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Faculty Research Working Paper Series

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Shared Sports Fandom Powerfully Reduces Partisan Animosity

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Abstract: Shared sports fandom powerfully reduces interpersonal partisan animosity. While traditional civic bridging institutions are in decline, sports fandom remains widely held and politically cross-cutting: 76% of American adults identify as sports fans and team fanbases are politically diverse. Across a nationally representative survey and nine pre-registered experiments, we demonstrate that this shared identity tempers hostile partisan attitudes and behavior as much as—and often more than—shared religion, race, socio-economic status, or geographic region. These effects hold across genders and political parties. Sports fandom remains one of the few social institutions capable of bridging partisan divides in everyday life.

Statement of significance: Partisan divisions increasingly shape the social lives of Americans. We identify a shared identity that effectively bridges this divide: supporting the same sports team. With 76% of Americans identifying as fans, this is no niche commonality. Across a nationally representative survey and nine preregistered experiments, learning that a political opponent supports one's favorite team increased warmth, perceived similarity, closeness, and willingness to interact, while reducing the willingness to financially penalize them. These benefits were at least as strong as sharing a religion, race, socioeconomic status, or home region. Because sports fandom is widespread, politically diverse, and

deeply meaningful, it represents one of the few remaining social institutions capable of bridging political divides in everyday life.

Interpersonal partisan animosity is increasing (1) and imposes social, economic, and political costs (2-6). Americans discriminate against opposing partisans in allocating resources (7), avoid cross-partisan social and romantic relationships (8-9), and spend less time with politically dissimilar family members (10).

Historically, social institutions protected against cross-partisan animosity by fostering cross-group ties, creating social capital that bridges between groups (11-12). Institutions like churches, unions, and schools enabled people of different political beliefs to connect with each other. These civic institutions facilitated cross-partisan contact, but are in decline today (14-16).

Today, partisan “mega-identities” increasingly consolidate, within individuals, what were formerly diverse social identifications (17). This is exacerbated by partisan sorting of where people live (18-19) and work (20-22). Cross-cutting, widely held, and deeply held identities might help to overcome mega-identities and reduce partisan animosity.

If social institutions are to mitigate partisan animosity, they must maintain politically diverse memberships and remain deeply important to those who identify with them. For a social institution to have a broad, population-level impact, a large fraction of Americans must identify with it. Shared sports fandom has these attributes. Using a nationally representative survey and nine pre-registered experiments, we document that shared sports fandom has exactly these attributes.

Psychological research suggests that intergroup attitudes are malleable and responsive to social context (23). Even minimal shared social identities can reduce intergroup bias by shifting how individuals categorize one another, recasting outgroup members as part of a common ingroup (24-28).

Misperceptions often exacerbate this divide; for example, partisans dramatically overestimate their opponents’ willingness to accept basic moral wrongs (29), and these exaggerated meta-perceptions predict intergroup hostility (30). Broadly, correlational evidence associates partisan animosity with unwillingness to compromise, political violence, democratic norm violations, and democratic backsliding (31-33), although recent causal evidence disputes whether it contributes to these anti-democratic beliefs and behaviors (34-35). Despite the mixed evidence of partisan animosity causing

democratic backsliding, strong causal evidence suggests that it undermines interpersonal connection and increases interpersonal conflict (4, 7, 9).

This paper demonstrates that sports fandom is one of few remaining commonalities that are politically cross-cutting, widely held, deeply important to people, (36-37) underappreciated (see content analysis in the supplement) and that it can reduce partisan animosity more than many other widely studied personally important identities. We find that learning that a counter-partisan is a fan of the same sports team increases perceived similarity and reduces interpersonal hostility.

Results:

Study 1 documents that sports fandom is a deeply held, widely held, and cross-cutting identity in the United States. Study 2 identifies the reduction in animosity of learning that a counter-partisan is a fan of the same sports team. This effect is benchmarked against other dimensions of similarity: socio-economic status, region where they are from, religion, and race. Study 3 replicates these findings in a nationally representative sample. Study 4 replicates the results of study 2 and study 3 and also investigates two psychological mechanisms. Study 5 extends these findings to a behavioral measure of partisan hostility using a modified dictator game.

Study 1: Sports fandom is widely, deeply, and diversely held

This study shows that sports fandom has three important attributes. First, it is a deeply held identity, on par with other identities that are widely recognized as important to individuals. This will be important for making sense of how powerful shared fandom is for improving cross-partisan perceptions. Second, sports fandom is widespread. This is important because it shows that shared fandom is relevant to so many Americans that it could feasibly be a vehicle for societal unification efforts. Third, fanbases of individual sports teams are politically diverse, which shows that counter-partisans who share fandom might interact with each other.

We conducted a national survey of Americans collected in February, 2026. The survey was conducted by the Civic Health and Institutions Project (CHIP50), a large-scale 50-state survey of public attitudes and behaviors conducted by a multi-university research consortium (38). 3,073 responses were collected in a non-probability sample using quotas on gender, age, and race to be nationally

representative. 2,987 consented to taking part in the survey, and 2,550 passed both of the attention checks.

Sports fandom is widespread

76% of our weighted sample of United States adults reported being a fan of one of the three major sports leagues in the United States (NFL, MLB, NBA). Fandom is widespread across genders with 87% of men and 66% of women reporting that they are fans. Since this paper focuses on the three major leagues, this 76% estimate should be considered a conservative estimate of the ubiquity of sports fandom in the U.S. For comparison, 81% of our sample reports a religious affiliation.

Sports fandom is deeply held

Respondents were asked for their sports fandom, race, religion, region of the United States they are from, and education level (as a proxy for socioeconomic status (SES)). Then they were asked if they agreed or disagreed whether each of these specific characteristics are important to their identity. Although sports research has validated measures of fandom intensity, for the sake of comparability to other identities and ease of participant experience, we opt for a simpler, facially valid single-question measure.

Of those who have a favorite sports team, 65.4% agree that being a fan of their favorite team is an important part of their identity. This is comparable to the 71.3% of those who have a religious affiliation agreeing that being their affiliation is an important part of their identity. Every participant had a race, SES, and where they are from, which 70.5%, 71.8%, and 65.7% agreed were important parts of their identities, respectively. Additionally, 82.7% of sports fans considered themselves passionate fans of their favorite team.

In addition to self-reported identity, we measure the behavior of participants in relation to two important, widespread and time-intensive identities: sports fandom and religious affiliation.

Respondents are asked to report during the last six months (September 2025 through February 2026), how frequently they (a) watched a sports game, (b) attended religious service, (c) talked about sports, and (d) talked about religion. They additionally reported how many minutes on average they spent on each activity. Respondents spend more time talking about sports than religion, and more time watching sports games than attending religious service. See Figs. S1 and S2.

For such a widely- and deeply-held identity, sports fandom has been understudied in top social science journals (see the supplement for content analysis). Sports fandom has been studied in subfields such as sports consumer behavior (39), sports marketing (40) and sports management (41). There is a small

but growing body of work on the social implications of sports affiliations as a shared identity that our work hopes to add to (42-46). But given its breadth and depth, one might be surprised at how top social science journals have published so little research on sports fandom (Figure S3).

We build directly upon foundational work examining shared identities as bridges across political divides. In particular, Levendusky demonstrates in *Our Common Bonds* that superordinate identities, including shared NFL fandom, can reduce affective polarization (28). We build upon this work by removing demographic confounds, extend this line of inquiry across multiple sports leagues, evaluate these effects without explicit identity salience priming, introduce a comparative benchmark demonstrating the relative strength of sports co-fandom against other primary social identity dimensions, identify an underlying psychological process moderating the effect of shared fandom, show that the reduction in partisan animus covaries with perceived similarity, and that in addition to attitudinal consequences it has behavioral consequences.

Sports fanbases are politically diverse

If sports teams were politically homogeneous, shared fandom would not be a useful tool for facilitating healthy cross-partisan interactions. Other evidence finds sporting events are one of the most politically diverse places people can enter (47) and that online sports content gets high

engagement across the political spectrum (48). In this data, we observe the partisan composition of sports team fanbases (rather than just attendees of games) and find meaningful political diversity.

A meaningful proportion of fanbases are both Democrat and Republican. Data from Fox Sports, weighted to be nationally representative, shows that for every NFL team fanbase a large portion of their partisan fans identify with the minority political party (Figure 1; n, weighted =15,315).

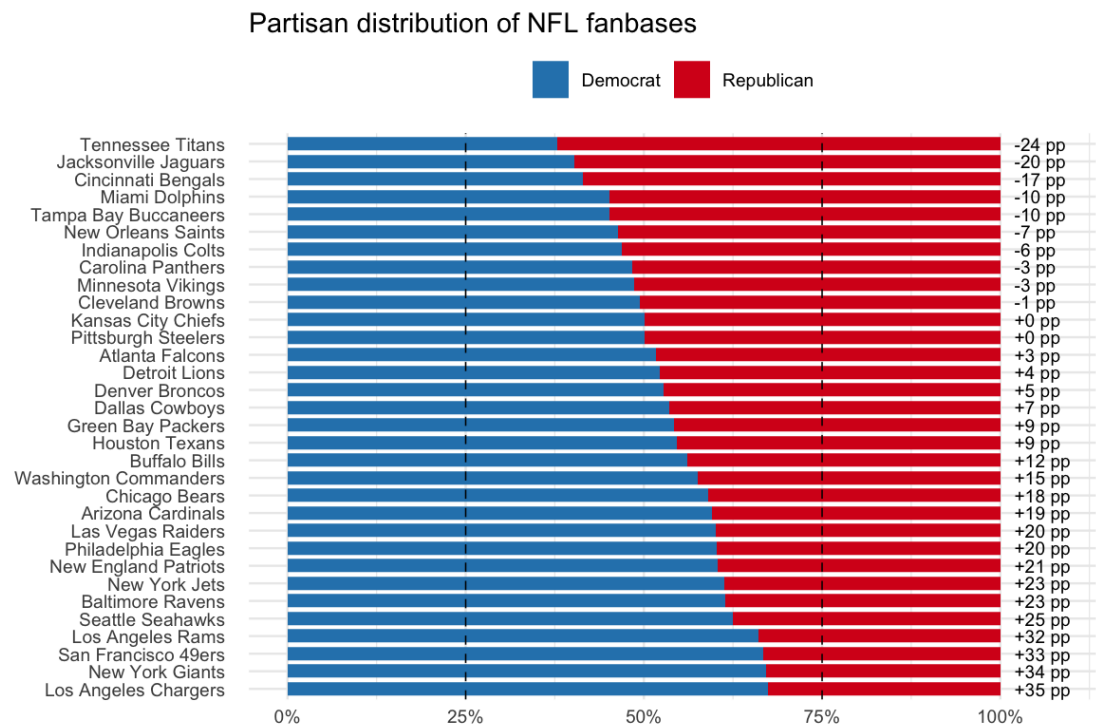


Figure 1. Every NFL team fanbase has a large portion of partisan fans that identify with the minority political party

Data from Fox Sports, weighted to be nationally representative, also shows that for every MLB team fanbase a large portion of their partisan fans identify with the minority political party (Figure 2; n, weighted=23,596).

