

The Consequences of Interparty Conversation on Outparty Affect and Stereotypes*

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Abstract

Americans increasingly dislike members of the opposite political party and associate negative trait stereotypes with them such as close-minded, mean, and hypocritical. Nevertheless, media, politicians, and nonprofits promote conversation as a remedy to societal divisions along party lines. How do conversations that cross party lines impact the negative feelings and perceptions Americans hold for opposing party members? How might the consequences of conversations that touch on politics differ from those that do not? I investigate these questions using an experiment that manipulates whether a Republican and Democrat engage in conversation or not, and if so, whether they discuss a political or non-political topic. This experiment takes two novel approaches. First, I design an algorithm to implement a blocked cluster design in settings where the researcher controls what clusters (e.g., conversations) form. Second, I design a chat software so participants can have real-time, written conversations online. Across two experiments, I find that conversation improves how partisans feel and think about opposing party members, and this positive effect holds for both political and non-political conversations. Surprisingly, I do not find evidence to suggest that talking politics is any less effective than avoiding overtly political topics for improving these outcomes. These results provide new evidence that interparty conversation, whether politically-charged or not, can work to undo the negative view of opposing party members held by many Americans.

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1 Introduction

The American political climate is characterized by a pronounced division along party lines in the way ordinary Americans feel about each other. Partisans increasingly feel animosity towards those who identify with the opposing political party and perceive them to hold negative traits, such as mean and selfish (e.g., Iyengar, Sood and Lelkes 2012). As the body of evidence documenting partisans' negative feelings and perceptions of opposing party members grows (e.g., Ahler and Sood 2018; Iyengar, Sood and Lelkes 2012; Iyengar and Westwood 2015; Levendusky and Malhotra 2015), additional work suggests this animosity impacts the political system through voting behavior (Abramowitz and Webster 2016) and attitudes toward bipartisan cooperation (Bankert 2020).

Media, politicians, and nonprofits often promote conversation that crosses party lines as a means to combat affective polarization—the widening gap between positive feelings toward members of one's own party (the "inparty") and negative feelings toward members of the opposing party (the "outparty"). In part, a focus on interparty conversation stems from conventional wisdom that conversation with "the enemy," despite disagreement, bridges understanding and respect. Indeed, literature on intergroup contact finds that contact with outgroup members, such as direct interpersonal conversations, is largely an effective strategy for improving bias toward an outgroup (Paluck, Green and Green 2019; Pettigrew and Tropp 2006).

However, the abounding evidence that partisanship leads to discrimination in non-political settings (e.g., Gift and Gift 2015; Huber and Malhotra 2017; Iyengar and Westwood 2015; McConnell et al. 2018) and can fracture interpersonal relationships (e.g., Chen and Rohla 2018), would seem to cast doubt on the hypothesis that conversation as a form of contact amongst partisans could improve negative feelings and perceptions of outparty members.

Political scientists often understand this body of evidence by taking a social identity perspective of partisanship (e.g., Green, Palmquist and Schickler 2002; Greene 1999). As a social identity, partisanship leads Americans to categorize the world into the inparty or the outparty (Tajfel and Turner 1979), which has triggered negativity toward the outparty as described above (Iyengar et al. 2019). Moreover, as the country continues to divide along party lines, inparty/outparty categories have become more defined and outparty negativity is intensifying (Mason 2015, 2018), likewise suggesting it would be difficult for partisans to reap benefits from interparty conversations.

While it may seem as though social identity theory and theories of intergroup contact are in tension when it comes to explaining the effects of interparty conversations, I argue that these theories are actually more complementary than is currently appreciated in the political science literature (e.g., Bond, Shulman and Gilbert 2018). Because social identity theory explains *why* partisans view outparty members negatively, it is a useful basis for understanding how these feelings and perceptions might *change* via contact.

Specifically, our social identities help us initially make sense of, and decrease uncertainty surrounding, any social interaction. At the outset of an interparty conversation, a partisan initially categorizes the outparty member as such and relies on their (negative) representation of the outparty to make sense of the outparty member. Conversation as a form of contact, however, can alter a partisan's representation of "outparty member." Conversations allows opposing partisans to see each other as individuals rather than outparty prototypes as individuating information is exchanged. Furthermore, conversations invite partisans to experience the interaction through their personal, rather than their social, identities—meaning, they see the outparty member (and themselves) as individuals rather than as "a Democrat" and "a Republican." By disarming the power of the "outparty" label to make sense of another individual, I expect interparty conversation can undermine the usefulness of relying on partisan identity to make sense of future interparty contact which generalizes the benefits of contact to the outparty at large (Brewer and Miller 1984).

A conversation that allows a partisan to see individuating features of an outparty member is fairly easy to imagine when conversation avoids overtly political topics—talking about work, family, or hobbies. However, it is unclear if *political* conversation provides an environment for sharing information that allows opposing party members to view each other as anything other than "the outparty." Nevertheless, even conversations that drift into political topics are a direct, interpersonal experience with an outparty member, which promotes an understanding of the interaction on an interpersonal, rather than intergroup, level. To be sure, political conversation has been shown to strengthen partisan identity (Levendusky, Druckman and McLain 2016) and makes salient the inherent competition between partisan groups, which can interfere with the positive effects of contact (e.g., Lowe 2020). Therefore, I expect that political conversations are a less effective venue for improving feelings toward and perceptions of the outparty than non-political conversations.

In this paper, I test these claims using two experiments. In both, I manipulate whether a pair

of opposing party members converse with each other or not and whether they discuss an overtly political topic or not. I am interested in two main outcomes: how partisans *feel* and how partisans *think* about opposing party members after the conversation.

To rigorously assess my hypotheses, I made two methodological innovations. First, I developed an algorithm to implement a blocked cluster design in experimental settings where the researcher controls what clusters (e.g., conversation partnerships or groups) form, which is common in the political discussion and deliberation literature (e.g., Druckman and Nelson 2003; Karpowitz and Mendelberg 2014; Klar 2014). Second, I designed a chat software called "Chatter" by which participants can have real-time, written conversations online. Chatter allows me to relatively easily emulate a real social experience without an existing academic laboratory. Taken together, the experimental design and chat software overcome a set of methodological and practical concerns to improve the experimental study of interpersonal political communications.

I find that interparty conversation mitigates negative outparty affect and improves a biased perception of outparty members' traits. Contrary to my expectations, I do not find evidence that political conversation is any less effective than non-political conversation for improving negative outparty feelings and perceptions. These results provide new evidence that interparty conversation, regardless of whether the conversation is politically-charged or not, can work to undo the negative representation of outparty members held by many Americans in this context. I conclude with a discussion of scope conditions that describe when interparty conversations are likely to have these effects and opportunities for future research on the consequences of interparty social interaction.

2 How Americans feel and think about outparty members

Research shows that negativity toward outparty members manifests in many ways (see Iyengar et al. 2019). In particular, there is a well-documented *affective* response toward outparty members—Republicans and Democrats increasingly report feeling negative toward members of the outparty (e.g., Iyengar, Sood and Lelkes 2012). Additionally, there is a *cognitive* response toward outparty members—partisans hold a negative, over-generalized representation of the outparty. This outparty representation includes negative trait stereotypes (Iyengar, Sood and Lelkes 2012), an overestimation of the extent to which outparty members belong to groups stereotypically associated with the

outparty (Ahler and Sood 2018), an overestimation of the extremity of outparty members' political views (Levendusky and Malhotra 2015), and even a dehumanization of outparty members (e.g., Cassese 2019; Martherus et al. 2019).

One explanation for this general trend is a partisan-ideological sorting—conservatives increasingly identify as Republican and liberals increasingly identify as Democrat (Levendusky 2009; Mason 2015). Not only have ideological and partisan identities aligned, but race, religion, and more have sorted along the same partisan divide (Mason 2018). As identities that cut across party lines have decreased, the strength of Americans' partisan identities has increased, which has affective and cognitive consequences. Stronger partisans react with stronger emotion to perceived party threats, regardless of their ideological positions (Mason 2015, 2018). And, as clearer social distinctions are made between the parties and as Americans hold stronger partisan identities, it becomes easier and more tempting to make (potentially inaccurate) generalizations about the outparty (Westfall et al. 2015).

Talking across party lines has repeatedly been cited as a solution to America's deep, bitter partisan divide. Not only do media (e.g., Grumet 2019) and politicians (e.g., Fang 2017) offer this advice, but nonprofits spend a great deal of money promoting this philosophy.¹ But because the majority of political science research on the consequences of interparty conversation focuses on outcomes such as the sharing of political information and political participation (e.g., Berelson et al. 1954; Druckman, Levendusky and McLain 2017; Huckfeldt and Sprague 1991; McClurg 2003; Mutz 2006; Sinclair 2012), the consequences of talking with the political opposition on how Americans *feel* about the outparty remains less clear. How one's view of the outparty changes in reaction to interparty conversation surely has downstream consequences on other political outcomes of social interaction, such as if information was distorted, if participation was hampered, and more. Therefore, it is important to also shed light on the immediate social psychological outcomes of conversation, such as how we feel and think about outparty members (e.g., Mutz 2002).

Additionally, it is important to study the consequences of interparty conversation on the feelings and perceptions of the outparty because we can derive two plausible expectations about this process from the literature. Consider the view of American partisanship offered by Mason (2018), who calls

¹For example, Better Angels (<https://www.better-angels.org/>), Village Square (<https://tlh.villagesquare.us/>), American Public Square (<https://americanpublicsquare.org/>), Listen First Project (<http://www.listenfirstproject.org/>), and many more.

partisanship, now aligned with many other identities, a "mega-identity" which heightens feelings of anger, competition, and a need to "win" not just in terms of political interests but in terms of protecting their partisan "team." On the one hand, it follows that these feelings of anger, competition, and threat might surface at the prospect of conversation with an opposing party member. Thus, the drive to maintain a win for one's partisan team could lead to an interaction that fails to improve, or even worsens, one's negative view of the outparty. On the other hand, conversation with outparty members could offer an opportunity to improve negative outparty attitudes as a form of intergroup contact (Allport 1954), which is considered "one of psychology's most effective strategies for improving intergroup relations" (pg. 5 Dovidio, Gaertner and Kawakami 2003). Multiple meta-analyses have shown that contact has the tendency to improve negative outgroup evaluations (Paluck, Green and Green 2019; Pettigrew and Tropp 2006). However, partisanship is not typically the subject of intergroup contact research. For example, the recent meta-analysis by Paluck, Green and Green (2019) utilized 27 studies that randomly assigned intergroup contact, none of which featured partisan groups. Thus, the political science literature lacks a clear understanding of how interparty conversation as a form of contact alters, if at all, the way partisans feel and think about the outparty.

3 Consequences of interparty conversation

In this section, I propose a resolution to the implicit tension in the political science literature between social identity theory and theories of intergroup contact to understand how interparty conversations might alter outparty feelings and perceptions. I derive three main expectations: that (1) non-political and (2) political conversation with an outparty member improves a partisans' negative representation of the outparty at large, but that (3) non-political conversation will be more effective than political conversation at doing so.

3.1 Partisanship as a social identity

Social identity theory (e.g., Tajfel and Turner 1979) and the related self-categorization theory (e.g., Turner et al. 1987) present one framework for understanding intergroup, including *interparty*, biases and prejudices (Green, Palmquist and Schickler 2004; Greene 1999; Iyengar, Sood and Lelkes 2012).

