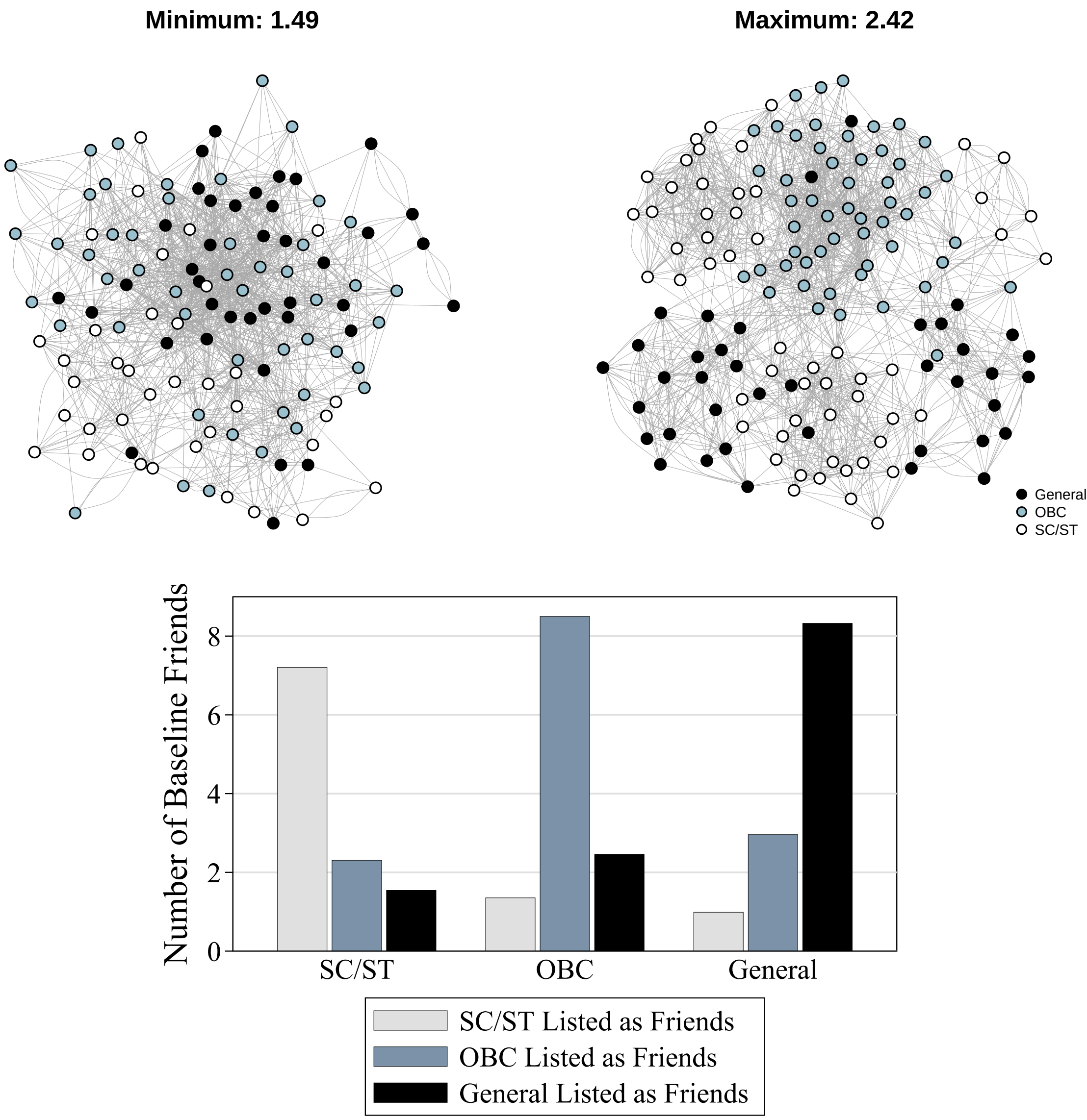
Online Appendix

Types of Contact: A Field Experiment on Collaborative and Adversarial Caste Integration

Matt Lowe

A Figures and Tables

Figure A1: Social Networks Are Segregated by Caste at Baseline



Notes: Top panel: the social network is visualized for the two locations (out of eight) with the minimum and maximum caste-based homophily. The homophily measure reflects how prevalent baseline friendships are between same-caste pairs compared to pairs in the network overall, with a measure above one reflecting that friendships are more likely to be formed within groups than across groups. The lowest caste-based homophily measure is 1.49, the maximum is 2.42, and the mean is 1.92. Each network displays only nodes that completed the baseline social network survey (1,174 of 1,261 participants). The question we asked was: "Now we have finalized the sign-up for all players in the league, I would like to ask one more question. Here are the photos of all the sign-ups. As I scroll through slowly, please can you tell me which of these people you consider to be friends?" Each network is undirected, with an edge between two nodes if either (or both) participant(s) listed the other as a friend. Each network is drawn using a force-directed algorithm (Kamada Kawai) that puts nodes closer together that have a smaller length of the shortest path between them. Bottom panel: for those that completed the baseline social network survey the bars show the mean number of friends listed of a given caste, averaging across all participants from a given caste. For example, the far-left bar shows that SC/ST caste participants report having 7.2 SC/ST friends on average.

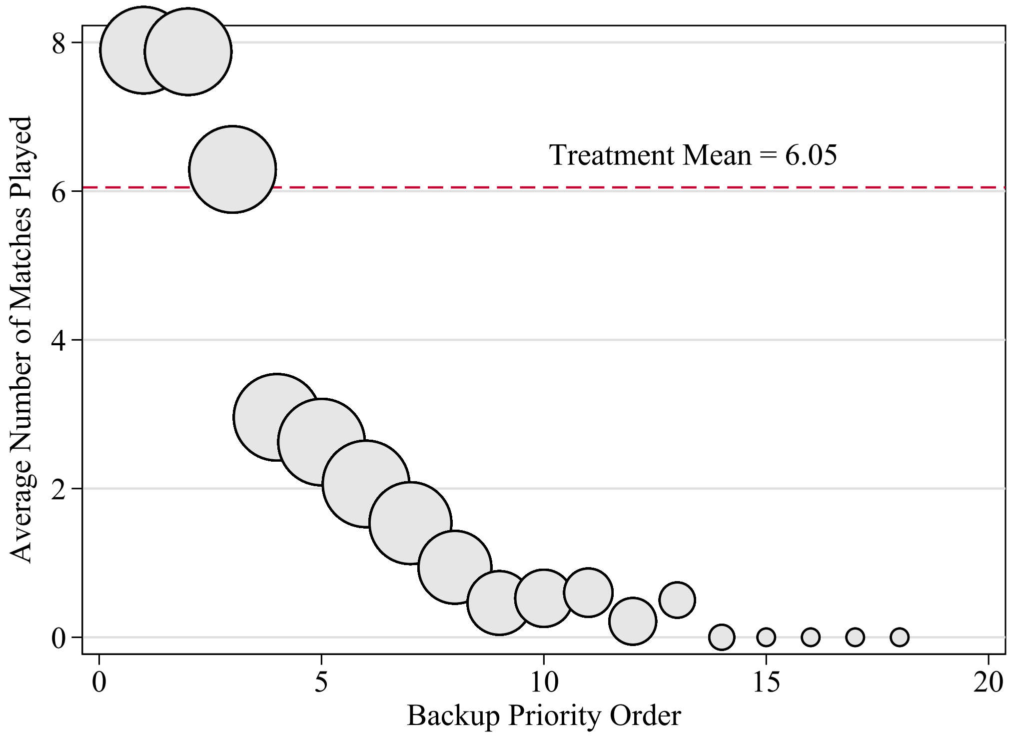
Figure A2: Cricket Explained

Notes: This photo was taken during one of the experimental matches. The fielding team comprises one bowler, one wicket-keeper, and three fielders. The batting team comprises two batsmen currently playing, and three sat together waiting their turn to bat.

Figure A3: Recruitment Poster

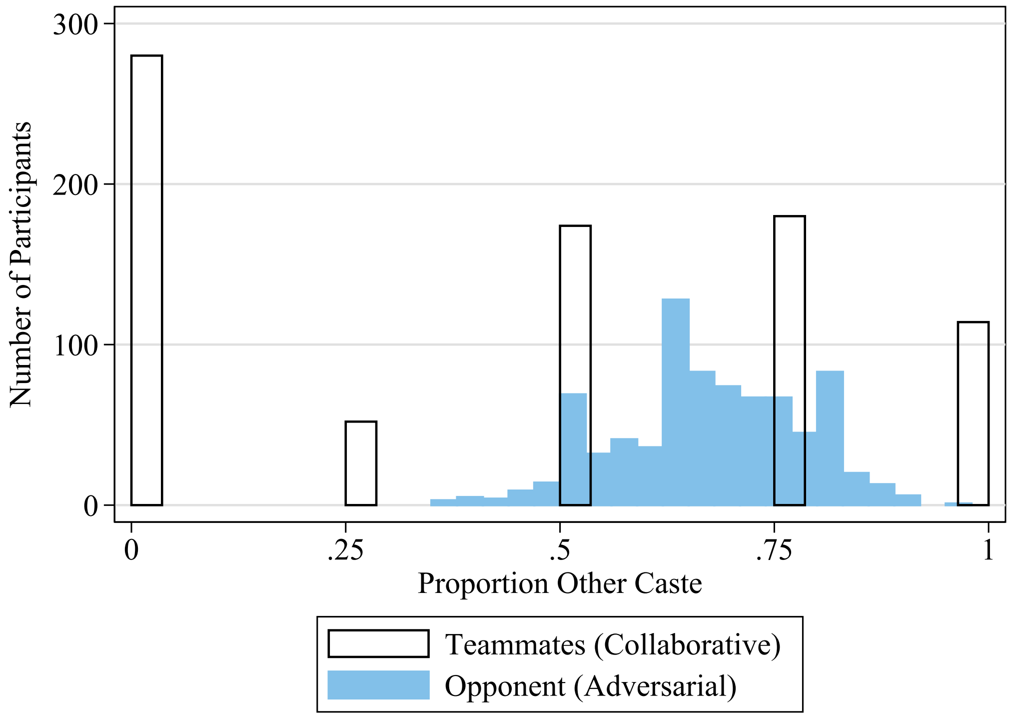
Notes: English and Hindi version of recruitment poster (only the Hindi version was used). The phone numbers and location (for the Hindi version) are blurred out for confidentiality reasons.

Figure A4: Number of Matches Played by Backups



Notes: This is a scatter plot of the average number of matches played against the backup priority number, with the size of the bubbles reflecting the sample size for each priority number. The dashed line is the average number of matches played by the 800 participants assigned to play in the leagues.

Figure A5: Variation in Collaborative and Adversarial Contact

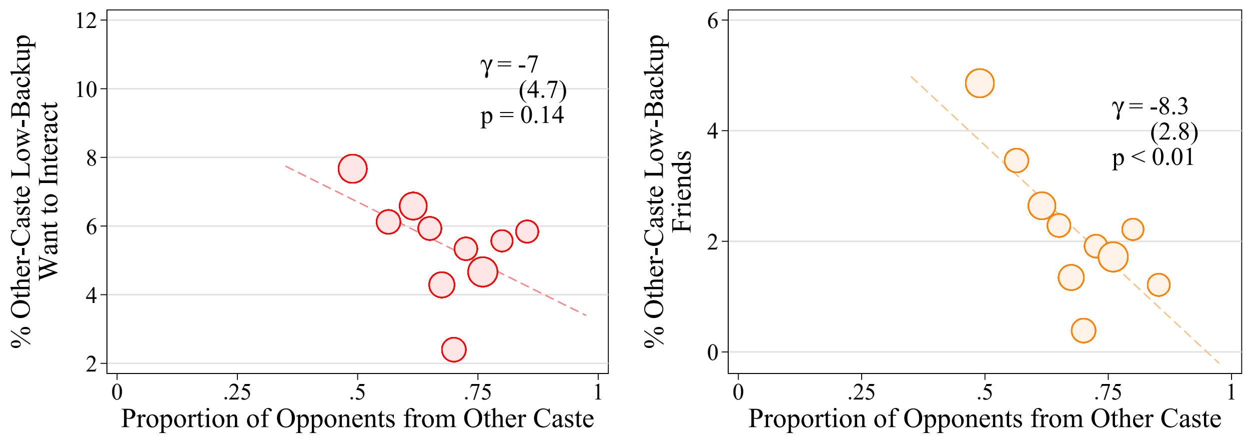


Notes: The white histogram shows the variation in the proportion of a player's teammates that belong to a different caste (collaborative contact). The blue histogram shows the variation in the proportion of a player's opponents that belong to a different caste (adversarial contact).

Figure A6: League Table

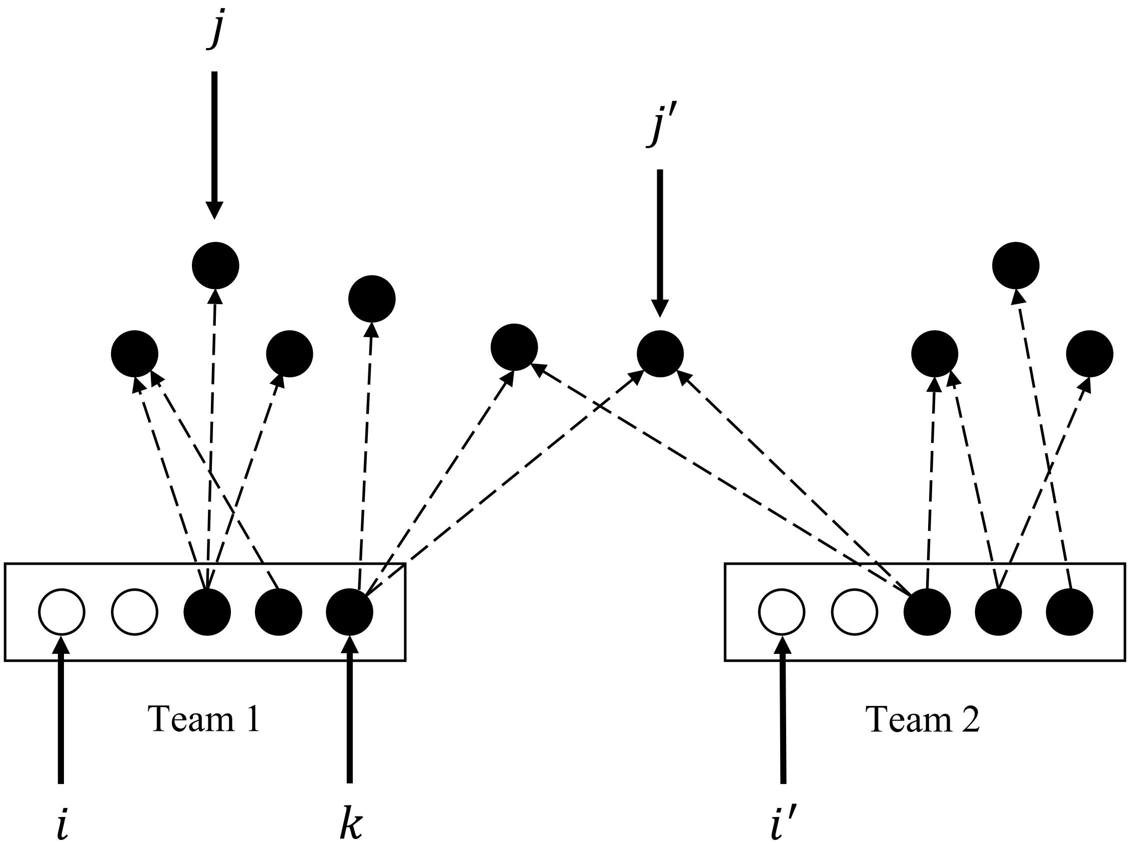
Notes: Example league table after 36 of 80 matches had been played. NRR is net run rate (used to settle ties between two teams with the same number of points). The location is blurred out for confidentiality reasons. Each team chose their own team name – for example, team 2T17, made up of five SC/ST players, chose to be called "Ambedkar Sporting Club". B. R. Ambedkar, a lower caste himself, was a champion of human rights for lower castes, an author of the Indian constitution, and an economist (with PhDs from both Columbia University and the London School of Economics).

Figure A7: Adversarial Effects Extend Beyond Immediate Interactions



Notes: The figure is created based on equation 1, and as described in Figure 2. The outcome is the percentage of other-caste men from among backups with priority number seven or above that the participant considers friends or wants to spend time with (left) or considers friends (right). The figures show whether adversarial contact affects cross-caste friendships other than with opponents.