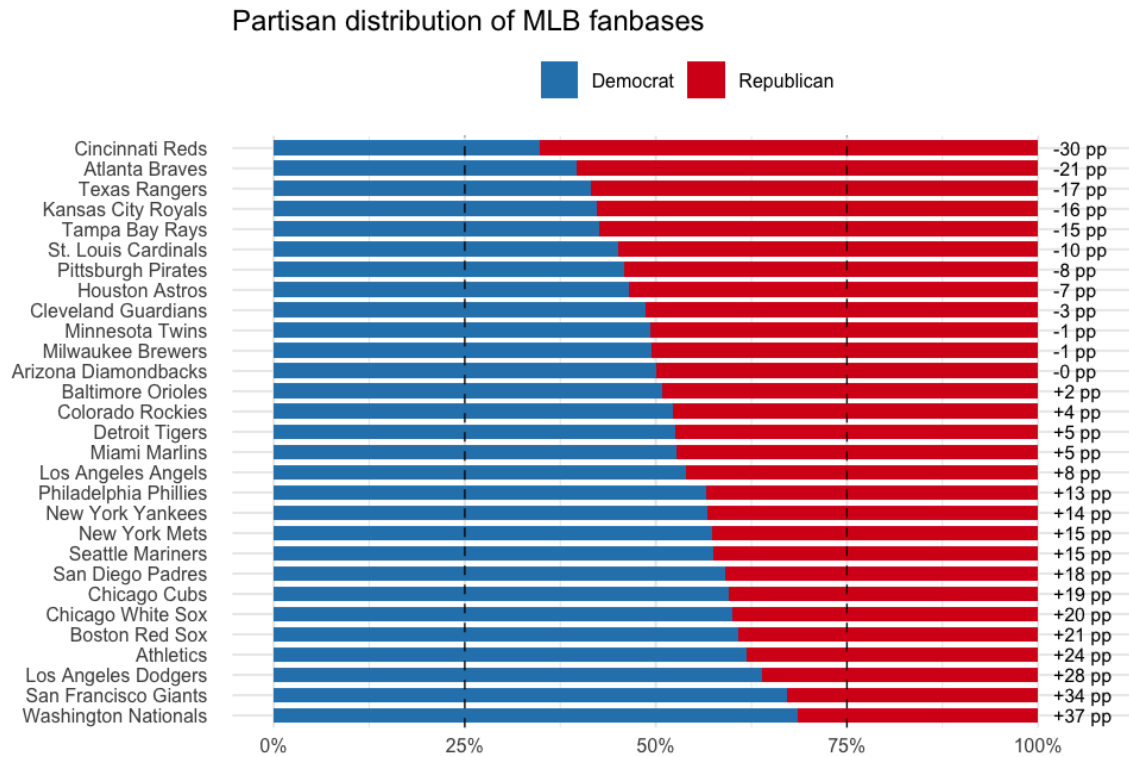


Figure 2. Every MLB team fanbase has a large portion of partisan fans that identify with the minority political party

The political diversity of fanbases offers real possibilities for cross-partisan interaction, but does not guarantee that all cross-partisan interactions will be positive. As with any time two people with opposing views meet, there could be conflict. Smaller leagues will also be statistically less representative of national political diversity. Neither of these possibilities, however, rule out the potential for positive cross-partisan interactions in popular leagues, such as NFL or MLB fanbases.

Study 2

Study 1 documents that sports fandom is a deeply, widely, and diversely held identity that merits further study. In the remaining sections, we study how this identity impacts an important contemporary social problem: interpersonal polarization.

Study 2 (preregistered on AsPredicted #264,805) shows how powerful shared co-fandom is for reducing partisan animosity. This is benchmarked against the impact of sharing four other important dimensions of identity on reducing polarization. Study 2 is composed of five unique experiments, each with parallel within-subject designs. Participants are recruited from Prolific and restricted to people who reside in the United States and are fluent in English. We pre-register how many individuals we will recruit for each study, but because we are studying partisan animosity, our experimental sample is restricted to those who self-identify as a Democrat or Republican once they have entered the study. All

studies were conducted on the same day on Prolific, with participants recruited sequentially for one sub study at a time.

In each sub study, participants are first presented with a description of a counter-partisan. If a Republican filled out the survey, they would be presented with a Democrat as a counter-partisan. Participants are then presented with three different survey measures, which have been well established and validated in psychology and political science literature, to capture polarization.

The first survey measure is a feelings thermometer. The feelings thermometer captures the warmth or coldness that the participant feels towards the described individual (1).

The Inclusion of Others in the Self scale measures perceived interpersonal closeness (49). This asks the participants to not only think about their outward perception of the counter-partisan, but also evaluate if the shared dimension of similarity overcomes the political difference to make them seem more connected.

The final survey measure used to capture polarization comes from the Interpersonal Social Attraction Scale (50); specifically the subset of questions from this scale that asks about willingness to engage in conversation. This is a meaningful estimate of how feelings towards counter-partisans might extend to social interactions. The second scale item is reverse coded for our analysis so that a higher score translates to a participant expressing higher conversational willingness towards the counter-partisan.

Each scale is z-scored, and the average of the three is used for the index. The standardized Cronbach's alpha is used to confirm that each of these measures positively correlates with each other. We preregister that if $\alpha > .65$ then an index will be used. The alpha for each experiment in study 2 meets this criteria (all were $> .75$, in fact). See Table S3 for question-level breakdowns for each study.

Participants are then presented with an additional fact about the counter-partisan, which is a dimension of similarity with the participant. The dimension of similarity for study 2a is education level (as a proxy for SES), 2b is race, 2c is region where participants are from, 2d is religion, and 2e is sports fandom. Study 2e is restricted to sports fans who have a favorite team. The dimensions of similarity are selected based on literature (51-53) and the findings of study 1: sports fandom, race, religion, and education level are widely and deeply held identities. The region where the participant is from condition addresses the concern that shared sports fandom is a proxy for hometown. There are 72 options of where participants are from that are used in our survey. Each United States state is an option, but for 14 large populous states that have culturally different regions, sub regions are an option. For example, California is broken into Northern California, Central California, Los Angeles Area, San Diego & Inland Empire. The list of 72 regions was generated using an LLM-classification of

regions aiming for similar population sizes when possible, and ensuring that each state is represented and, to the extent possible, regions are culturally distinctive.

To avoid deception, vignettes were constructed using profiles of actual respondents identified in advance. By varying only individual attributes; fandom, race, religion, education level, or hometown; we isolated the marginal effect of sports fandom while controlling for potential interactions with unmeasured features. Although sports fandom correlates with numerous social dimensions of interest to social scientists (36), holding these attributes constant ensures precise estimation.

Participants are required to reach the correct answer on the attention check, which ensures they have read and understand the new information. Then they answer the same set of polarization questions (feelings thermometer, Identity of Self with the Other, and conversational willingness). The serial introduction of information on the counter-partisan individual is designed to mirror the way that people learn additional information about people in the real world. We hypothesize that the affective polarization index towards a counter-partisan will be decreased by each dimension of similarity. This is analyzed using a paired t-test of the within-subjects difference in the polarization index for each study.

When a participant shares the same level of education as the counter-partisan (N=138), the polarization index is improved by a mean of 0.18 (paired t-test p-value < 0.001, SE: 0.03, 95% CI: (0.11, 0.24), df=137). When a participant shares the race of the counter-partisan (N=127), the polarization index is improved by a mean of 0.20 (paired t-test p-value < 0.001, SE: 0.04, 95% CI: (0.11, 0.29), df=136). When the participant is from the same place as the counter-partisan (N=143), the polarization index is improved by a mean of 0.24 (paired t-test p-value < 0.001, SE: 0.03, 95% CI: (0.17, 0.31), df=142).

When the participant shares the same religion as the counter-partisan, the polarization index is improved by a mean of 0.38 (paired t-test p-value < 0.001, SE: 0.02, 95% CI: (0.33, 0.43), df=418). The pre-registered study 2d does not exclude any participants, which means that for the 40 participants (out of N=419) who expressed that their religious affiliation was ‘Nothing in particular,’ they were presented with a counter-partisan who also had ‘Nothing in particular’ as their religious affiliation. One might worry that ‘Nothing in particular’ is not a meaningful identity or dimension of similarity. Therefore, although it is not pre-registered, a supplemental analysis that excludes those who do not express a religious affiliation is conducted. There is virtually no difference in the effect size. Shared religion decreases the polarization index by a mean of 0.38 (paired t-test p-value < 0.001, SE: 0.02, 95% CI: (0.33, 0.43), df=379). See Table S3 for further details. This supplemental analysis does not exclude those who identify as Agnostic or Atheist, since these are meaningful identities that

Americans have and participate in; in fact, 3% of all United States adults report participation in atheist or non-belief organizations (54).

Finally, when the participant shares the same sports fandom as the counter-partisan ($N=521$), the polarization index is improved by a mean of 0.39 (paired t-test p-value < 0.001 , SE: 0.02, 95% CI: (0.35, 0.44), $df=520$). Shared sports fandom has the highest marginal mean treatment effect of the similarity dimensions we studied.

We additionally hypothesize in the pre-registered analysis plan that co-fandom similarity will decrease polarization at least as much as the other dimensions of similarity. This is tested by comparing Cohen's d of the within-subjects difference in the polarization index across studies using a z-test. The effects, benchmarked against each other, are pictured in Figure 3. Cohen's d of the treatment effect is the highest for co-fandom: 0.79 (95% CI: (0.69, 0.89)). Religion has a Cohen's d of 0.75 (95% CI: (0.64, 0.86)), region where participants are from is 0.59 (95% CI: (0.41, 0.77)), education is 0.48 (95% CI: (0.30, 0.65)), and race is 0.41 (95% CI: (0.22, 0.59)). Cohen's d for co-fandom is significantly different from education (p-value=0.002), race (p-value=0.0002), and region where participants are from (p-value=0.05). Sports and religion are statistically indistinguishable (p-value=0.59).

The effect of each dimension of similarity for the index components individually is also included in the supplement. A relevant question is if the conversational willingness measure is actually capturing the ease of discussing sports, rather than true social behavioral intent. The Cronbach's alpha for the index, across dimensions of similarity, is above 0.75, which removes the concern that one DV is driving the effect. In fact, the thermometer warmth and Inclusion of Self in the Other move significantly as well.

The absolute shift induced by shared sports fandom is notable. On the 0–100 feelings thermometer, learning that a counter-partisan shared the respondent's sports fandom increased average warmth from 32.70 to 41.76, a 9.06-point increase. This shift closes more than half (52%) of the initial distance between the baseline rating and the scale midpoint of 50. Conversational willingness similarly increased from 7.53 to 8.35 on a 2–14 scale, moving the average response from just below the scale midpoint to above it. Perceived interpersonal closeness increased from 2.00 to 2.66 on a seven-point

pictorial scale that ranges from no overlap between the self and other to nearly complete overlap; this denotes a visible shift.

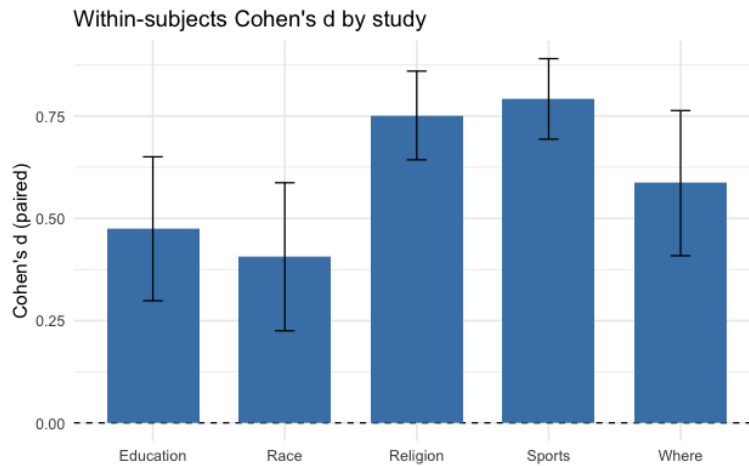


Figure 3. The within-subjects Cohen's d of each dimension of similarity, benchmarked against each other.

These treatment effects can also be analyzed by gender and party affiliation, though we did not pre-register analyzing them in this way. The same patterns persist. For both genders, the co-fandom condition has a higher mean treatment effect than education, race or region where participants are from. Sports co-fandom is nonsignificantly different from the effect of shared religion. For both parties, the co-fandom condition has a higher mean treatment effect than education, race or region where participants are from. Sports co-fandom is nonsignificantly different from the effect of shared religion. See the supplement for further details. Taken together, these results indicate that sports co-fandom is a powerful mechanism for reducing partisan animosity.