According to this framework, individuals associate with groups as a cognitive tool to understand their place in a complex, social world. As a consequence of forming a social identity, an individual's sense of self becomes bound to the group, so maintaining a positive sense of self is tied to maintaining a positive view of the ingroup.

Because the ingroup is understood in comparison to the outgroup, social identity theory hypothesizes that individuals are motivated to positively differentiate the ingroup from the outgroup—I like "us" more than "them." Research supports this hypothesis in regard to partisan groups, showing that partisans express explicit and implicit favoritism, or bias, for members of the inparty even in non-political settings (e.g., Iyengar and Westwood 2015). So while social identities need not induce "outgroup hate," American partisan identity has triggered this response (Iyengar et al. 2019), in part because political groups are defined by competition over political power (Brewer 1999). Moreover, Americans' partisan identities have strengthened as they have overlapped with other important identities, making Americans more emotional and hostile toward threats to their partisan identity (Mason 2015, 2018).

3.2 Conversations as contact

The social identity perspective of partisan identity explains what we might expect at the outset of an interparty conversation. When partisan identity is a salient, individuals will initially categorize themselves and others as inparty or outparty members. There are two main consequences of this. First, when an individual self-categorizes, they comprehend and act in accordance with their social identity—how they see themselves as "a Republican" or "a Democrat" (Turner et al. 1987). Second, when a partisan categorizes an outparty member as such, they depersonalize the outparty member, thus viewing the outparty member as an oversimplified prototype of the broader group (Hogg and Reid 2006; Tajfel 1981), which as discussed above, takes the form of negative affect and negative trait stereotypes.

However, Allport's influential "contact hypothesis" suggests that improved intergroup relations can result from intergroup contact if it meets several conditions—equal group status within the contact situation, common goals, intergroup cooperation, and the support of authorities, law, or custom (Allport 1954). Yet, interparty conversation as a form of contact would presumably lack several of these conditions. For example, partisans engaging in an everyday conversation are not

likely to be pursuing a shared goal, nor does the current American political environment and its elites necessarily support positive interactions amongst partisans. However, a meta-analysis of 515 studies of intergroup contact suggest that while these conditions facilitate an optimal form of contact, they are not necessary for contact to have its positive effects (Pettigrew and Tropp 2006).

Another facilitating condition of contact has emerged in more recent empirical literature as particularly important—that contact ought to offer the opportunity to build personal acquaintances or even friendships (Pettigrew 1997, 1998). Building personal acquaintances is inherent in conversation, unlike other forms of direct and indirect contact often the subject of intergroup contact research. For example, learning about an outgroup member could be avoided throughout other forms of direct contact, such as sharing a classroom or sports team (e.g., Mousa 2020). Likewise, indirect contact, such as vicarious or imagined contact (Dovidio, Eller and Hewstone 2011), lacks the dynamics of interacting directly with an outgroup member by definition. Moreover, the interpersonal nature of conversation is important because a number of studies find negative effects of exposure to outgroup members (Enos 2014; Hangartner et al. 2019) or their views (Bail et al. 2018) absent more meaningful interaction.

Conversation builds an outparty acquaintance as information is both shared and received. In regard to sharing information, presenting meaningful parts of yourself to another is important in developing interpersonal relationships (Jourard 1971), and research shows that self-disclosure to an outgroup member can reduce negative outgroup bias (Ensari and Miller 2002). In regard to receiving information, conversation allows a partisan to learn individuating information about an outparty member and view the outgroup with more heterogeneity, which decreases outgroup bias (Miller 2002; Wilder 1978). However, increased knowledge about an outparty member may not, in and of itself, improve a biased, overgeneralized view of the outparty at large. Learning individuating information about an outgroup member can lead to subtyping the individual or viewing the member as atypical of the group, leaving the negative view of the outparty as a whole unchanged (Hewstone and Brown 1986; Mousa 2020).

Therefore, how a partisan processes information shared in an interparty conversation conditions if and when the effects of contact will generalize from the outparty member to the outparty at large. When individuating information is shared, partisanship can shift from being the most useful, or even the only, dimension shaping an understanding of the outparty member and one’s self. Instead of

categorizing an outparty member as such, conversation allows the outparty member to be understood better as an individual person (Brewer and Miller 1988, 1984). Thus information is attended to on an interpersonal, rather than on an intergroup, level. Contact can then improve biased outgroup affect and perceptions because ingroup/outgroup categories, from which intergroup biases originate, are undermined as useful bases for understanding interparty interactions (e.g., Bettencourt et al. 1992; Miller, Brewer and Edwards 1985).

3.3 Topic of conversation

However, different types of conversations may lead to variation in how effective contact is at fostering an understanding of the outparty member on an interpersonal, rather than an intergroup, level. Consider *what* partisans talk about. It is relatively easy to imagine non-political conversations—talking about family or hobbies—providing individuating information about an outparty member. Even though conversation about family, hobbies, or even your pets at home can cue partisanship (Hetherington and Weiler 2018), non-political conversations encourage partisans to understand each other as individuals, beyond (potentially incorrect) stereotyped views, group associations, and traits (e.g., Ahler and Sood 2018; Iyengar, Sood and Lelkes 2012; Levendusky and Malhotra 2015).

On the other hand, conversations that delve into overtly political topics allow relatively less opportunity to self-disclose and make the groups’ competition for political power more salient, which can dampen the positive effects of intergroup contact (Lowe 2020). Moreover, political conversation has been shown to strengthen partisan identity (Levendusky, Druckman and McLain 2016). So when talking about politics, it may be more difficult to move beyond an understanding of the outparty member based on an inparty/outparty categorization. This leads me to three main hypotheses of interparty conversations:

Hypothesis 1: *Non-political* conversation as contact with an outparty member improves (1) outparty affect and (2) use of negative outparty trait stereotypes.

Hypothesis 2: *Political* conversation as contact with an outparty member improves (1) outparty affect and (2) use of negative outparty trait stereotypes.

Hypothesis 3: Non-political conversation improves (1) outparty affect and (2) use of negative outparty trait stereotypes *more* than political conversation.

In sum, while I expect both non-political and political conversations are venues for improving outparty affect and use of negative trait stereotypes, I expect non-political conversation will be more effective than political conversation for doing so.

4 Experiment

To assess the consequences of interparty conversation on outparty affect and stereotypes, I conducted an experiment on Amazon Mechanical Turk (MTurk) involving conversation amongst Republicans and Democrats.² The experiment required four steps outlined in Figure 1. First, a set of potential participants took a pre-treatment survey to gather relevant pre-treatment covariates. At the conclusion of the survey, participants were asked if they would be willing to return for a follow up task involving an "online chat with another Worker or writing a short essay."

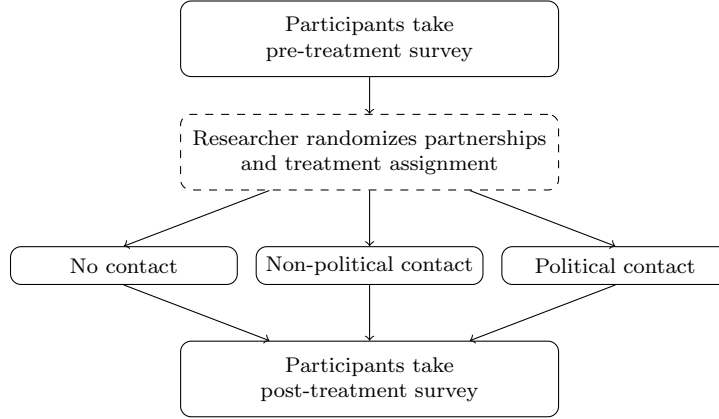
Second, I used the pre-treatment survey responses of participants willing to return for the follow-up task to randomize participants into partnerships, each containing one Republican and one Democrat. Then, I randomly assigned conversation partnerships to one of three experimental conditions: no contact with partner (instead write an individual short essay), (2) contact with partner and discuss a non-political topic, or (3) contact with partner and discuss a political topic. Participants selected for the experiment were invited via email through MTurk to complete the follow-up task. Having participants return for the experiment at all, let alone at the same time, presented a difficult coordination task. To minimize attrition between the pre-treatment survey and returning for the experiment, participants took the pre-treatment survey 10-30 minutes before the experiment. With the remaining 10 minutes, I randomized participants into partnerships, assigned partnerships to experimental conditions, emailed chosen participants 5 minutes before the experiment was live, and emailed chosen participants once more when experiment was live.

Third, participants selected for the experiment returned to complete the follow-up task where they spent a minimum of eight minutes writing a short essay or conversing with their assigned partner. Fourth, after completing their assigned task, participants proceeded to a post-treatment survey to assess how their feelings and perceptions about the outparty may have changed.

In what follows, I discuss several of these steps' details—the three experimental conditions, the

²See Appendix D for participant compensation details.

Figure 1: Experimental stages



Note: Visualization of participants' and researcher's roles throughout the four stages of the experiment.

measurement of outcome variables, how partnerships and treatment were randomly assigned via a blocked cluster experimental design, and finally, how conversation occurred via an online chat app.

4.1 Experimental conditions

Table 1 shows the wording of the short essay and conversation prompts which are shown throughout the duration of the exercise. Specifically, for partners assigned to have **no contact** with their outparty partner, each individual wrote separately about the meaning of life. For those assigned to the **non-political contact** condition, participants talked with their outparty partner about the meaning of life. I selected this topic because previous research has investigated how to foster a personal acquaintance in a laboratory experiment setting, finding that participants grow closer during a short interaction when communicating about "deep" (i.e., What is the meaning of life?) rather than "shallow" questions (e.g., What is your name? Where are you from?) (Sedikides et al. 1999; Tu, Shaw and Fishbach 2015). For those assigned to the **political contact** condition, participants conversed with their outparty partner about gun control. I selected this topic because it is a political issue salient to the average American so most participants are likely to have opinions they can converse about for a few minutes. Importantly, since intergroup contact implies group membership is known during the contact situation, participants are told the partisanship of their conversation partner.

Table 1: Instructions for experimental conditions

<u>No contact</u>	<u>Non-political contact</u>	<u>Political contact</u>
<p>Please share your thoughts on the meaning of life. A conversation partner will not be joining you. Rather, we ask that you write about the meaning of life independently by sending messages in the chat box below.</p> <p>For example, survey research shows that many people mention family as the most important sources of meaning in their life. Survey research also shows that other people mention career, money, faith, friends, and hobbies as the most important source of meaning in their life.</p> <p>What do you think?</p>	<p>We've randomly assigned you a partner that belongs to or leans toward the [Republican/Democratic] party. Please have a conversation with them about the meaning of life.</p> <p>Specifically, we are interested in you sharing what you think makes life meaningful and learning your conversation partner's thoughts as someone that might hold different values and beliefs.</p> <p>For example, survey research shows that many people mention family as the most important sources of meaning in their life. Survey research also shows that other people mention career, money, faith, friends, and hobbies as the most important source of meaning in their life.</p> <p>What do you think?</p>	<p>We've randomly assigned you a partner that belongs to or leans toward the [Republican/Democratic] party. Please have a conversation with them about gun control.</p> <p>Specifically, we are interested in you sharing your opinion on gun control and learning your conversation partner's opinion as someone that might hold different values and beliefs.</p> <p>For example, survey research shows that some people believe it is more important to protect the right of Americans to own guns than control gun ownership, while others believe the opposite. Survey research also shows that some people believe making it harder to own guns would result in fewer mass shootings, while others believe this would make no difference.</p> <p>What do you think?</p>

Note: Instructions for three experimental conditions. References to survey research included in the prompts come from recent Pew Research Center polls (Pew Research Center 2017, 2018).

