Working paper

Leader identity and coordination

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Leader Identity and Coordination[*]

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Abstract

Coordination is important for resolving collective action problems and market failure. With a view to understanding coordination failure in societies with ethnic or religious diversity, we introduce leader identity in a coordination game and implement it in the field across 44 towns in India. We find that religious minority leaders (Muslims) improve coordination, while majority leaders (Hindus) do not. We then test the effectiveness of intergroup contact and affirmative action. Intergroup contact improves coordination irrespective of leader identity but affirmative action leads to a deterioration in coordination in Muslim-led groups alongside an increase in coordination in Hindu-led groups. We find that both policies are less effective for Muslim-led groups in towns with a recent history of religious conflict. Our findings contribute novel evidence to research on coordination failure, leader identity, policy alternatives for promoting integration of minorities, and conflict.

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1. Introduction

Coordinating economic actions across individuals can be critical to resolving collective action problems and market failure. For instance, coordination may be necessary for escaping poverty traps, changing social norms, optimizing resource use on common land, or raising the provision of public goods (Coleman, 1987; Kremer, 1993; Hoff, 2000; Hoff and Stiglitz, 2001; Bowles et al., forthcoming). Several mechanisms to improve coordination have been considered in the experimental literature, with one prominent solution being the introduction of leaders (Brandts et al., 2015).[1] However, little is known about how leader effectiveness varies when leaders have different identities, even though many societies are diverse and experience intergroup conflict.

We implement a coordination game in the field in India and experimentally vary the religious identity of the group leader; half the groups have a (minority) Muslim leader and half have (majority) Hindu leaders. We randomize groups into two other treatment arms, in which we examine how an affirmative action policy and a policy encouraging intergroup contact each influence leader effectiveness. We provide the first evidence of how these two commonly used interventions compare in an experimental setting, on matched samples. Further, since our treatment arms are stratified across areas of high and low recent religious conflict, we are able to examine whether the impact of leader identity and the specific policies differ across the two conflict environments, which no previous work has done.

In a departure from most previous work on leader identity that can only identify the combined impact of leader preferences or actions and citizen reactions, our experimental design allows us to isolate citizen reactions to leader identity, controlling for leader actions.[2] We are also the first to study coordination, an aggregate outcome, when leader identity varies. Previous work has tended to focus on the impact of leader identity on the allocation of services such as the allocation to the leaders' ethnic group (Pande 2003; Burgess et al., 2015), or the educational aspirations of girls under female leaders (Beaman et al., 2012).

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[1] See Hogg, 2001 for a theoretical analysis and Devetag and Ortmann, 2007 for a survey of this literature.

[2] The political economy literature has mainly focused on the identity of political leaders. Citizen-candidate models (Osborne and Slivinski, 1996; Besley an Coate, 1997) allow leader identity to affect policy outcomes, in contrast to Downsian models where only the identity of the median voter matters. Empirical analysis of the role of leader identity in political settings include Pande, 2003; Chattopadhyay and Duflo, 2004; Chin and Prakash, 2011; Bhalotra et al., 2014; Meyersson, 2014; Burgess et al, 2015; Brollo and Troiano, 2016; and Bhavnani, 2017.

We use a weakest link turnaround game (as in Brandts and Cooper, 2006) in which a leader is introduced to facilitate coordination. A key feature of the weakest link game is that an individual's payoff depends positively upon the minimum effort in their group and negatively on their own effort. Payoffs are designed such that coordination tends to occur at the lowest effort level. This weak link production function -- a characteristic of many real world situations -- is prone to being caught in an inefficient equilibrium, and previous work has shown that introducing a leader, who proposes an effort level, can facilitate the transition to a more efficient outcome (Brandts et al., 2015).[3] A laboratory style experiment in the field permits identification of the relative effectiveness of distinct mechanisms, absent the selection and endogeneity problems that would otherwise be present. One of our innovations in the game, relative to previous work, is that we experimentally vary the (religious) identity of group leaders, and thereby obtain a causal estimate of the impact of leader identity on group coordination. This pushes forward the frontier on the open question of what makes some leaders more effective than others (Brandts et al., 2007; Brandts et al., 2015; Weber et al., 2001). It thereby widens the scope of the analysis and expands its significance.