There are two primary limitations of Study 2. First, study 2 collected data for each identity in separate, sequential studies on Prolific on the same day, restricting within Prolific that participants could not enter more than one study. This meant participants were not randomized between experiments. There are plausible statistical concerns with this sampling approach. Study 2 had two sets of analytic goals: first, determining if fandom reduces partisan animosity, and second benchmarking the effect size across identities. The first goal is unaffected by the sequential sampling. The second might be, which study 3 addresses.

Study 3

Study 3 (pre-registered AsPredicted #274,335) builds upon Study 2 in two ways. First, it involves a nationally representative sample in a new survey setting other than Prolific. Second, participants are randomized across experiment arms concurrently to address the limitations of study 2 in comparing

across treatment arms. The sample is recruited per the sampling methodology employed by CHIP50 (38) (see the study 1 supplement).

1,631 participants, who identify as Republicans or Democrats, are randomly assigned to one of the five experimental arms. The sample size is the number of participants who provided within-subject reports, qualified for the arm, and identified with a party. SES ($n=325$), race ($n=316$), where from ($n=325$), religion ($n=334$), or sports ($n=331$). The same scales and paradigms are used as in study 2. In this study, we pre-registered that only those with a religious affiliation were eligible to receive the shared religion exposure, just as it is for sports fans. However, this screening occurred after randomization to prevent a disproportionate distribution of non-sports fans or non-religious participants across the treatment arms.

We hypothesize that the affective polarization index toward a counter-partisan will be decreased by each dimension of similarity. This is analyzed using a paired t-test of the within-subjects difference in the polarization index for each study. Here we discuss each successively. When a participant shares the same level of education as the counter-partisan, the polarization index is improved by a mean of 0.20 (paired t-test $p < .001$, SE: 0.03, 95% CI: [0.14, 0.26], $df=324$). When a participant shares the race of the counter-partisan, the polarization index is improved by a mean of 0.23 (paired t-test $p < .001$, SE: 0.04, 95% CI: [0.15, 0.30], $df=315$). When the participant is from the same place as the counter-partisan, the polarization index is improved by a mean of 0.15 (paired t-test $p < .001$, SE: 0.02, 95% CI: [0.10, 0.19], $df=324$). When the participant shares the same religion as the counter-partisan, the polarization index is improved by a mean of 0.33 (paired t-test $p < .001$, SE: 0.04, 95% CI: [0.26, 0.40], $df=333$). Finally, when the participant shares the same sports fandom as the counter-partisan, the polarization index is improved by a mean of 0.45 (paired t-test $p < .001$, SE: 0.04, 95% CI: [0.38, 0.52], $df=330$). See the study 3 supplement for a full description of the index and questions. The treatment effects across experimental arms are shown in Figure 4.

We again hypothesize that co-fandom similarity will decrease polarization at least as much as all other dimensions of similarity being studied. This is tested by comparing the mean treatment effect of the within-subjects difference in the polarization index iteratively between the sports treatment arm and each of the others and find that, like in study 2, the shared sports condition is significantly different

from SES (z-score = 5.39, p-value<0.001), race (z-score = 4.26, p-value<0.001), region where participants are from (z-score = 6.86, p-value<0.001), and religion (z-score = 2.30, p-value = 0.02).

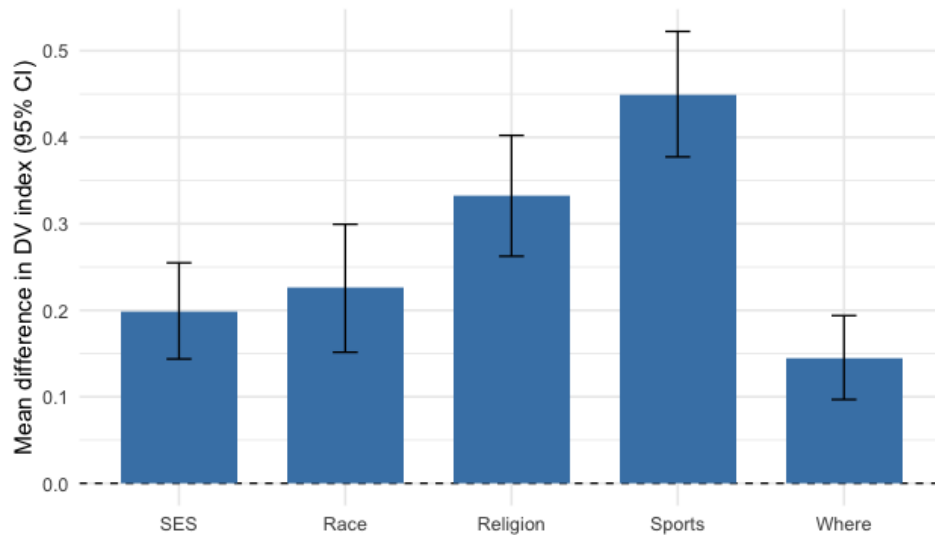


Figure 4. The within-subjects mean difference in treatment effect of each dimension of similarity, benchmarked against each other.

Across the two replications, sports fandom induces a within-person change that falls between two-thirds and four-fifths of a standard deviation (study 2 Cohen's d: 0.79; study 3 Cohen's d: 0.67).

Study 4

Study 4 replicates and extends the findings of study 2 and study 3. It investigates the psychological mechanisms underlying the unifying effects of shared fandom. Specifically, it investigates whether fandom identity centrality moderates these effects. It also tests whether perceived similarity between the counter-partisan and participants covaries with reducing animosity in a manner consistent with mediation.

Study 4a

Study 4a examines a possible moderator for reducing partisan animosity: the centrality of sports fandom to the participant's identity. We hypothesize that the effect on the polarization of a participant toward a counter-partisan caused by adding co-fandom information will be moderated by the identity centrality of the fandom to the participant.

To test this hypothesis, the same experiment as study 2e is run (and the similar conditions in study 3), but with a new set of Prolific participants (N=258) in a new pre-registered study (AsPredicted #264,811). An additional question to capture identity centrality is added: a modified version of the In-Group Identification Centrality Measure (55) to measure how strongly participants feel attached to

their favorite sports team. It involves 3 questions that ask people how important an identity is to who they are (Fig. S6). The items are z-scored and averaged into an identity centrality index.

The moderation effect is examined using an ordinary least squares regression with the z-scored fandom centrality as the regressor and the within-subjects difference in polarization as the outcome (Figure S7). Identity centrality is a significant predictor of the dependent variable index with a coefficient of 0.12 (SE: 0.03, p-value <0.001, df=256). When party and gender are included in the regression, neither are statistically significant, and the identity centrality index remains significant with a coefficient of 0.11 (SE: 0.03, p-value <0.001, df=252) and 0.11 (SE: 0.03, p-value <0.001, df=252) respectively. As predicted, those for whom their fandom is most central to who they are showed the biggest reduction in animosity because of shared fandom.

Study 4b

Study 4b explores a possible mediating mechanism for the effect of shared fandom: the perceived similarity between the participant and the counter-partisan. We hypothesize that the reduction in polarization of a participant toward a counter-partisan caused by adding co-fandom information will be mediated by the participant's perceived similarity to the counter-partisan (56). Noting the inability of mediation analysis to provide causal explanations, a basic mediation analysis is included here as an exploratory attempt to unpack the trends identified earlier. Due to limitations in the variables observed and measured, inferences from the mediation regression should be taken as suggestive at best (57).

To test this hypothesis, the same experiment as study 2e is run but with a new set of Prolific participants (N=306) in a new pre-registered study (AsPredicted #264,814). We capture the participant's perceived similarity of the counter-partisan both before and after introducing the dimension of similarity.

Mediation was tested using ordinary least squares regression on participant-level within-subject difference scores, with delta-method standard errors and confidence intervals. The delta-method estimates used the full covariance matrix of the estimated paths to account for dependence among estimates arising from the within-subject design. Exposure to a co-fan counter-partisan increased perceived similarity by 0.85 units (SE: 0.07, 95% CI: (0.72, 0.98)) relative to the control profile. Exposure to a co-fan counter-partisan increased the index by 0.31 units (SE: 0.02, 95% CI: (0.27, 0.35)). A one-unit increase in perceived similarity was associated with a 0.16-unit (SE: 0.03, 95% CI: (0.10, 0.21)) increase in the index. In the difference-score mediation model, the estimated direct effect

of co-fandom, adjusting for change in perceived similarity, was 0.18 (SE: 0.03, 95% CI: (0.12, 0.23)), compared with a total effect of 0.31 (SE: 0.02, 95% CI: (0.27, 0.35)).

Taken together, study 4a and study 4b shed light on why and for whom shared fandom reduces animosity. People who care the most about their fandom show the greatest interpersonal benefits of shared fandom, and it appears that this may be partly the result of increased feelings of similarity.

Study 5

Study 5 expands on the previous findings by adding a behavioral measure and finds that participants are less hostile to counter-partisans who share their sports fandom than counter-partisans who share any of the other similarity dimensions.

In study 5, (pre-registered at AsPredicted #266,441; N=1,477) participants are randomly assigned to one of four modified dictator games. Participants must choose which real person receives a monetary bonus and which person receives nothing. Mirroring the analytic aim of study 2 and study 3, this behavioral game paradigm compares the behavioral consequences of sharing co-fandom with a counter-partisan to those of sharing the other dimensions of similarity with a counter-partisan. In each condition, the participant has the choice between a counter-partisan who shares their fandom or a counter-partisan who shares their education (condition 1), their race (condition 2), where they are from (condition 3), or their religion (condition 4). Participants are required to actively assign each of the two real people to receive a bonus or to receive no bonus. Participants must identify as sports fans, are asked about all the other dimensions of identity, and only see one condition, so we do not anticipate them being primed, experiencing experimental demand, or predicting what the experiment is about. There might be concern that social desirability bias is affecting the choice of participants in conditions such as race and religion, however participants are informed that no one will be told of their bonus decision, and we are too underpowered to analyze if certain racial or religious groups felt compelled to give or not to give in a way that is separate from the experimental manipulation.

Participants are given the following directions: *Two Prolific respondents are described below. We are only going to give a bonus to one of them. You decide who receives the bonus. Neither individual will be told that you were responsible for the bonus decision. The person you assign to 'no bonus' receives nothing. Please drag the respondents to the boxes you would like to allocate.* See Fig. S8 for the full participant experience.

We hypothesize in the pre-registration that people who share fandom give bonuses to counter-partisans at rates at least as high as people who share other dimensions of similarity. A binomial test is used to see if participants allocate bonuses across different dimensions of similarity at different

rates. Although for ethical reasons we cannot test true hostility between participants, we believe that forced choice preferential giving demonstrates a similar construct.

Across all forced-choice conditions, participants more often allocated the bonus to the counter-partisan who shared their sports fandom than to the counter-partisan who shared another identity dimension: education/SES (76.5% vs. 23.5%), race (79.5% vs. 20.5%), region where they are from (65.0% vs. 35.0%), and religion in the preregistered sample (58.9% vs. 41.1%). Differential preferential giving is statistically significant: exact two-sided binomial tests against 0.50 give a p-value less than 0.001 for each of the conditions. These allocation decisions are shown in Figure 5.

However, similar to study 2, the pre-registered study 5 does not exclude participants by religious affiliation. When the analysis is re-run excluding 36 participants in the religion condition ($n=331$), the religion comparison was attenuated but remained directionally consistent (55.3% vs. 44.7%) with a p-value difference of 0.0615. This suggests that those with a meaningful religious identity are not more generous to those who share their religious affiliation than those who share their sports fandom. The trends hold by party and gender (see Figs. S9 and S10).