4.2 Outcome measures

I have two outcomes of interest. The first uses the standard 101-point feeling thermometer, where larger values indicate more favorable or "warm" feelings toward that person or group (e.g., Iyengar, Sood and Lelkes 2012).³ Respondents rate both "Republicans across the country" and "Democrats across the country" in pre- and post-treatment surveys. My first outcome of interest is how contact can alter generalized *outparty affect*, which I define as the difference between pre- and post-treatment outparty feeling thermometer ratings.⁴

³Feeling thermometer question wording is, "Please rate the following groups using the following thermometer. Ratings between 50 and 100 degrees mean that you feel favorable and warm toward the group. Ratings between 0 and 50 degrees mean that you don't feel favorable toward and don't care too much for that group. You would rate a group at the 50 degree mark if you don't feel particularly warm or cold toward the group."

⁴When using feeling thermometers and trait rating, research shows it is important to specify the group you want participants to rate beyond "the Democratic party" or "Democrats," for example (Druckman and Levendusky 2019). I ask respondents to rate "Democrats across the country" to target not only Democratic voters, but the entire outgroup that identifies as a Democrat.

The second set of outcomes assess how contact can alter *perceptions of the outparty*, which I measure by asking participants to rate, using a five point Likert scale, how well several traits describe members of each political party (e.g., Levendusky 2018). Trait ratings were asked in the post-treatment survey only.

Respondents also indicate their partisan identification in the pre-treatment survey.⁵ Participants who choose Independent or Other are asked toward which party they lean. Due to the evidence that "leaners" behave similarly as partisans (Greene 1999; Iyengar and Westwood 2015; Pew Research Center 2019), I collapse Independents who lean toward one party into that party. Using partisan identification, I identify each individual's outparty in order to construct the outcome measures of outparty affect and perceptions.

4.3 Experimental design

Lab experiments involving social interaction amongst participants, like this one, are common across the political discussion and deliberation literature (e.g., Druckman and Nelson 2003; Karpowitz, Mendelberg and Shaker 2012; Klar 2014); however, several methodological and practical concerns arise with this type of experiment. Not only does social interaction complicate a researcher's design and subsequent data analysis, but small sample sizes, imbalance across experimental conditions, and more have implications for efficiency of estimation and the power of hypothesis tests. And as a practical matter, experimental studies involving participant interaction are resource-intensive, often prohibitively so, largely requiring an academic lab and existing subject pool.

To rigorously test the hypotheses derived in Section 3, I sought to address several of these methodological and practical concerns through two specific approaches to the experiment. First, I implemented a blocked cluster experimental design to improve efficiency of my estimation, among other advantages. Second, I developed a chat software to more easily allow for participant social interaction. In what follows, I briefly discuss each of these approaches in turn.

⁵Partisan identification question wording is, "Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?" A follow up question asks strength of partisan identity, "Would you call yourself a strong [Republican/Democrat] or not a very strong [Republican/Democrat]?" Finally, participants indicating Independent or Other are asked, "Do you think of yourself as closer to the Republican or Democratic party?"

4.3.1 Blocked cluster design

For this experiment, I chose a blocked cluster design because (1) randomly assigning treatment at the *cluster*-level (here, conversation-level) is appropriate due to inherent interference between participants within a conversation, and (2) randomly assigning treatment within *blocks* of clusters improves efficiency in estimation (e.g., Moore 2012). However, a blocked cluster design is typically used for field experiments which feature pre-existing clusters, such as cities or classrooms (e.g., Imai et al. 2009). To implement this design for a lab experiment, the researcher must somehow assign units to clusters (i.e., individuals to groups or partnerships). While guidance and tools exist for blocking (e.g., Moore 2012) and blocking with pre-existing clusters (e.g., Imai et al. 2009), it is less clear how to simultaneously block and cluster units. Therefore, I created an algorithm to construct a blocked cluster design.⁶

Figure 2 outlines the five steps of my blocked cluster design algorithm as applied to designing this experiment. There are a few specifics about this example to highlight before explaining the steps of the algorithm. First, for this example, I each block contains three partnerships because I have three experimental conditions. Second, I want each cluster to have two participants. Third, I want each cluster to feature one Republican and one Democrat.⁷ For this reason, I'll call partisanship my "clustering constraint," or the variable the created clusters will be constrained to reflect. Importantly, the clustering constraint must apply to all clusters to ensure the benefits of balance achieved by blocking.⁸

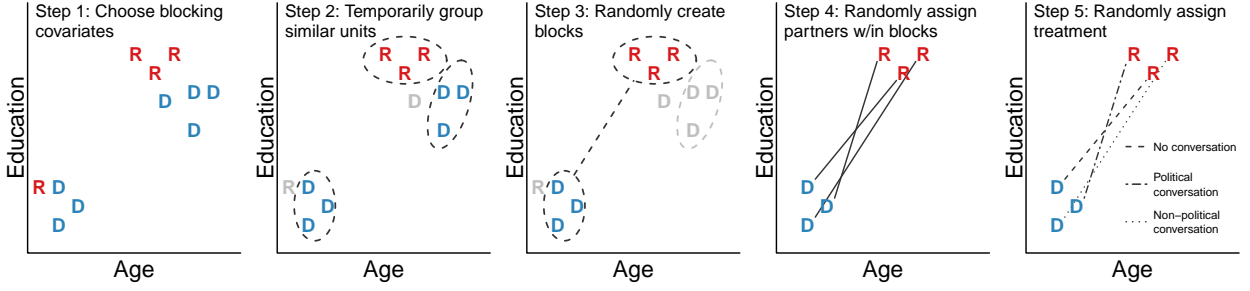
The first step of the algorithm, demonstrated in the first plot of Figure 2, is to identify relevant blocking covariates and the clustering constraint, if any. For simplicity, I plot participants on only two dimensions—education and age. Because these variables likely affect the extent to which

⁶It is important to note that the proposed blocked cluster experimental design is certainly more complicated than one featuring completely randomized assignment of clusters and of the treatment. If the costs, in terms of complication, outweigh the benefits, I would not recommend this design. For example, if a large- n study is possible, then completely randomized groups and treatment assignment may be sufficient. Assessing power, efficiency, and more via `DeclareDesign` will prove helpful in these design decisions (Blair et al. 2019; Blair and Fultz 2019)

⁷This algorithm is generalizable to any number of experimental manipulations, any number of units per cluster, and any clustering constraint, such as disagreeable attitudes on the topic of discussion, different gender, or none at all.

⁸A researcher may want to consider group composition as a treatment, such as creating same-party groups as a control condition for opposite-party conversation. In this case, one could imagine randomly assigning units to clusters to reflect one of these two clustering constraints (i.e., experimental conditions). However, careful consideration would need to be made to ensure doing so does not induce imbalance across experimental conditions on other covariates likely to impact the outcome of interest. Additionally, considering group composition as treatment (rather than fixed, pre-treatment) complicates consideration of a unit's potential outcomes. This type of design is beyond the scope of this paper.

Figure 2: Blocked cluster experimental design algorithm



Note: Visualization of the algorithm for constructing a blocked cluster design when the researcher controls the construction of the clusters.

participants will change their outparty affect, I block on these variables to control for this variation. I also indicate if the participants are Republican or Democrat because this is the variable all created clusters will be constrained to reflect—every cluster will have one Republican and one Democrat.

The second step is to identify temporary groupings of n similar units with respect to the clustering constraint, where n is the number of experimental manipulations.⁹ The second plot in Figure 2 shows the temporary groupings of three similar units, conditional on partisan identification. Importantly, these groupings are **not** the clusters; rather, they are temporary groupings of similar units used to facilitate the creation of blocked and randomized clusters in subsequent steps.

The third step finishes the process of creating the blocks. I randomly assign each temporary grouping to another temporary set of units, conditional on having different partisanship. For this example, one group of similar Democrats is randomly assigned to one group of similar Republicans. These six individuals represent one block. Any remaining groups or individuals not assigned to blocks (as shown in gray) are discarded. It may seem counterintuitive to finalize the blocks before finalizing the specific cluster assignments. However, creating the blocks first ensures cluster-level similarity within each block.

The fourth step is to randomly assign clusters. Within each block, I randomly assign one unit from each temporary grouping to a unit from the other grouping. The fourth plot of Figure 2 shows this process for one block—Democrats and Republicans are randomly assigned to each other. The result is three similar, randomly assigned clusters grouped together in a block. Finally, with the

⁹I create these temporary groupings using the `blockTools` statistical software (Moore 2016) with the optimum greedy algorithm and the Mahalanobis distance metric (Moore 2012). Details on the specific variables used for this step are available in Appendix C.

created blocks and clusters in hand, treatment is randomly assigned at the cluster-level within each block as in any blocked cluster design. The fifth plot of Figure 2 demonstrates this step.

It is important to stress two features of this algorithm. First, cluster-level difference is minimized within each block, as is the goal of any blocked cluster design. Second, within-cluster differences are randomized across the experimental blocks ensuring variation in the kinds of people talking to each other. For example, Figure 2 shows that each cluster within this block features a young, less educated Democrat and an older, more educated Republican. This demonstrates the first goal of the algorithm—similarity at the cluster-level within a block. On the other hand, I do not want all of the conversation partnerships to be between very dissimilar Republicans and Democrats. Individual-level difference between the Republican and Democrat within a partnership varies randomly across blocks. In summary, while the clusters in the block in Figure 2 feature partners who are all very different in the same ways, another block may feature partners who are all very similar.¹⁰

4.3.2 Chatter conversation software

In addition to addressing several methodological concerns via the blocked cluster experimental design, I sought to overcome practical concerns that arise when conducting experiments involving social interaction. To do so, I took a novel approach to how the social interaction amongst participants would occur. I designed a software called "Chatter" so participants can have real-time, written conversations online.¹¹ Full details on Chatter are available in Appendix A. Chatter allows me to emulate a real social experience for the study participants without an existing laboratory or a participant pool. Moreover, Chatter provides me full experimental control—participants are filtered into chatrooms with the partners and treatments pre-assigned via the blocked cluster design.

5 Data and results

I fielded the experiment between August 15-22, 2019 and January 13-15, 2020 on MTurk with eight separate rounds of data collection. In total, 1,632 unique MTurk Workers took the pre-treatment survey and a subset of 630 were selected via the blocked, randomized cluster experimental design

¹⁰See Appendix B for a visualization of the randomization of individual-level difference within clusters and the minimization of cluster-level differences within blocks.

¹¹I greatly appreciate Matt Dickenson’s work to build the software. Chatter is a Ruby on Rails application backed by a Postgres database, deployed on Heroku.

algorithm. Therefore, the design included 630 participants, formed into 315 partnerships/clusters, and nested within 105 blocks.