Figure A8: Friends of Friends of Teammates – Identification Intuition



Notes: This figure demonstrates the intuition behind the identification of the effect on friendship of being indirectly linked with another participant. The dashed lines reflect baseline friendship links reported by the other-caste members of Teams 1 and 2. Players i and i' belong to the same caste (same color) and have the same collaborative contact (Prop. Oth. Caste on Team$_{icl}$ = Prop. Oth. Caste on Team$_{i'cl} = 0.75$). Player k is a teammate of i's, but not a teammate of i''s. I find the effects of direct links on friendship by asking "is the probability that i and k are friends after the league is over greater than the probability that i' and k are friends?". Similarly, player j is an other-caste friend of an other-caste teammate of i's (an indirect link), but he is not an indirect link of i''s. I find the effects of indirect links on friendship by asking "is the probability that i and j are friends after the league is over greater than the probability that i' and j are friends?" Each of these comparisons is an example of one within-cell comparison that contributes to identification – the actual estimates come from pooling many such comparisons. Finally, j' is an example of an other-caste player indirectly linked to both i and i'. This player does not contribute to identification of the indirect link effect since there is no variation within this cell.

Figure A9: Leagues 2, 7, 8 Had More Spectators Despite Fewer Participants

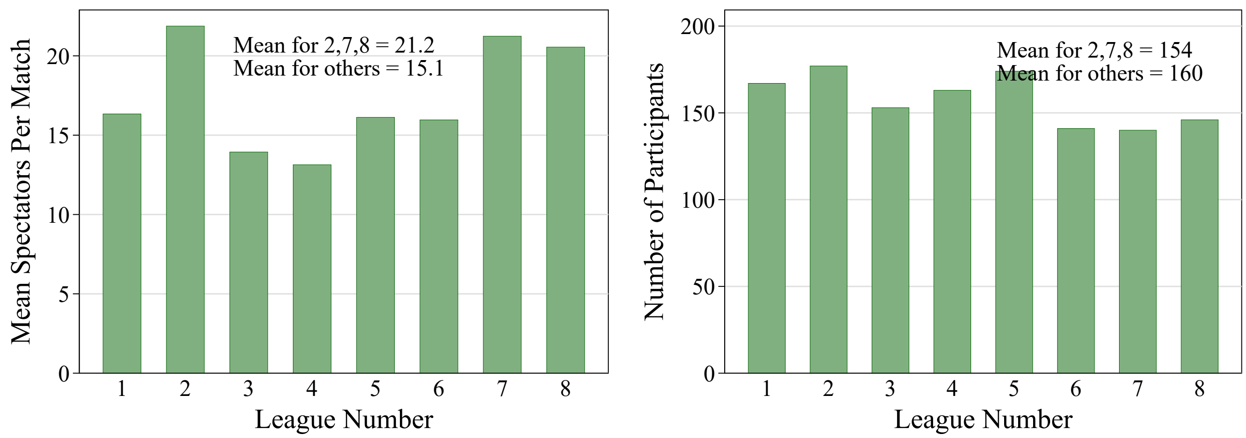
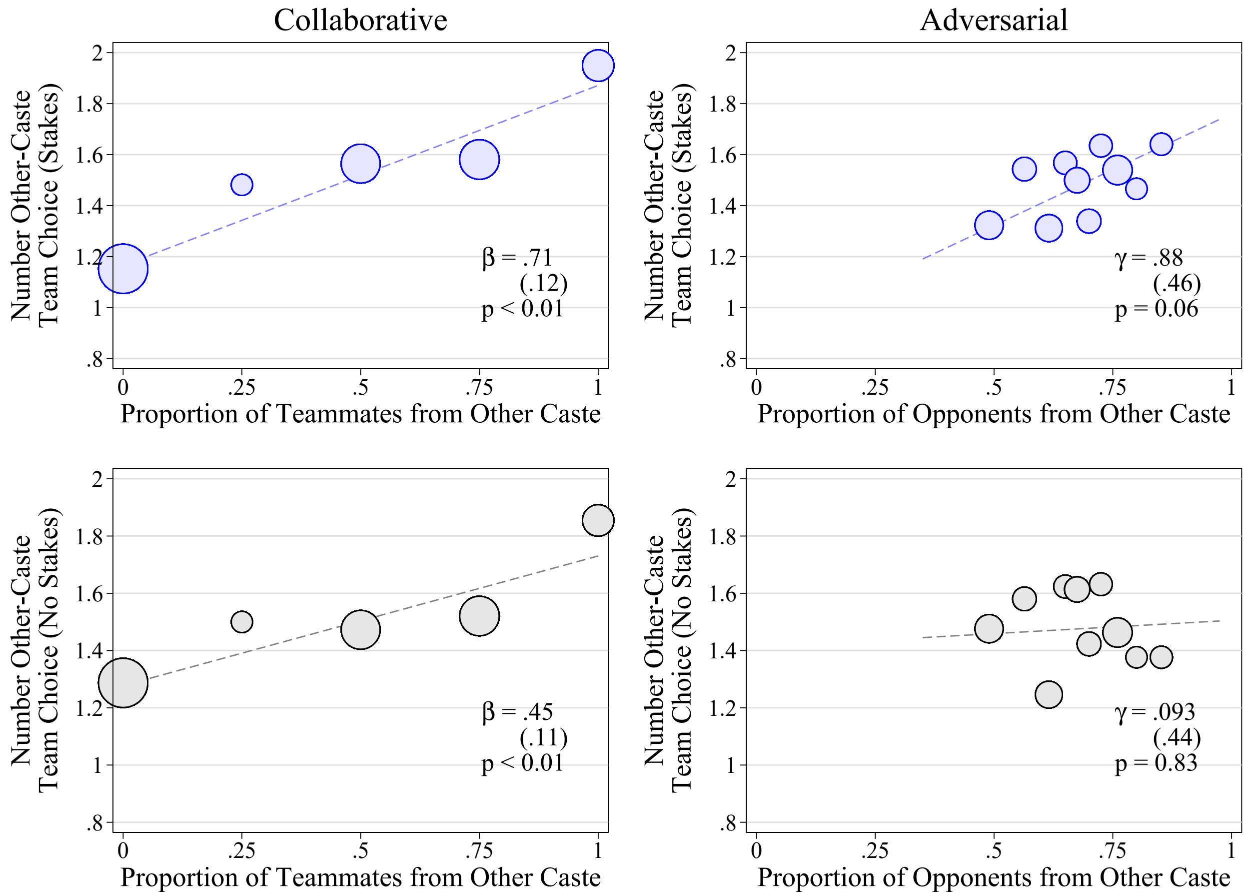
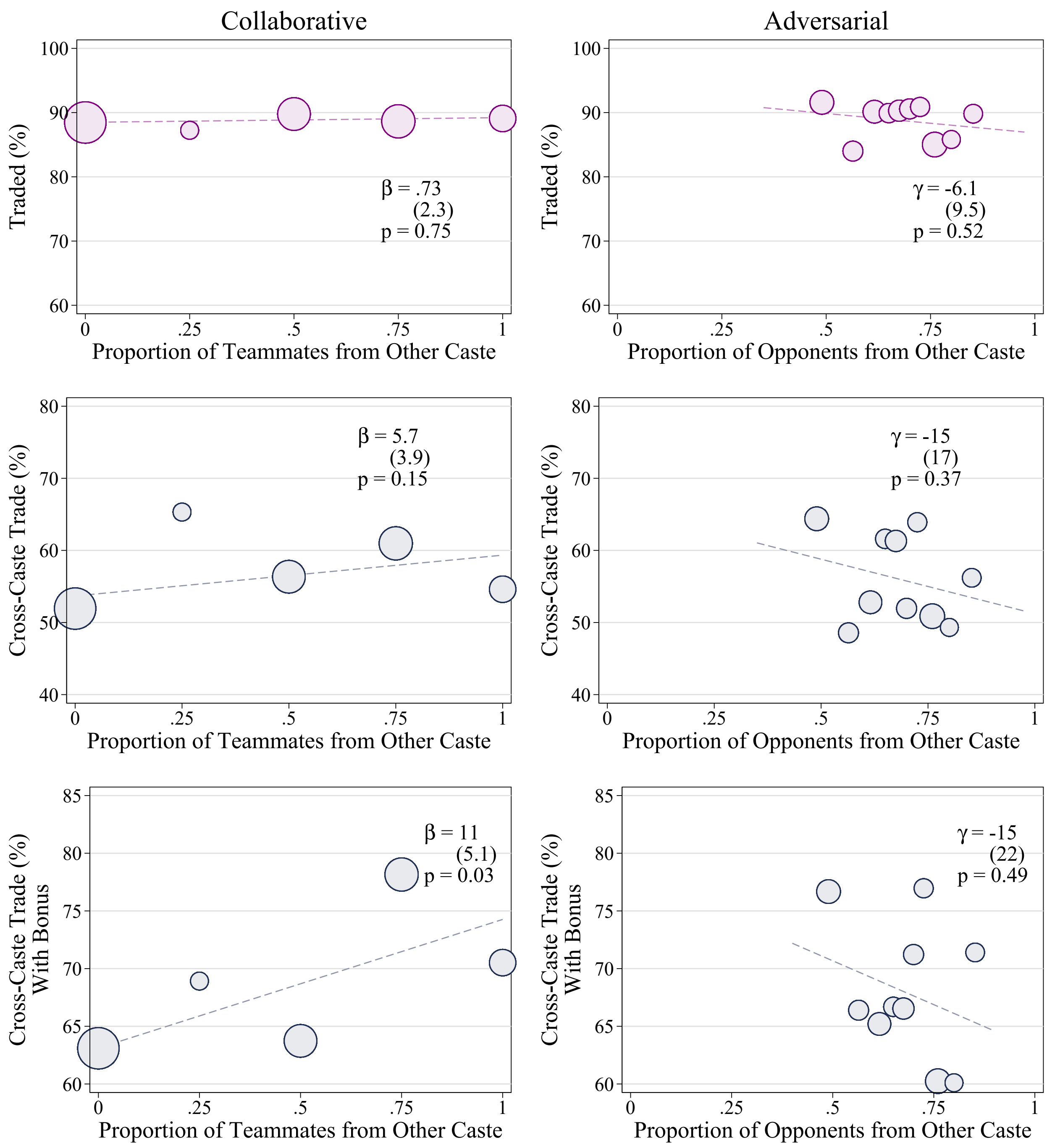


Figure A10: Both Types of Contact Reduce Ability-Based Statistical Discrimination



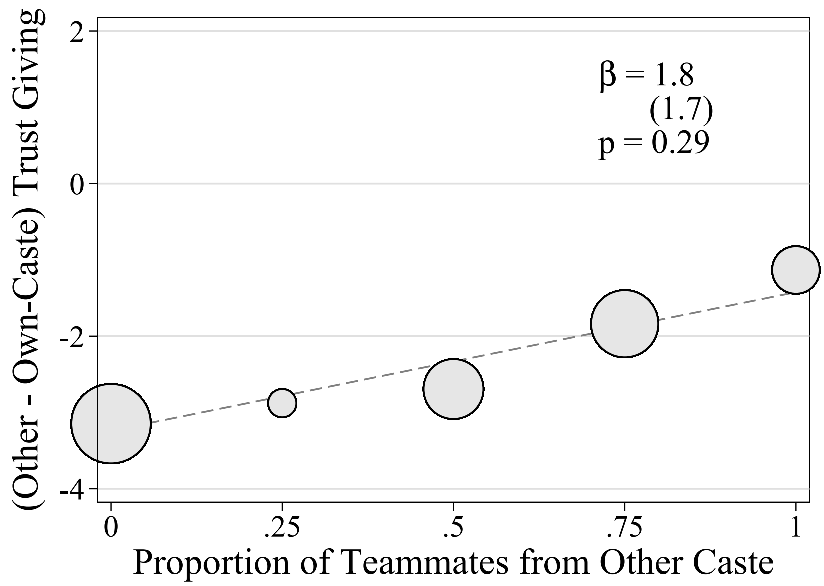
Notes: The figure is created based on equation 1, and as described in Figure 2. The top panel outcome is the number of other-caste men (from zero to four) chosen as teammates for the future match with stakes. The bottom panel outcome is the same, for the future match without stakes.

Figure A11: Collaborative Contact Increases Incentivized Cross-Caste Trade



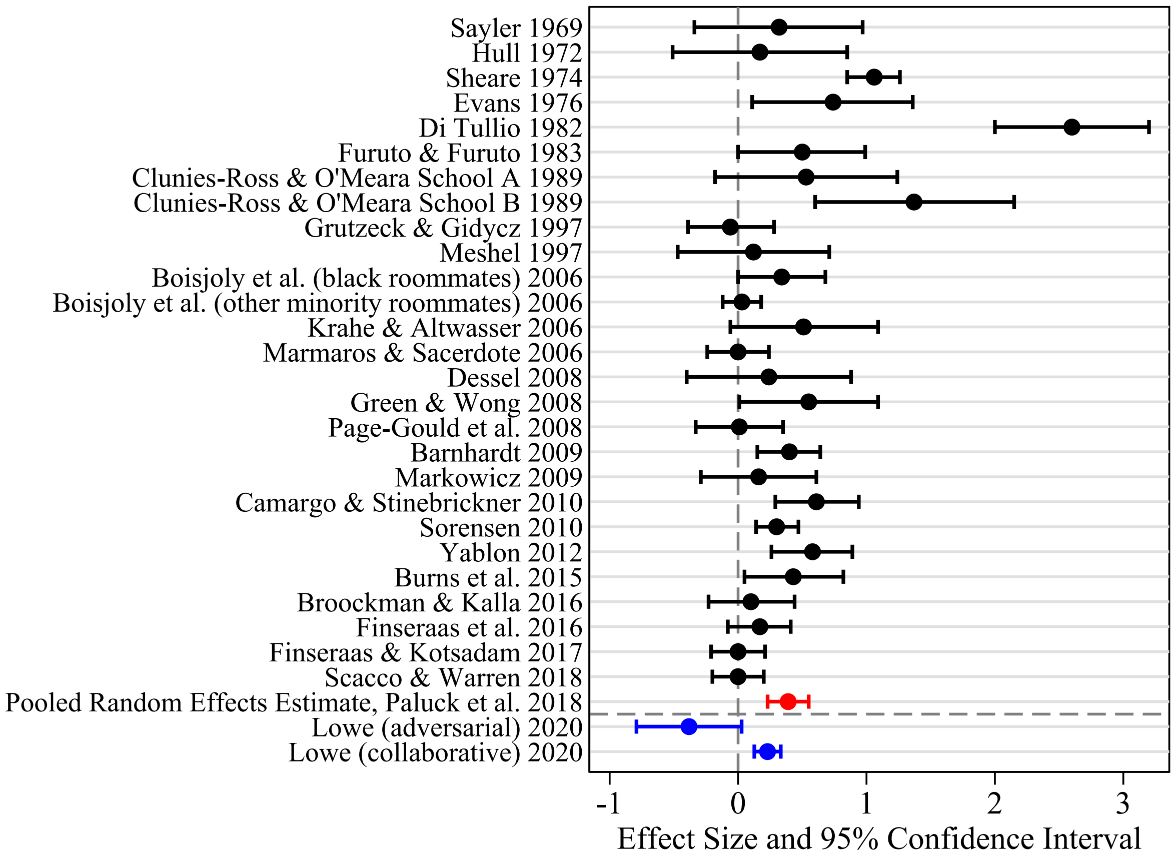
Notes: The figure is created based on equation 1, and as described in Figure 2, with the addition of the trade and color-switch bonus dummy variables. For this trading figure, the unit of observation is the participant-good, meaning there are two observations per participant. The top panel outcome is the percentage of goods successfully traded. The middle panel outcome is the percentage of goods successfully traded with someone from a different caste. The bottom panel outcome is the same, but includes only those assigned to the league that were also assigned a positive monetary incentive to switch the sticker color of their goods.

