6), we again obtain support for Hypothesis 3, that mutual receptiveness positively moderates the negative effect of *Majority* \rightarrow *Minority*. In summary, as with Hypothesis 2, we find that mutual receptiveness to opposing views is associated with an increased propensity for majority-group members to initiate relationships with minority-group members, and we do not find evidence that either mutual extraversion or mutual self-monitoring have a similar effect. Together, Tables A2 and A3 help demonstrate the distinct role of mutual receptiveness in bridging ideological and structural divides.

[Insert Table A3 about here]

Polynomial Regression

Our primary modeling approach in Study 2 uses variables computed from individual-level measures from both members of a dyad. For example, *Ideologically Opposed* is determined by comparing the political orientations of dyad members. An alternate modeling approach, polynomial regression, enters individual-level components as separate regressors, along with interactions among these regressors and higher-order terms. This approach allows consideration of the separate and combined effects of component measures on the outcome, as well as more flexible estimation of the response surface (Edwards, 1994).

Our current models assess average effects of ideological divergence on relationship formation, but they do not indicate *where* in the joint distribution of political orientation these effects occur or how these effects *vary* across different configurations. For instance, an implicit

assumption in our models is that the tendency to connect with ideologically aligned (IA) others is as pronounced for liberal-liberal dyads as for conservative-conservative dyads (relative to ideologically opposed [IO] dyads). Our models cannot discern potential asymmetries in effects across dyads that vary in political orientation. To assess the robustness of our findings and to develop a more nuanced understanding of the results related to Hypotheses 2 and 3, we estimated polynomial regressions and prepared accompanying surface plots.

Polynomial regressions take the following general form:

$$Z = \alpha + \beta_1 X + \beta_2 Y + \beta_3 X^2 + \beta_4 XY + \beta_5 Y^2 + u \quad (\text{A1})$$

where Z is the outcome of interest, and X and Y are the bases of *congruence effects*—how alignment or misalignment of two component variables has an effect on an outcome (e.g., relationship formation; (Edwards, 1994). For our analyses involving directed dyads (tests of Hypothesis 3), these bases are naturally the political orientation of the evaluator, i , and target, j . For our analyses involving undirected dyads (tests of Hypothesis 2), these bases are less obvious, since we do not conceptually distinguish between members of the dyad. To implement polynomial regressions for Hypothesis 2, we simply designated one member of each undirected dyad as the i and the other as the j . As in our previous models, we account for stable, between-section differences using school-section fixed effects.

Congruence effects are most easily assessed visually using three-dimensional surface response plots, where the vertical z-axis is the predicted response variable and the horizontal axes correspond to individual component variables x and y . Conceptually, our Hypothesis 2 concerns how ideological homophily—the propensity for ideologically aligned individuals to connect, and for ideologically opposed individuals to repel—varies with mutual receptiveness. Visual evidence consistent with our expected baseline condition of ideological homophily would

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be a surface response plot with a high ridgeline along the $x = y$ line (i.e., $Political\ Orientation_i = Political\ Orientation_j$) and z (predicted probability of tie formation) plummeting rapidly as x and y values diverge. To examine this baseline condition, we first estimated a polynomial regression using the full sample and prepared an associated surface response plot. Then, because Hypothesis 2 focuses on how mutual receptiveness moderates such ideological homophily effects, we estimate models and prepared plots using subsamples of dyads, including low-receptiveness dyads (those in the lower 25% of the distribution of mutual receptiveness—values of 8.44 or less) and high-receptiveness dyads (those in the upper 25%—values of 10.0 or more). To the extent that ideological homophily effects become more pronounced as mutual receptiveness decreases and attenuated as mutual receptiveness increases, we find support for our hypotheses.

We also tested Hypothesis 3 using a similar approach, using political orientation rescaled such that high values correspond to viewpoints in the majority. We designate the horizontal x and y axes of the corresponding surface response plots ‘Majority-Minority Orientation’ (indexed for focal actor i and focal alter j). The vertical z axis is the predicted probability focal actor i nominated a relationship with focal actor j .