Despite the quick timeline and reminders outlined above, chosen participants did attrit between the pre-treatment survey and returning for the experiment. And, a single participant's attrition impacts their cluster and block.¹² In what follows, all *blocks* for a which any participant did not follow up are dropped.¹³ This is an advantage of block randomized designs. Dropping entire blocks does not sacrifice balance across experimental conditions on blocking covariates, which could generate bias (e.g., King et al. 2007). After maintaining only full blocks, the sample used in subsequent analyses contains 44 (41.9%) full blocks of 264 participants. Thus, I have 44 partnerships in the control condition, 44 partnerships in the non-political contact condition, and 44 partnerships in the political contact condition. Importantly, no participants attrited post-treatment, which could bias results if participants attrited as a function of treatment assignment, such as after seeing they were assigned to talk politics.

5.1 Manipulation check

Before considering the effects of interparty conversation, it is important to consider if the participants took the exercise seriously and engaged in their assigned exercise. I have read every short essay and conversation transcript, and the participants do indeed engage with each other and discuss their assigned topic.¹⁴ Additionally, a median number of 17.5 messages were sent across non-political conversation and 14 messages across political conversations. The median number of words exchanged were 222, 269, and 299 in the no contact, non-political contact, and political contact conditions, respectively. These summary statistics demonstrate the participants engaged in the exercise. Moreover, participants discussed their assigned topic. The word "gun" appeared 386 times across the conversations assigned to talk about gun control, and not at all in the other experimental conditions. The word "meaning" appeared 394 times in the control condition, 119 times in the non-political contact condition, and not at all in the political contact condition.¹⁵

¹²Appendix E shows details on attrition by round of data collection.

¹³Appendix J shows results for all full partnerships/clusters which are largely consistent with results when including only full blocks.

¹⁴Appendix F provides an example from each of the three experimental conditions of on-topic, active participation in the exercise.

¹⁵Appendix G presents consistent results across additional words and phrases.

5.2 Randomization inference hypothesis tests

Given the evidence that the participants engaged in their assigned type of conversation, I next assess my claims regarding the consequences of conversation with an outparty member. I test my hypotheses using randomization inference (Fisher 1935). Because my sample size is relatively small, and as I demonstrate below, my outcomes are not distributed normally, I use randomization inference to avoid appealing to large sample approximations or modeling assumptions.¹⁶ Additionally, randomization inference is straightforward given the blocked cluster randomization procedure I use for assigning conversation partnerships to experimental conditions. I consider this a three-armed experiment, so I assess pairwise comparisons between each experimental condition. For each test, I assume a sharp null hypothesis of no treatment effect for all units.

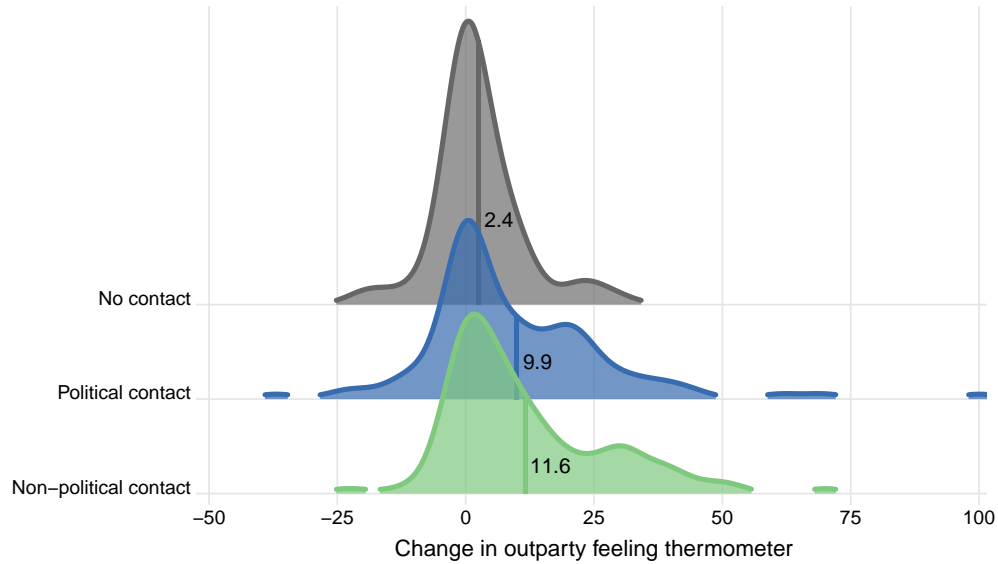
I use the suite of tools available in the `DeclareDesign` software to declare my blocked cluster randomization procedure (Blair et al. 2019), and I use the `ri2` software (Coppock 2019) to conduct the randomization inference. Because there are 2^{44} possible random assignments for the following tests, in what follows, I report approximate p -values using a random sample of 50,000 random assignments consistent with my design.

I first assess contact’s effects on outparty affect before turning to contact’s effect on outparty trait stereotypes. Figure 3 shows a summary of the change in outparty affect outcome variable. Change is tightly concentrated around zero for the no contact condition, while each of the contact conditions shows considerable positive change in affect. Improvement in outparty affect is notably similar across non-political and political conversations. I find support of my first hypothesis that non-political interparty contact significantly improves negative outparty affect relative to no contact ($p < .001$). I also find support for my second hypothesis that political interparty contact significantly improves negative outparty affect ($p = .002$). Finally, I assess my third hypothesis, that non-political conversation is more effective than political conversation at improving outparty affect. Contrary to my expectations, I do not find evidence to suggest that there are differing consequences of non-political and political conversation on outparty affect ($p = .580$).

To help put these results into context, I summarize participants’ post-treatment outparty feeling thermometer ratings relative to meaningful points on the scale (e.g., Levendusky 2018). First,

¹⁶Appendix I reports consistent results using parametric hypothesis test approaches.

Figure 3: Change in outparty affect by experimental condition



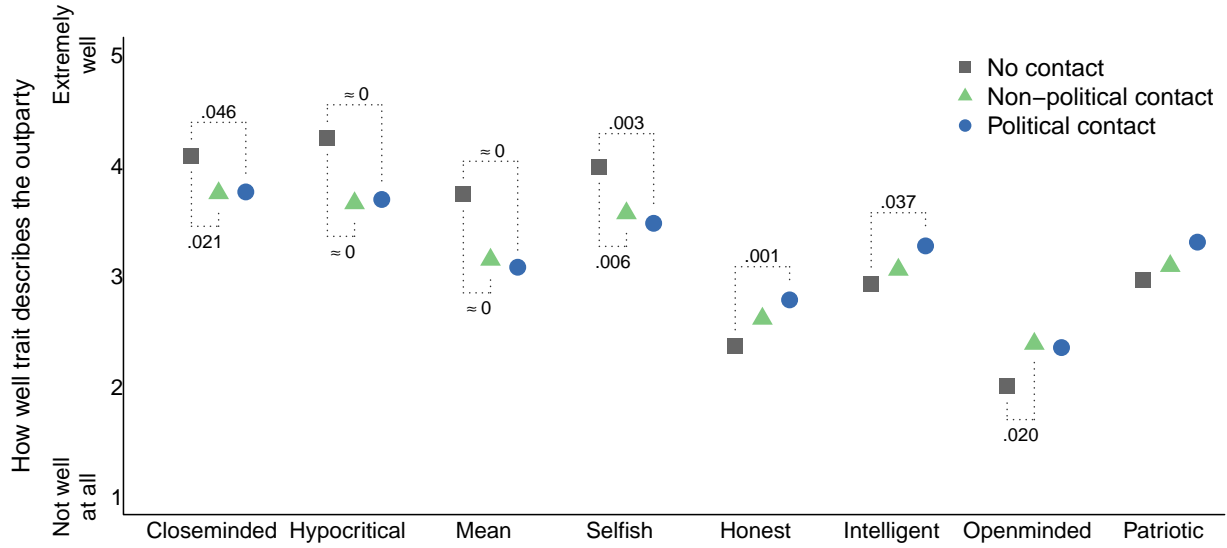
Note: Density of outcome variable, change in outparty affect, by experimental condition considering full blocks. Outcome measured as change in outparty affect using pre- and post-treatment ratings of the outparty on the 101-point feeling thermometer. Grey density shows outcome for the no contact condition, blue density shows outcome for the political contact condition, and green density shows outcome for the non-political contact condition. Vertical lines display the mean change for each condition. Change for the no contact condition is tightly concentrated around 0. Change for each contact condition is skewed positively, indicating an improvement, on average, in outparty affect.

consider the percentage of participants rating the outparty "warmly" after contact, or greater than or equal to 50 on feeling thermometer. 44% of those in non-political condition and 38% of those the political condition rated the outparty in this way, while only 25% of participants who did not experience interparty contact rated the outparty favorably. Additionally, at the "cold" end of the feeling thermometer, consider a very unfavorable rating of less than or equal to 5. Only 17% of those in the non-political condition and 15% of those in political condition rated outparty in this way, while 28% of those who did not experience outparty contact rated the outparty with such an extremely unfavorable rating.

I've provided evidence that interparty conversation can alter how partisans feel about the outparty, and I now turn to assess if contact can alter how partisans think about, or perceive, outparty members. The outcomes of interest are respondents' level of agreement (on a five point scale, higher values indicating more agreement) with how well several traits, four negative and four positive, describe supporters of the outparty. I again use randomization inference to approximate p -values with a difference-in-means test statistic.

Figure 4 plots the mean response of each experimental condition for each of the traits surveyed.

Figure 4: Perceptions of the outparty



Note: Mean response for each experimental condition for each of the traits surveyed. Randomization inference p -values are also reported for significant results ($\alpha = .05$).

Randomization inference p -values are also reported for significant results ($\alpha < .05$).¹⁷ In line with my expectations, when respondents had conversation with an outparty member, whether non-political or political, they were less inclined to ascribe each of the four negative traits—closeminded, hypocritical, mean, and selfish—to the outparty. However, there are inconsistent results among the positive traits. Political contact significantly increased perceptions of the outparty as honest and intelligent, and non-political contact increased perceptions of the outparty as openminded. I lack a theoretical explanation for the inconsistent patterns in these positive trait rating results. Interestingly, these results differ from Levendusky’s (2018) findings that priming the superordinate American identity improves positive trait ratings but not negative trait ratings. Future research ought to explore these contrasting findings given different outparty prejudice-reduction techniques.

5.3 Study 2

I conducted a second study intended to replicate and extend Study 1 by addressing three main limitations of Study 1. First, Study 1 was not a fully crossed design and was missing a baseline conditions where participants did not have contact with an outparty member but still wrote or thought about a political topic. A second limitation of Study 1 is that it did not isolate the effect

¹⁷The table of full results is reported in Appendix H.

of the social experience of having a conversation. In other words, the results could be driven by participants *thinking* about an outparty member, thus the effect of *conversing* with an outparty member remains unclear. A third limitation of Study 1 is that the political topic, gun control, featured substantial agreement in the conversations, demonstrated in Appendix 11. While I chose gun control for its potential for common ground, in Study 2 I chose a topic that would be more divisive and a harder test for finding positive effects of political conversation.