Figure A12: Collaborative Contact and the Trust Gap for General Castes



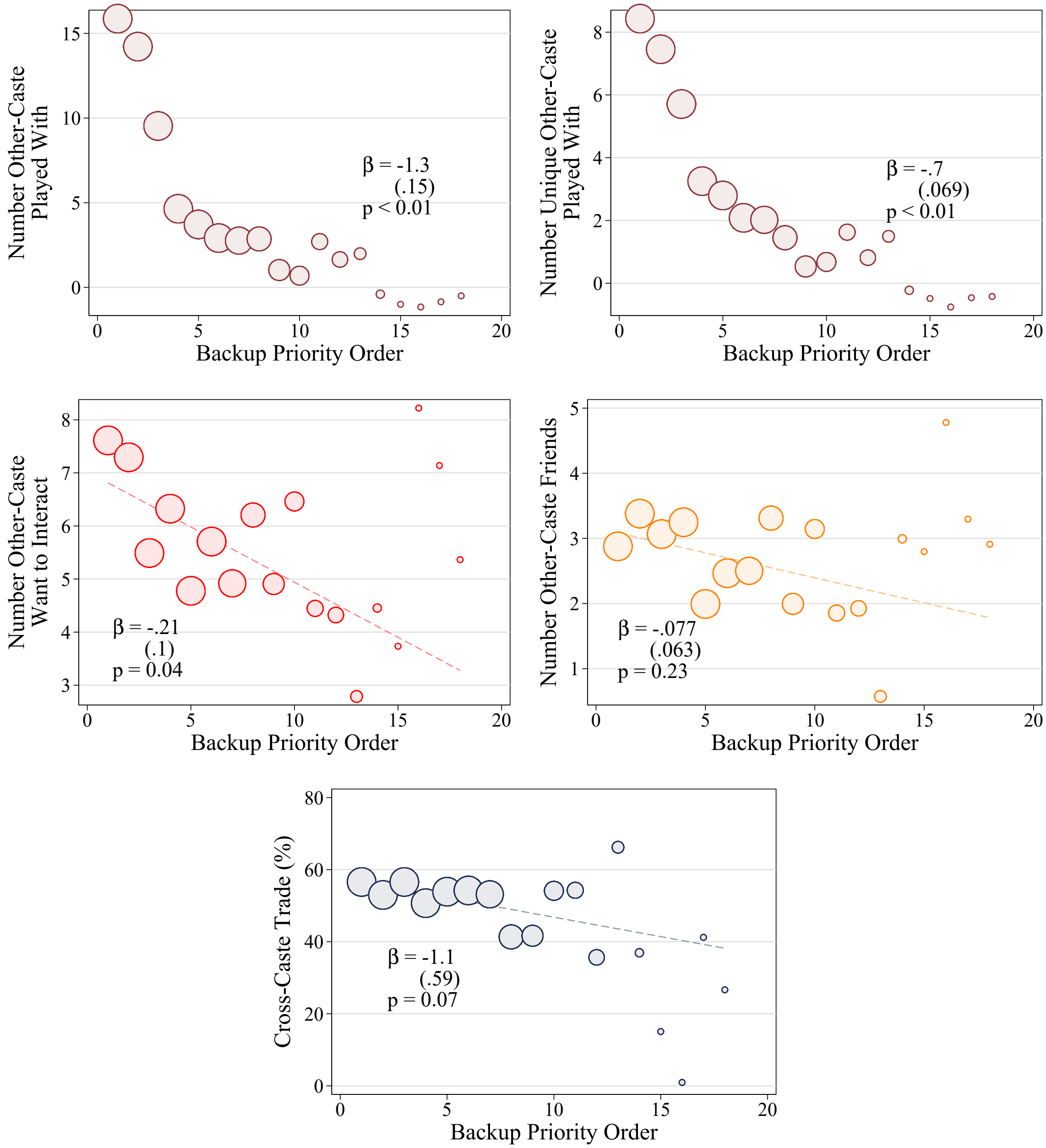
Notes: The figure is created based on equation 1, and as described in Figure 2. The sample includes only General caste league participants. The outcome is the average amount sent in the trust game to the two other-caste partners less the amount sent to the one own-caste partner.

Figure A13: Comparison to Other Experimental Estimates of Effects of Contact



Notes: This figure replicates and expands Figure 2 from Paluck et al. (2018). The figure shows the 27 intergroup contact effect sizes from studies Paluck et al. (2018) identified as featuring random assignment and outcomes measured at least one day after the contact intervention began. The effect sizes are shown in chronological order (from top to bottom), followed by the pooled meta-analytic estimate of Paluck et al. (2018) (in red), and my own estimated effects of collaborative and adversarial contact on the Cross-Caste Behavior Index (in blue, from Figure 4).

Figure A14: Short-Term Collaborative Contact Also Has Positive Effects

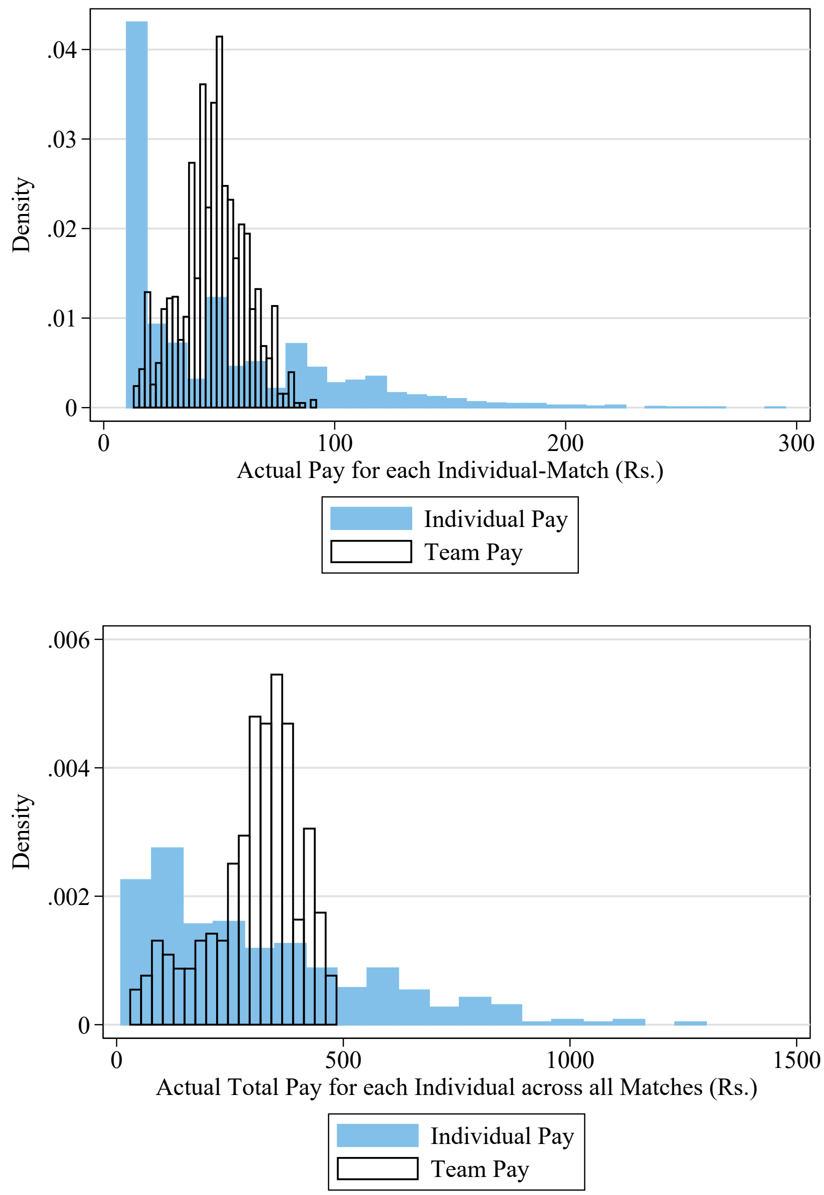


Notes: The figure is constructed similarly to Figure 2, though with the estimates coming from the specification:

$$y_{icl} = \alpha_{cl} + \beta \text{Backup Priority}_{icl} + \theta \mathbf{X}_{icl} + \varepsilon_{icl}$$

where Backup Priority$_{icl} \in \{1, 2, ..., 18\}$ and X$_{icl}$ is a vector of control variables: number of other-caste friends at baseline (and dummy variable for missing) and the five variables used for re-randomization for all five figures, and color-switch and trade bonus dummy variables for the Cross-Caste Trade figure (bottom). Robust standard errors are used for the top four figures, while standard errors are clustered at the individual-level for the Cross-Caste Trade figure. The outcomes are: (1) the total number of other-caste men played on a team with (including double-counting when the same other-caste is played with multiple times) (top-left), (2) the total number of unique other-caste men played on a team with (with no double-counting) (top-right), (3) the number of other-caste men the participant considers friends or wants to spend time with (middle-left), (4) the number of other-caste men the participant considers friends (middle-right), and (5) the percentage of goods traded with someone from a different caste (bottom).

Figure A15: Payout Distributions



Notes: The top panel shows histograms of actual incentive pay at the individual-match level, including a Rs. 10 show-up incentive received by everyone for each match. The blue histogram is for those in teams assigned to Individual Pay and the transparent histogram is for those in teams assigned to Team Pay. The bottom panel shows the two histograms for actual incentive pay aggregated across all matches to the individual-level.

Table A1: Interactions with Cross-Caste Opponents Are More Hostile

	Friendly			Hostile		Proportion Hostile
	High-Fives	Congrats	Hugs	Arguments	Insults	
	(1)	(2)	(3)	(4)	(5)	(6)
Teammates	0.52	0.22	0.88	0.08	0.02	-0.50
	(0.07)	(0.04)	(0.10)	(0.02)	(0.01)	(0.06)
Observations	9300	9300	9300	9300	9300	2260
Opponents Mean	.0052	.0026	.0086	.033	.0042	.68
Match FE	Yes	Yes	Yes	Yes	Yes	Yes
Caste i*Caste j FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Surveyors recorded all instances of friendly and hostile behavior between players during each match. The table uses the following dyadic specification to test for whether the type of contact affected the nature of actual in-match interactions:

$$y_{ijt} = \alpha_t + \alpha_{c(i)c(j)} + \phi \text{Teammate}_{ijt} + \xi_{ijt}$$

where y_{ijt} is the number of interactions (e.g. number of high-fives) that took place between players i and j during match t. α_t are a set of match fixed effects, and $\alpha_{c(i)c(j)}$ are a set of caste of player i-by-caste of player j fixed effects. Teammate$_{ijt}$ is the key regressor: a dummy variable equal to one if i and j are assigned to the same team, and equal to zero if they are instead opponents during match t. This regressor is random conditional on the caste-by-caste fixed effects given that random assignment to teams within each league was stratified only on caste (see Section 3.2).

I include only dyad-match observations where (1) neither i or j is a backup player, and (2) i and j are members of different castes. Standard errors are dyadic-robust at team-level. Opponents Mean is the mean of the outcome for all dyad-matches in which i and j are playing on opposing teams. The outcomes for columns (1) to (5) are the counts of interactions that i and j were involved in during match t, where the interactions are: (1) high-fives, (2) hugs/taps on back, (3) one player complimenting/congratulating another player, (4) arguments, and (5) one player insulting (sledging) another player. The sample in column (6) is further restricted to those dyad-matches involved in at least one interaction. The outcome is the total number of hostile interactions ((4)+(5)) divided by the total number of interactions ((1)+(2)+(3)+(4)+(5)). *** p<0.01, ** p<0.05, * p<0.1.

Table A2: Baseline Summary Statistics

	Observations	Mean	Min	Median	Max
(1) General Caste	1,261	.33	0	0	1
(2) OBC Caste	1,261	.35	0	0	1
(3) SC/ST Caste	1,261	.32	0	0	1
(4) N. Oth. Caste Friends	1,174	3.9	0	2	68
(5) Prop. Oth. Caste Nearby	1,261	.44	0	.46	.97
(6) Mean Subcaste Oth. Caste Friends	1,261	3.9	2	3.7	9.8
(7) Worked Last Year	1,261	.17	0	0	1
(8) Played Last Tournament	1,261	.18	0	0	1
(9) N. Catches (out of 6)	1,261	5	0	5	6
(10) Age	1,261	18	14	18	30
(11) N. Fours or Sixes When Batting (out of 6)	1,261	1.8	0	2	6
(12) Max. Bowling Speed (km/h)	1,261	87	46	86	119
(13) Would Volunteer	1,261	.44	0	0	1
(14) In School	1,261	.77	0	1	1
(15) Prop. Oth. Caste on Team	800	.44	0	.5	1
(16) Prop. Oth. Caste of Opponents	800	.67	.35	.68	.98
(17) Homog. Team	1,261	.22	0	0	1
(18) Mixed Team	1,261	.41	0	0	1
(19) High Backup	1,261	.11	0	0	1
(20) Backup Priority Order	461	5.7	1	5	18

Notes: Baseline variables are: (1) to (3) dummy variable equal to one if General, OBC, or SC/ST caste respectively, (4) number of other-caste friends listed at baseline, (5) proportion other-caste signups from same address cluster, (6) mean number of other-caste friends for signups from same subcaste as participant, (7) dummy variable equal to one if worked for income in the past year, (8) dummy variable equal to one if played in a cricket tournament in the area in the past year, (9) number of catches (from 0 to 6) in the fielding ability test, (10) age, (11) number of 4s/6s from 6 attempts in the batting ability test, (12) maximum bowling speed (km/h) from 6 attempts in the bowling ability test, (13) dummy variable equal to one if said willing to volunteer to help with league organization, (14) dummy variable equal to one if currently attending school or college, (15) proportion of teammates from a different caste, (16) proportion of opponents from a different caste, (17) dummy variable equal to one if assigned to homogeneous-caste team, (18) dummy variable equal to one if assigned to mixed-caste team, (19) dummy variable equal to one if backup with priority one to three, (20) randomly assigned priority number, if a backup player.

Table A3: Randomization Checks – Effects of Contact

	N. Oth. Caste Friends (1)	Prop. Oth. Caste Nearby (2)	Mean Subcaste Oth. Caste Friends (3)	Worked Last Year (4)	Played Last Tournament (5)	N. Catches (6)	Age (7)	N. 4s/6s Batting (8)	Max. Bowling Speed (9)	Would Volunteer (10)	In School (11)
Panel A: Full Sample											
Prop. Oth. Caste on Team	0.30	-0.02	0.08	-0.01	0.02	0.15	0.10	0.06	0.84	0.04	0.02
	(0.44)	(0.02)	(0.10)	(0.03)	(0.04)	(0.11)	(0.33)	(0.11)	(0.82)	(0.04)	(0.04)
Prop. Oth. Caste of Opponents	-3.44	-0.13	-0.03	0.04	0.18	-0.23	2.60	0.06	3.16	-0.00	-0.28
	(2.83)	(0.08)	(0.46)	(0.14)	(0.15)	(0.50)	(1.31)	(0.57)	(4.77)	(0.20)	(0.16)
Caste*League FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	746	800	800	800	800	800	800	800	800	800	800
Panel B: Analysis Sample - Completed All Outcomes											
Prop. Oth. Caste on Team	0.31	-0.03	0.05	-0.02	0.03	0.12	0.14	0.04	0.87	0.03	0.01
	(0.48)	(0.02)	(0.11)	(0.03)	(0.04)	(0.12)	(0.34)	(0.11)	(0.84)	(0.05)	(0.04)
Prop. Oth. Caste of Opponents	-3.66	-0.13	-0.08	0.07	0.21	-0.30	2.82	0.19	1.64	0.03	-0.34
	(2.97)	(0.09)	(0.49)	(0.14)	(0.14)	(0.52)	(1.34)	(0.57)	(4.86)	(0.19)	(0.16)
Caste*League FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	701	746	746	746	746	746	746	746	746	746	746
Full Sample Outcome Mean	3.8	.44	3.9	.17	.18	5	18	1.8	87	.43	.77
Used for re-randomization	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at team-level. Outcome variables are: (1) number of other-caste friends listed at baseline, (2) proportion other-caste signups from same address cluster, (3) mean number of other-caste friends for signups from same subcaste as participant, (4) dummy variable equal to one if worked for income in the past year, (5) dummy variable equal to one if played in a cricket tournament in the area in the past year, (6) number of catches (from 0 to 6) in the fielding ability test, (7) age, (8) number of 4s/6s from 6 attempts in the batting ability test, (9) maximum bowling speed (km/h) from 6 attempts in the bowling ability test, (10) dummy variable equal to one if said willing to volunteer to help with league organization, and (11) dummy variable equal to one if currently attending school or college. Re-randomization is relevant for collaborative contact treatment only.

Table A4: Randomization Checks – Effects of Program Participation

	N. Oth. Caste Friends (1)	Prop. Oth. Caste Nearby (2)	Mean Subcaste Oth. Caste Friends (3)	Worked Last Year (4)	Played Last Tournament (5)	N. Catches (6)	Age (7)	N. 4s/6s Batting (8)	Max. Bowling Speed (9)	Would Volunteer (10)	In School (11)
Panel A: Full Sample											
Mixed Team	0.54	-0.02	0.04	-0.01	0.01	0.07	-0.17	0.10	0.50	-0.04	0.03
	(0.35)	(0.02)	(0.08)	(0.03)	(0.03)	(0.08)	(0.26)	(0.08)	(0.74)	(0.03)	(0.03)
Homog. Team	0.15	-0.01	-0.01	0.03	-0.02	-0.03	-0.18	0.04	-0.66	-0.04	-0.00
	(0.35)	(0.02)	(0.09)	(0.03)	(0.03)	(0.08)	(0.30)	(0.09)	(0.80)	(0.04)	(0.03)
High Backup	1.08	-0.03	-0.04	0.01	0.02	0.15	-0.06	0.24	1.12	0.01	0.00
	(0.49)	(0.02)	(0.10)	(0.04)	(0.04)	(0.11)	(0.38)	(0.13)	(1.07)	(0.05)	(0.04)
Caste*League FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1174	1261	1261	1261	1261	1261	1261	1261	1261	1261	1261
Panel B: Analysis Sample - Completed All Outcomes											
Mixed Team	0.56	-0.03	0.04	-0.01	0.02	0.07	-0.14	0.08	0.88	-0.06	0.04
	(0.38)	(0.02)	(0.09)	(0.03)	(0.03)	(0.09)	(0.27)	(0.09)	(0.77)	(0.04)	(0.03)
Homog. Team	0.12	-0.01	0.01	0.03	-0.02	-0.02	-0.14	0.06	-0.34	-0.04	0.01
	(0.38)	(0.02)	(0.09)	(0.03)	(0.03)	(0.09)	(0.32)	(0.09)	(0.83)	(0.04)	(0.04)
High Backup	1.16	-0.03	-0.02	0.01	0.01	0.15	-0.15	0.21	1.70	0.02	0.04
	(0.52)	(0.02)	(0.10)	(0.04)	(0.04)	(0.12)	(0.37)	(0.14)	(1.08)	(0.05)	(0.04)
Caste*League FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1099	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167
Full Sample Outcome Mean	3.9	.44	3.9	.17	.18	5	18	1.8	87	.44	.77
Used for re-randomization	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at team-level for those assigned to play in the leagues, otherwise participant-level. Homog. Team is equal to one if the participant is assigned to a homogeneous-caste team, and zero otherwise. Mixed Team is equal to one if the participant is assigned to a team with at least one other-caste teammate, and zero otherwise. High Backup is equal to one if the participant is assigned to the control group and has a priority number of 1 to 3. Backups with a priority number of 4 and above are the omitted category. Outcome variables are: (1) number of other-caste friends listed at baseline, (2) proportion other-caste signups from same address cluster, (3) mean number of other-caste friends for signups from same subcaste as participant, (4) dummy variable equal to one if worked for income in the past year, (5) dummy variable equal to one if played in a cricket tournament in the area in the past year, (6) number of catches (from 0 to 6) in the fielding ability test, (7) age, (8) number of 4s/6s from 6 attempts in the batting ability test, (9) maximum bowling speed (km/h) from 6 attempts in the bowling ability test, (10) dummy variable equal to one if said willing to volunteer to help with league organization, and (11) dummy variable equal to one if currently attending school or college. Re-randomization is relevant for the Mixed Team and Homog. Team coefficients only.