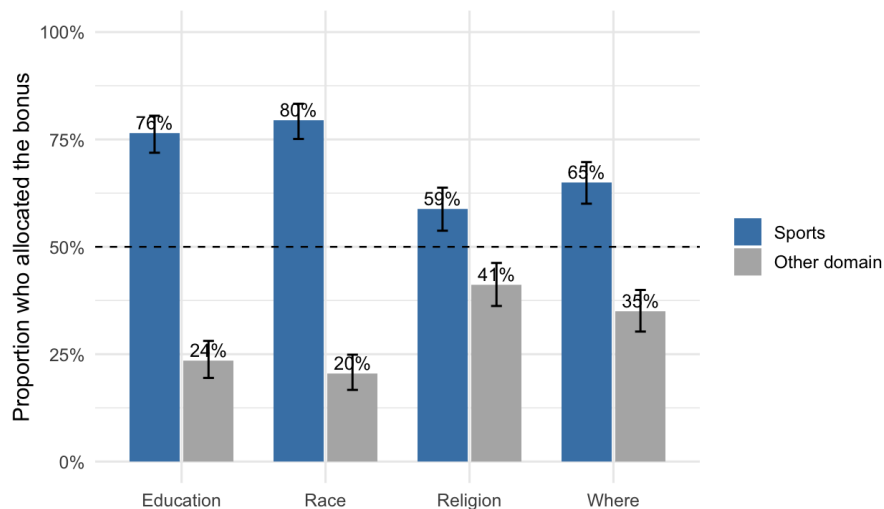


Figure 5. Forced choice dictator game allocation decisions.

Study 5 shows that the effect of shared fandom documented in the above studies translates to actual behavior towards counter-partisans.

Discussion

Shared sports fandom powerfully reduces partisan animosity. Being a fan of the same team as a counter-partisan decreases overall animosity, which can be subset into increasing feelings of warmth, closeness, willingness to interact, and similarity. In line with this decrease in animosity, shared fandom

also leads to reduced hostile behavior towards counter-partisans. Exploratory findings show these results hold across genders and political identities.

Unlike research that reduces partisan animosity through one-shot treatments, this focuses on an identity that is persistent, preexisting, and deeply meaningful to people. While many experimental approaches to reducing partisan animosity have effects which decay over time (58), even the most highly effective approaches typically rely on researcher manipulation, which limits their reach (59-61). In contrast, sports fandom is already widespread, persistent, and naturally embedded in everyday life. Sports fandom has another advantage over many animosity-reducing strategies: people enjoy it, seek out opportunities to participate in it, and it is already a part of people's lives (36-37).

For social scientists, this paper furthers research on the social implications of sports fandom and documents its effectiveness in reducing interpersonal partisan animosity. There are several directions for future research. One is to examine the implications for interpersonal interactions, such as how and when a sports fan should disclose their partisanship. Individuals navigating cross-partisan interactions might strategically disclose their shared sports fandom to enhance the warmth, quality, and duration of the exchange. During politically mixed events (10) or contentious interactions, shared sports fandom could be disclosed to increase perceived similarity and reduce conflict. Shared sports fandom might also make people more persuasive (62) in political dialogue.

Another direction for future research is to examine whether reductions in interpersonal hostility translate into broader shifts in group-level affective polarization or alter downstream democratic attitudes (34-35). Future research could also explore whether shared fandom clarifies inaccurately extreme beliefs partisans attribute to each other (63), how it extends to counter-partisan fans of rival teams, and its relevance in contexts outside the United States.

For institutional stakeholders in sports fandom, this research highlights opportunities for mutual benefit. The sports teams that people are fans of are also often private institutions with financial interests in maintaining and cultivating fans, and in being seen positively by their fans and other stakeholders. These institutions may be motivated to model, emphasize, and foster connection among their fans. Sports fandom is, generally speaking, separate from the political arena. This makes sports a safe space for animosity to be reduced. But it may not always be this way, if political entrepreneurs try to politicize it. Future research should examine the consequences of such activities. On the other hand, if the experience of sports fandom does remain mostly apolitical, or is asymmetrically political by party (46), the benefits of cross-partisan shared fandom discussed in this research will not naturally occur. Individuals would need to proactively surface these differences in order to capture the animosity-reducing benefits of shared fandom.

Although professional sports has many flaws (64), this research suggests that sports fandom could play a role in tempering rising partisan animosity. Sports fandom is a nearly ubiquitous identity that serves

as one of the few remaining social institutions capable of organically reconnecting counter-partisans and fostering interpersonal goodwill across political lines.

Methods

Overview

Ethics statement and reproducibility

The procedures and materials for all studies were reviewed and approved by the Harvard University Institutional Review Board (IRB25-0939) and the University of Rochester's Institutional Review Board (STUDY00009146). All participants provided informed consent and were compensated for participation. Study 2 was pre-registered at AsPredicted #264,805 on December 18, 2025. Study 3 was pre-registered at AsPredicted #274,335 on February 18, 2026. Study 4a was pre-registered at AsPredicted #264,811 on December 18, 2025 and 4b was pre-registered at AsPredicted #264,814 on December 18, 2025. Study 5 was pre-registered at AsPredicted #266,441 on January 5, 2026. Claude, Gemini, and ChatGPT were utilized and all AI outputs were carefully reviewed by the research team before being incorporated.

Recruitment and screening

All participants were recruited from Prolific or PureSpectrum via CHIP50 (The Civic Health and Institutions Project, a 50 States Survey) from December 2025 to February 2026. Participants in studies 2 and 4 were paid \$0.30. Participants in study 5 were paid \$0.17. The average payment was always at least \$9 per hour, per Prolific recommendation. Participants were always required to consent and pass a ReCaptcha bot check before proceeding to the survey instrument. The sample sizes were determined based on power calculations from pilot testing and pre-registered. Any sample size deviations from the pre-registered plans were because we could only control overall recruitment, not who would a priori qualify for our experimental sample (Democrats and Republicans only). For example, study 5 (AsPredicted #266,441) received 2,997 Prolific submissions, in accordance with the pre-registered recruitment goal of 3,000, but only 1,477 qualify for the experiment and compose our sample because they are both sports fans and have a partisan identification. Every study uses a separate sample, except for study 1 and 3, which ask the same questions to the same sample. Within Prolific, we restricted those who had taken a part in pilot testing or other experimental studies with the same hypotheses, as pre-registered.

Analyses

For study 2, we pre-register that we will perform a paired t-test of the within-subjects difference in the polarization index for each study and use a paired t-test to compare the Cohen's d of the within-subjects difference in the polarization index across studies. We do use a paired t-test of the within-

subjects difference in the polarization index for each study, but then to compare across studies we iteratively use a z-test, since the study arms have independent samples, so a paired t-test is not appropriate here. We also report the mean treatment effect difference for interpretability. For study 3, we pre-register that we will perform a paired t-test of the within-subjects difference in the polarization index within each treatment arm and use a paired t-test to compare the mean treatment effect of the within-subjects difference in the polarization index iteratively between the sports treatment arm and each of the others. We do use a paired t-test of the within-subjects difference in the polarization index for each study, but then to compare across arms we iteratively use a z-test, since the study arms have independent samples, so a paired t-test is not appropriate here. We also pre-register that the dependent variables will be z-scored and aggregated into an polarization index, assuming Cronbach's alpha is above 0.65. However, the standardized Cronbach's alphas only exceed 0.60, so we compute both the index and report in the supplement the survey items separately. For study 4a we pre-register that we will compute the ordinary least squares regression with the z-scored fandom centrality as the regressor and the within-subjects difference in polarization as the outcome. For study 4b we pre-register that we will compute the Ordinary Least Squares regression and the delta method to estimate the proportion of the treatment effect on the outcome (polarization index) that is accounted for by the mediator (perceived similarity). For study 5 we pre-register that we will use a binomial test to see if participants allocate bonuses across different dimensions of similarity at different rates.

All null-hypothesis tests were two-sided. Paired t-tests were used for within-participant pre-post comparisons, two-sided z-tests were used for cross-arm/cross-study comparisons, OLS coefficient tests used two-sided t-tests, and Study 5 used exact two-sided binomial tests against 0.50. We did not conduct formal tests of normality; inference from paired t-tests and OLS models relied on the standard large-sample assumptions for participant-level difference scores. Tests for multiple comparisons were not applied to our pre-registered analyses since they were not pre-registered. For Studies 2 and 3, paired-samples Cohen's d was calculated as the mean within-subject treatment-control difference divided by the standard deviation of the within-subject differences.

Reporting summary

Data availability

The de-identified data collected by the research team are openly available at <https://researchbox.org/7916> (code: VWPDLY). Because the original datasets include personally

identifiable information such as Prolific ID, IP Address, Latitude, and Longitude, we drop all columns that contain PII. The data from Fox Sports is proprietary and cannot be shared externally.

Code availability

The analysis scripts for our studies are openly available at <https://researchbox.org/7916> (code: VWPDLY) and use R Version 4.4.2.

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Author contributions:

AF and TR conceptualized the paper. AF and TR designed the experiments. AF conducted the experiments. AF and TR designed the analysis plan. AF conducted the analysis. AF and TR wrote and edited the paper.

Supplementary Materials for

Shared Sports Fandom Powerfully Reduces Partisan Animosity

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Study 1 Supplement

Nationally representative survey

The primary survey for study 1 was deployed by the CHIP50 team (The Civic Health and Institutions Project, a 50 States Survey (38)). They connect with the panel vendors through an online sample marketplace run by PureSpectrum, which recruits respondents over 18 and are set for nationally representative quotas for gender, race, ethnicity, age, and region. Respondents who fail basic attention checks or a CAPTCHA are terminated. Two survey responses are age 14; these responses are dropped mechanically in the weighting logic but not in the unweighted sample.

3,073 respondents were recruited, 2,987 consented to taking part in the survey, and 2,550 passed both of the attention checks, as per CHIP50 protocol (38). 53.3% identified as female and 46.6% identified as male. 69.3% identified as White, 15.6% as Black or African American, 10.1% as Hispanic or Latino, 3.1% as Asian, 1.3% as American Indian or Alaska Native, and less than 1% each as Middle Eastern or North African (0.28%) and Native Hawaiian or Pacific Islander (0.35%). 30.5% identify as Democrats, 36.0% identify as Independent or Something Else, and 33.5% identify as Republicans. The average age of respondents is 47.1 years; the 25th percentile is 33 years, and the 75th percentile is 60 years.

The representativeness of this survey is ensured by generating weights on gender, race, region, education level, and age bracket to match US Census demographics using the raking method followed by Pew Research Center. Consistent with research practices on survey reweighting, weights are trimmed at the 1st and 99th percentile, so that outliers from small cell crosstabs do not skew the averages (65).

The post-stratification weights are based on Census demographics as follows: age bins: 18-24 (12.098%), 25-34 (17.355%), 35-44 (16.329%), 45-64 (32.622%), 65+ (21.596%) (66). Gender: male (49.5%), female (50.5%) (67). Race: White (including Middle Eastern or North African respondents) (60.59%), Black (12.68%), Hispanic (19.6%), Asian/Pacific Islander (6.39%), American-Indian/Native Alaskan (0.73%), (68). Education levels: Under 25 (12.098%), less than high school (9.142%), high school or some college (47.379%), college or more (31.381%) (67). Regions: Northeast (17%), Midwest (20.4%), South (39.2%), West (23.4%) (69). The `pewmethods` R package is used to apply and rake these weights (58).

The Fox Sports Marketplace Tracking Data on the NFL includes 39,022 observations between March 2, 2023 and April 1, 2026. This includes 23,691 fans of one of the 32 NFL teams, 15,450 of whom identify with a political party and compose our primary, pre-weighted analytic sample. Responses were collected by Prodege to be nationally representative across zip codes and on gender (50% male and 50% female for non-fans, 60% male and 40% female for sports fans), age (25% ages 18-34, 35% ages 35-49, 25% ages 50-64, 15% ages 65-75) and ethnicity (70% White, 15% African-American, and 15% Other). Respondents are required to meet the following criteria to complete the survey: (1) have a valid US zip code, (2) be between the ages of 18 and 75, (3) have access to the internet/device at home, and (4) watch at least two hours of TV per week.