To address these limitations, I conducted a fully crossed 2x2 study in which partners were randomly assigned to have imagined or actual contact and were randomly assigned to discuss either a political or a non-political topic. In order to better isolate the effect of the social experience of having a conversation with an outparty member, Study 2 instructs participants to *imagine* contact in the no contact condition. By doing so, the treatment effect in Study 2 can be interpreted as the benefit derived from the social experience of having a conversation. Finally, I ask participants assigned to a political topic to imagine or have a conversation on U.S. immigration policy, a more divisive topic than gun control.¹⁸

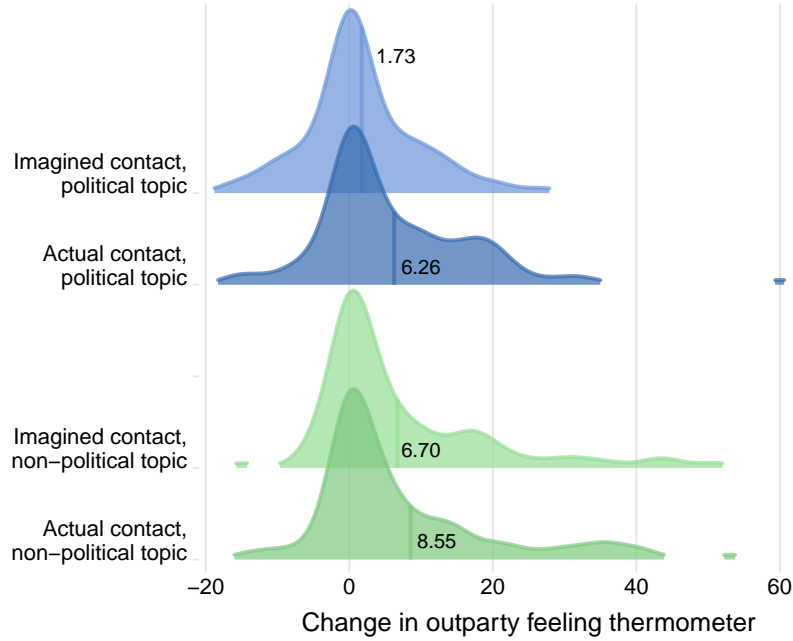
I conducted the experiment on September 14 - October 20, 2020. A total of 2876 participants took the recruitment survey and 1096 were used in the blocked cluster design and invited back for experiment. As with Study 1, participants attrited in Study 2. There are 37 full blocks (27%) and 370 full partnerships (68%).

I test my hypotheses using full blocks to maintain balance across experimental conditions (N=296). I continue using randomization inference to test my hypotheses. Specifically, I use the randomization inference approach for analyzing an interaction in a two-way factorial designs outlined by Keele, McConnaughey and White (2012) and introduced by Patel and Hoel (1973). The test is a rank-based test and is intended for testing for an interaction between the effects of two factors, here contact type (imagined or actual) and topic (non-political or political).¹⁹ I test my first two hypotheses by considering topic as the modifying factor, thus I am testing whether the effect of contact for each topic. I then assess the interaction of contact and topic to test my third hypothesis. Because I have directional hypotheses, I will report one-tailed p-values, and all tests will use the

¹⁸Appendix L shows the full conversation prompts.

¹⁹Rank-based tests are useful in the presence of outliers and differences in the tails of the distributions across experimental conditions, as is the case with the feeling thermometer outcomes. Therefore, I will use ranked-based tests as my main testing approach as it is a powerful alternative in this context.

Figure 5: Study 2 change in outparty affect by experimental condition



Note: Density of outcome variable, change in outparty affect, by experimental condition considering full blocks in Study 2. Outcome measured as change in outparty affect using pre- and post-treatment ratings of the outparty on the 101-point feeling thermometer. Blue densities shows outcome for political topic and green densities show outcome for non-political topic. Vertical lines display the mean change for each condition.

conventional $\alpha = .05$ significance level.²⁰

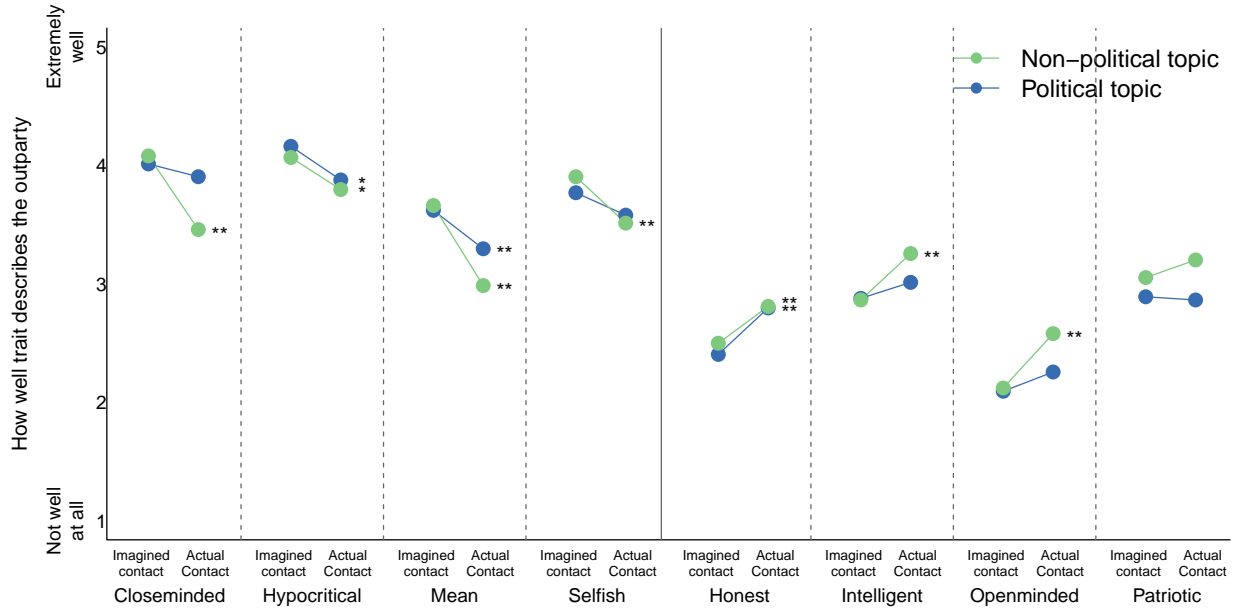
Figure 5 visualizes the change in outparty affect outcome. We see that imagining a political conversation leads some participants to update positively and some negatively about members of the outparty, with an average change near 0. However, actual conversation with an outparty member leads to more improvements in feelings toward outparty members, with an average change of 6.26. I expected that political conversation as contact, relative to imagined contact, with an outparty member would increase outparty affect, and I find support for this hypothesis ($p = .002$).

Turning to non-political imagined and actual contact, we see that both types of contact largely lead to improvement in outparty affect. In fact, imagining a non-political conversation improves outparty affect to a similar magnitude as engaging in a real conversation. While actual conversation improves outparty affect, I do not find evidence to suggest it improves affect more than imagined contact ($p = .371$).

Finally, I expected that conversation as contact increases outparty affect more when the topic

²⁰This analysis was pre-registered.

Figure 6: Study 2 perceptions of the outparty



Note: Mean response for each experimental condition for each of the traits surveyed.

is non-political verses political. I do not find support for the interaction ($p = .949$). In fact, the benefits of actual conversation are more pronounced when the topic is political. In sum, actual conversation is particularly important for improving outparty affect when political topics are salient. On the other hand, the results of this study provide additional evidence that imagined contact can be an an effective form of intergroup contact (Dovidio, Eller and Hewstone 2011), with no evidence here to conclude it is any less powerful than having a real conversation when the topic avoids politics.

I next turn to how members of the outparty are perceived after contact. Figure 6 plots mean results for each experimental condition for each trait. Non-political conversation, as opposed to imagined conversation, improves perceptions of outparty members for all traits except "hypocritical" ($p < .10$) and "patriotism." Therefore, when allowed to connect beyond partisan identities, actual non-political conversation leads partisans to be less inclined to use negative traits and more inclined to use positive traits to describe outparty members. Political conversation, on the other hand, does not result in the same consistent effects. Participants were more inclined to view opposing partisans as honest, and were less inclined to view them as mean and hypocritical.

6 Conclusion

This paper considers whether interparty conversation may mitigate or fuel the heightened outparty negativity that characterizes America’s political climate. With an experiment involving actual conversation amongst opposing partisans, this paper shows that interparty conversation can result in a sizable increase in outparty affect and a disinclination to describe outparty members by negative trait stereotypes, in particular for conversations that avoid politics.

While I’ve found that conversation *can* improve how partisans feel about and think about outparty members, a question left for future research is *when* conversations improve affect and perceptions outside of the environment constructed for this research. In particular, this experiment featured online conversation, limiting the external validity of these findings as applied to in-person interactions where physical appearance and body language are additional guides to social interaction. Moreover, computer-mediated communication has been shown to have higher levels of self-disclosure than face-to-face communications (e.g., Joinson 2001). These factors certainly influence how a conversation unfolds and what effects it has on subsequent outcomes.

Along these lines, this experimental design involved only two individuals, one from each party. While this helps satisfy one of Allport’s conditions for contact to improve outgroup prejudice—equal status in the contact situation—not all conversations will avoid having a minority group or minority opinion apparent in the interaction. This is an important consideration because research shows that when politics arises in a discussion, people tend to conform to the majority opinion and shield their own views (Carlson and Settle 2016). Relatedly, this research does not account for the role social sanctioning may play in political and non-political interactions that occur in Americans’ everyday lives. It is left for future research to speak to how different group compositions and pre-existing relationships may impact the effectiveness of conversation as a strategy for combating negative intergroup attitudes.

Moreover, this research does not reflect the role of self-selection into interparty conversation. Research shows that anticipating political discussion makes people anxious (Carlson and Settle 2016). It follows that people prefer to avoid political discussion, especially when it is disagreeable (Gerber et al. 2012) or with an outparty member (Settle and Carlson 2019). But, while research finds some people prefer to avoid political conversation or social interaction with outparty members, sometimes

these interactions occur beyond our control. Walsh contends that "Much political interaction occurs not among people who make a point to specifically talk about politics but emerges instead from the social processes of people chatting with one another" (pg. 35 Cramer Walsh 2004). Moreover, a recent large-scale, full-network study supports the idea that talking politics is more an *incidental* than it is a *purposive* exercise (Minozzi et al. 2019). If we take the incidental model of political discussion seriously, then talking politics is often unanticipated, it is hard to avoid altogether, and everyone is subject to experiencing some political talk in their daily lives, and this paper illustrates that such political talk with outparty members can improve how we feel and think about them.

More broadly, this research speaks to a vein in the polarization literature that works to accurately characterize the extent to which the electorate is affective polarized (Druckman and Levendusky 2019; Druckman et al. 2019; Klar, Krupnikov and Ryan 2018; Lelkes and Westwood 2017; Westwood, Peterson and Lelkes 2019). While this paper characterizes Americans' views of outparty as biased, overgeneralized, and potentially inaccurate, it also illuminates the limits of our partisan identities by showing conversation has the power to interfere with our inclination to interpret social situations through the lens of our partisan identities and correct for heightened outparty negativity. In this sense, this paper plays a role in illuminating a further limitation of partisan biases, as partisanship did not have power to derail the largely congenial conversations that unfolded in this experiment (e.g., Lelkes and Westwood 2017).

Relatedly, this research theorizes about and studies positive contact. However, research shows that a single negative instance of contact has a stronger, negative effect on affect than does any single instance of positive contact (Barlow et al. 2012). Therefore, future research should consider under what conditions partisan conversations go awry, perhaps when a partisan feels like their group or "team" is being threatened. While this research studied the topic of gun control, conversations delving into electoral politics or appealing to more deeply held values may activate stronger emotions and fuel, rather than mitigate, affective polarization.