Table A5: Attrition and Attendance

	Attrited				N. Matches Attended			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Prop. Oth. Caste on Team	-0.00	-0.01	-0.01	0.01	-0.01	-0.39	0.42	-0.08
	(0.02)	(0.04)	(0.04)	(0.04)	(0.21)	(0.34)	(0.29)	(0.42)
Prop. Oth. Caste of Opponents	-0.10	-0.14	-0.07	-0.10	0.49	2.66	-1.89	0.57
	(0.08)	(0.17)	(0.15)	(0.17)	(0.93)	(1.65)	(1.17)	(1.85)
Caste*League FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome Mean	.068	.068	.058	.077	6	6.1	6.3	5.6
Caste Sample	ALL	General	OBC	SC/ST	ALL	General	OBC	SC/ST
Observations	800	263	278	259	800	263	278	259

Notes: Standard errors clustered at team-level. Attrited is a dummy variable equal to one if the participant did not complete all endline outcomes. N. Matches Attended is the number of matches the participant played in, ranging from zero to eight.

Table A6: Self-Reported Friendship Predicts Trading

	Whether i trades with j (=0/1)			Cross-Caste Trade	
	(1)	(2)	(3)	(4)	(5)
Want to Interact, Not Friend	0.016	0.016	0.013		
	(0.002)	(0.003)	(0.003)		
Friend	0.038	0.045	0.037		
	(0.003)	(0.006)	(0.005)		
Number of Other-Caste Interact-Not-Friends				0.007	0.007
				(0.003)	(0.003)
Number of Other-Caste Friends				0.010	0.010
				(0.003)	(0.004)
Observations	118389	78293	78293	1510	1510
Outcome Mean	.0079	.0086	.0086	.56	.56
Respondent FE	Yes	Yes	Yes	No	No
Caste*League FE	No	No	No	Yes	Yes

Notes: Unit of observation is i-j dyad (pair of individuals) for columns (1) to (3), participant-good for columns (4) and (5). Standard errors are dyadic-robust at individual-level for columns (1) to (3), otherwise robust. Want to Interact, Not Friend is a dummy variable equal to one if i listed j as someone they want to spend time with, but not someone they consider to be a friend. Friend is a dummy variable equal to one if i listed j as a friend. The remaining two key right-hand-side variables are individual-level counts of the number of other-caste individuals selected for each of these categories. Outcome Mean is for the base category in columns (1) to (3), otherwise for the full regression sample. Cross-Caste Trade is a dummy variable equal to one if the good was successfully traded with someone from a different caste. Column (1) sample includes all same-league dyads. Columns (2) and (3) include only those dyads where j is not the same caste as i. Column (3) additionally controls for a dummy variable equal to one if i listed j as a friend at baseline. Columns (4) and (5) control for the trade and color-switch bonus dummy variables. Column (5) additionally controls for number of other-caste friends at baseline (and dummy for missing).

Table A7: The Young Form Friendships More Easily Than The Old

	Want to Interact (1)	Friends (2)
Prop. Oth. Caste on Team*$<$ 18 Years Old	2.89	1.55
	(0.75)	(0.47)
Prop. Oth. Caste on Team*$\geq$ 18 Years Old	1.43	0.47
	(1.05)	(0.52)
Prop. Oth. Caste of Opponents*$<$ 18 Years Old	-2.52	-0.05
	(4.00)	(2.99)
Prop. Oth. Caste of Opponents*$\geq$ 18 Years Old	-13.62	-6.53
	(4.41)	(2.42)
Observations	770	770
Outcome Mean	7.9	3.5
Caste*League*($<$ 18 Years Old) FE	Yes	Yes
p(Coll. Young = Coll. Old)	.24	.12
p(Adv. Young = Adv. Old)	.082	.12

Notes: Standard errors clustered at team-level. Column (1) outcome is number of other-caste participants the respondent considers friends or wants to spend time with. Column (2) outcome is number of other-caste participants the respondent considers friends. Both columns include number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization as controls.

Table A8: Collaborative Contact Effects on Opponents vs. Non-Opponents

	Want to Interact (1)	Friends (2)
Panel A:	% of Oth. Caste Opponents	
Prop. Oth. Caste on Team	0.52	0.24
	(0.89)	(0.44)
Prop. Oth. Caste of Opponents	Yes	Yes
Caste*League FE	Yes	Yes
Outcome Mean	8.3	3.6
Panel B:	% of Oth. Caste Non-Opponents	
Prop. Oth. Caste on Team	1.73	1.15
	(0.83)	(0.44)
Prop. Oth. Caste of Opponents	Yes	Yes
Caste*League FE	Yes	Yes
Outcome Mean	8.4	3.6
Observations	770	770

Notes: Standard errors clustered at team-level. Panel A outcomes are the percentage of other-caste men among opponent teams selected for each question. Panel B outcomes are the percentage of other-caste men among non-opponent teams selected for each question. Each regression controls for number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization.

Table A9: Indirect Links Do Not Explain Generalized Effects of Contact

	Whether i lists j as... (=0/1)			
	Want to Interact (1)	Friend (2)	Want to Interact (3)	Friend (4)
Teammate	0.239	0.126		
	(0.019)	(0.016)		
Friend of Other-Caste Teammate	0.0019	0.0015		
	(0.004)	(0.003)		
Opponent			-0.004	-0.001
			(0.005)	(0.003)
Friend of Other-Caste Opponent			-0.0036	0.0018
			(0.006)	(0.003)
Observations	52171	52171	79858	79858
Outcome Mean	.08	.035	.076	.033
α_{jcl}*Prop. Oth. Caste on Team FE	Yes	Yes	No	No
α_{jcl}*Prop. Oth. Caste of Opponents FE	No	No	Yes	Yes

Notes: Unit of observation is i-j dyad (pair of individuals). Sample includes only dyads where j is not the same caste as i. Additionally, columns (1) and (2) include only dyads where i is assigned to a mixed team. Columns (3) and (4) include only dyads where i is assigned to league participation. All columns control for a dummy variable equal to one if i listed j as a friend at baseline, and a dummy variable equal to one if this baseline link data is missing. Standard errors are dyadic-robust at team-level. Teammate (Opponent) is a dummy variable equal to one if i and j are teammates (opponents). Friend of Other-Caste Teammate (Opponent) is a dummy variable equal to one if j is listed at baseline as a friend of any of i's other-caste teammates (opponents). α_{jcl} is a set of Caste*League (of i) fixed effects fully interacted with person j fixed effects. α_{jcl} is then fully interacted with the categories of Prop. Oth. Caste on Team in columns (1) and (2), and with the categories of Prop. Oth. Caste of Opponents in columns (3) and (4).

Table A10: Collaborative Contact Leads to More Friendships in Leagues With More Spectators

	Want to Interact			Friends		
	All	Team	% Other-Team	All	Team	% Other-Team
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A:	Many-spectators Leagues (2, 7, 8)					
Prop. Oth. Caste on Team	3.10	1.41	2.43	2.01	0.72	1.87
	(1.09)	(0.13)	(1.27)	(0.65)	(0.12)	(0.67)
Caste*League FE	Yes	Yes	Yes	Yes	Yes	Yes
Outcome Mean	8.4	.63	9	3.8	.34	3.9
Observations	288	288	288	288	288	288
Panel B:	Few-spectators Leagues (1, 3-6)					
Prop. Oth. Caste on Team	1.73	1.22	0.64	0.58	0.58	0.28
	(0.83)	(0.12)	(0.94)	(0.38)	(0.08)	(0.44)
Caste*League FE	Yes	Yes	Yes	Yes	Yes	Yes
Outcome Mean	7.6	.54	8	3.2	.25	3.4
Observations	482	482	482	482	482	482

Notes: Standard errors clustered at team-level. Column (1) outcome is number of other-caste participants the respondent considers friends or wants to spend time with. Column (2) outcome is number of other-caste teammates the respondent considers friends or wants to spend time with. Column (3) outcome is percentage of other-caste men from other teams the respondent considers friends or wants to spend time with. Columns (4) to (6) outcomes parallel those in (1) to (3), for participants the respondent considers friends. All regressions control for Prop. Oth. Caste of Opponents, number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization.

Table A11: Participants Who Watch More Matches Make More Other-Caste Friends

	Want to Interact	Friends
	(1)	(2)
Number of Matches Watched	0.04	0.04
	(0.02)	(0.02)
Number of Matches Played	0.24	0.07
	(0.05)	(0.03)
Observations	1211	1211
Outcome Mean	7.2	3.2
Number of Matches Watched Mean	8.6	8.6
Caste*League FE	Yes	Yes

Notes: Robust standard errors. Column (1) outcome is number of other-caste participants the respondent considers friends or wants to spend time with. Column (2) outcome is number of other-caste participants the respondent considers friends. Both columns include number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization as controls.

Table A12: Effects of Contact on Team Formation Beyond Immediate Interactions

	Team Choice for Match with	
	Stakes	No Stakes
	(1)	(2)
Panel A:	% of Other Castes from Other Teams	
Prop. Oth. Caste on Team	0.34	0.09
	(0.16)	(0.15)
Prop. Oth. Caste of Opponents	Yes	Yes
Outcome Mean	1.5	1.5
Panel B:	% of Other Castes among Non-Playing Backups	
Prop. Oth. Caste of Opponents	0.49	-0.60
	(0.85)	(0.78)
Prop. Oth. Caste on Team	Yes	Yes
Outcome Mean	.66	.69
Observations	768	768
Caste*League FE	Yes	Yes

Notes: Standard errors clustered at team-level. Panel A outcomes are for generalization of collaborative contact effects. They are the percentage of other-caste men among other teams (in the same league) listed as future teammates for either the future match with stakes (column (1)) or the one without (column (2)). Panel B outcomes are for generalization of adversarial contact effects. They are the percentage of other-caste men among non-playing backups selected as teammates for each match. Each regression controls for number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization.

Table A13: Voting for Friends vs. Same Caste

	Vote Rank = 1 to 5		
	All	All	Non-Opp
	(1)	(2)	(3)
Own Caste Voted On	0.31		
	(0.03)		
Baseline Friend	0.84	0.85	0.53
	(0.05)	(0.32)	(0.46)
Own Caste Voted On*Prop. Oth. Caste on Team		-0.12	-0.14
		(0.08)	(0.12)
Own Caste Voted On*Prop. Oth. Caste of Opp.		0.13	-0.29
		(0.39)	(0.48)
Baseline Friend*Prop. Oth. Caste on Team		0.05	-0.06
		(0.14)	(0.18)
Baseline Friend*Prop. Oth. Caste of Opp.		-0.05	0.54
		(0.46)	(0.65)
Observations	9180	9180	4570
Votee FE	Yes	Yes	Yes
Prop. Oth. Caste on Team	No	Yes	Yes
Prop. Oth. Caste of Opponents	No	Yes	Yes
Caste*League*Own Caste Voted On FE	No	Yes	Yes

Notes: The unit of observation is a voter-votee pair. Voter-clustered standard errors for column (1). Team of voter-clustered standard errors for columns (2) and (3). The outcome was reverse-coded such that a higher number is better. All columns exclude votes for teams with players only of the same caste of the voter or players only of other castes. Baseline Friend is a dummy variable equal to one if the voter listed the votee as a friend at baseline. Each column also includes a dummy variable equal to one if this baseline data is missing. Columns (2) and (3) additionally include an interaction between this dummy variable for missing and each of Prop. Oth. Caste on Team and Prop. Oth. Caste of Opp. Votee fixed effects can be included because the same person can be voted on by multiple voters. Column (3) only includes votes made on teams that were not faced as opponents during the league. Columns (2) and (3) also control for number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization, as well as each interacted with Own Caste Voted On.

Table A14: Trading with Teammates and Friends of Teammates

	Whether i trades with j (=0/1)
Teammate	-0.001
	(0.009)
Friend of Oth. Caste Teammate	0.002
	(0.003)
Observations	25482
Outcome Mean	.013
α_{jcl}*Prop. Oth. Caste on Team FE	Yes

Notes: Unit of observation is i-j dyad (pair of individuals). Sample includes only dyads where (1) i is assigned to a mixed team, (2) i is given a positive monetary incentive to switch the sticker color of his gifts, and (3) j is not the same caste as i. Regression controls for a dummy variable equal to one if i listed j as a friend at baseline, and a dummy variable equal to one if this baseline link data is missing. Standard errors are dyadic-robust at team-level. Teammate is a dummy variable equal to one if i and j are teammates. Friend of Oth. Caste Teammate is a dummy variable equal to one if j is listed at baseline as a friend of any of i's other caste teammates. α_{jcl} is set of Caste*League (of i) fixed effects fully interacted with person j fixed effects. α_{jcl} is then fully interacted with the categories of Prop. Oth. Caste on Team (0.25, 0.5, 0.75, and 1, since the sample is only those i's assigned to mixed teams).

Table A15: Contact and the Trust Gap by Caste

	Amount Sent in Trust Game (Rs. 0 to 50)					
	(1)	(2)	(3)	(4)	(5)	(6)
Own Caste Recipient	2.50	1.75	-0.45			
	(0.93)	(0.96)	(1.12)			
Own Caste Recip.*Prop. Oth. Caste on Team				-1.76	0.16	0.77
				(2.08)	(2.51)	(2.78)
Own Caste Recip.*Prop. Oth. Caste of Opp.				-7.68	-2.49	11.43
				(9.22)	(10.04)	(11.41)
Observations	741	789	723	741	789	723
Outcome Mean	21.8	21.4	23.6	21.8	21.4	23.6
Caste Sample	General	OBC	SC/ST	General	OBC	SC/ST
Sender FE	Yes	Yes	Yes	Yes	Yes	Yes
Age of Recipient	Yes	Yes	Yes	Yes	Yes	Yes
Caste*League*Own Caste Recipient FE	No	No	No	Yes	Yes	Yes

Notes: The unit of observation is a Sender-Recipient pair. Senders are partnered with one General, one OBC, and one SC/ST Recipient, such that there are three observations per Sender. Standard errors clustered at individual-level for columns (1) to (3), team-level for columns (4) to (6). Columns (4) to (6) also include the interaction of Own Caste Recipient with number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization.

Table A16: Contact with Friends Increases Trust

	Amount Sent (1)	Stated Trust (2)	Trust Index (3)
Number of Friends on Team	1.41	0.04	0.12
	(0.77)	(0.03)	(0.05)
Observations	2253	770	751
Outcome Mean	22.2	.21	0.03
Prop. Oth. Caste on Team	Yes	Yes	Yes
Prop. Oth. Caste of Opp.	Yes	Yes	Yes
Caste*League FE	Yes	Yes	Yes

Notes: The unit of observation is a Sender-Recipient pair in column (1), and an individual in columns (2) and (3). Senders are partnered with one General, one OBC, and one SC/ST Recipient, such that there are three observations per Sender in column (1). Standard errors clustered at team-level. Outcome in column (1) is amount sent (Rs. 0 to 50) by Sender to Recipient in trust game. Outcome in column (2), Stated Trust, is a dummy variable coming from the question "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". Stated Trust equals one if the respondent answers "Most people can be trusted" and equals zero if the respondent answers "Need to be very careful". Outcome in column (3), Trust Index, is the average of two variables: the standardized individual-level mean amount sent in the trust game and standardized Stated Trust. All columns include number of own-caste friends and number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization as controls.