We further ensure the representativeness of this survey by generating post-stratification weights on gender, race, region, education level, and age bracket to match US Census demographics, same as above, using the trimming (65) and raking method followed by Pew (70).

The post-stratification weights are based on Census demographics as follows: age bins: 18-24 (12.098%), 25-34 (17.355%), 35-44 (16.329%), 45-64 (32.622%), 65+ (21.596%) (66). Although the panel is capped at 75, 65–75 respondents are weighted to the full 65+ target. Gender: male (49.5%), female (50.5%) (67). Race: White (including Middle Eastern or North African respondents) (60.59%), Black (12.68%), Hispanic (19.6%), Asian/Pacific Islander (6.39%), American-Indian/Native Alaskan (0.73%), (68). Education levels: Under 25 (12.098%), less than high school (9.142%), high school or some college (47.379%), college or more (31.381%) (67). Regions: Northeast (17%), Midwest (20.4%), South (39.2%), West (23.4%) (69). The `pewmethods` R package is used to apply and rake these weights (70). This excluded 724 respondents whose gender, race/ethnicity, education, age, or region could not be mapped to the weighting categories, including respondents coded as Other/prefer-not-to-answer for race/ethnicity. The final weighted base therefore contains 38,298 respondents. This weighted sample includes 23,373 NFL fans, 15,315 of which identify with a political party.

The weighted sample size of each team for the Figure 1 is as follows: Arizona Cardinals = 194.59156, Atlanta Falcons = 357.64600, Baltimore Ravens = 308.79586, Buffalo Bills = 395.57280, Carolina Panthers = 244.94594, Chicago Bears = 764.73036, Cincinnati Bengals = 321.27773, Cleveland Browns = 332.86074, Dallas Cowboys = 1,365.99158, Denver Broncos = 330.70924, Detroit Lions = 483.20089, Green Bay Packers = 649.58484, Houston Texans = 238.84682, Indianapolis Colts = 158.29248, Jacksonville Jaguars = 105.55214, Kansas City Chiefs = 853.70539, Las Vegas Raiders = 353.55851, Los Angeles Chargers = 269.25662, Los Angeles Rams = 345.96875, Miami Dolphins = 380.72059, Minnesota Vikings = 348.85399, New England Patriots = 562.51192, New Orleans Saints = 293.88094, New York Giants = 685.83721, New York Jets = 347.98400, Philadelphia Eagles = 780.06162, Pittsburgh Steelers = 774.83431, San Francisco 49ers = 878.85449, Seattle Seahawks = 395.02519, Tampa Bay Buccaneers = 282.14667, Tennessee Titans = 174.24499, Washington Commanders = 213.01488.

The Fox Sports Marketplace Tracking Data on the MLB includes 82,865 observations between March 2, 2023 and August 22, 2023. This includes 35,343 fans of one of the 30 MLB teams, 23,741 of whom identify with a political party and compose our primary, pre-weighted analytic sample. Responses were collected by Prodege to be nationally representative across zip codes and on gender (50% male and 50% female for non-fans, 60% male and 40% female for sports fans), age (25% ages 18-34, 35% ages 35-49, 25% ages 50-64, 15% ages 65-75) and ethnicity (70% White, 15% African-American, and 15% Other). Respondents are required to meet the following criteria to complete the survey: (1) have a valid US zip code, (2) be between the ages of 18 and 75, (3) have access to the internet/device at home, and (4) watch at least two hours of TV per week.

We further ensure the representativeness of this survey by generating post-stratification weights on gender, race, region, and age bracket to match US Census demographics, same as above, using the trimming (65) and raking method followed by Pew (70). Education is not collected in this tracker, so we do not match on those demographics.

The post-stratification weights are based on Census demographics as follows: age bins: 18-24 (12.098%), 25-34 (17.355%), 35-44 (16.329%), 45-64 (32.622%), 65+ (21.596%) (66). Although the panel is capped at 75, 65–75 respondents are weighted to the full 65+ target. Gender: male (49.5%), female (50.5%) (67). Race: White (including Middle Eastern or North African respondents) (60.59%), Black (12.68%), Hispanic (19.6%), Asian/Pacific Islander (6.39%), American-Indian/Native Alaskan (0.73%), (68). Regions: Northeast (17%), Midwest (20.4%), South (39.2%), West (23.4%) (69). The `pewmethods` R package is used to apply and rake these weights (58). This excluded 1,330 respondents whose gender, race/ethnicity, age, or region could not be mapped to the weighting categories, including respondents coded as Other/prefer-not-to-answer for race/ethnicity. The final weighted base therefore contains 81,535 respondents. This weighted sample includes 35,013 MLB fans, 23,596 of which identify with a political party. Additionally, the weighted sample of Toronto's Blue Jays fans who live in the US and qualify is less than 100, so they are excluded from the graph.

The weighted sample size of each team for the Figure 2 is as follows: Arizona Diamondbacks = 439.83714, Atlanta Braves = 1,611.61263, Baltimore Orioles = 542.64260, Boston Red Sox = 1,176.07900, Chicago Cubs = 1,506.87064, Chicago White Sox = 582.06669, Cincinnati Reds = 620.04239, Cleveland Guardians = 654.72863, Colorado Rockies = 238.54581, Detroit Tigers = 854.42083, Houston Astros = 868.93506, Kansas City Royals = 372.94694, Los Angeles Angels = 427.58474, Los Angeles Dodgers = 2,062.44207, Miami Marlins = 341.79294, Milwaukee Brewers = 464.82054, Minnesota Twins = 509.78559, New York Mets = 1,042.73037, New York Yankees = 2,929.42190, Athletics = 221.18096, Philadelphia Phillies = 1,135.66307, Pittsburgh Pirates = 611.94592, San Diego Padres = 276.06313, San Francisco Giants = 905.65520, Seattle Mariners = 535.70069, St. Louis Cardinals = 741.84779, Tampa Bay Rays = 357.15816, Texas Rangers = 765.44410, Washington Nationals = 276.05232.

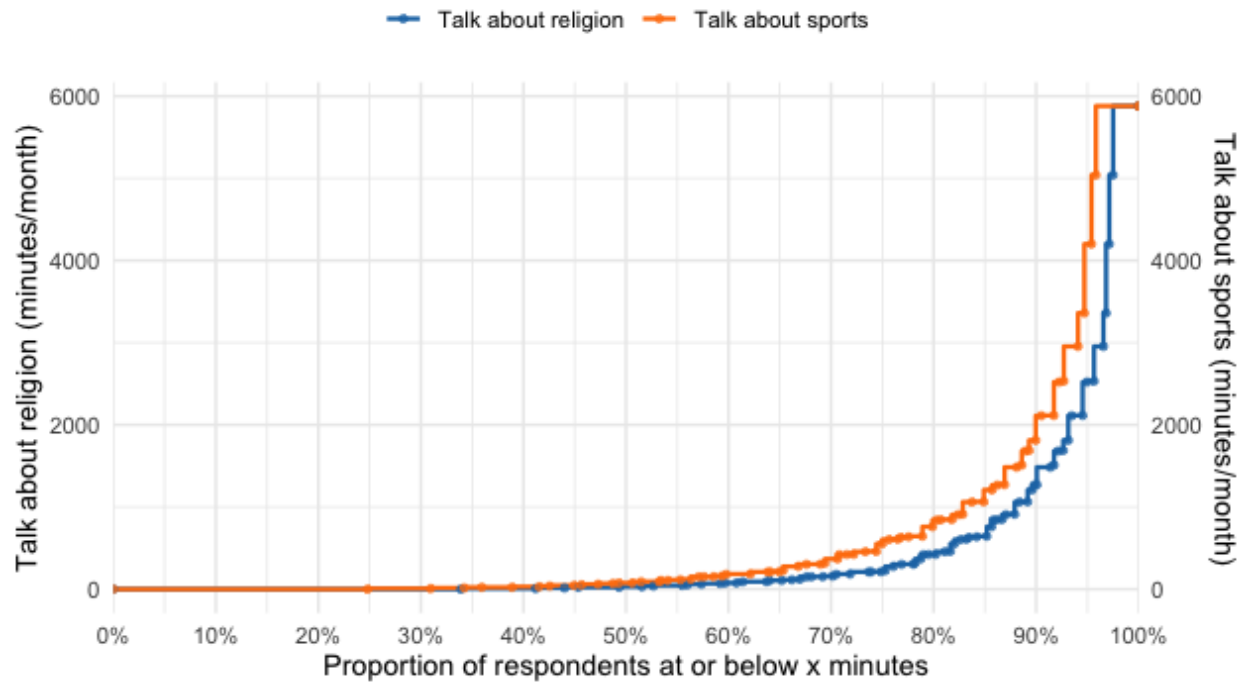


Fig. S1. The cumulative proportion of average time spent talking about religion or sports over the past six months. Sample includes those without a specific religious or sports affiliation.

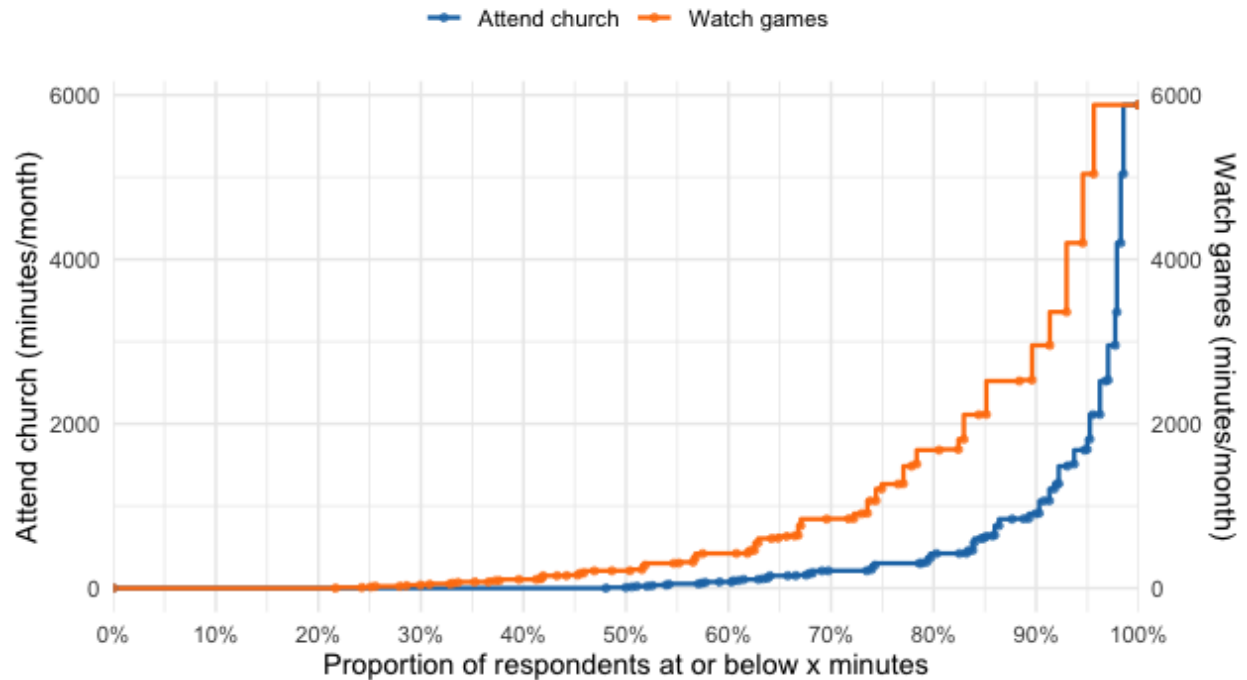


Fig. S2. The cumulative proportion of average time spent participating in religion or sports over the past six months. The sample includes those without a specific religious or sports affiliation.