Finally, if interparty conversations can improve feelings and perceptions of the outparty, it begs the question why negativity toward the outparty continues to rise. However, there are many countervailing forces that work to fortify the walls of our inparty/outparty categories, such as ideological polarization (e.g., Rogowski and Sutherland 2016; Webster and Abramowitz 2017), hostile political campaigns (Iyengar, Sood and Lelkes 2012), and an increase in partisan news (Lelkes, Sood

and Iyengar 2017). Future research should dig deeper into the interplay between regular interparty conversation and partisan pressures from the broader political climate, and how they together shape a partisans' view of the outparty.

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Appendices

A Chatter conversation software

As a practical matter, in order to study interparty conversations, I designed a software called "Chatter" by which participants can have real-time, written conversations online.²¹ Chatter allows 2-10 participants to have a conversation via an interface similar to many messaging apps like iMessage or WhatsApp.

Figure 7 shows an example of Chatter's user interface. Participants see instructions for the conversation above a box containing previously sent messages. A participant's own messages appear unlabeled on the right in blue and other conversation members' messages appear, labeled with a unique identifier, on the left. Participants also see a timer that counts down the time remaining and a "Done" button which illuminates and activates when time expires.

Several features of Chatter facilitate experimentation involving conversations. First, Chatter allows the researcher to set up chatrooms so that the partnerships or groups created using the blocked, randomized cluster design can engage in social interaction. Second, Chatter allows the researcher to customize the conversational instructions shown to each participant. Specifically, in the experiment I explain below, treatment takes the form of the topic at the cluster-level, so conversation partners see the same instructions. But, each participant's instructions are customized to include the partisan identity of their partner. Third, the researcher controls all additional chatroom and user settings, including what usernames are displayed (e.g., random sequence of letters, the same name to control perception of gender, etc.) and how long the conversation should last. Lastly, I use Chatter coupled with the Qualtrics survey software for survey administration and Amazon Mechanical Turk to recruit participants. However, experimentation using Chatter is generalizable to other survey platforms and other participant pools.

Chatter allows researchers to relatively easily emulate a real social experience without an existing laboratory or a participant pool. Moreover, as a software for *online* conversations, Chatter allows for diversity in the participant pool that is hard to come by when using in-person conversations, usually with students, faculty, and staff that are affiliated with a college campus (e.g., Karpowitz and Mendelberg 2014; Klar 2014) or that can be recruited within a few cities (e.g. Druckman, Levendusky and McLain 2017). A final practical advantage of Chatter is that a researcher can quickly conduct a large- n study involving conversations. Chatter allows for hundreds of conversations to happen simultaneously, which is difficult to achieve in the setting of an academic laboratory.

²¹Chatter is a Ruby on Rails application backed by a Postgres database, deployed on Heroku.

Figure 7: Chatter user interface

We've randomly assigned you a partner that belongs to or leans toward the **Republican** party. Please have a conversation with them about gun control.

Specifically, we are interested in you sharing your opinion on gun control and learning your conversation partner's opinion as someone that might hold different values and beliefs.

For example, survey research shows that some people believe it is more important to protect the right of Americans to own guns than control gun ownership, while others believe the opposite. Survey research also shows that some people believe making it harder to own guns would result in fewer mass shootings, while others believe this would make no difference.

What do you think?

With bonus, this HIT is paying above minimum wage. We expect you to have thoughtful, thorough conversations that utilize the full 8 minutes without large gaps of time. Participants who do so will receive a \$1.00 bonus.

► Additional instructions about the chat app:

Hi there. Are you for stricter gun control?

Y066eRGRyB: Hi, how are you? Yes, I am for stricter gun control, you?

I'm well. Hope you are as well. Yes, I think we need stricter gun control laws in this country. I think at the very least people with mental illness disorders should not have the ability to own guns. I also think there should be universal background checks.

Write your reply...

Send

Time until finished: 0:00:02:00

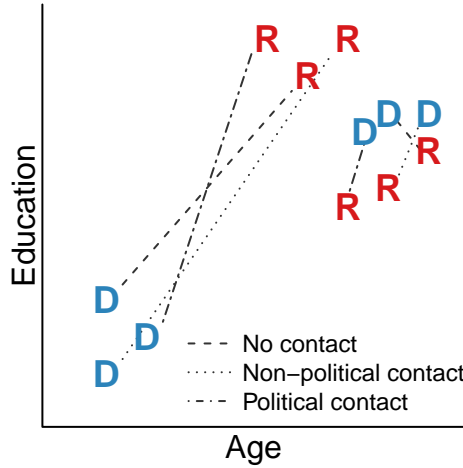
Done

Note: Chatter user interface. Instructions appear at the top of the page. Akin to other messaging software, an individual's own messages appear on the right. Other users' messages appear on the left. When the timer indicates no time is left, the "Done" button activates and redirects users to a post-conversation survey when clicked.

B Blocked, randomized cluster algorithm and partnership-level and individual-level differences

Figure 8 demonstrates two important features of the blocked, randomized cluster algorithm by adding a second block of clusters. First we see that cluster-level difference is minimized within each block. However, we also see that individual-level difference within partnerships is randomized across blocks. The first block shows Democrats and Republicans that are very different (in the same ways), but the second block shows Democrats and Republicans that are very similar (in the same ways).

Figure 8: Partnership-level difference minimized within blocks and individual-level difference randomized across blocks



C Details on blocked cluster design for experiment

The following provides more specific, technical details for the blocked cluster algorithm used in the experiment, particularly for the blocking variables.

- Create trios of similar individuals within the same party
 - Using the `blockTools::block()` statistical software (Moore 2016) with the optimum greedy algorithm and the Mahalanobis distance metric (Moore 2012). Note is step does not create the blocks *in full*, despite the use of the `blockTools` statistical software. See Section 4.3.
 - Blocking variables are age and education (considered continuous); indicators for gender* and ethnicity, strength of partisan identification*; pre-treatment thermometer ratings of inparty, outparty, and President Trump*; a 6-item battery on pre-treatment gun views (considered continuous); a single pre-treatment item asking overall view regarding gun control*; personality trait estimates including 4 item adaptive versions of each Big 5 Trait (openness*, conscientiousness, agreeableness, neuroticism, and extraversion) (Costa and McCrae 2008), Systemizing and Empathizing Quotients (Baron-Cohen et al. 2003); and latitude and longitude. Variables marked with an * are up-weighted to have twice the weight of the other variables.
 - Block within subgroups of partisan identification. Those who indicated "Independent" or "other" for partisan identification are collapsed into the respective party toward which they lean.
- Shuffle individuals within trios.
- Simultaneously create blocks and interparty pairs by randomly assigning one Democratic trios

to each Republican trio.

- Within each block of interparty pairs, randomly assign treatment at interparty pair-level.

D MTurk HIT payment details

All participants who completed the pre-treatment survey were compensated \$1, regardless of whether they expressed interest in returning for the follow-up task. Those that returned for the follow-up task (including the conversation or short essay and the post-treatment survey) were compensated an additional amount. If their partner joined and they finished the post-treatment survey, they were compensated \$2 + \$1 bonus for engaging in the writing task. If the participant waited for five minutes but their partner did not join (thus they could not complete the task), they were still compensated the \$2. These compensation amounts were set so that all participants were thus paid above federal minimum wage.

E Attrition details

This experiment required multiple rounds of data collection. Early rounds of data collection on MTurk had smaller sample sizes as I assessed the availability of MTurk Workers to immediately complete my posted HITs their willingness to return for the conversation task. I also assessed the scalability of Chatter in these early rounds, scaling up in later rounds of data collection.

Table 2 shows sample sizes across rounds of data collection as well as details on attrition. About 75% of full partnerships completing the task, and about 42% of full blocks completing the task.

Table 2: Sample size and attrition details across eight rounds of data collection

Round	Pre-test Participants (N)	Invited to Return (N)	Full Pairs (%)	Full Blocks (%)
1	124	42	85.7%	71.4%
2	138	30	73.3%	40.0%
3	146	54	63.0%	22.2%
4	174	78	71.8%	30.8%
5	249	84	76.2%	42.9%
6	270	102	74.5%	35.3%
7	311	132	83.3%	59.1%
8	220	108	72.2%	33.3%
	1632	630	75.6%	41.9%

F Example short essays and conversations

Table 3: Example short essays, conversations for experimental conditions

<u>No contact (control)</u>	<u>Non-political contact</u>	<u>Political contact</u>
<p>u1 I think that feeling content in where you are is really one of the deepest meanings in life.</p> <p>Having a beautiful connection with someone you love makes life feel so much more worth it.</p> <p>Being able to connect spiritually and find your inner peace is a great goal.</p> <p>Finding someone who is your soul match and a willing partner is the ultimate meaning of life.</p> <p>Not letting money or materialistic things rule you, but instead letting those things be a byproduct of what you love.</p> <p>Finding your true family, whether blood or not is a great goal in life.</p> <p>Realizing that sometimes you have to let go and let God is a great goal.</p> <p>Making sure your heart and your spirit are in a place of love is incredibly important in life.</p> <p>Not being around anyone who takes away your joy and your light is an important goal in life.</p> <p>All of these things together are pertinent to reaching your full potential aka the meaning of your life.</p> <p>There is no right and wrong answer to what the exact meaning is, but you have to look within yourself to see what your soul and spirit deem important.</p> <p>The true meaning of life is to feel fully content and at peace with your mind, body and spirit.</p> <p>The true meaning of life is love.</p>	<p>u3 What do you think about the meaning of life</p> <p>u4 I think that the meaning of life is very simply to be good people and to spread love and positivity to others.</p> <p>u3 I think that the mean of life is to enjoy every second we live on this earth. I think it's important to notice the beauty in the simple things.</p> <p>u4 I definitely agree with that, especially because we have no idea when our life is going to end and if there is something after this life.</p> <p>u4 We definitely don't appreciate the small things in life, we tend to take them for granted in my opinion.</p> <p>u3 EXACTLY. We don't know when our life will end so we have to make everyday importwand not to get hung up on mistakes</p> <p>u4 Yep, and I think it's human nature to be honest.</p> <p>u4 We're humans and we tend to only focus on ourselves at times.</p> <p>u4 I know I sometimes blow things way out of proportion with regards to things going wrong in my life. But in reality, my problems really aren't that big of a deal.</p> <p>u4 Many people worldwide are way less off than me which is why I try to appreciate everything that I have.</p> <p>u4 It's difficult at times though, sometimes little things add up and can stress you out and you forget to put that type of stuff into perspective.</p> <p>u3 Yes I agree</p> <p>u3 I think that people are so focused on the long term they don't think about the here and now.</p> <p>u3 I'll admit I'm one of them</p> <p>u4 I agree. I mean it's good to focus on the future and prepare yourself but I think it's also important to balance the future with the present as well.</p> <p>u4 I see so many people setting themselves up for future success but in the present they're miserable, working a ton of hours at their jobs and hating their lives because they have no free time.</p> <p>u3 Exactly. That's why I decided to travel and make the most of my youth</p> <p>u4 What I try to do is enjoy every single day. I try to find minor things that make me happy such as going out to a restaurant or playing a fun game on my phone.</p> <p>u3 Perfect example. Little walks down a trail make me happy</p> <p>u4 I love walking around a lake near my house as well, it's very relaxing.</p> <p>u4 Lets me ease some of my stress when I'm struggling mentally.</p> <p>u3 Absolutely. The meaning of life is to bring yourself and the ones around you happiness in my book.</p> <p>u4 Me too. I had a great time chatting with you. Have a great day!</p>	<p>u5 Hi, I am ready when you are. thank you.</p> <p>u6 Hi there! I just think that something so importat is tough to discuss</p> <p>u6 Especially with a stranger</p> <p>u5 My thoughts on gun control are that there are plenty of laws we just need to follow them although maybe some gun types just aren't needed in the general public.</p> <p>u5 such as assault rifles i mean</p> <p>u6 I agree, some things are not meant to be had by everyone</p> <p>u6 yea AK47s are superflous</p> <p>u6 but some people just like the power they get from owning them</p> <p>u5 how do you feel about background checks at gun shows...I thought they had those and then someone told me no they do not</p> <p>u6 also you can have a garage sale and sell your guns, there are many loopholes!</p> <p>u6 guns are in our culture and will be there in the future</p> <p>u5 yes...or just give them away...I have known that to happen. I don't know how they will regulate that so yes guns are here to stay no doubt</p> <p>u5 Maybe we can work harder on making some areas safe.</p> <p>u6 i am not antigun but have a hard time accepting assault rifles</p> <p>u5 I know gun enthusiasts that like their assault rifles very much. I don't know how we are going to keep guns out of the hands of the mentally ill...that is a grey area to regulate</p> <p>u6 sadly people have an 'all or nothing' attitude, so it is hard to compromise</p> <p>u5 I saw we first expend the money and energy to make sure all the existing laws are followed and see where that leaves us.</p> <p>u5 sorry say not saw..oops</p> <p>u6 no prob!! lol,,„at least it is nice to have a conversation with someone who gets other people's point!</p> <p>u6 i wish we had more of that</p> <p>u5 our time is about up....have a wonderful rest of the day and nice talking with you</p> <p>u6 same!! have a great one!</p> <p>u6 on to the nest HIT lol :)</p>
<p>u2 For me life is happiness and love. Happiness is when you are with the people you cared for and love. I think life will be dull or boring if we don't have those people that we will cherish the most. They are the one who makes the ride worthwhile.</p> <p>Life also is giving to others. It is sharing what you have and not asking in return.</p> <p>Life is when you cry and laugh the most. Life is when you are hurt but prefer to stand up.</p> <p>Life is still fighting despite the hardship.. Life is loving all the positive things. Life is protecting our mother nature.</p> <p>Life is everything.</p>		