Table A4 reports results of polynomial regression using undirected dyads (Models 1-3; Hypothesis 1) and directed dyads (Models 4-6; Hypothesis 3). Models 1 and 4 were estimated using the full sample; Models 2 and 5 using low-receptiveness dyads; and Models 3 and 6 using high-receptiveness dyads. As with our previous models, these results are best interpreted visually, although we note that the relationships between independent variables of interest and the outcome variable become more curvilinear in the absence of receptiveness. Both Models 2 and 5 have higher-order terms and interaction terms that are greater in magnitude than their

respective, full-sample counterparts (Models 1 and 3). Lastly, none of the coefficients in either high-receptiveness model (3 or 6) is statistically significant, suggesting that relationship formation and nomination among these dyads attend less to relative positions in political orientation and majority-minority orientation.

[Insert Table A4 about here]

Figure A1 depicts the three-dimensional relationship between political orientation of i , political orientation of j , and the formation of network ties suggested by the models of Table A4. As described previously, the x- and y-axes are the political orientations of dyad members, and the z-axis is the predicted probability of a mutually recognized network tie. Pairs of subfigures display the same plots from two different angles to ease interpretation. In Figure A1a, we see a pattern consistent with homophily: dyads with opposite political orientations have the lowest predicted probability, and dyads with the same political orientations (i.e., dyads along the *Political Orientation_i = Political Orientation_j* line) have relatively higher predicted probabilities. We note there is a slight asymmetry in homophily effects: individuals who identify as ‘Very Liberal’ (a political orientation value of ‘1’) are more likely to connect with others who are also ‘Very Liberal’ than are those who are ‘Very Conservative’ to connect with others who are also ‘Very Conservative’. This nuance was not visible under our previous models.

[Insert Figure A1 about here]

Figures A1b and A1c correspond to Models 2 and 3 of Table A4 and illustrate how receptiveness moderates homophily effects. At lower levels of receptiveness, we see much more pronounced homophily effects: homogenous political orientation dyads (i.e., dyads along the *Political Orientation_i = Political Orientation_j* line) have a higher predicted probability of a mutually recognized relationship than corresponding dyad profiles in Figure A1b, and this

predicted probability plummets steeply as political orientations diverge. There is an asymmetry in the tendency for liberal individuals to connect with similar others compared to this tendency for conservatives. Figure A1c, in contrast, presents a relatively flat response surface, suggesting dyads high in receptiveness are less restrictive with respect to political orientation in relationship formation. Overall, these results are consistent with and support Hypothesis 2.¹¹

Figure A2 reports the figures corresponding to Models 4 through 6 of Table A4. The dependent variable in these analyses is the indicator that focal actor, i , nominated focal alter, j . In the figures, the x-axis is the majority-minority orientation for ego, the y-axis is the majority-minority orientation for alter, and the z-axis is the predicted probability that ego nominated alter. In Figure A2a, we see a similar pattern as appears in Figure A1a, although more pronounced: evaluators considering IA targets (e.g., majority-group members viewing other majority-group members) are more likely to nominate, and evaluators considering IO targets (majority-group members viewing minority group members, and vice versa) are less likely to nominate.

[Insert Figure A2 about here]

In the remaining subfigures, we again see evidence of receptiveness moderating ideological homophily effects. In Figure A2b, we see that in the presence of low receptiveness, individuals are most likely to nominate individuals in the same majority vs. minority group as them (e.g., along the *Majority-Minority Orientation_i = Majority-Minority Orientation_j* line), and that the probability of nomination drops steeply as the majority-minority orientation of ego and

¹¹ We hesitate to make too much of the saddle-like nature of Figure B1c. In analyses not reported, we test Hypothesis 1 using directed dyads and nominations as the dependent variable, even though we conceptualized Hypothesis 1 using undirected dyads and mutually recognized ties. We obtain similar results as reported in Figure B1a and B1b and obtain a virtually flat response surface for the high-receptiveness dyads. If anything, liberal individuals prefer to nominate conservative individuals in the presence of high receptiveness.

alter diverge. This is consistent with amplified homophily effects. As in Figures A1a and A1b, we again see asymmetric effects in Figure A2b: majority-group members are more likely to nominate other majority-group members than are minority-group members to nominate other minority-group members. Figure A2c shows that, when mutual receptiveness is high, evaluators are much more likely to nominate divergent alters than otherwise. Consistent with Hypothesis 3, we also see that, even when mutual receptiveness is high, minority-group members persist in nominating other minority-group members, but also see that if anything, they are more likely to do so (compare with A2a). We also see that, in these conditions, evaluators generally tend to nominate minority-group members, regardless of their own majority vs. minority-group status.