Content analysis

The prevalence of sports fandom across the United States suggests that this should be a prominent research topic across social science disciplines. To examine the commonness of scholarship on sports fandom, we conducted a content analysis of the top ten journals in each of five fields (economics, psychology, political science, sociology, and management/organizational research) as well as the top ten general science journals (71-72). The topic of sports is rarely studied in these top journals. For each of the identities (SES, where from, partisanship, race, religion, and sports fandom), the frequency of mention within each of the disciplines (Economics, Management, Political Science, Psychology, Sociology, and Top Ten Impact) is counted per 10,000 articles. The specific search terms and process are documented below and in the replication package.

Across the five discipline-specific journal categories, sports-related articles were the least frequent of the six identity domains examined. In the pooled corpus across all journal categories, sports-related articles were also the least common domain (12.4 per 10,000 articles), appearing far less often than articles mentioning religion (99.1), place or region (151.4), partisanship (236.8), race or ethnicity (361.6), or class, socioeconomic status, or education (616.3).

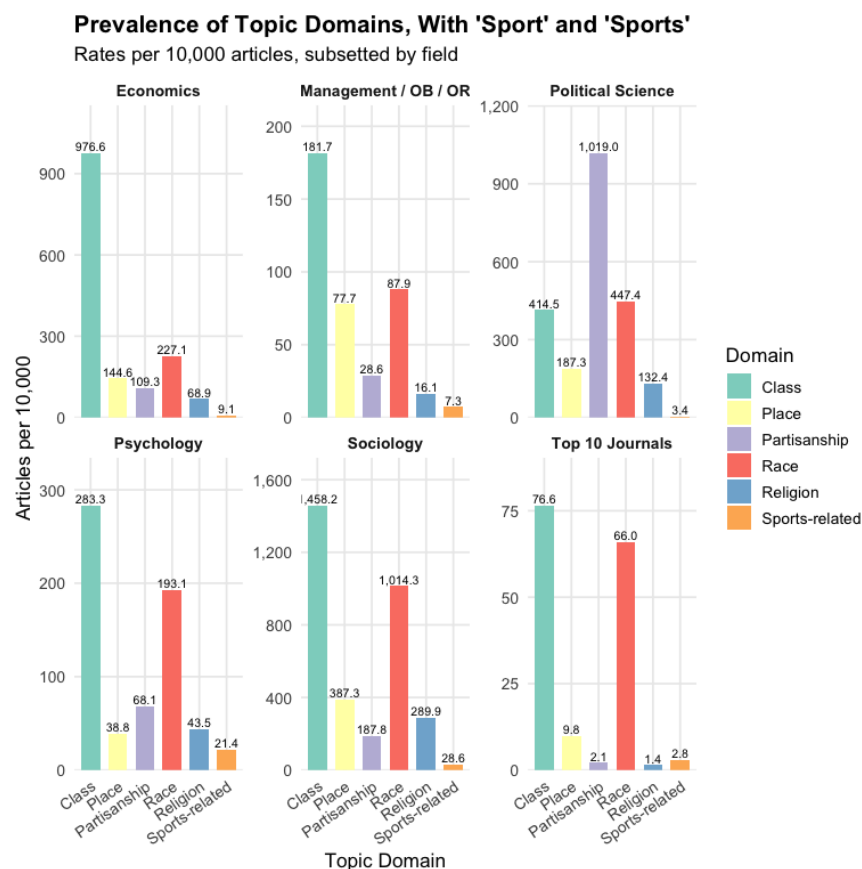


Figure S3. The frequency of mention of each identity (SES, where from, partisanship, race, religion, and sports fandom), within each of the disciplines (Economics, Management, Political Science, Psychology, Sociology, and Top Ten Impact) is counted per 10,000 articles.

Following the method of Card and DellaVigna (59), a corpus of research articles published since 1980 is gathered. The full list of journals, selected for their impact factors, is included below (72). The titles and abstracts were pulled from the “CrossRef” API, the largest metadata repository containing over 106 million records (73). A Python script scrapes for academic articles based on domain keywords for the identities probed in study 1.

The top ten journals in each relevant category were selected based on rankings reported by Clarivate’s 2024 *Journal Citation Reports*, prioritizing the five-year journal impact factor (JIF) to account for year-to-year volatility in citation patterns (72). The top 10 highest impact journals, overall, were also selected. They are as follows, with the associated impact factor: Economics: Quarterly Journal of Economics (20.9), American Economic Review (16.6), Journal of Economic Literature (15.9), Journal of Economic Perspectives (14.4), Journal of Financial Economics (13.7), Energy Economics (13.2), Annual Review of Economics (12.2), NBER Macroeconomics Annual (11.0), Journal of Political Economy (11.0), Review of Financial Studies (10.8). Psychology: Qualitative Research in Psychology (99.2), Psychological Science in the Public Interest (41.8), Annual Review of Psychology (34.4), Psychological Bulletin (28.5), Nature Reviews Psychology (21.8), Advances in Methods and Practices in Psychological Science (18.5), American Psychologist (12.8), Perspectives on Psychological Science (11.9), Computers in Human Behavior (10.6), Psychological Methods (10.0). Political Science: Annual Review of Political Science (16.7), International Organization (8.7), American Political Science Review (8.5), Political Analysis (8.0), Review of International Organizations (7.4), Policy and Society (7.3), Political Communication (7.3), Environmental Politics (7.1), American Journal of Political Science (7.1), Journal of Public Administration Research and Theory (6.9). Sociology: Annual Review of Sociology (15.2), American Sociological Review (13.9), Annals of Tourism Research (11.1), Population and Development Review (8.8), Sociological Methods & Research (7.1), Gender & Society (6.5), Journal of Health and Social Behavior (6.0), American Journal of Sociology (5.7), Sociological Theory (5.6), Journal of Marriage and Family (5.6). Management and Organizational Research: Academy of Management Annals (26.9), Annual Review of Organizational Psychology and Organizational Behavior (25.1), Journal of Strategic Information Systems (21.5), Academy of Management Review (19.3), Business Strategy and the Environment (16.1), Journal of Management (15.7), California Management Review (15.6), Journal of Innovation & Knowledge (15.0), Organizational Research Methods (14.2), Journal of Manufacturing Systems (13.9). Top 10 Journals overall: CA-A Cancer Journal for Clinicians (353.0), Nature Reviews Drug Discovery (129.8), Nature Reviews Molecular Cell Biology (128.7), Lancet (104.8), Nature Reviews Disease Primers (104.8), Nature Reviews Materials (100.2), Nature Reviews Microbiology (99.2), Qualitative Research in Psychology (99.2), Nature Reviews Clinical Oncology (99.1), Foundations and Trends in Machine Learning (89.0).

The data collection is limited to titles and abstracts in order to capture agenda salience rather than incidental mentions within the full text. If sports is not a central aspect of a study and is found only within the body of the article, counting it toward the aggregate would blur the lines “in comparison to other relevant topics.” This design choice ultimately prioritizes construct validity.

A topic keyword dictionary identifies the primary articles for each attribute. The script iterated through each title and abstract entry in the corpus and flagged the articles that contained these words. These flagged articles were stored in a separate CSV file. For the keyword dictionaries, there are very few sources that standardize lists for any domain, let alone all of them together. There are individual dictionaries existing in studies and repositories: partisan phrase lists for partisanship, LIWC categories for religion, and so forth. For this content analysis, constructed dictionaries use (1) seed terms from these sources of canonical literatures and (2) human-curated and expanded these lists to include close synonyms, plurality, and spelling variants (74-76).

Study 2 supplement

Studies 2a-e were launched on December 18, 2025, in the following order: education, race, where, sports, and religion. All studies were labelled as ‘A study on identity’ on Prolific.

2a: education

200 respondents were recruited, and 138 qualified for our sample. 77 identified as female and 61 identified as male. 86 identify as Democrats and 52 identify as Republicans. The average age of respondents is 42 years, the 25th percentile is 30 years, and the 75th percentile is 52 years.

2b: race

200 respondents were recruited, and 127 qualified for our sample. 71 identified as female and 56 identified as male. 85 identify as Democrats and 42 identify as Republicans. The average age of respondents is 41 years, the 25th percentile is 30 years, and the 75th percentile is 52 years.

2c: where you are from

200 respondents were recruited, and 143 qualified for our sample. 75 identified as female and 68 identified as male. 99 identify as Democrats, and 44 identify as Republicans. The average age of respondents is 43 years, the 25th percentile is 32 years, and the 75th percentile is 53 years.

2d: religion

599 respondents were recruited, and 419 respondents qualified for our sample. 248 identified as female and 168 identified as male (1 had Prolific demographic data expired, and 2 revoked their demographic data from Prolific). 262 identify as Democrats and 157 identify as Republicans. The average age of respondents is 42 years, the 25th percentile is 32 years, and the 75th percentile is 52 years.

2e: sports fandom

1,000 respondents were recruited, and 521 respondents qualified for our sample. 244 identified as female and 275 identified as male (1 identified as prefer not to say and 1 had Prolific demographic data expired). 350 identify as Democrats and 171 identify as Republicans. The average age of respondents is 40 years, the 25th percentile is 30 years, and the 75th percentile is 50 years.

	Mean treatment effect	Cohen's d	Confidence interval of Cohen's d	Sample size
Education	0.18	0.48	(0.30, 0.65)	138
Race	0.20	0.41	(0.22, 0.59)	127
Region where they are from	0.24	0.59	(0.41, 0.77)	143
Religion (<i>as pre-registered</i>)	0.38	0.75	(0.64, 0.86)	419
Sports	0.39	0.79	(0.69, 0.89)	521

Table S1. The within-subjects mean treatment effect, Cohen's d, confidence interval, and sample size of each dimension of similarity.

Comparison	Z-score of difference in Cohen's d	p-value
Sports and education	3.08	0.002
Sports and race	3.67	0.0002
Sports and region where they are from	1.98	0.05
Sports and religion (<i>as pre-registered</i>)	0.54	0.59

Table S2. The within-subjects Cohen's d of the sports condition was iteratively compared to the other conditions with a z-test.

Although we pre-register a reduction in the polarization index as our primary outcome, we also subset each component of the index: warmth, perceived closeness, and willingness to converse. As shown in Table S3, the treatment condition showed higher scores than the control on each component of the index. As shown in Table S4, increases within-subject and within-components are all statistically significant except for conversational willingness in the education condition.

	Feelings thermometer		Identity of Self with the Other		Conversational willingness		Sample size	Std. Cronbach's Alpha
	Control	Treatment	Control	Treatment	Control	Treatment		
Education	29.18 (1.87)	32.94 (2.10)	1.78 (0.08)	2.06 (0.09)	7.38 (0.27)	7.67 (0.28)	138	0.80
Race	29.13 (1.87)	32.14 (2.13)	1.84 (0.08)	2.23 (0.10)	7.06 (0.29)	7.42 (0.31)	127	0.81
Region where they are from	30.61 (1.94)	35.11 (2.02)	1.80 (0.07)	2.15 (0.09)	7.17 (0.27)	7.80 (0.26)	143	0.76
Religion (as pre-registered)	33.01 (1.04)	41.27 (1.09)	1.88 (0.05)	2.50 (0.06)	7.35 (0.15)	8.07 (0.15)	419	0.78
Religion (excluding 'nothing in particular')	33.08 (1.11)	41.11 (1.15)	1.88 (0.05)	2.51 (0.06)	7.32 (0.16)	8.07 (0.15)	379	0.78
Sports fandom	32.70 (0.93)	41.76 (1.08)	2.00 (0.05)	2.66 (0.06)	7.53 (0.13)	8.35 (0.13)	521	0.81

Table S3. The point estimates for each raw scale of the control and treatment, across dimensions of similarity.