Table A17: Effects of Contact for Backups, Controlling for Matches Played

	N. Oth. Caste Friends (Baseline)		N. Oth. Caste Want to Interact		N. Oth. Caste Friends		Cross-Caste Trade	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean Prop. Oth. Caste on Team	1.41	2.16	3.58	8.73	2.58	8.14	-0.11	0.08
	(1.34)	(2.70)	(2.62)	(6.71)	(2.24)	(5.60)	(0.11)	(0.25)
N. Matches Attended	0.07	0.08	0.22	0.13	0.09	-0.04	0.01	0.01
	(0.05)	(0.07)	(0.09)	(0.14)	(0.07)	(0.11)	(0.00)	(0.01)
Observations	244	114	250	120	250	120	490	236
Outcome Mean	4	4.2	6.4	7.1	2.9	3.2	.54	.56
N. Matches Attended Mean	6.1	8.8	6.2	8.8	6.2	8.8	6.2	8.8
Sample	All	High	All	High	All	High	All	High
Caste*League FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The unit of observation is the participant for columns (1) to (6), and the participant-good for columns (7) and (8). Robust standard errors for columns (1) to (6). Standard errors clustered at individual-level for columns (7) and (8). The four outcomes are: number of other-caste friends listed at baseline (columns (1) and (2)), number of other-caste participants the respondent considers friends or wants to spend time with at endline (columns (3) and (4)), number of other-caste participants the respondent considers friends at endline (columns (5) and (6)), and a dummy variable equal to one if the good was successfully traded with someone from a different caste (columns (7) and (8)). Mean Prop. Oth. Caste on Team is the mean of the other-caste on-team exposure actually experienced by the backup. Columns (3) to (8) also control for number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization. Columns (7) and (8) additionally control for color-switch and trade bonus dummy variables. The sample in odd-numbered columns includes all backup players that played at least one match. The sample in even-numbered columns includes backup players with priority numbers one to three that played at least one match.

Table A18: Effects of Contact on Winning

	Number of Matches Won		
	Participant (1)	Team (2)	Total Pay (3)
Prop. Oth. Caste on Team	-0.06		-6.50
	(0.33)		(14.61)
Prop. Oth. Caste of Opponents	0.05		-13.90
	(0.99)		(63.45)
Mixed Team		-0.17	
		(0.29)	
Team Ability Index		2.52	
		(0.47)	
Observations	800	160	800
Outcome Mean	3	4	294
Caste*League FE	Yes	Yes	Yes

Notes: The unit of observation in columns (1) and (3) is the participant. In column (2) it is the team. Standard errors clustered at team-level. The outcome for column (1) is the number of matches played and won by each participant. The outcome for column (2) is the number of matches played and won by each team. The outcome for column (3) is the total payout in Rs. earned by each participant, including a Rs. 10 show-up fee for each match the participant played in. Mixed Team is equal to zero if all players in the team are from the same caste, and one otherwise. Team Ability Index is the average ability index across the five players in a team, where the ability index is the average across three standardized baseline ability measures: maximum bowling speed, number of 4s/6s when batting, and number of catches when fielding. Columns (1) and (3) also control for number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization.

Table A19: Collaborative Contact Effects Do Not Depend on Incentive Structure

	N. Oth. Caste		Voting	Trade	Trust	Index
	Friends (1)	Team Choice Stakes (2)	Rank (1-5) (3)	Cross-Caste (4)	Amount Sent (5)	Cross-Caste Behavior (6)
Ind. Pay*Prop. Oth. Caste on Team	1.63	0.71		0.06		0.25
	(0.52)	(0.16)		(0.06)		(0.07)
Team Pay*Prop. Oth. Caste on Team	0.69	0.71		0.07		0.21
	(0.51)	(0.17)		(0.05)		(0.08)
Ind. Pay*Prop Oth. Caste on Team*Own Caste			-0.02		-0.87	
			(0.14)		(2.03)	
Team Pay*Prop Oth. Caste on Team*Own Caste			-0.12		0.01	
			(0.09)		(1.87)	
Observations	770	768	9180	1510	2253	777
Outcome Mean	3.5	1.5	3	.56	22	.14
p(Team = Individual)	.2	.99	.53	.95	.75	.71

Notes: Standard errors clustered at team-level. Each regression estimates the effect of collaborative contact separately for those on Team Pay and Individual Pay teams. To do this, each column includes a set of covariates (used previously) fully interacted with a dummy for Individual Pay. For the set of covariates for columns (1), (2) and (6), see Panel A, column (1) of Table 2. For column (3), see column (5) of Table 4. For column (4), see column (2) of Table 5. For column (5), see column (2) of Table 6. The unit of observation is the participant for columns (1), (2), and (6). The unit of observation is a voter-votee pair in column (3), a participant-good in column (4), and a sender-recipient pair in column (5). Ind. (Team) Pay is a dummy variable equal to one if the participant's team receives Individual (Team) Pay incentives. Own Caste is a dummy variable equal to one if the votee/recipient is the same caste as the voter/sender for the voting and trust outcomes. The outcome for each column is: (1) number of other-caste men participant considers friends, (2) number of other-caste men participant chose as teammates for match with stakes, (3) vote rank given for field trip (5 is best), (4) dummy variable equal to one if good was traded with someone from a different caste, (5) amount sent in trust game (Rs. 0 to 50), and (6) Cross-Caste Behavior Index.

Table A20: Cross-Caste Interactions with Teammates Do Not Depend on Incentive Structure

	Friendly			Hostile		Proportion Hostile
	High-Fives (1)	Congrats (2)	Hugs (3)	Arguments (4)	Insults (5)	(6)
Individual Pay	-0.11	0.06	-0.12	-0.06	-0.01	-0.02
	(0.10)	(0.04)	(0.12)	(0.04)	(0.01)	(0.03)
Observations	3153	3153	3153	3153	3153	1967
Team Pay Mean	.53	.2	.91	.12	.029	.083
Match FE	Yes	Yes	Yes	Yes	Yes	Yes
Caste i*Caste j FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Unit of observation is individual dyad-match (ijt). Sample only includes dyad-match observations where (1) neither i or j is a backup player, (2) i and j belong to the same team, and (3) i and j are members of different castes. Standard errors are dyadic-robust at team-level. Individual Pay is a dummy variable equal to one if i and j are playing on a team assigned to Individual Pay incentives. Team Pay Mean is the mean of the outcome for all dyad-matches in which i and j are on a team assigned to Team Pay incentives. The outcomes for columns (1) to (5) are the counts of interactions that i and j were involved in during match t, where the interactions are: (1) high-fives, (2) hugs/taps on back, (3) one player complimenting/congratulating another player, (4) arguments, and (5) one player insulting (sledging) another player. The sample in column (6) is further restricted to those dyad-matches involved in at least one interaction. The outcome is the total number of hostile interactions ((4)+(5)) divided by the total number of interactions ((1)+(2)+(3)+(4)+(5)).

Table A21: Is Contact Mediated by Other-Caste Friends of Teammates and Opponents?

	Want to Interact (1)	Friends (2)	Cross-Caste Trade (3)	Trust Index (4)
Prop. Oth. Caste on Team	2.08	0.92	0.06	-0.11
	(0.83)	(0.42)	(0.05)	(0.09)
Prop. Oth. Caste of Opponents	-11.01	-5.01	-0.28	-0.97
	(3.17)	(2.16)	(0.20)	(0.35)
Prop. Oth. Caste on Team*Oth. Caste Team Oth. Caste Friends	0.02	0.03	0.00	0.01
	(0.10)	(0.07)	(0.01)	(0.01)
Prop. Oth. Caste of Opp.*Oth. Caste Opp. Oth. Caste Friends	0.79	0.38	0.03	0.00
	(0.41)	(0.29)	(0.03)	(0.04)
Observations	767	767	1504	2244
Outcome Mean	7.9	3.5	.56	.031
Caste*League FE	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at team-level. The unit of observation is the participant for columns (1), (2), and (4), and the participant-good for column (3). Column (1) outcome is the number of other-caste participants the respondent considers friends or wants to spend time with. Column (2) outcome is the number of other-caste participants the respondent considers friends. Column (3) outcome is a dummy variable equal to one if the good was successfully traded with someone from a different caste. Column (4) outcome is the average of two variables: the standardized individual-level mean amount sent in the trust game and standardized Stated Trust. All columns include number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization as controls. Column (3) additionally includes the trade bonus and color-switch bonus dummy variables.

Table A22: Lower Castes Have Lower Cricket Ability

	Baseline Ability			Individual Pay Per Match	
	Bowl	Bat	Field		
	(1)	(2)	(3)	(4)	(5)
OBC	-1.11	-0.10	0.05	0.01	1.82
	(0.90)	(0.11)	(0.10)	(2.75)	(2.50)
SC/ST	-3.45	-0.31	-0.22	-12.92	-7.45
	(0.84)	(0.11)	(0.10)	(2.64)	(2.40)
Age	0.61	0.04	0.05	3.72	2.94
	(0.09)	(0.01)	(0.01)	(0.35)	(0.34)
Bowl Ability					6.69
					(1.00)
Bat Ability					8.18
					(1.16)
Field Ability					4.46
					(0.86)
Observations	800	800	800	769	769
General Caste Outcome Mean	88.1	1.94	5.02	50.7	
Outcome Standard Deviation	10.1	1.29	1.16	33	
League FE	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors. Ability measures are from baseline ability testing. Bat Ability is number of 4s/6s (out of 6), standardized when used as regressor (in column (5)) such that one unit corresponds to one standard deviation. Bowl Ability is maximum bowling speed and Field Ability is number of catches (out of 6). Both are also standardized when used as regressors. Individual Pay Per Match is the average payout the player would have received per match, based on his performance, if he received Individual Pay incentives (for those with Team Pay, this is counterfactual pay, for those with Individual Pay, it is actual pay).

Table A23: Discrimination in Within-Team Allocation

	Captain Choice		Batting Order		Bowling Order	
	(1)	(2)	(3)	(4)	(5)	(6)
OBC	-0.32	-0.26	-0.24	-0.23	-0.04	-0.04
	(0.28)	(0.29)	(0.10)	(0.10)	(0.12)	(0.12)
SC/ST	-1.16	-0.96	-0.69	-0.59	-0.54	-0.43
	(0.26)	(0.26)	(0.10)	(0.09)	(0.12)	(0.12)
Age	0.28	0.26	0.14	0.12	0.11	0.08
	(0.03)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)
Bowl Ability		0.28		0.18		0.33
		(0.10)		(0.03)		(0.04)
Bat Ability		0.33		0.27		0.19
		(0.09)		(0.03)		(0.04)
Field Ability		0.21		0.22		0.19
		(0.12)		(0.04)		(0.04)
Observations	4814		6400			
Estimation	Conditional Logit		Rank-ordered Logit			

Notes: Standard errors clustered at team-level. The unit of observation is the player-match. Columns (1) and (2) exclude backup players since they could not be selected as captains. Captain Choice is equal to one if the player was chosen as the captain of his team for a given match, and zero otherwise. Batting and Bowling Order range from 1 to 5, giving the order within a team for a given match. These two outcomes are reverse-coded so that a higher number is better. Bowlers are not explicitly ordered from 1 to 5 – I use the number of balls actually bowled to rank each team member in each match, yielding a bowling order (in which there may be ties). Coefficients reflect effects on the latent utility from choosing a player as a captain, batsman, or bowler. Bat Ability is number of 4s/6s (out of 6), standardized such that one unit corresponds to one standard deviation. Bowl Ability is maximum bowling speed and Field Ability is number of catches (out of 6). Both are also standardized.

Table A24: Caste Heterogeneity of Contact Effects (I)

	N. Oth. Caste		Trade	Index
	Friends	Team Choice Stakes	Cross-Caste	Cross-Caste Behavior
	(1)	(2)	(3)	(4)
Prop. Oth. Caste on Team: General	1.32	0.67	0.17	0.36
	(0.53)	(0.17)	(0.07)	(0.07)
.... OBC	0.56	0.62	-0.03	0.11
	(0.72)	(0.18)	(0.06)	(0.08)
.... SC/ST	0.99	0.83	0.03	0.23
	(0.50)	(0.23)	(0.07)	(0.10)
p(General = OBC)	.39	.83	.028	.017
p(OBC = SC/ST)	.62	.48	.49	.31
p(General = SC/ST)	.67	.59	.16	.31
Prop. Oth. Caste of Opponents: General	-5.87	0.45	-0.00	-0.30
	(3.15)	(0.81)	(0.27)	(0.38)
.... OBC	0.01	0.69	0.01	-0.34
	(3.05)	(0.75)	(0.28)	(0.34)
.... SC/ST	-3.68	1.26	-0.51	-0.63
	(2.25)	(0.86)	(0.28)	(0.41)
p(General = OBC)	.17	.83	.98	.93
p(OBC = SC/ST)	.34	.62	.18	.59
p(General = SC/ST)	.58	.51	.18	.57
Observations	770	768	1510	777
Caste*League FE	Yes	Yes	Yes	Yes
Trade and Color-Switch Bonus FE	No	No	Yes	No

Notes: Standard errors clustered at team-level. Each column corresponds to one regression, with the outcome regressed on the two contact regressors fully interacted with the three caste group dummy variables. The unit of observation is the participant for columns (1), (2), and (4), and the participant-good for column (3). The outcomes for each column are: (1) number of other-caste men participant considers friends, (2) number of other-caste men participant chose as teammates for future match with stakes, (3) dummy variable equal to one if good was traded with someone from a different caste, and (4) Cross-Caste Behavior Index. Trade and Color-Switch Bonus FE are dummy variables for the participant's trading and color-switching incentives. All regressions include number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization, with each interacted with the three caste group dummy variables.

Table A25: Caste Heterogeneity of Contact Effects (II)

	Voting	Trust
	Rank (1-5) (1)	Amount Sent (2)
Own Caste*Prop. Oth. Caste on Team: General	0.03	-2.10
	(0.14)	(2.06)
.... OBC	-0.27	-0.08
	(0.12)	(2.53)
.... SC/ST	-0.11	1.28
	(0.13)	(2.75)
p(General = OBC)	.12	.53
p(OBC = SC/ST)	.37	.71
p(General = SC/ST)	.46	.33
Own Caste*Prop. Oth. Caste of Opponents: General	0.25	-6.26
	(0.64)	(9.26)
.... OBC	1.06	-3.68
	(0.49)	(9.68)
.... SC/ST	-1.10	9.82
	(0.63)	(11.07)
p(General = OBC)	.23	.85
p(OBC = SC/ST)	.0094	.37
p(General = SC/ST)	.12	.28
Observations	9180	2253
Caste*League*Own Caste Recipient FE	Yes	Yes
Prop. Oth. Caste on Team*Caste FE	Yes	No
Prop. Oth. Caste of Opponents*Caste FE	Yes	No
Votee FE	Yes	No
Sender FE	No	Yes
Age of Recipient	No	Yes

Notes: Standard errors clustered at team-level. Each column corresponds to one regression, and shows the effect of each type of contact on own-caste favoritism (in voting and trust) separately for each caste. The unit of observation is a voter-votee pair for column (1), and a sender-recipient pair in column (2). The outcome in column (1) is the vote rank given for the field trip (5 is best). The outcome in column (2) is the amount sent in the trust game (from Rs. 0 to 50). Both regressions include number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization, with each interacted with the three caste group dummy variables.

Table A26: Each Caste Responds Similarly to Trading Incentives

	Cross-Caste Trade (1)
Color Switch Bonus = 50: General	0.24
	(0.06)
.... OBC	0.24
	(0.06)
.... SC/ST	0.18
	(0.06)
Color Switch Bonus = 100: General	0.27
	(0.06)
.... OBC	0.25
	(0.06)
.... SC/ST	0.21
	(0.06)
Observations	1510
Prop. Oth. Caste on Team	Yes
Prop. Oth. Caste of Opponents	Yes
Caste*League FE	Yes
Trade Bonus Dummy	Yes
p(General 50 = OBC 50)	.93
p(OBC 50 = SC/ST 50)	.44
p(General 50 = SC/ST 50)	.54
p(General 100 = OBC 100)	.83
p(OBC 100 = SC/ST 100)	.63
p(General 100 = SC/ST 100)	.49

Notes: Standard errors clustered at team-level. The regression shows the effect of each color-switch bonus on cross-caste trade, separately for each caste. The unit of observation is the participant-good, meaning there are two observations per participant. The outcome is a dummy variable equal to one if the good was successfully traded with someone from a different caste. Trade Bonus Dummy is equal to one if the participant was assigned Rs. 20 for each successful trade, and zero if the participant was assigned Rs. 10 for each successful trade. The regression controls for number of other-caste friends at baseline (and dummy for missing), and the five variables used for re-randomization.

B Background on the Contact Hypothesis

The Contact Hypothesis. Social psychologists began studying intergroup contact in the 1940s amidst a context of racial conflict in the US (Pettigrew et al. (2011)). On the basis of these studies, Allport (1954) introduced the contact hypothesis, writing in chapter 16 of *The Nature of Prejudice*:

> Prejudice (unless deeply rooted in the character structure of the individual) may be reduced by equal status contact between majority and minority groups in the pursuit of common goals. The effect is greatly enhanced if this contact is sanctioned by institutional supports (i.e., by law, custom or local atmosphere), and provided it is of a sort that leads to the perception of common interests and common humanity between members of the two groups.