Taken together, the plots in Figure A2 are consistent with the previous findings for Hypothesis 3, though they suggest a more elaborate account than before. We still see that the predicted probability of nomination within heterogenous dyads increases as mutual receptiveness increases. Yet unexpectedly, we find that homogenous minority-minority effects persist with a rise in receptiveness. This suggests mutual receptiveness is simultaneously attenuating homophily effects for majority-group members, while amplifying homophily effects for minority-group members.¹²

¹² In other analyses not reported, we extended polynomial regression models to include the full suite of controls used in our other analyses. Although the corresponding surface response plots are less pronounced, we again find support for the pattern of moderation described above.

Table A1*Receptiveness to Opposing Views Items*

Item	Subscale
1. I am willing to have conversations with individuals who hold strong views opposite to my own.	2
2. I like reading well thought-out information and arguments supporting viewpoints opposite to mine.	2
3. I find listening to opposing views informative.	2
4. I value interactions with people who hold strong views opposite to mine.	2
5. I am generally curious to find out why other people have different opinions than I do.	2
6. People who have opinions that are opposite to mine often have views which are too extreme to be taken seriously. (R)	3
7. People who have views that oppose mine rarely present compelling arguments. (R)	3
8. Information from people who have strong opinions that oppose mine is often designed to mislead less-informed listeners. (R)	3
9. Some points of view are too offensive to be equally represented in the media. (R)	4
10. Some issues are just not up for debate. (R)	4
11. Some ideas are simply too dangerous to be part of public discourse. (R)	4
12. I consider my views on some issues to be sacred. (R)	4
13. People who have views that oppose mine are often biased by what would be best for them and their group. (R)	3
14. People who have views that oppose mine often base their arguments on emotion rather than logic. (R)	3
15. Listening to people with views that strongly oppose mine tends to make me angry. (R)	1
16. I feel disgusted by some of the things that people with views that oppose mine say. (R)	1
17. I often feel frustrated when I listen to people with social and political views that oppose mine. (R)	1
18. I often get annoyed during discussions with people with views that are very different from mine. (R)	1

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Table A2

Logistic Regressions: Relationship Formation in Undirected Dyads (Study 2 Robustness Checks)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Ideologically Opposed	-0.543 (0.454)	-0.463 (0.707)	-2.758** (0.916)	-2.029** (0.779)	-2.792** (0.881)	-2.573** (0.917)
Mutual Extraversion	0.253*** (0.029)		0.253*** (0.029)	0.059* (0.026)	0.048* (0.024)	0.061* (0.026)
Mutual Self-monitoring		0.279*** (0.055)	0.190*** (0.053)	0.024 (0.039)	0.014 (0.041)	0.010 (0.041)
Mutual Receptiveness			-0.0837** (0.033)	-0.078** (0.029)	-0.074** (0.028)	-0.076** (0.029)
Ideologically Opposed × Mutual Extraversion	0.046 (0.063)		0.005 (0.063)	-0.062 (0.058)		-0.081 (0.059)
Ideologically Opposed × Mutual Self-monitoring		0.036 (0.093)	-0.020 (0.098)		0.079 (0.091)	0.109 (0.093)
Ideologically Opposed × Mutual Receptiveness			0.281*** (0.072)	0.250*** (0.066)	0.223** (0.069)	0.238*** (0.067)
Additional Controls	No	No	No	Yes	Yes	Yes
AIC	17943.952	18047.786	17891.241	14757.291	14757.520	14757.643
BIC	18206.782	18310.616	18190.324	15101.690	15101.918	15111.105
Log Likelihood	-8942.976	-8994.893	-8912.620	-7340.646	-7340.760	-7339.822
Deviance	17885.952	17989.786	17825.241	14681.291	14681.520	14679.643
Num. obs.	63775	63775	63775	63775	63775	63775

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Note. Two-way-cluster-robust standard errors appear in parentheses. All models include school-section fixed effects. Additional controls include gender (indicators both male, both female), country of origin (both U.S., neither U.S.), mutual political orientation, mutual extraversion, and mutual self-monitoring.