G Manipulation check

Table 4 details how many times the following terms appear across all short essays or conversations for each experimental condition. Phrases such as "family," "faith," and "happiness" occur often, as expected, when talking about the meaning of life, and do not occur when participants are asked to discuss gun control. Likewise, "gun," "shooting," and "background check" occur often when discussing gun control but not when participants were asked to discuss the meaning of life.

Table 4: Topic-specific word counts suggesting participants discussed assigned topic

	gun	shooting	background check	family	faith	meaning	happiness
No contact	0	1	0	111	14	394	42
Non-political contact	0	0	0	105	7	119	18
Political contact	386	38	38	13	0	0	0

H Full outparty trait results

Table 5 provides full results corresponding to Figure 4 in the main body of the paper. The table reports randomization inference hypothesis tests with the difference in means test statistic under the sharp null hypothesis of no treatment effect. The dependent variable for each test is a measure of agreement with how well the trait describes supporters of the outparty using a five point scale (higher values indicating more agreement). I report two-sided p -values. Recall these results consider only all full blocks.

Table 5: Significance tests of average treatment effect estimates of outparty stereotypes, with full blocks

	"Closeminded"		"Hypocritical"		"Mean"		"Selfish"	
	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value
Non-political contact vs. no contact	-.34	.021	-.59	≈ 0	-.59	≈ 0	-.42	.006
Political contact vs. no contact	-.33	.046	-.56	≈ 0	-.66	≈ 0	-.51	.003
Non-political contact vs. political contact	-.01	≈ 1	-.03	.878	.07	.737	.09	.529
	"Honest"		"Intelligent"		"Openminded"		"Patriotic"	
	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value
Non-political contact vs. no contact	.25	.155	.13	.490	.39	.020	.13	.444
Political contact vs. no contact	.42	.001	.34	.037	.35	.053	.34	.063
Non-political contact vs. political contact	-.17	.302	-.22	.201	.03	.890	-.216	.210

Note: Results considering all full blocks. Randomization inference hypothesis tests with the difference in means test statistic under the sharp null hypothesis of no treatment effect. Dependent variable is agreement, on a five point scale with higher values indicating more agreement, with how well the trait describes supporters of the outparty. Two-sided *p*-values are reported.

I Robustness with other hypothesis test approaches

As a robustness check, I test my hypotheses by calculating *p*-values by using standard errors and *t*-values for matched-pair clustered designs (Blair 2019; Imai et al. 2009). Results are consistent with randomization inference results presented in the main body of the paper.

Specifically, Table 6 reports results from a parametric tests that are consistent with the results in Table ?? . Also, Table 7 reports results from a parametric tests that are consistent with the results in Figure 4 in the main body of the paper and Table 5 in the appendix.

Table 6: Parametric significance tests of average treatment effect estimates, outcome change in outparty affect

	Estimate	Std. error	<i>t</i> -value	<i>p</i> -value	Conf. interval	Df
Non-political contact vs. no contact	9.17	1.80	5.08	≈ 0	[5.53, 12.81]	43
Political contact vs. no contact	7.47	2.40	3.11	.003	[2.62, 12.31]	43
Non-political vs. political contact	1.70	2.85	.60	.55	[-4.04, 7.45]	43

Note: Results considering all full blocks. Dependent variable is individual-level change in outparty affect. Two-sided *p*-values are reported. Both non-political contact and political contact improved outparty affect relative to no contact.

Table 7: Parametric significance tests of average treatment effect estimates, trait ratings outcomes

	Estimate	Std. error	<i>t</i> -value	<i>p</i> -value	Conf. interval	Df
<i>Outcome: "Closeminded"</i>						
Non-political contact vs. no contact	-0.34	0.14	-2.48	0.017	[-0.62, -0.06]	43
Political contact vs. no contact	-0.33	0.15	-2.15	0.037	[-0.64, -0.02]	43
Non-political vs. political contact	-0.01	0.15	-0.07	0.941	[-0.32, 0.3]	43
<i>Outcome: "Hypocritical"</i>						
Non-political contact vs. no contact	-0.59	0.12	-4.8	≈ 0	[-0.84, -0.34]	43
Political contact vs. no contact	-0.56	0.12	-4.79	≈ 0	[-0.79, -0.32]	43
Non-political vs. political contact	-0.03	0.15	-0.23	0.819	[-0.33, 0.27]	43
<i>Outcome: "Mean"</i>						
Non-political contact vs. no contact	-0.59	0.14	-4.31	≈ 0	[-0.87, -0.31]	43
Political contact vs. no contact	-0.66	0.16	-4.04	≈ 0	[-0.99, -0.33]	43
Non-political vs. political contact	0.07	0.17	0.41	0.687	[-0.27, 0.41]	43
<i>Outcome: "Selfish"</i>						
Non-political contact vs. no contact	-0.42	0.14	-2.99	0.005	[-0.7, -0.14]	43
Political contact vs. no contact	-0.51	0.16	-3.24	0.002	[-0.83, -0.19]	43
Non-political vs. political contact	0.09	0.15	0.61	0.543	[-0.21, 0.39]	43
<i>Outcome: "Honest"</i>						
Non-political contact vs. no contact	0.25	0.17	1.51	0.138	[-0.08, 0.58]	43
Political contact vs. no contact	0.42	0.15	2.79	0.008	[0.12, 0.72]	43
Non-political vs. political contact	-0.17	0.15	-1.11	0.272	[-0.48, 0.14]	43
<i>Outcome: "Intelligent"</i>						
Non-political contact vs. no contact	0.12	0.16	0.76	0.449	[-0.2, 0.45]	43
Political contact vs. no contact	0.34	0.15	2.23	0.031	[0.03, 0.65]	43
Non-political vs. political contact	-0.22	0.16	-1.37	0.176	[-0.53, 0.1]	43
<i>Outcome: "Openminded"</i>						
Non-political contact vs. no contact	0.39	0.15	2.52	0.015	[0.08, 0.7]	43
Political contact vs. no contact	0.35	0.17	2.05	0.046	[0.01, 0.7]	43
Non-political vs. political contact	0.03	0.17	0.2	0.841	[-0.31, 0.38]	43
<i>Outcome: "Patriotic"</i>						
Non-political contact vs. no contact	0.12	0.15	0.84	0.404	[-0.17, 0.42]	43
Political contact vs. no contact	0.34	0.17	1.99	0.053	[0.004, 0.69]	43
Non-political vs. political contact	-0.22	0.16	-1.35	0.183	[-0.54, 0.11]	43

Note: Results considering all full blocks. Dependent variables are trait ratings of the outparty. Two-sided *p*-values are reported.

J Results including all full clusters

As a robustness test, I ignore the blocking element of the randomization procedure and consider only the cluster-level randomization of treatment. This increases the sample size by analyzing all

clusters for which both participants returned to complete the experiment. However, the number of full clusters across conditions now varies with 84 clusters in the no contact condition, 77 clusters in the non-political contact condition, and 77 clusters in the political contact condition. Considering full clusters increases the power of the tests.

First consider change in outparty affect. Table 8 reports randomization inference p -values when using all full clusters. Patterns of significance are consistent. Both non-political and political contact improve outparty affect, but are not distinguishable from each other.

Table 8: Randomization inference test of outparty affect, with full clusters

	Estimate	p -value
Non-political contact vs. no contact	8.41	≈ 0
Political contact vs. no contact	6.43	≈ 0
Non-political vs. political contact	1.98	.28

Note: Results considering all full clusters. Randomization inference p -values under the sharp null hypothesis of no treatment effect with difference-in-differences test statistic. Dependent variable is individual-level change in outparty affect. Two-sided p -values are reported. Both non-political contact and political contact improved outparty affect relative to no contact.

Second, consider stereotypical perceptions of the outparty. Figure 9 plots the mean response of each experimental condition for each of the traits surveyed considering all full clusters. For comparison, ratings of the *inparty* are also plotted for each trait. Randomization inference p -values are also reported for significant results ($\alpha = .05$).

When respondents had interparty social interaction, whether non-political or political, they were less inclined to ascribe the negative traits — closeminded, hypocritical, mean, and selfish — to the outparty. This is consistent with the results when only including full blocks, as presented in the main body of the paper in Figure 4. Additionally, interparty social interaction, whether non-political or political, lead to an increase in ascribing positive traits — honest, intelligent, openminded, patriotic — to the outparty. This is not consistent with the results in Figure 4, likely do to increased power when including all full clusters. Table 9 reports full details on the inparty trait rating results.

However, it is not the case that respondents are feeling better about other people, in general, after a contact experience. Figure 9 also plots the mean trait ratings of the inparty, where largely, perceptions of the inparty are not affected by contact with an outparty member. Table 10 reports full details on the inparty trait rating results.