With Allport's approval, Thomas Pettigrew, who was a graduate research assistant of Allport's at the time, refined the hypothesis to state that interpersonal contact between groups will reduce prejudice only when four conditions are met: (i) equal status of the groups within the situation, (ii) common goals, (iii) intergroup cooperation, and (iv) the support of authorities, law or custom (Pettigrew (2021)).

Existing evidence on the importance of Allport's conditions for the effects of contact relies on cross-study variation (Pettigrew and Tropp (2006)). This evidence concludes that the conditions facilitate, but are not necessary for, prejudice reduction. In particular, studies that satisfy all four conditions show greater reductions in prejudice than those that do not, yet those that do not still find that contact reduces prejudice. For a subset of studies, Pettigrew and Tropp (2006) are able to estimate the effects of each condition separately, with the exception of the support of authorities condition. Here they find that no condition alone has a significant effect on the contact treatment effect, nor is any condition predictive of effect size when all are included in the same regression. Taking this evidence seriously, the implication is that no single condition alone can enhance the positive effects of contact.

The contact hypothesis was formulated to rationalize the mixed effects of contact observed in various settings in the US. However, the theory does not say anything about *why* contact has positive effects, or similarly, by what channels contact works through. Pettigrew (1998) builds on the hypothesis by arguing for four primary channels. First, contact leads to *learning* about the outgroup, which can correct negative beliefs. Second, contact leads to *changed behavior*, as individuals reduce dissonance between prejudice and new behavior by revising attitudes. Third, contact generates *affective ties*, and these friendships mediate effects. Fourth, contact leads to *ingroup reappraisal*, for example, through individuals reassessing the norms and customs associated with the ingroup. Social psychologists have found evidence for the importance of these channels using mediation techniques, again with cross-study variation (Pettigrew and

Tropp (2008)). That said, these channels do not map directly to economic concepts, nor do they clarify why exactly the condition of common goals might matter.

Economic Channels and Common Goals. The presence of common goals generates incentives for different kinds of interactions. Groups with common goals have incentives to cooperate with and encourage one another. In contrast, groups with opposing goals have incentives to undermine one another.

These different types of interactions can generate different treatment effects of contact through both belief-based and preference-based channels. On the beliefs side, participants may make inferences about the nature of the outgroup that depend on the outgroup behavior they observe (Levy and Razin (2018)). These inferences may diverge strongly if participants make attribution errors – participants grow to like other-caste teammates and dislike other-caste opponents since they fail to account for the fact that other-caste teammates have incentives to be cooperative, while other-caste opponents have incentives to be hostile (for a formal model, see Appendix C).[1] In contrast, the two types of contact may give similar information along other outgroup dimensions, like cricket ability.

On the preference side, the interactions that common goals incentivize may mediate effects on preferences if participants develop habits for cooperating with or competing against outgroup members (Becker and Murphy (1988)) or if participants choose their preferences (or "worldviews") to rationalize their cooperative or competitive behavior with the outgroup (Bernheim et al. (2019)).

Each of these channels may have implications for the overall effects of different types of intergroup contact on economic efficiency. For example, shifting preferences toward intergroup cooperation could reduce barriers to intergroup trade, allowing groups to exploit gains from trade. Otherwise, positive effects on beliefs about the trustworthiness of outgroup members can increase efficiency in intergroup agreements that require trust to be enforced.

[1] Motivated beliefs that persist after the leagues have ended could cause a similar divergence (Bénabou and Tirole (2016)).

C Learning Model

In this appendix section I develop a simple model to formalize how the type of contact can mediate impacts on future intergroup behaviors through a learning channel. The starting point is that integration leads to learning about the underlying "types" of other-caste players. The type of integration affects the nature of this learning by changing the structure of signals observed about others.

C.1 Bayesian Information Processing

Each participant is either a good (friendly) or bad (hostile) type, denoted by $\beta_i \in \{\beta_G, \beta_B\}$. I assume that each participant knows the types of players from their own caste[2] (due to more frequent interaction), but learns about the types of other-caste players through observing signals of their types during cricket matches.

For simplicity, assume that two players i and j play together for one match. They face two possible types of contact: they either belong to the same team ($m = 1$) or they are opponents ($m = 0$). During the match, each player can either be friendly to the other ($y = 1$) or be hostile ($y = 0$). A friendly action could be to encourage the other verbally, while a hostile action could be to argue with the other player. Players i and j each observe one signal (y) from the other about their type.

I assume the net utility of player i being friendly with player j to be

$$u_{ij} = \alpha + \phi_1 \mathbb{1}[\beta_i = \beta_G] + \phi_2 m_{ij} + \varepsilon_{ij} \tag{5}$$

where $\varepsilon_{ij} \sim \text{Logistic}(0,1)$. Good types have greater net utility from being friendly with others than bad types ($\phi_1 > 0$). In addition, since teammates have common goals and opponents do not, players receive greater net utility from being friendly with teammates than opponents ($\phi_2 > 0$).[3]

This underlying utility micro-founds the signal structure. Defining π_m^β as $P(y = 1 \mid \beta, m)$, the probability of seeing the other player be friendly given their type and the type of contact, it follows that

$$\pi_m^\beta = P\left(u_{ij} \geq 0\right) = \frac{e^{\alpha + \phi_1 \mathbb{1}[\beta_i = \beta_G] + \phi_2 m}}{1 + e^{\alpha + \phi_1 \mathbb{1}[\beta_i = \beta_G] + \phi_2 m}} \tag{6}$$

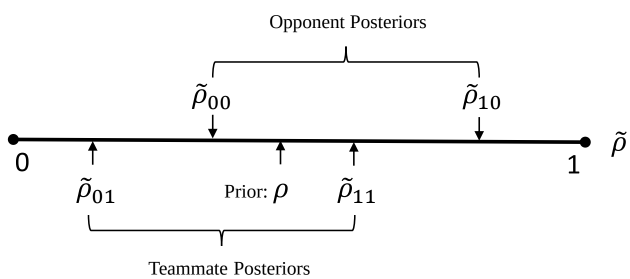
This signal structure has the following features: (i) $\pi_m^G > \pi_m^B \; \forall m$: good types are more likely to be friendly

[2] Empirical results are consistent with this – for example, own-caste contact has only weak effects on own-caste friendships (panel B, Table 2).

[3] This could be further micro-founded by assuming that players receive utility from winning matches and that being friendly with teammates increases the probability of winning more than being friendly with opponents.

than bad types, whether they are teammates or opponents; (ii) $\pi_1^\beta > \pi_0^\beta \; \forall \beta$: teammates are more likely to be friendly than opponents, whether good or bad types; and (iii) $\frac{\pi_0^G}{\pi_0^B} > \frac{\pi_1^G}{\pi_1^B}$, $\frac{1-\pi_0^G}{1-\pi_0^B} > \frac{1-\pi_1^G}{1-\pi_1^B}$: a monotone likelihood ratio property ensuring that posteriors have an intuitive ordering[4] (see Appendix C.5 below for all proofs).

Players hold the common and correct prior ρ that others are good types.[5] Suppose now that players i and j are randomly assigned to be teammates or opponents – i.e. as in the experiment, the type of contact is random. After playing the match, each player updates as a rational (Bayesian) information processor. I first consider the case where i rationally conditions on m. Here i recognizes the fact that opponents should be more hostile, and correspondingly discounts hostile behavior when $m = 0$. More generally, rational information processors should condition on the type of contact (the "situation") when forming inferences about others. In this case, posteriors $\tilde{\rho}_{sm}$ (where $s = 1$ if the friendly signal is observed) can be summarized as:



since $\tilde{\rho}_{10} > \tilde{\rho}_{11} > \rho > \tilde{\rho}_{00} > \tilde{\rho}_{01}$. The type of contact affects the distribution of posteriors – in particular, the highest possible posterior occurs when opponents are friendly, since given the incentives they have, a friendly opponent sends a strong signal that they are a good type. In contrast, the type of contact does not affect the expected posterior, i.e.

$$E_\rho \left[\tilde{\rho} \mid m = 0\right] = E_\rho \left[\tilde{\rho} \mid m = 1\right] = \rho \tag{7}$$

This result follows from the well-known martingale property of Bayesian models. This feature of the fully rational model suggests that the type of contact should have limited impact on inferences about the

[4]For example, if instead $\frac{1-\pi_0^G}{1-\pi_0^B} < \frac{1-\pi_1^G}{1-\pi_1^B}$, it can be the case that players update *less* negatively after observing hostile behavior ($y = 0$) from a teammate than after observing hostile behavior from an opponent. This result is counterintuitive given that hostile behavior should to some extent be expected of opponents.

[5]As explained below, the most important implications of the model are similar if I instead assume that players hold incorrect priors.

type of others. The intuition is clear: though players randomly assigned to be opponents are more hostile, the fully rational Bayesian does not conclude from this that these opponents are more likely to be bad types – this agent properly accounts for how the situation drove the behavior, not the person.

C.2 Fundamental Attribution Error

A large literature in social psychology challenges the claim that individuals properly account for the situation when making inferences about others. Evidence from many settings shows that individuals commit the so-called "fundamental attribution error", over-inferring character traits of individuals from behavior relative to situational effects (Jones and Harris (1967); Jones and Nisbett (1971); Nisbett et al. (1973); Ross (1977); Gilbert and Malone (1995); Ross and Nisbett (2011)). This evidence suggests that a more natural model in this setting is one in which players over-attribute behavior to underlying types.

To model these attribution errors, I assume that players continue to use Bayes' rule to update beliefs, but fail to condition on m (similar to the approaches of Jehiel (2005); Eyster and Rabin (2005); Furukawa (2017); Chauvin (2018))[6] – treating signals from teammates and opponents identically.[7] It now follows that

$$E_{\rho}^{b}[\tilde{\rho} \mid m=0] < \rho < E_{\rho}^{b}[\tilde{\rho} \mid m=1] \tag{8}$$

where the b superscript references the bias. With attribution bias, the type of contact systematically affects the expected posterior, with the two types of contact moving the expected posterior in *opposite* directions from the prior. In expectation, players infer that randomly chosen opponents are less likely to be good types than randomly chosen teammates. Players do so because, conditional on the type of behavior observed, players have the same posterior belief regardless of whether the observed behavior was from an opponent or from a teammate. Since friendly signals are more likely to be observed from teammates, this attribution bias leads the expected posteriors to diverge.

[6] I am agnostic as to the source of the lack of conditioning, though one possibility is that conditioning takes cognitive effort. In support of this explanation, evidence exists that individuals are more likely to commit the fundamental attribution error when under cognitive load (Gilbert (1989)). An alternative explanation is that individuals' motivated "belief in a just world" leads them to attribute behaviors to internal factors rather than external causes, such that people "get what they deserve" (Bénabou and Tirole (2006a)).

[7] Haggag et al. (2018) study intrapersonal (as opposed to interpersonal in this paper) attribution bias in the context of consumer choice: when individuals decide their value of drinking a new drink, they fail to properly condition on the (random) state in which they consumed it last time. Their model of attribution bias does not explicitly map to Bayesian learning, but has the advantage of allowing attribution bias to range from zero to one, nesting the extreme cases of perfect and no conditioning. Other papers in economics study intrapersonal attribution errors through the lens of motivated forgetting, e.g. through recalling past successes more than past failures (Bénabou and Tirole (2002), Bénabou and Tirole (2006a)).

C.3 Decisions to Interact

I do not observe $\tilde{\rho}$ directly in the data, and consequently cannot test the theory directly by comparing the sample expectation of posteriors across treatments. Instead, I observe each player's choices of whom to interact with. Focusing on the case of social interaction, suppose that players select others as friends only when $\tilde{\rho} > c$. Without attribution bias, it follows that

$$P(\tilde{\rho} > c \mid m = 0) \lesseqgtr P(\tilde{\rho} > c \mid m = 1) \tag{9}$$

meaning that, without bias, the type of contact has an ambiguous effect on the likelihood of friendship, with the ambiguity depending on the exact cutoff c. For some cutoffs it is even possible for opponents to be *more* likely to become friends than teammates. This result holds because an instance of opponent friendliness is particularly informative of their type.

The model with attribution bias does not have the same ambiguity, since regardless of c it implies that

$$P^b(\tilde{\rho} > c \mid m = 0) \leq P^b(\tilde{\rho} > c \mid m = 1) \tag{10}$$

i.e. players are weakly more likely to become friends with teammates than opponents regardless of the cutoff. In this sense, the results most naturally fit with a model of belief updating with attribution bias.

C.4 Discussion

Friendliness vs. Ability. In the model, players update only about the friendliness of other-caste players. In the experiment, there is an important second dimension of updating: players learn about the cricket ability of other-caste players. Along this dimension, it is plausible that the type of contact should not affect updating. Though participants observe very different signals of friendliness from teammates versus opponents, the signals of cricket ability observed are likely to be similar. In this sense, the type of contact might systematically affect learning along some dimensions but not others.

Incorrect Priors. To simplify the exposition, I assume that priors are correct. A more plausible assumption may be that priors are incorrect, such that $\rho \neq \rho^t$, where ρ^t is the true proportion of other-castes that are good types. In this case, the type of contact can affect the speed of learning ($|\, \rho^t - E_{\rho^t}[\tilde{\rho} \mid m = x] \,|$) even in the absence of attribution bias.[8] But only with attribution bias can the learning (in expectation) go

[8] However, the predicted effect of the type of contact on the speed of learning is of ambiguous sign.

in opposite directions from the prior, depending on the type of contact. In this sense, even with incorrect priors the model with attribution bias is a more natural model through which to interpret the results.

Individuals vs. Groups. The model focuses on inferences about the types of individuals. Similar updating can occur about the caste group as a whole if we assume a second level of uncertainty, regarding the proportion of types in the caste group. Signals of behavior from individuals are then used to also update about the group. In the empirics I explore effects of contact on behaviors toward individuals directly interacted with, as well as the broader caste group.

C.5 Model Proofs

Endogenous Signal Structure

Utility structure implies that $\pi_m^G > \pi_m^B \; \forall m$:

$$\begin{aligned}
\pi_m^G = \frac{e^{\alpha+\phi_1+\phi_2 m}}{1+e^{\alpha+\phi_1+\phi_2 m}} &\gtrless \frac{e^{\alpha+\phi_2 m}}{1+e^{\alpha+\phi_2 m}} = \pi_m^B \\
e^{\alpha+\phi_1+\phi_2 m} + e^{2\alpha+\phi_1+2\phi_2 m} &\gtrless e^{\alpha+\phi_2 m} + e^{2\alpha+\phi_1+2\phi_2 m} \\
e^{\alpha+\phi_1+\phi_2 m} &> e^{\alpha+\phi_2 m}
\end{aligned}$$

since $\phi_1 > 0$. It follows that $\pi_1^\beta > \pi_0^\beta \; \forall \beta$ given the symmetry in the problem, and that $\phi_2 > 0$.

Utility structure implies that $\frac{\pi_0^G}{\pi_0^B} > \frac{\pi_1^G}{\pi_1^B}$:

$$\begin{aligned}
\frac{\pi_0^G}{\pi_0^B} = \frac{\frac{e^{\alpha+\phi_1}}{1+e^{\alpha+\phi_1}}}{\frac{e^{\alpha}}{1+e^{\alpha}}} &\gtrless \frac{\frac{e^{\alpha+\phi_1+\phi_2}}{1+e^{\alpha+\phi_1+\phi_2}}}{\frac{e^{\alpha+\phi_2}}{1+e^{\alpha+\phi_2}}} = \frac{\pi_1^G}{\pi_1^B} \\
\frac{e^{2\alpha+\phi_1+\phi_2}}{(1+e^{\alpha+\phi_1})(1+e^{\alpha+\phi_2})} &\gtrless \frac{e^{2\alpha+\phi_1+\phi_2}}{(1+e^{\alpha})(1+e^{\alpha+\phi_1+\phi_2})} \\
1+e^{\alpha}+e^{\alpha+\phi_1+\phi_2}+e^{2\alpha+\phi_1+\phi_2} &\gtrless 1+e^{\alpha+\phi_1}+e^{\alpha+\phi_2}+e^{2\alpha+\phi_1+\phi_2} \\
e^{\alpha+\phi_1+\phi_2}-e^{\alpha+\phi_1} &\gtrless e^{\alpha+\phi_2}-e^{\alpha} \\
e^{\phi_1}e^{\phi_2}-e^{\phi_1} &\gtrless e^{\phi_2}-1 \\
e^{\phi_1} &> 1
\end{aligned}$$

since $\phi_1 > 0$.

Utility structure implies that $\frac{1-\pi_0^G}{1-\pi_0^B} > \frac{1-\pi_1^G}{1-\pi_1^B}$:

$$\begin{aligned}\frac{1-\pi_0^G}{1-\pi_0^B} = \frac{\frac{1}{1+e^{\alpha+\phi_1}}}{\frac{1}{1+e^{\alpha}}} &\gtrless \frac{\frac{1}{1+e^{\alpha+\phi_1+\phi_2}}}{\frac{1}{1+e^{\alpha+\phi_2}}} = \frac{1-\pi_1^G}{1-\pi_1^B}\\ \frac{1+e^{\alpha}}{1+e^{\alpha+\phi_1}} &\gtrless \frac{1+e^{\alpha+\phi_2}}{1+e^{\alpha+\phi_1+\phi_2}}\\ 1+e^{\alpha}+e^{\alpha+\phi_1+\phi_2}+e^{2\alpha+\phi_1+\phi_2} &\gtrless 1+e^{\alpha+\phi_2}+e^{\alpha+\phi_1}+e^{2\alpha+\phi_1+\phi_2}\\ e^{\alpha+\phi_1+\phi_2}-e^{\alpha+\phi_1} &> e^{\alpha+\phi_2}-e^{\alpha}\end{aligned}$$

from the working above.