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Table A3

Logistic Regressions: Relationship Nomination in Directed Dyads (Study 2 Robustness Check)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Minority → Majority	0.470 (0.746)	0.136 (1.342)	0.556 (1.569)	0.642 (1.064)	0.259 (1.310)	0.719 (1.397)
Majority → Minority	-0.355 (0.556)	0.228 (0.964)	-2.590* (1.146)	-2.811* (1.094)	-2.632* (1.218)	-2.479† (1.282)
Mutual Extraversion	0.184*** (0.038)		0.168*** (0.037)	-0.123*** (0.036)		0.114* (0.037)
Mutual Self-monitoring		0.190*** (0.053)	-0.114* (0.0.051)		0.102* (0.050)	0.054 (0.050)
Mutual Receptiveness			-0.025 (0.038)	-0.018 (0.039)	-0.003 (0.040)	-0.020 (0.039)
Minority → Majority × Mutual Extraversion	-0.114 (0.098)		-0.110 (0.099)	-0.133 (0.099)		-0.131 (0.091)
Majority → Minority × Mutual Extraversion	0.026 (0.075)		-0.022 (0.076)	-0.037 (0.094)		-0.026 (0.087)
Minority → Majority × Mutual Self-monitoring		-0.063 (0.173)	-0.035 (0.170)		-0.051 (0.160)	-0.016 (0.149)
Majority → Minority × Mutual Self-monitoring		-0.052 (0.128)	-0.077 (0.115)		-0.066 (0.156)	-0.063 (0.149)
Minority → Majority × Mutual Receptiveness			0.015 (0.135)	0.001 (0.115)	-0.018 (0.116)	0.004 (0.118)
Majority → Minority × Mutual Receptiveness			0.333*** (0.091)	0.311** (0.118)	0.317** (0.119)	0.317** (0.120)
Additional Controls	No	No	No	Yes	Yes	Yes
AIC	46654.069	46819.349	46606.132	44868.622	44945.319	44867.223
BIC	46966.269	47131.550	46976.870	45258.873	45335.570	45286.742
Log Likelihood	-23295.034	-23377.675	-23265.066	-22394.311	-22432.660	-22390.611
Deviance	46590.069	46755.349	46530.132	447788.622	44865.319	44781.223
Num. obs.	127550	127550	127550	127550	127550	127550

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Note. Two-way-cluster-robust standard errors appear in parentheses. All models include school-section fixed effects and an indicator whether the alter nominated the given ego. ‘Minority → Majority’ indicates the focal actor is in the minority group, considering someone in the majority group; ‘Majority → Minority’ is an indicator that the focal actor is in the majority group, considering someone in the minority group. Additional controls include gender (indicators both male, both female), country of origin (both U.S., neither U.S.), mutual extraversion, and mutual self-monitoring.

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Table A4

Logistic Regressions: Polynomial Regression Analyses (Study 2 Robustness Checks).

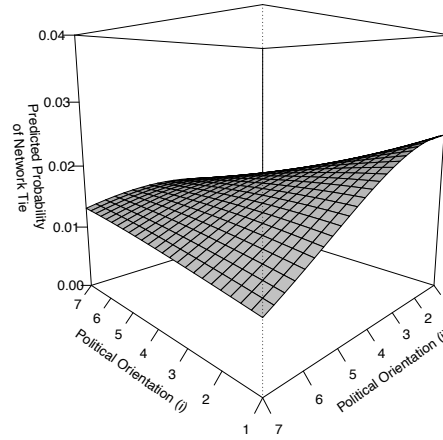
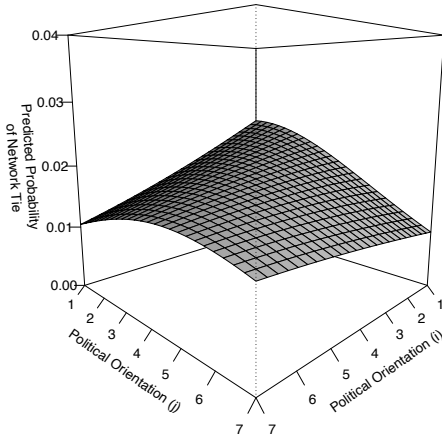
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Political/Majority-Minority Orientation _i	-0.141 (0.092)	-0.118 (0.172)	-0.097 (0.153)	0.077 (0.166)	0.367 (0.254)	0.163 (0.291)
Political/Majority-Minority Orientation _j	0.023 (0.091)	0.081 (0.159)	0.238 (0.157)	-0.220* (0.108)	0.028 (0.215)	-0.132 (0.169)
Political/Majority-Minority Orientation _i ²	-0.005 (0.014)	-0.063* (0.031)	0.020 (0.021)	-0.033 [†] (0.017)	-0.078** (0.025)	-0.023 (0.030)
Political/Majority-Minority Orientation _j ²	-0.028* (0.013)	-0.071** (0.027)	-0.031 (0.021)	-0.002 (0.010)	-0.037 [†] (0.019)	0.005 (0.016)
Pol./Maj-Min. Orient. _i × Pol./Maj-Min. Orient. _j	0.035** (0.013)	0.130*** (0.033)	-0.012 (0.020)	0.048*** (0.009)	0.079*** (0.017)	0.009 (0.013)
Dyad Direction Sample	Undirected Full Sample	Undirected Low Recept.	Undirected High Recept.	Directed Full Sample	Directed Low Recept.	Directed High Recept.
AIC	18098.632	4245.618	5027.793	59195.262	13415.075	16592.405
BIC	18379.589	4482.350	5267.224	59497.707	13673.294	16853.324
Log Likelihood	-9018.316	-2091.809	-2482.897	-29566.631	-6676.537	-8265.203
Deviance	18036.632	4183.618	4965.793	59133.262	13353.075	16530.405
Num. obs.	63775	15314	16707	127550	30628	33414