Figure 9: Outparty and inparty trait ratings considering all full clusters

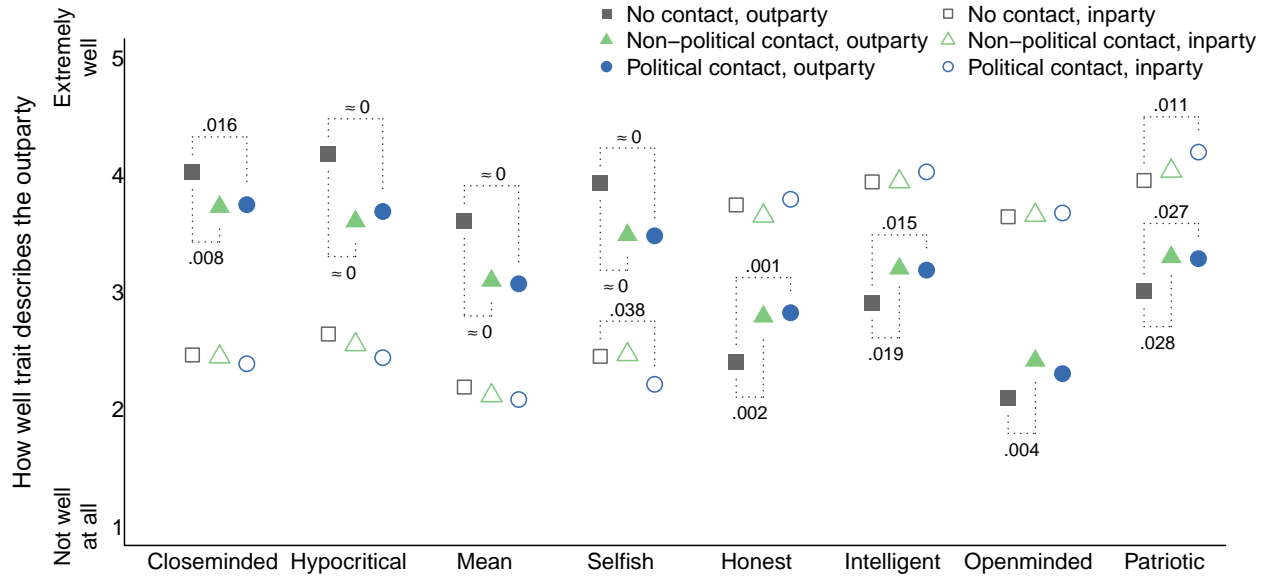


Table 9: Significance tests of average treatment effect estimates of *outparty* stereotypes, with full clusters

	"Closeminded"		"Hypocritical"		"Mean"		"Selfish"	
	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value
Non-political contact vs. no contact	-.30	.008	-.57	≈ 0	-.51	≈ 0	-.44	≈ 0
Political contact vs. no contact	-.28	.016	-.49	≈ 0	-.54	≈ 0	-.45	≈ 0
Non-political contact vs. political contact	-.02	.92	-.084	.52	.026	.87	.006	≈ 1
	"Honest"		"Intelligent"		"Openminded"		"Patriotic"	
	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value
Non-political contact vs. no contact	.39	.002	.29	.019	.32	.004	.29	.028
Political contact vs. no contact	.42	.001	.28	.015	.21	.07	.28	.027
Non-political contact vs. political contact	-.032	.83	.013	.96	.11	.40	.013	.96

Note: Results considering all full clusters. Randomization inference hypothesis tests with the difference in means test statistic under the sharp null hypothesis of no treatment effect. Dependent variable is agreement, on a five point scale with higher values indicating more agreement, with how well the trait describes supporters of the outparty. Two-sided *p*-values are reported.

Table 10: Significance tests of average treatment effect estimates of *inparty* traits, with full clusters

	"Closeminded"		"Hypocritical"		"Mean"		"Selfish"	
	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value
Non-political contact vs. no contact	-.016	.880	-.091	.433	-.074	.459	.015	.919
Political contact vs. no contact	-.075	.539	-.201	.089	-.106	.328	-.238	.038
Non-political contact vs. political contact	.058	.665	.110	.389	.032	.810	.253	.053
	"Honest"		"Intelligent"		"Openminded"		"Patriotic"	
	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value
Non-political contact vs. no contact	-.095	.337	.001	≈ 1	.013	.902	.080	.427
Political contact vs. no contact	.048	.596	.085	.360	.032	.774	.242	.011
Non-political contact vs. political contact	-.143	.126	-.084	.407	-.019	.898	-.162	.087

Note: Results considering all full clusters. Randomization inference hypothesis tests with the difference in means test statistic under the sharp null hypothesis of no treatment effect. Dependent variable is agreement, on a five point scale with higher values indicating more agreement, with how well the trait describes supporters of the inparty. Two-sided *p*-values are reported.

K Partnership agreement

Because the treatment not only involved exposure to an outparty member, but also conversation with them, it is interesting to consider both pre-treatment levels of agreement on the issue of gun control might lead to heterogeneous treatment effects. I code a partnership as having "similar" or "different" views by splitting partnership-level measures of agreement at the mean. The agreement measure is the absolute difference between each individual's mean response to six gun control proposal questions. In Figure 10, we see that partners who agree pre-treatment are no more likely to improve their affect than those who disagreed.

To further assess the impact of agreeing on the topic of gun control, I hand coded each message sent in the political and non-political conversations for whether the message expressed agreement, disagreement, or neither. For each transcript, I then created an agreement score: ($\#$ of messages expressing agreement - $\#$ of messages expressing disagreement)/($\#$ of messages in transcript). Finally, I split this variable at the mean to dichotomize conversation-level agreement. Figure 11 presents boxplots of this result. We see that agreement and disagreement within the non-political conversations does not impact changes in outparty affect. However, conversations that disagree about gun control improve their outparty affect less than those that agree.

Figure 10: Pre-treatment agreement on gun control

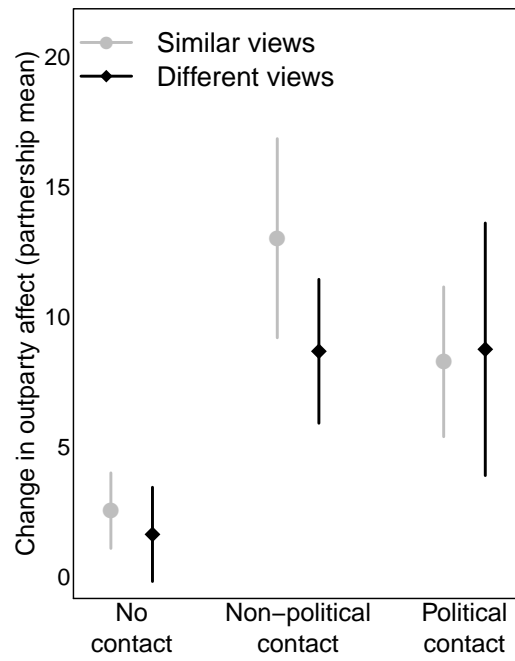
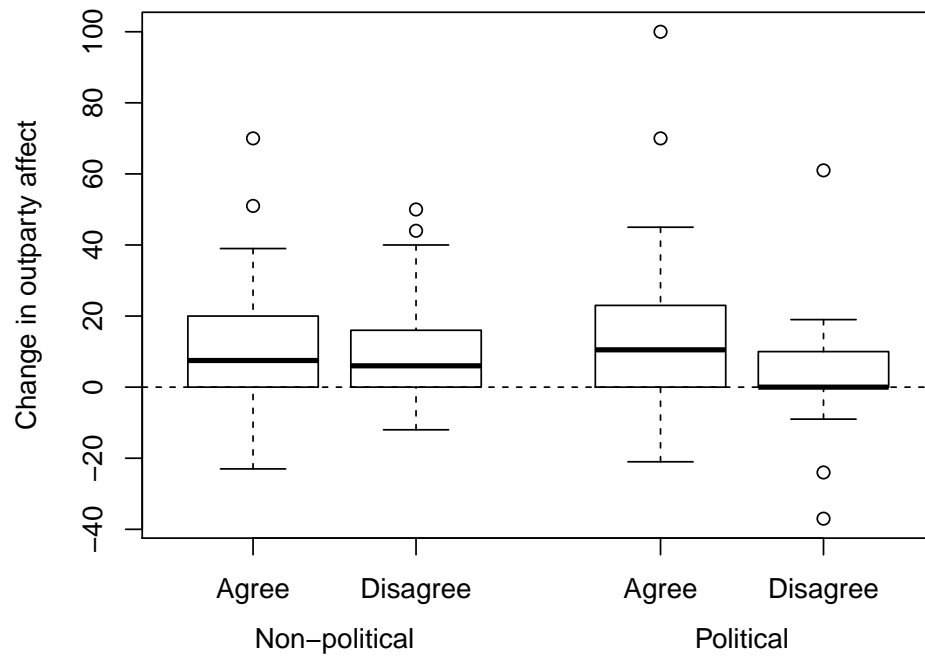


Figure 11: Agreement within conversations



L Study 2

This is a 2x2 design. The first random assignment is contact—either imagined contact with their partner (and writing a short individual essay) or actual contact with their partner in the form of conversation. The second random assignment is topic—either non-political or political. The non-political topic is the meaning of life, and the political topic is immigration. Recall, treatment is randomly assigned at the partnership level within each block. Treatment is administered by way of the instructions that the participants see when they enter their pre-assigned chatroom. The four different instructions are the following:

- ***Imagined contact, non-political topic***

Imagine we've randomly assigned you to have a conversation with someone that belongs to or leans toward the [Republican/Democratic] party. What about your views on the meaning of life would you share with this person? What do you think they would share with you?

No partner will be joining you, instead please answer the questions independently by sending messages in the chat box below.

For example, survey research shows that many people mention family as the most important source of meaning in their life. Survey research also shows that other people mention career, money, faith, friends, and hobbies as the most important source of meaning in their life.

- ***Imagined contact, political topic***

Imagine we've randomly assigned you to have a conversation with someone that belongs to or leans toward the [Republican/Democratic] party. What about your views on immigration policy would you share with this person? What do you think they would share with you?

No partner will be joining you, instead please answer the questions independently by sending messages in the chat box below.

For example, survey research shows that some people believe that stronger enforcement of our immigration laws is more important than creating a way for immigrants already here illegally to become citizens, while others believe the opposite. Survey research also shows that some people believe that undocumented immigrants currently living in the U.S. are more likely than U.S. citizens to commit serious crimes, while others believe they are not.

- ***Contact, non-political topic***

We've randomly assigned you to have a conversation with someone that belongs to or leans toward the [Republican/Democratic] party. Please share your views on the meaning of life with each other.

Please have your conversation by sending messages in the chat box below.

For example, survey research shows that many people mention family as the most important source of meaning in their life. Survey research also shows that other people mention career, money, faith, friends, and hobbies as the most important source of meaning in their life.

- ***Contact, political topic***

We've randomly assigned you to have a conversation with someone that belongs to or leans toward the [Republican/Democratic] party. Please share your views on immigration policy with each other.

Please have your conversation by sending messages in the chat box below.

For example, survey research shows that some people believe that stronger enforcement of our immigration laws is more important than creating a way for immigrants already here illegally to become citizens, while others believe the opposite. Survey research also shows that some people believe that undocumented immigrants currently living in the U.S. are more likely than U.S. citizens to commit serious crimes, while others believe they are not.