Posteriors – No Attribution Bias

Posteriors follow from the application of Bayes' Rule, i.e. that $P(\beta_i = \beta_G \mid y, m) = \frac{P(y|\beta_i=\beta_G,m)\cdot P(\beta_i=\beta_G,m)}{P(y,m)}$. It follows that posteriors are:

	Teammate: $m = 1$	Opponent: $m = 0$
$y = 1$	$\tilde{\rho}_{11} = \frac{\rho\pi_1^G}{\rho\pi_1^G+(1-\rho)\pi_1^B}$	$\tilde{\rho}_{10} = \frac{\rho\pi_0^G}{\rho\pi_0^G+(1-\rho)\pi_0^B}$
$y = 0$	$\tilde{\rho}_{01} = \frac{\rho\left(1-\pi_1^G\right)}{\rho\left(1-\pi_1^G\right)+(1-\rho)\left(1-\pi_1^B\right)}$	$\tilde{\rho}_{00} = \frac{\rho\left(1-\pi_0^G\right)}{\rho\left(1-\pi_0^G\right)+(1-\rho)\left(1-\pi_0^B\right)}$

Posteriors – Attribution Bias

In this case, $P(\beta_i = \beta_G \mid y = a, m = 1) = P(\beta_i = \beta_G \mid y = a, m = 0) = P(\beta_i = \beta_G \mid y = a)$. Posteriors are now the same for teammates and opponents, conditional on the signal observed:

	Teammate: $m = 1$, Opponent: $m = 0$
$y = 1$	$\tilde{\rho}_1^b = \frac{\rho\left(\pi_1^G+\pi_0^G\right)}{\rho\left(\pi_1^G+\pi_0^G\right)+(1-\rho)\left(\pi_1^B+\pi_0^B\right)}$
$y = 0$	$\tilde{\rho}_0^b = \frac{\rho\left(2-\pi_1^G-\pi_0^G\right)}{\rho\left(2-\pi_1^G-\pi_0^G\right)+(1-\rho)\left(2-\pi_1^B-\pi_0^B\right)}$

Expected posteriors now depend on the type of contact (equation 8):

$$E_\rho^b[\tilde{\rho} \mid m = 1] = \rho\pi_1^G\tilde{\rho}_1^b + \rho\left(1-\pi_1^G\right)\tilde{\rho}_0^b + (1-\rho)\pi_1^B\tilde{\rho}_1^b + (1-\rho)\left(1-\pi_1^B\right)\tilde{\rho}_0^b > \rho$$

since $\tilde{\rho}_1^b > \tilde{\rho}_{11}$ and $\tilde{\rho}_0^b > \tilde{\rho}_{01}$ (the posteriors in each state are greater than when conditioning on the situation, but the probability with which each state occurs is unchanged). Similarly:

$$E_\rho^b[\tilde{\rho} \mid m=0] = \rho \pi_0^G \tilde{\rho}_1^b + \rho \left(1-\pi_0^G\right) \tilde{\rho}_0^b + (1-\rho)\, \pi_0^B \tilde{\rho}_1^b + (1-\rho) \left(1-\pi_0^B\right) \tilde{\rho}_0^b < \rho$$

since $\tilde{\rho}_1^b < \tilde{\rho}_{10}$ and $\tilde{\rho}_0^b < \tilde{\rho}_{00}$.

Probability of Selecting Friends – No Attribution Bias

To see equation 9, note that the cutoff c can fall into five relevant regions:

1. $0 \leq c < \tilde{\rho}_{01}$: $P[\tilde{\rho} > c \mid m=0] = P[\tilde{\rho} > c \mid m=1] = 1$
2. $\tilde{\rho}_{01} \leq c < \tilde{\rho}_{00}$: $P[\tilde{\rho} > c \mid m=0] > P[\tilde{\rho} > c \mid m=1]$
3. $\tilde{\rho}_{00} \leq c < \tilde{\rho}_{11}$: $P[\tilde{\rho} > c \mid m=0] = \rho \pi_0^G + (1-\rho)\, \pi_0^B < \rho \pi_1^G + (1-\rho)\, \pi_1^B = P[\tilde{\rho} > c \mid m=1]$
4. $\tilde{\rho}_{11} \leq c < \tilde{\rho}_{10}$: $P[\tilde{\rho} > c \mid m=0] > P[\tilde{\rho} > c \mid m=1]$
5. $\tilde{\rho}_{10} \leq c \leq 1$: $P[\tilde{\rho} > c \mid m=0] = P[\tilde{\rho} > c \mid m=1] = 0$

Teammates are more likely to become friends than opponents in Region 3, but in Regions 2 and 4 the opposite is true.

Probability of Selecting Friends – Attribution Bias

To see equation 10, note that there are now only three relevant regions for the cutoff:

1. $0 \leq c < \tilde{\rho}_0^b$: $P[\tilde{\rho} > c \mid m=0] = P[\tilde{\rho} > c \mid m=1] = 1$
2. $\tilde{\rho}_0^b \leq c < \tilde{\rho}_1^b$: $P[\tilde{\rho} > c \mid m=0] = \rho \pi_0^G + (1-\rho)\, \pi_0^B < \rho \pi_1^G + (1-\rho)\, \pi_1^B = P[\tilde{\rho} > c \mid m=1]$
3. $\tilde{\rho}_1^b \leq c \leq 1$: $P[\tilde{\rho} > c \mid m=0] = P[\tilde{\rho} > c \mid m=1] = 0$

There are now no regions where opponents are more likely to become friends than teammates. In this sense, the attribution bias model maps more easily to the stylized facts of the empirics. In particular, the attribution bias model is consistent with the results when $\tilde{\rho}_0^b \leq c < \tilde{\rho}_1^b$, whereas the Bayesian model is only consistent with the results when $\tilde{\rho}_{00}^b \leq c < \tilde{\rho}_{11}^b$, a smaller region.

D Pre-registration Differences

This study was pre-registered (without a formal pre-analysis plan) in the AEA registry with ID #0001856. The key differences between the paper and the pre-registration are:

- The pre-registration describes the experimental variation in monetary incentives designed to test whether the type of contact mediates treatments effects. In the paper, I estimate these effects (Section 6.2), but devote more attention to the variation in contact induced by random assignment to teammates versus opponents. Partway through the experiment it became clear that the latter source of variation could be exploited and would be informative, and later it became clear that while the latter variation affected the nature of interactions (Table A1), the former did not (Table A20). As a result I describe both sets of results in the paper, but focus my attention on the "stronger" treatment.

- The pre-registration describes 11 primary and secondary outcomes. I measured all of these outcomes, but do not report effects on three of them in the present paper:

  - First, I do not estimate effects on collective field trip voting (votes jointly agreed on by each team) since this paper focuses on how *individual*-level beliefs, preferences, and behaviors, respond to variation in intergroup contact.
  - Second, the caste IAT data I collected measures associations between General/Scheduled Caste and Good/Bad. This outcome turns out to not fit naturally with the set of outcomes I report in this paper given that the implicit preferences here relate to General Castes versus Scheduled Castes rather than Ingroup Castes versus Outgroup Castes. As a result, the IAT data has nothing to say about preferences towards OBCs, and unclear predictions for when OBCs have contact with both General and Scheduled Castes.
  - Third, participants answered vignettes that aimed to capture their willingness to cooperate with other-caste members (as signalled by names) immediately after each match. I omit this data in the paper due to two doubts: first, there is no baseline evidence of ingroup bias in the answers, and second, these measures are much more short-term than those I ultimately focus on in the paper.

- As detailed in the pre-registration, I held income lotteries after each match. I held these lotteries to allow me to explore income effects as a channel for the effects of contact in case contact also affected income. In practice, neither collaborative nor adversarial contact affected match earnings (column 3, Table A18), and so I don't exploit the variation given by the income lotteries.

Other than these differences, these are the main aspects which were described in the pre-registration and then implemented in the paper without deviation:

- The location (Uttar Pradesh) and NGO partner (Sarathi Development Foundation)
- The definition of outgroup contact as contact with other-castes, where "caste" comprises one of three caste groups. From the pre-registration: "though data on subcaste (jati) will be collected, the primary focus is on three broad caste groups: General, OBC and SC/ST. It is these three groups that will be used for stratification in the randomisation, and it is these three groups which will be used for the primary analysis of effects on bias/prejudice towards own versus "other" castes."
- Eligible sample (14 to 30-year-olds)
- Entire experiment design, including:
  - Random assignment to leagues or not
  - Random assignment to different teams and opponents
  - Random assignment to umpires ("Each match is randomised to have either a General or OBC or SC/ST umpire. This randomisation is not of primary interest, but given that some allocation of umpires to matches is needed, random allocation comes at no extra cost.")
  - Random assignment to monetary incentives
  - Exact monetary incentive scheme
  - Ex ante ability testing
  - Match length
- Sample size:
  - Pre-registered: 120-160 teams, 900-1200 men, 6-8 leagues
  - Actual: 160 teams, 1261 men, 8 leagues

E Qualitative Observations

I recorded the observations of surveyors throughout the implementation period using daily debriefs. I report here a selection of surveyor observations that relate to how the participants viewed and experienced caste relations during the study. I have redacted all names.

Before the Leagues Began.

- Some OBCs said that if Tiwaris, Pandits etc. (Brahmins) are playing, they won't play. (*December 23, 2016*)

- One respondent warned of fights between upper and lower castes (Brahmin vs OBC), and a few cases between General and SCs. (*December 24, 2016*)

- One Rajbhar (OBC) refused to play because we have signed up people from another hamlet, with whom they have a feud. (*December 26, 2016*)

- Respondents in the Harijan (SC) hamlet said that they usually play with Yadavs (OBC), but not with Brahmins (General). They said that it would be weird to play with them since there's no interaction (they said that they would be nervous). But they agreed to sign up for the tournament. (*December 27, 2016*)

- When one Brahmin (General) was shown the photos, particularly the lower caste ones, he said "why are you showing me their photos, you're spoiling my day". Another Brahmin marked lower caste participants as friends, while calling them derogatory names. (*January 5, 2017*)

- Some Yadavs (OBC) asked us to run the tournament carefully as they had had clashes in the past with the people from the General caste hamlet. (*March 22, 2017*)

- One of the Brahmin (General) sign-ups asked the surveyor whether the J-PAL team would also be registering individuals from other castes. (*May 23, 2017*)

- One Brahmin (General) requested that he be assigned in the team that consists of players from his own hamlet and thus from his own caste. He also said that if he were assigned in a team with a Chamar (SC), he would *"bohot maar marenge"* (beat them a lot). (*May 23, 2017*)

- One Brahmin (General) asked if the tournament registration was being undertaken in order to survey the caste prejudices in the village. (*May 24, 2017*)

- When the surveyors inquired about the location of the Harijan (SC) hamlet to a Brahmin (General) respondent, he derided the possibility of participation of individuals from the Harijan community and requested that the entirety of the registration only be conducted in his hamlet. (*May 24, 2017*)
- The mother of a Yadav (OBC) respondent, before giving her consent, inquired about the other participating individuals and advised the J-PAL team to not register the Bhumihars (General) since according to her they have a proclivity to asserting authority through violence during cricket matches. (*May 25, 2017*)
- When the surveyors asked a Brahmin (General) respondent about the location of the Dhobi (SC) basti, he provided the J-PAL team with the location, while saying *"Wahan kaun jaata hai"* (Who even goes there?). (*May 25, 2017*)
- One Bhomihar (General) respondent said that he would not play if any Chamars (SC) were to play in the tournament as well. Similarly, a Thakur (General) respondent said that he would not play with any Chamar since *"Chamar mere ghar par a kar kam karte hai"* (Chamars come and work at my house). He also claimed that *"Thakur ki team age rahegi hamesh"* (Thakur team would be always leading). (*May 26, 2017*)
- Due to the backlog of signups waiting at the field to conduct their ability tests, a Bhomihar (General) participant poked fun at the affirmative action structure or "reservations". He said that the J-PAL team should first conduct the tests of those from the SC/ST category followed by those from the OBC, and finally those from the General category, similar to the preference given within the reservation structure at any educational or government institution. (*May 29, 2017*)
- Some sign-ups from the Brahmin (General) hamlet derided the possibility of Harijan (SC) signups playing in the tournament by stating *"ye Chamarawati wale kya khelenge?"* (what would these people from the Chamar basti even play?). (*May 30, 2017*)
- When requested to select the players he considers as his friends, a Saroj (SC) participant asked the surveyor to show him the list that consists of players only from the Saroj hamlet to select his friends from. (*June 5, 2017*)
- When looking at the signups from the Harijan (SC) community, a Kurmi (OBC) participant stated with derision the possibility of having to play with players from the SC/ST category. (*June 6, 2017*)
- Following a Bhomihar's (General) survey, another Bhomihar asked if he had chosen any Pals (OBC). To this the participant replied that he chose those he saw fit to choose. (*June 6, 2017*)

- A Chamar (SC), upon seeing a series of photos of respondents belonging to the General category, asked the surveyor to *"yeh tiwaran aur pandatan ko hataiye"* (remove/scroll through these Tiwaris and Pandits from here quickly). (*June 6, 2017*)
- While conducting the treatment assignment phone call of a Saroj (SC) participant, he inquired if a teammate was a Chamar or Saroj. To this the surveyor replied by revealing the father's name as "... Yadav" (OBC). Upon hearing this Sambhu stated *"O ye Yadav Ji hai....*" (Oh, he is a Yadav...). (*June 8, 2017*)

During the Leagues.

- A Maurya (OBC) player, when awaiting his turn to bat and speaking to two OBC teammates said that he was glad that were was no Chamar (SC) in his team or else he and his teammates would have beaten him. (*April 13, 2017*)
- During one match, a Baniya (OBC) umpire's indecisive behavior over the nature of the wicket of a Rajput (General) player when a Yadav (OBC) player was bowling caused two players to walk out mid-match. Both returned after efforts by the J-PAL team. The J-PAL team suspected that the umpire's indecision could be attributed to the fear that the umpire may hold of the opposing team which included four Thakur (General) players. (*April 14, 2017*)
- After his match, a Yadav (OBC) player abused an SC opposition player by claiming that *"madar-chod Chamar ko khelna nahi aata hai*" (the motherf**ker Chamar does not know how to play). (*April 14, 2017*)
- One Lohar (OBC) player commented on the batting performance of his Brahmin (General) team-mate by saying *"mar Babana* (slur for Brahmin) *mar"* (hit Brahmin hit). Before the start of the same match, the same Lohar player requested that the J-PAL team do not use any Musahar (SC) backup players as replacements for those missing in his team. (*April 18, 2017*)
- A Chamar (SC) umpire changed decisions on three separate occasions, under pressure from a Brahmin (General) player. The J-PAL team suspects that this indecisive behavior is representative of the general fear of the Thakurs (General) and other General category residents that the SC community holds within the area. (*April 21, 2017*)

- A Bhomihar (General) player questioned the ability of the Gosain (OBC) backup player availed for his team by uttering a caste related slur "*Yeh Sarwa Halwai kya khelega?*" (What is the bloody Sweet Maker (caste) going to play?) (*April 22, 2017*)
- When a Chamar (SC) umpire did not declare a no ball as appealed by a Bhomihar (General) player, the Bhomihar player made a comment that *"Chamar to Chamar ki hi sunega, Thakur ki thodi na sunega"* (it's obvious. Chamar would only listen to the Chamar, he would not listen to the Thakur) (*April 25, 2017*)
- After losing a match, a Thakur (General) player walked up to the Thakur umpire and rhetorically asked *"tu kaunsi jaati ka hai?"* (what caste do you belong to?). The player did so in order to remind the umpire where his loyalty should lie, given that they both belong to the same caste. (*April 26, 2017*)
- Following a match, a Chamar (SC) player told a surveyor *"Hame macth khelkar bahut accha laga. Kam se kam khelne ke bahane gaon ke logon se milne ka mauka mila. Ye saare log hamare gaon se hai hame ye pata hi nahi tha"* (It felt really nice to play the match. At least using the match as an excuse, I got to meet the other people from the village. I didn't even know all these people were from my village). (*June 14, 2017*)
- Prior to a match, a Mishra (General) player told the Match Observation survey conducting Mishra surveyor *"Aap bhi Mishra aur hum bhi Mishra. Toh match mein hamara thoda support kariyega"* (You're a Mishra, I am Mishra. So try supporting me a little bit during the match). (*June 15, 2017*)
- After his match, a Brahmin (General) player told surveyor that *"hum apne jaati walon ko aage karenge, aur chamaron ko maar ke bhaga denge. Chamaron ka chehra dekhte hai toh pura din kharab ho jaata hai"* (I will assist those from my own caste, and beat the Chamars. My whole day goes bad when I see face of a chamar). (*June 17, 2017*)
- When a Pal (OBC) umpire did not declare an out as per a Bhomihar (General) player's appeal, the player kicked the stumps at the non-strike wicket and said *"Yeh saala chutiya umpire hai, pata nahi kaha se bakri charane walon ko pakad laate hai"* (This is a c**t for an umpire, don't know where you people pick these goat-rearers from). Cattle rearing is generally associated as the traditional occupation of the Pal community. (*June 18, 2017*)
- During a match, a Bhomihar (General) player commented on the performance of Chamar (SC) player by saying *"Chamarva kitna maar raha hai!"* (The Chamar is scoring a lot!). (*June 22, 2017*)

- Prior to a match, several General caste players were discussing with some spectators that their match would be a "Harijan vs. Thakur" match. They added that their reputation and integrity is at stake in this match and said *"Chamar madarchodon ko jeetne mat dene"* (Don't let the motherf**ker Chamars win). (*June 24, 2017*)

- Prior to a match, a Dhobi (SC) player urged a surveyor to not assign a *"Babu Saheb"* (slang for upper caste person) as the umpire or else *"yeh log hume match hara denge"* (these people would have us lose the match). (*June 29, 2017*)

After the Leagues Ended.