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$.

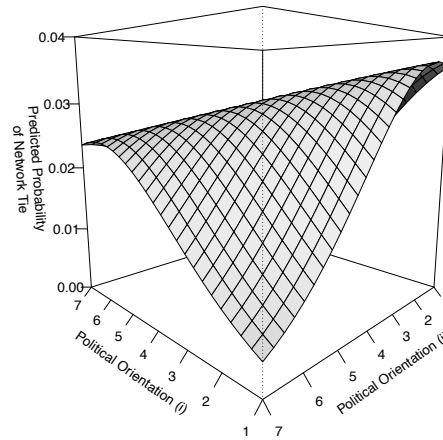
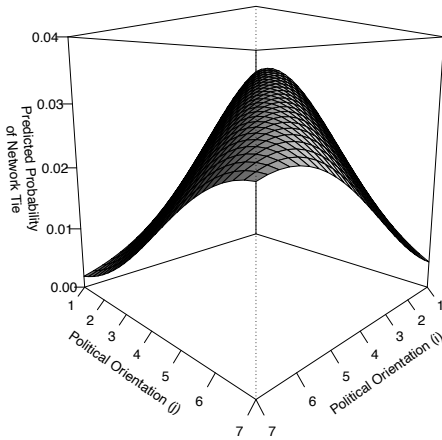
Two-way-cluster-robust standard errors appear in parentheses. All models include school-section fixed effects. Models 1-3 use undirected dyads and mutually recognized ties as the dependent variable. Models 4-6 use directed dyads and the indicator i nominated j as the dependent variable

Figure A1.

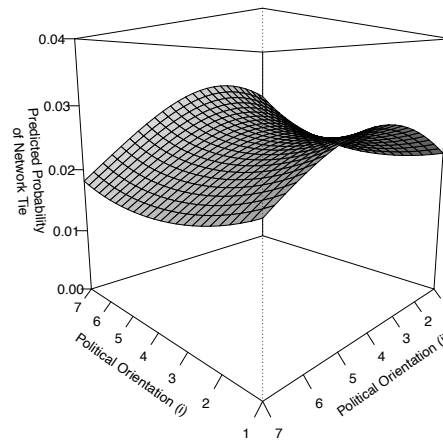
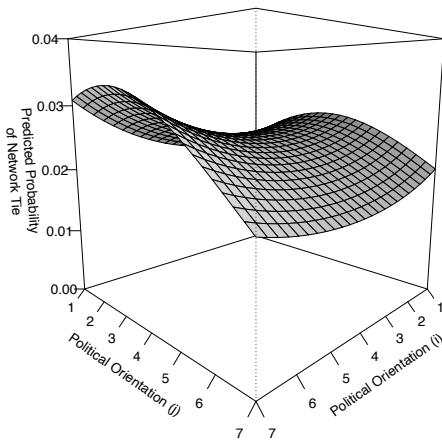
Plots of Predicted Probability of Relationship Formation across Political Orientation Profiles (Undirected Dyads)