	Feelings thermometer	Inclusion of others in self	Conversational willingness
Sports and education	1.362563e-06	1.031454e-08	3.079665e-03
Sports and race	6.049742e-05	8.240956e-04	3.411555e-03
Sports and region where they are from	1.763806e-04	4.869291e-06	2.885419e-01
Sports and religion (<i>sample as pre-registered</i>)	3.933958e-01	4.804897e-01	4.553516e-01

Table S4. Results of a Welch two-sample t-test, iteratively comparing each component of the index in the sports condition to the other conditions.

In exploratory, not pre-registered, supplemental analyses, we also subset the treatment effects by gender (Figure S4 and Table S5) and party (Figure S5 and Table S6).

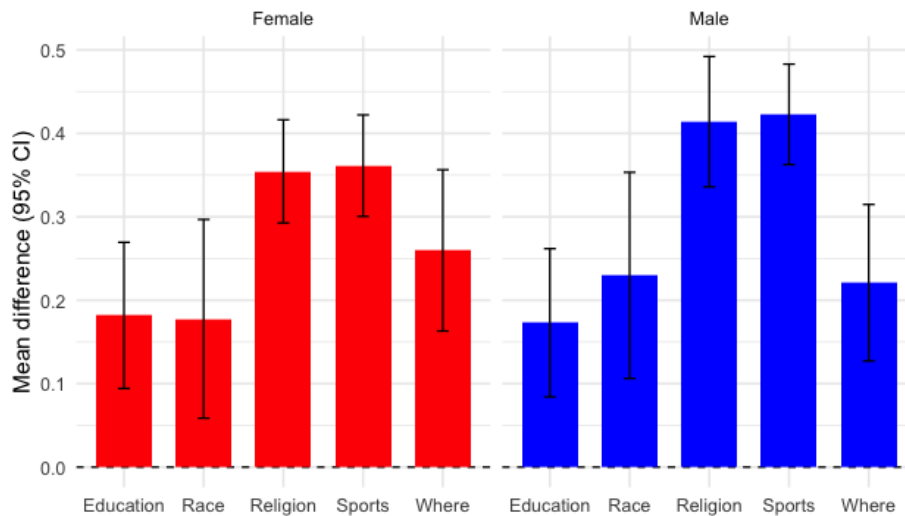


Fig. S4. The within-subjects mean difference in treatment effect of each dimension of similarity, benchmarked against each other, separated out by gender.

		Mean treatment effect	Standard error	Sample size
Education	Female	0.18	0.04	77
	Male	0.17	0.05	61
Race	Female	0.18	0.06	71
	Male	0.23	0.06	56
Region where they are from	Female	0.26	0.05	75
	Male	0.22	0.05	68
Religion (<i>as pre-registered</i>)	Female	0.35	0.03	248
	Male	0.41	0.04	168
Sports	Female	0.36	0.03	244
	Male	0.42	0.03	275

Table S5. The within-subjects mean treatment effect, standard error, and sample size of each dimension of similarity, separated by gender.

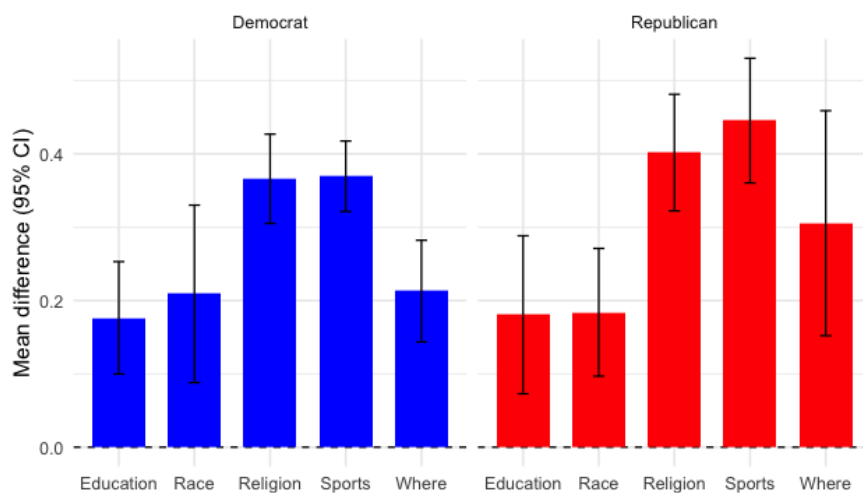


Fig. S5. The within-subjects mean difference in treatment effect of each dimension of similarity, benchmarked against each other, separated out by party affiliation.

		Mean treatment effect	Standard error	Sample size
Education	Democrat	0.18	0.04	86
	Republican	0.18	0.05	52
Race	Democrat	0.21	0.06	85
	Republican	0.18	0.04	42
Region where they are from	Democrat	0.21	0.04	99
	Republican	0.31	0.08	44
Religion (<i>as pre-registered</i>)	Democrat	0.37	0.03	262
	Republican	0.40	0.04	157
Sports	Democrat	0.37	0.02	350
	Republican	0.45	0.04	171

Table S6. The within-subjects mean treatment effect, standard error, and sample size of each dimension of similarity, separated by party.

Study 3 Supplement

The sample for study 3 was collected by the CHIP50 team (The Civic Health and Institutions Project, a 50 States Survey (38)). They connect with the panel vendors through an online sample marketplace run by PureSpectrum. Respondents are over 18 and are set for nationally representative quotas for gender, race, ethnicity, age, and region. Respondents who fail basic attention checks or a CAPTCHA are terminated.

3,073 respondents were recruited, 2,987 consented to taking part in the survey, and 2,550 passed both of the attention checks as per CHIP50 protocol (38). 1,631 qualify for the experiment because they have a partisan affiliation. 861 identified as female, 769 identified as male, and 1 identified as non-binary/third gender. 778 identify as Democrats and 853 identify as Republicans. The average age of respondents is 48 years, and the 25th percentile is 34 years and the 75th percentile is 62 years.

The sample is the same as for study 1. However, as opposed to study 1, study 3 does not implement post-stratification weights, since we are not making population-level inferences as per our pre-analysis plan.

We pre-registered that the dependent variables will be z-scored and aggregated into a polarization index, assuming Cronbach's alpha is above 0.65, which is identical to our earlier study. However, in this case, Cronbach's alpha was only ≥ 0.60 (0.61 for SES, 0.6721158 for sports, 0.63 for where they are from, 0.69 for race, and 0.62 for religion), so we will additionally analyze each of the items (feelings thermometer, The Inclusion of Others in the Self, and conversational willingness) separately. Each scale will still be z-scored for cross-item comparability.

Feelings thermometer

For each of the treatment arms, adding a dimension of similarity improves the within-subject feelings of warmth toward the counter-partisan. When a respondent shares the same SES as the counter-partisan, the feelings thermometer is improved by a mean of 0.29 (paired t-test p-value < 0.001, SE: 0.04, 95% CI: (0.21, 0.38)). When a respondent shares the race of the counter-partisan, the feelings thermometer is improved by a mean of 0.25 (paired t-test p-value < 0.001, SE: 0.05, 95% CI: (0.15, 0.35)). When the respondent is from the same place as the counter-partisan, the feelings thermometer is improved by a mean of 0.16 (paired t-test p-value < 0.001, SE: 0.04, 95% CI: (0.08, 0.24)). When a respondent shares the same religion as the counter-partisan, the feelings thermometer is improved by a mean of 0.44 (paired t-test p-value < 0.001, SE: 0.05, 95% CI: (0.33, 0.54)). When a respondent shares the same sports fandom as the counter-partisan, the feelings thermometer is improved by a mean of 0.53 (paired t-test p-value < 0.001, SE: 0.05, 95% CI: (0.43, 0.62)).

We additionally hypothesize in the pre-registered analysis plan that co-fandom similarity will decrease polarization at least as much as the other dimensions of similarity. The within-subjects point estimate of the effect of shared sports fandom on the feelings thermometer is directionally the greatest among all dimensions of similarity. It is statistically different from the effect of shared race (p-value < 0.001), shared SES (p-value < 0.001), and shared where respondents are from (p-value < 0.001). It is statistically indistinguishable from the effect of shared religion.

The Inclusion of Others in the Self (IOS)

For each of the treatment arms, adding a dimension of similarity improves interpersonal closeness toward the counter-partisan. When a respondent shares the same SES as the counter-partisan, the IOS is improved by a mean of 0.19 (paired t-test p-value < 0.001, SE: 0.05, 95% CI: (0.09, 0.28)). When a respondent shares the race of the counter-partisan, the IOS is improved by a mean of 0.25 (paired t-test p-value < 0.001, SE: 0.06, 95% CI: (0.15, 0.36)). When the respondent is from the same place as the counter-partisan, the IOS is improved by a mean of 0.18 (paired t-test p-value < 0.001, SE: 0.04, 95% CI: (0.10, 0.26)). When a respondent shares the same religion as the counter-partisan, the IOS is improved by a mean of 0.36 (paired t-test p-value < 0.001, SE: 0.05, 95% CI: (0.27, 0.45)). When a respondent shares the same sports fandom as the counter-partisan, the IOS is improved by a mean of 0.50 (paired t-test p-value < 0.001, SE: 0.05, 95% CI: (0.40, 0.60)).

We additionally hypothesize in the pre-registered analysis plan that co-fandom similarity will decrease polarization at least as much as the other dimensions of similarity. The within-subjects point estimate of the effect of shared sports fandom on the IOS is directionally the greatest among all dimensions of similarity. It is statistically different from the effect of shared race (p-value < 0.001), shared SES (p-value < 0.001), and shared where respondents are from (p-value < 0.001). It is also statistically different from the effect of shared religion (p-value < 0.05).

Conversational willingness

For each of the treatment arms, adding a dimension of similarity improves conversational willingness toward the counter-partisan. When a respondent shares the same SES as the counter-partisan, conversational willingness is improved by a mean of 0.12 (paired t-test p-value < 0.005, SE: 0.04, 95% CI: (0.04, 0.19)). When a respondent shares the race of the counter-partisan, conversational willingness is improved by a mean of 0.17 (paired t-test p-value < 0.001, SE: 0.05, 95% CI: (0.08, 0.27)). When the respondent is from the same place as the counter-partisan, conversational willingness is improved by a mean of 0.10 (paired t-test p-value < 0.05, SE: 0.04, 95% CI: (0.02, 0.18)). When a respondent shares the same religion as the counter-partisan, conversational willingness is improved by a mean of 0.20 (paired t-test p-value < 0.001, SE: 0.05, 95% CI: (0.11, 0.30)). When a respondent shares the same sports fandom as the counter-partisan, conversational willingness is improved by a mean of 0.32 (paired t-test p-value < 0.001, SE: 0.05, 95% CI: (0.23, 0.42)).

We additionally hypothesize in the pre-registered analysis plan that co-fandom similarity will decrease polarization at least as much as the other dimensions of similarity. The within-subjects point estimate of the effect of shared sports fandom on conversational willingness is directionally the greatest among all dimensions of similarity. It is statistically different from the effect of shared race (p-value < 0.05), shared SES (p-value < 0.005), and shared where respondents are from (p-value < 0.001). It is statistically indistinguishable from the effect of shared religion.

	Mean treatment effect	Confidence interval of mean treatment effect	Cohen's d	Sample size
Education	0.20	0.14, 0.26	0.39	325
Race	0.23	0.15, 0.30	0.34	316
Region where they are from	0.15	0.10, 0.19	0.33	325
Religion	0.33	0.26, 0.40	0.51	334
Sports	0.45	0.38, 0.52	0.67	331

Table S7. The within-subjects mean treatment effect, confidence interval, Cohen's d, and sample size of each dimension of similarity.

Comparison	Z-score of difference in mean treatment effect	p-value
Sports and education	5.39	<0.001
Sports and race	4.26	<0.001
Sports and region where they are from	6.86	<0.001
Sports and religion	2.30	0.02

Table S8. Iteratively comparing the mean treatment effect of the sports condition to the other conditions with a z-test.