- While conducting a survey in an SC respondent's house, a Brahmin (General) participant said *"Chamar ke Ghar mein kyun kar rahe aap survey"* (Why are you conducting a survey in the house of a Chamar?). Though he said it as a joke he was asked not to mention such things in the future. (*February 15, 2017*)

- When selecting friends at endline, a Yadav (OBC) participant derided the players from the SC/ST community while scrolling through the photos. At one such occasion, when he saw the photo of of a particular Chamar (SC) player, he said *"Yeh Chamar se dosti nahi karenge"* (I will not start a friendship with this Chamar). (*May 8, 2017*)

- One Chamar (SC) participant said that there is more interaction between different communities after the league ended, with people visiting other hamlets more often, and organising cricket matches among themselves. He said he liked playing with the other people in the league because he got to know about the cricketing ability of those he didn't know before the league happened. (*May 9, 2017*)

- Regarding the trading exercise, a Chamar (SC) participant said "Who will go to the Thakur hamlet to trade flip-flops, as they will be getting beaten up". (*May 9, 2017*)

- One Bhomihar (General) respondent understood the underlying purpose of the study, saying that this is about caste. He said that he would never hangout with Chamars. He eventually chose people from his Bhomihar caste in the part where people have to answer about with whom they would like to hangout. (*May 12, 2017*)

- A Bhomihar (General) player was being asked to choose his team for the possible bonus matches, and he came across the photos of some players belonging to the SC/ST community. Upon looking at these photos, the player said *"Kaha ki in chamaron ka photo mat dikhaiye?"* (Haven't I told you already to not show me the photos of these Chamars?). (*July 5, 2017*)

- When a Gond (ST) player arrived in the Brahmin (General) hamlet to exchange his goods, a Brahmin (General) participant instructed the Gond man to have all the players from his hamlet come near the temple in the Brahmin hamlet so that they could exchange their goods without any discomfort. The Brahmin threatened to beat the Gond player and his companions if they were to fail to comply with the Brahmin's demands. (*July 7, 2017*)

- A Brahmin (General) participant observed a Dhobi (SC) participant receiving their goods to trade, from a distance. The Brahmin approached the Dhobi participant to trade with him after he gets the goods from his house, but the Dhobi participant said he didn't have time to make the trade now. The Brahmin became infuriated and reminded the Dhobi participant that he was standing in the Brahmin hamlet. Had the surveyor not intervened, the Brahmin would likely have beaten the Dhobi participant. (*July 7, 2017*)

- A Brahmin (General) participant did not like that the flip-flops and gloves were given to players from the lower caste. He said *"In neechi jati walon ko nahi dena chahiye tha"* (You shouldn't have given the gifts to these lower caste players). (*July 13, 2017*)

- While selecting those whom he considers to be his friends, a Brahmin (General) participant said *"In Chamaron ka photo na dikhaiye. Yeh hamare dost nahi ho sakte."* (Don't show me the photos of these Chamars. They can't be my friends). Similarly, a Chamar (SC) said *"In Pandey madarchod ko nahi select karna hai."* (Do not select these motherf**ker Pandeys) (*July 14, 2017*).

- A Brahmin (General) claimed that after a considerable time spent searching for possible trades, he was informed that there is was matching pair available in the Chamar (SC) hamlet. However he claimed that he was averse to going to that hamlet. However, in the end he worked out a compromise and had the player from the Chamar hamlet meet him halfway, where they exchanged the gifts. (*July 16, 2017*)

- A Brahmin (General) claimed that he received Rs. 60 out of the Rs. 150 after transferring Rs. 50 to his partner Player B only because the Player B was a Thakur (General). The participant said *"Hum Thakuron ki Aukat jaante hai"* (I understand that Thakurs have a reputation). He added that *"Agar koi chamar hota toh usko ek rupaya nahi dete"* (Had it been a Chamar (SC), I wouldn't have transferred a single penny). (*July 21, 2017*)

- A Bhomihar (General) participant was disappointed when his trust game partner didn't return any money, since his partner belonged to the same caste. (*July 21, 2017*)

F Inessential Experiment Design Details

Site Selection. Secondary criteria included: large population of interested cricketers, few or no Muslims, not used in piloting, and no cricket tournament running at the same time.

Study Construal. Similar to the non-caste relations framing of the entire study, when introducing the trading exercise, surveyors told participants that "the trading game will allow us to study trading and cooperative behavior in Indian villages."

Backup Protocol. Of all cases of absent players, 99.9% were replaced with a backup player of the same caste.

Team Assignment. There were 104 mixed-caste teams in total. In principle, apart from the 35% of teams engineered to be homogeneous-caste, additional homogeneous-caste teams could have occurred by chance. In practice, none did, leaving the total number of homogeneous-caste teams at 7*8 = 56.

Incentives. The Individual Pay incentive scheme was as follows: when batting, if a player scored one run, he earned Rs. 2.5 (~$0.04). When bowling, if a player got a wicket, he earned Rs. 35 (~$0.50). In this way, individuals on the same team were paid based on their *own* performance, creating some incentive to compete with one another (e.g. by vying for the first slot in the batting order, or for the chance to bowl, in order to make more money). In contrast, players on Team Pay teams were paid equally: if a player scored one run when batting, each player on his team earned Rs. 0.5 (~$0.01). If a player got a wicket when bowling, each player earned Rs. 7 (~$0.10). Conditional on the same performance, a Team Pay team earned the same aggregate payout as an Individual Pay team, but the distribution across players within the team was equalized. As expected, Individual Pay players had much more dispersed payouts (Figure A15).

League Logistics. To address concerns of low attendance: (i) surveyors gave a Rs. 10 (~$0.15) show-up fee to each player for each match attended; (ii) I held a lottery for a cricket bat following the league for all those who attended at least six matches; (iii) I accommodated weather conditions and conflicting schedules by adjusting match times; and (iv) I required participants to have a phone number in order to sign up, and surveyors called these phone numbers the day before each match and on the day itself to remind players to attend.

Each team's ability results were made common knowledge within the team by a surveyor who read out the results in the minutes immediately prior to the team's first and second matches. Teams could opt-in to hearing the results again from the third match onwards but did so for only 7% of the matches.

After each league ended I held an awards ceremony at which the best three teams (according to the final league table, see Figure A6) and players (based on number of times voted man-of-the-match) were given trophies and cash prizes. Man-of-the-match voting occurred immediately after each match.

Outcome Measurement. All cricket coaching field trips were held in September 2017, roughly one month after the final *Endline-2* survey was taken. For the trading, I took two steps to reduce the possibility of fraudulent reporting. First, surveyors took photos of the sticker with the ID on the final gloves and flip-flops. This approach reduced the possibility of collusion between surveyors and participants since surveyors could later be audited if the photo did not match the code entered. Second, after a trade was catalogued, the surveyor removed and destroyed the sticker so that it could not be used again. In practice, there were no reported cases of fraudulent trades.

G Randomization Details

Re-randomization

Only caste was used for stratification when randomly assigning participants to the leagues and teams. To avoid other chance imbalances, I re-randomized, following Banerjee et al. (2017). I ran the full randomization 100 times, selecting the run with the minimum maximum t-statistic from a series of balance checks on age, maximum bowling speed, total 4s/6s during the batting test, whether would volunteer, and whether attend school. Ideally I would also have used the social network data for re-randomization. Unfortunately timing constraints made this infeasible, given that the social network survey was done separately after the baseline survey.

This re-randomization approach aimed to improve balance between league versus control participants, and between mixed versus homogeneous-caste teams. Since the network-based randomization of the match schedule was not re-randomized, balance for adversarial contact was not affected by this approach.

Match Schedule Generation

Each of the teams represents a node in a network. A k-regular graph is a graph where each node is connected to exactly k others. If this graph is simple, no node is connected to itself (no "loops") or to another node more than once (no "parallel edges"). A match schedule in which 20 teams each play eight matches (never playing themselves and never playing against a given team more than once) can be represented by a simple 8-regular graph with 20 nodes.

In principle, to randomly determine the match schedule we then need only consider the set of all possible simple 8-regular graphs, and randomly choose one. In practice, this set of graphs is too large for this approach to be feasible. I instead used an existing algorithm, Bollobás' "pairing method", to choose a random simple 8-regular graph. This algorithm works as follows:

1. Start with a set of 20 nodes. Create a set of 20*8 = 160 points, associating each set of 8 points with one of the nodes (teams).

2. Choose two points randomly and pair them.

3. If these two points are associated with the same team (= team playing itself) or are already connected (= teams already assigned to play one another), go back to 2.

4. Add an edge (fixture) between the two teams these points are associated with.

5. Remove the two points that have now been successfully paired.

6. If any points are left, go back to 2. and continue pairing.
7. If no points are left, exit. Create adjacency matrix from the resultant team pairings.

Stage three ensures that the resulting graph is simple. In practice, the algorithm may not complete successfully (this is more likely as k grows). In these cases, the algorithm is re-started.

H Trading Exercise Script

Surveyor: Now let me explain the trading game. We will give each man who signed up for the tournament (this includes backups) mis-matched gifts: a set of mis-matched gloves (e.g. two left-hand gloves) and mis-matched flip-flops (e.g. two right-foot flip-flops). Each gift comes with a unique code.

Today I will give you both flip-flops and gloves like these [show example of gifts to respondent].

You are welcome to keep the gifts as they are, but they are not very useful on their own. Instead, you can trade with another sign-up who got the other half of the gift. For example, you have been assigned two [left-handed/right-handed] gloves, and so you should find someone with two [right-handed/left-handed] gloves, and swap one of yours for one of his. Similarly, you have been assigned two [left-footed/right-footed] flip-flops, so you should find someone with two [right-footed/left-footed] flip-flops, and swap one of yours for one of his.

Do you understand, or should I repeat?

[Surveyor: Find a pair of [left-handed/right-handed] gloves for this respondent. Put a [green/pink/white] sticker on the gloves. Write the code [pre-assigned number] on the sticker CLEARLY. Then enter the code here to confirm.]

[Surveyor: Now take a photo of the gloves so that the code is readable. This will help us verify which gloves were handed out later. Surveyor: Now hand over the gloves to the respondent.]

[Surveyor: Find a pair of [left-footed/right-footed] flip-flops for this respondent. Put a [green/pink/white] sticker on the flip-flops. Write the code [pre-assigned number] on the sticker CLEARLY. Then enter the code here to confirm.]

[Surveyor: Now take a photo of the flip-flops so that the code is readable. This will help us verify which flip-flops were handed out later. Surveyor: Now hand over the flip-flops to the respondent.]

Surveyor: We will return to find you after 4 or 5 days and check who you traded with by looking at the codes on the 2 flip-flops and 2 gloves you are left with.

We are paying different trade incentives to different people – with the incentive chosen randomly. In your case, for each successful trade you make, we will give you Rs. [10/20]. You should not trade both gifts with the same person – if you do so, we will only give you the Rs. [10/20] for one of the two trades. "We will return to find you after 4 or 5 days and check who you traded with by looking at the codes on the 2 flip-flops you are left with.

[For those randomly assigned to color-switch incentives] You have been randomly selected to get an extra bonus: for each trade you make with someone whose gloves/flip-flops have a different color sticker, we will give you an additional Rs. [50/100]. These gloves/flip-flops will be more difficult to find. Again, you should not trade both goods with the same person – if you do, we will only give you this bonus for one of the two trades even if both have a different color sticker. Please don't try to cheat by changing the sticker color on the gifts. We will be able to check for this since we know which sticker color is matched to which number.

[For those not assigned to color-switch incentives] Some gloves/flip-flops have different color stickers. But you will get Rs. [10/20] reward for trading gloves/flip-flops no matter what color sticker is on the gloves/flip-flops you trade with.

When we return, we will also ask you some questions about how you arranged your trading.

Do you understand, or should I go over it again?

[**Team Formation** questions]

To remind you, you will be paid Rs. [10/20] for each successful trade you make.

[For those randomly assigned to color-switch incentives] You will also be paid a bonus of Rs. [50/100] for each trade you make with a different color gift.

To get paid, you will need to show us the code on each item when we return to survey you -- so please don't remove the stickers or lose the items until then.

Would you like to write this down, so that you don't forget?

Appendix References

Allport, G. (1954). The Nature of Prejudice. *Garden City, NJ Anchor*.

Banerjee, A. V., Chassang, S., and Snowberg, E. (2017). Decision theoretic approaches to experiment design and external validity. *Handbook of Economic Field Experiments*, 1:141–174.

Becker, G. S. and Murphy, K. M. (1988). A theory of rational addiction. *Journal of Political Economy*, 96(4):675–700.

Bénabou, R. and Tirole, J. (2002). Self-confidence and personal motivation. *The Quarterly Journal of Economics*, 117(3):871–915.

Bénabou, R. and Tirole, J. (2006a). Belief in a just world and redistributive politics. *The Quarterly Journal of Economics*, 121(2):699–746.

Bénabou, R. and Tirole, J. (2016). Mindful economics: The production, consumption, and value of beliefs. *Journal of Economic Perspectives*, 30(3):141–64.

Bernheim, B. D., Braghieri, L., Martínez-Marquina, A., and Zuckerman, D. (2019). A Theory of Chosen Preferences. SSRN Scholarly Paper ID 3350187, Social Science Research Network, Rochester, NY.

Chauvin, K. P. (2018). A Misattribution Theory of Discrimination. *Working Paper*.

Eyster, E. and Rabin, M. (2005). Cursed equilibrium. *Econometrica*, 73(5):1623–1672.

Furukawa, C. (2017). Why Diaries Help: An Information Processing Model of Mindset Shift. *Working Paper*.

Gilbert, D. T. (1989). Thinking lightly about others: Automatic components of the social inference process. *Unintended Thought*, 26:481.

Gilbert, D. T. and Malone, P. S. (1995). The correspondence bias. *Psychological Bulletin*, 117(1):21.

Haggag, K., Pope, D. G., Bryant-Lees, K. B., and Bos, M. W. (2018). Attribution Bias in Consumer Choice. *The Review of Economic Studies*, 86(5):2136–2183.

Jehiel, P. (2005). Analogy-based expectation equilibrium. *Journal of Economic Theory*, 123(2):81–104.

Jones, E. E. and Harris, V. A. (1967). The attribution of attitudes. *Journal of Experimental Social Psychology*, 3(1):1–24.

Jones, E. E. and Nisbett, R. E. (1971). The actor and the observer: Divergent perceptions of the causes of behavior. In E. E. Jones et al. (Eds.), Attribution: Perceiving the causes of behavior (pp. 79-94). Morristown, NJ: General Learning Press.

Levy, G. and Razin, R. (2018). Immigration Into Prejudiced Societies: Segregation and Echo Chambers Effects. *CEPR Discussion Paper No. DP12630.*

Nisbett, R. E., Caputo, C., Legant, P., and Marecek, J. (1973). Behavior as seen by the actor and as seen by the observer. *Journal of Personality and Social Psychology*, 27(2):154.

Paluck, E. L., Green, S. A., and Green, D. P. (2018). The contact hypothesis re-evaluated. *Behavioural Public Policy*, pages 1–30.

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49(1):65–85.

Pettigrew, T. F. (2021). *Contextual Social Psychology: Reanalyzing Prejudice, Voting and Intergroup Contact*. American Psychological Association Press: Washington, DC.

Pettigrew, T. F. and Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90(5):751.

Pettigrew, T. F. and Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology*, 38(6):922–934.

Pettigrew, T. F., Tropp, L. R., Wagner, U., and Christ, O. (2011). Recent advances in intergroup contact theory. *International Journal of Intercultural Relations*, 35(3):271–280.

Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. *Advances in Experimental Social Psychology*, 10:173–220.

Ross, L. and Nisbett, R. E. (2011). *The Person and the Situation: Perspectives of Social Psychology*. Pinter & Martin Publishers.