(a) All Dyads



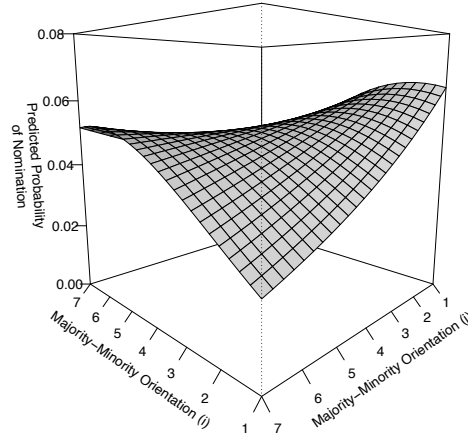
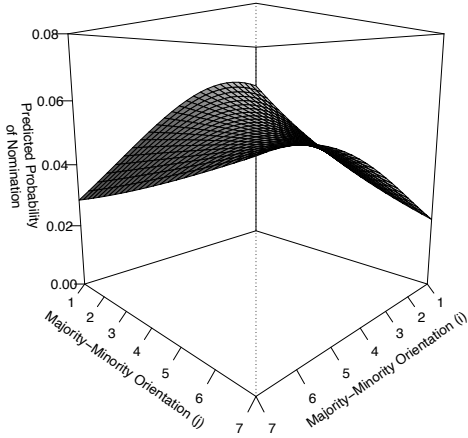
(b) Low Receptiveness Dyads



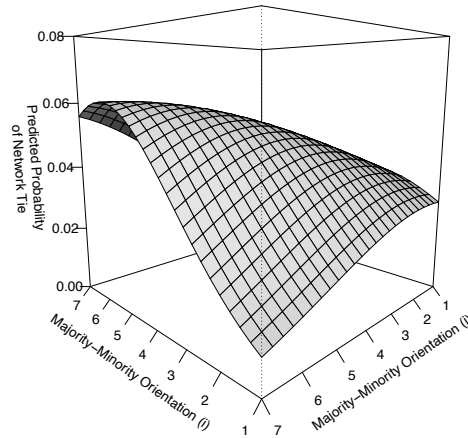
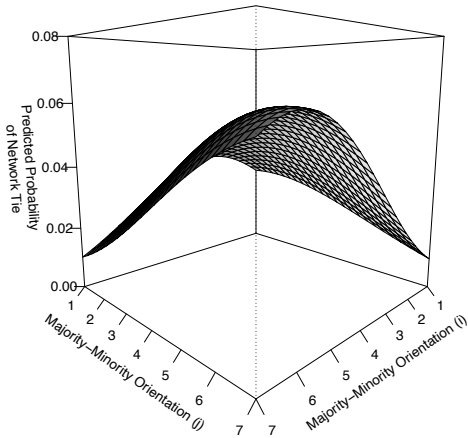
(c) High Receptiveness Dyads

Figure A2.

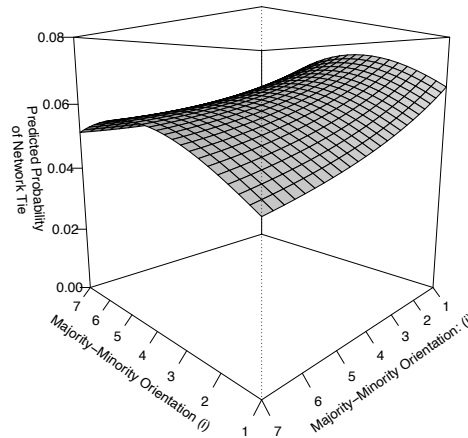
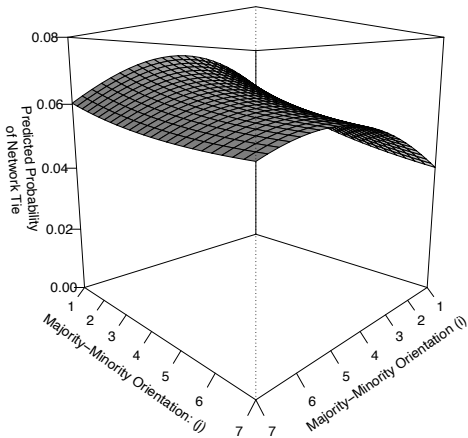
Plots of Predicted Probability of Relationship Nomination across Political Orientation Profiles (Directed Dyads)



(d) All Dyads



(e) Low Receptiveness Dyads



(f) High Receptiveness Dyads