Study 4 supplement

Both studies were launched on December 19, 2025, and labeled 'A study about identity'. These are separate samples to generate separate models; this is not moderated mediation.

Moderation

600 participants were recruited, and 258 qualified for our sample. 122 identified as female and 133 identified as male, 2 preferred not to say, and 1 revoked consent for Prolific to share their demographic data. 154 identify as Democrats and 104 identify as Republicans. The average age of respondents is 41 years, and the 25th percentile is 31 years, and the 75th percentile is 48 years.

Intercept	0.29***	0.25** *	0.28***
Identity centrality (z-scored)	0.12***	0.11** *	0.11***
Sex (Male)		0.08	
Party (Republican)			0.02

Significance codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05

Table S9. The ordinary least squares regression with the z-scored fandom centrality as the regressor and the within-subjects difference in polarization as the outcome, and gender and party as coefficients.

Please indicate how much you agree or disagree with each statement about being a Philadelphia Eagles fan.

	1 (Strongly disagree)	2	3	4	5	6	7 (Strongly agree)
The fact that I am a Philadelphia Eagles fan is an important part of my identity.	☐	☐	☐	☐	☐	☐	☒
Being a Philadelphia Eagles fan is an important part of how I see myself.	☐	☐	☐	☐	☐	☐	☒
I often think about the fact that I am a Philadelphia Eagles fan.	☐	☐	☐	☐	☐	☐	☒

Fig. S6. An example of the question presented to participants to capture the identity centrality of their sports fandom.

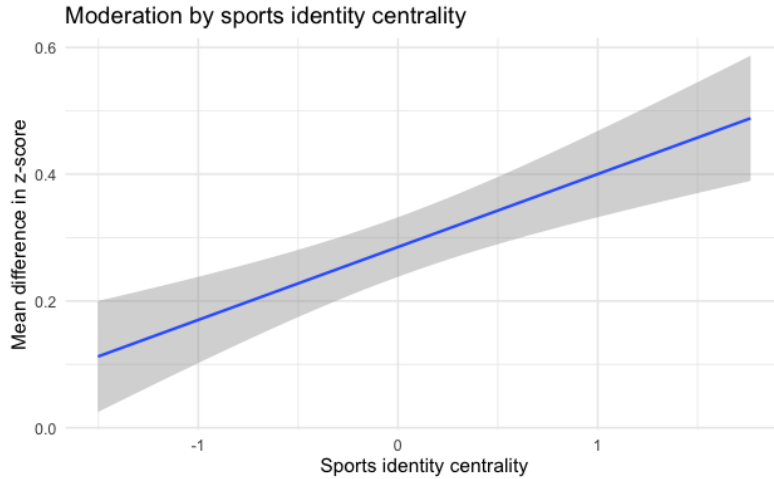


Fig. S7. As the identity centrality of sports fandom increases, the animosity-reducing effect of learning that a counter-partisan shares sports fandom increases.

Mediation

600 participants were recruited and 310 qualified for our sample. 159 identified as female and 146 identified as male, and 5 revoked consent for Prolific to share their demographic data. 199 identify as Democrats and 111 identify as Republicans. The average age of respondents is 42 years, and the 25th percentile is 31 years and the 75th percentile is 52 years. 306 participants have complete pairs of information for the within-subject design, and their responses compose our analytic sample.

	Estimate	Standard error	Confidence interval
Total effect (c)	0.31	0.02	(0.27, 0.35)
Direct effect (c')	0.18	0.03	(0.12, 0.23)
Treatment effect on mediator (a)	0.85	0.07	(0.72, 0.98)
Mediator effect on outcome (b)	0.16	0.03	(0.10, 0.21)
Indirect effect	0.13	0.03	(0.08, 0.19)
Proportion mediated	42.91%	8.08%	(27.07%, 58.74%)

Table S10. The output of the OLS regression and the delta method to estimate the proportion of the treatment effect on the outcome (polarization index) that is accounted for by the mediator (perceived similarity).

Study 5 supplement

This survey was launched on January 5, 2026 and labeled ‘A study about identity’. All participants were asked about all attributes (sports fandom, religion, race, where they are from, and education level/SES). The sample comprises anyone who had (a) partisan identity and (b) sports affiliation. This sample is randomized to one of four arms: race, religion, region where from, and SES. We also note that there may have been social desirability bias in the race condition for those who might have felt uncomfortable answering about preferring to give money to a certain race, but we hope that the anonymity helps mitigate this.

2,997 participants were recruited and 1,477 individuals qualified for the sample. 772 identified as female, 691 identified as male, 7 preferred not to say, 2 had their demographic data on Prolific expired, and 5 revoked consent from sharing their demographic data with Prolific. 923 identify as Democrats and 554 identify as Republicans. The average age of respondents is 43 years, and the 25th percentile is 33 years and the 75th percentile is 53 years.

Sports v. Education		Sports v. Race		Sports v. Where they are from		Sports v. Religion (as pre-registered)		Sports v. religion (excluding nothing in particular)	
% shared fandom	% shared SES	% shared fandom	% shared race	% shared fandom	% shared where they are from	% shared fandom	% shared religion	% shared fandom	% shared religion
76.5%	23.5%	79.5%	20.5%	65.0%	35.0%	58.9%	41.1%	55.3%	44.7%

Table S11. Forced choice allocation outcomes in study 5.

Two Prolific respondents are described below. We are only going to give a bonus to one of them.

You decide who receives the bonus. Neither individual will be told that you were responsible for the bonus decision. **The person you assign to 'no bonus' receives nothing.**

Please drag the respondents to the boxes you would like to allocate.

Items

What is your political affiliation?
Democrat

What is your favorite sports team?
Philadelphia Eagles

What is your political affiliation?
Democrat

What is your religious affiliation?
Roman Catholic

\$0.10 Bonus

No Bonus

Fig. S8. An example of the participant's experience in the forced choice dictator game.

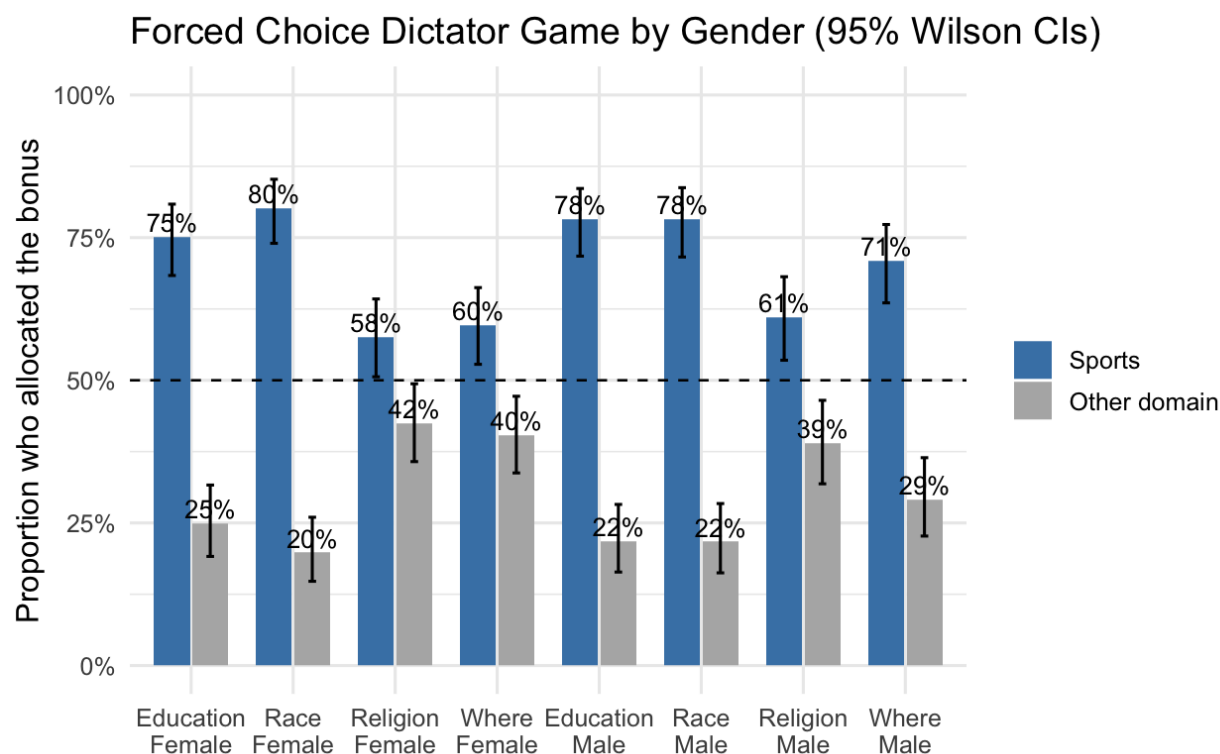


Fig. S9. Forced choice dictator game allocation decisions, separated by gender.

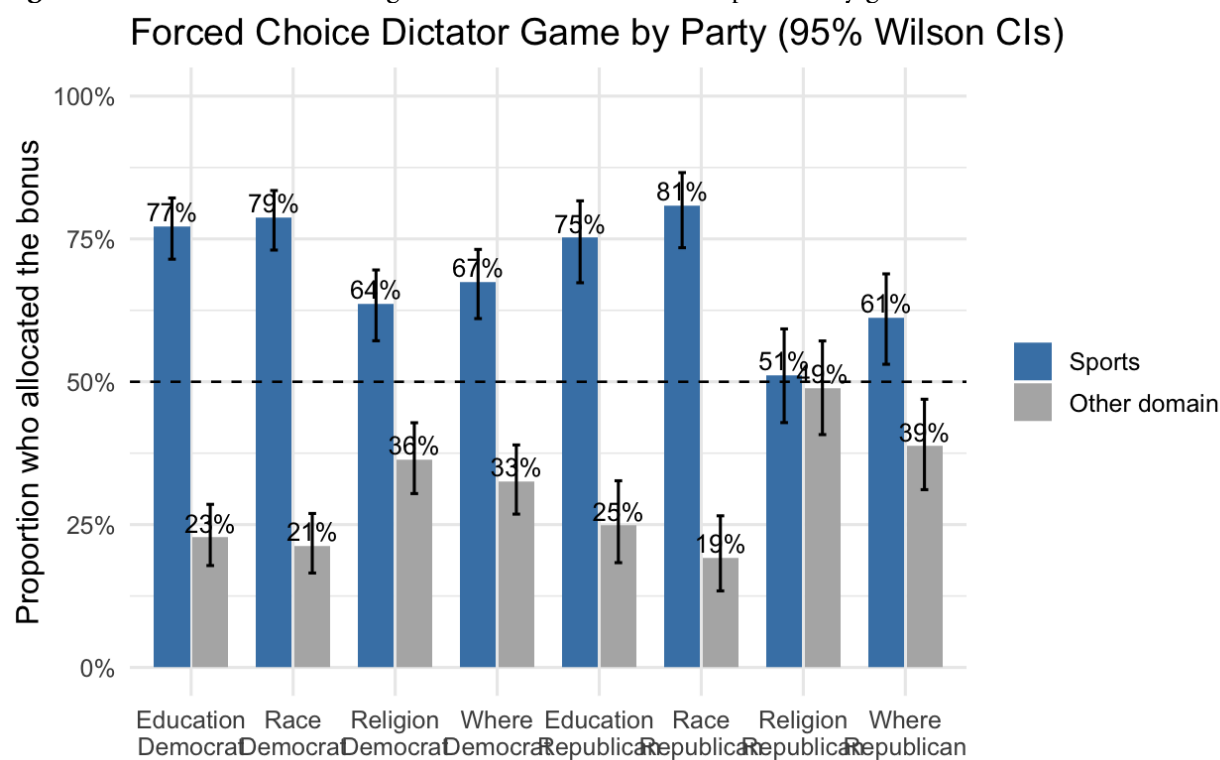


Fig. S10. Forced choice dictator game allocation decisions, separated by party.