In a departure from previous leader-coordination studies that have been entirely conducted in the laboratory,[4] we conducted our experiment in the field in India's largest state, Uttar Pradesh, where religious identity is salient to politics and conflict. In the experiment, 1028 Hindu and Muslim subjects from 44 selected towns participate in groups of four. Over half the towns were selected from districts that had a history of inter-religious conflict. We introduce a leader after four rounds, and we model changes in minimum effort at the group level as a function of leader identity.

We report four main findings. First, the introduction of Muslim leaders increases minimum group effort by 31%, thereby coordinating group outcomes to a Pareto-superior equilibrium, while the introduction of Hindu leaders has no significant impact on coordination. This result is robust to the inclusion of town fixed effects and to a number of specification checks. Investigating mechanisms, we find that this does not arise from Muslim leaders proposing higher effort, but

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[3] There is a long tradition of scholars in different disciplines studying leadership but it is only recently that the potential value of simple coordination games for studying something as complex as leadership has been established.

[4] See, among others, List and Reiley, (2002); Brandts and Cooper, (2006); Brandts and Cooper, (2007); Brandts et al., (2007); Brandts et al., (2015); Brandts et al., (2016); Cartwright et al., (2013). Almost all prior papers on coordination use lab settings; Polania-Reyes (2016) is a notable exception.

rather from citizen reactions to leader identity. In particular, the results are consistent with stronger in-group behavior among the minority group (as in Bisin and Verdier, 2011; Gupta et al., 2018).

Second, we find that intergroup contact (achieved by having mixed identity groups collaborate in solving a puzzle before coordination is measured) improves coordination irrespective of leader identity. This has implications for policy, for example, motivating de-segregation. Previous work shows that segregation can act to intensify existing prejudices (Glaeser, 2005; Enos and Gidron, 2016; Field et al., 2008), and our results complement this work, showing that a short exposure can improve coordination, consistent with lower prejudice. Intergroup contact is possibly the most common policy suggested to reduce intergroup conflict (Paluck et al., forthcoming), and previous work suggests it can change attitudes and improve cooperation towards the out-group (Dahl et al., 2017).[5] However, no previous work has analyzed the effectiveness of contact in improving coordination, nor how this varies with leader identity (and conflict history).[6]

Third, we find that the impacts of affirmative action (AA) depend critically upon leader identity. Introducing a quota for Muslim leaders leads to an increase in coordination in Hindu-led groups. However, it leads to a deterioration of coordination in Muslim-led groups, consistent with backlash against Muslims and an increased sense of solidarity among Hindus. The AA literature is dominated by the analysis of gender quotas,[7] and it does not investigate coordination as an

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[5] Coordination is different from cooperation. Cooperation is usually measured by the willingness to contribute in a standard public goods game, in which payoffs depend on the sum of other players' contributions and there is only one pure-strategy Nash equilibrium. Instead, in the "weakest link" coordination game where payoffs depend on the minimum of other people's contributions, there are multiple pure-strategy Nash equilibria that can be Pareto-ranked. Conceptually, non-zero contributions in a public goods game can be related to altruism, trust or other prosocial motivations, and the leader's role can be thought of as encouraging such motivations. In contrast, non-zero effort in the coordination game is individually rational and the leader's role is mostly to guide the group towards a specific equilibrium i.e. to act as a focal point.

[6] See, among others, Pettigrew and Tropp, 2006; Burns et al., 2015; Ashraf and Bandiera, 2017; Bertrand and Duflo, 2017. In their survey of about 500 studies on this topic, Pettigrew and Tropp (2006) find that only 5 percent use randomized samples, making causal claims difficult. They also observe the scarcity of research using field samples (as opposed to student samples in a lab) or developing country samples, raising questions about the external validity of the findings on intergroup contact. Some recent studies use random assignment of groups to test contact in a developing country setting (Lowe, 2017; Rao, 2018; Scacco and Warren, 2018). Bhavnani et al. (2014) study impacts of intergroup contact on violence in Jerusalem but their data are observational rather than experimental. Barnhardt (2009) finds that contact between Hindus and Muslims in India reduces anti-Muslim prejudice.

[7] Gender quotas are now implemented in over 120 countries (Quota Project, 2016). One strand of work studies how quotas influence policy outcomes, gender norms, women's aspirations and political participation (see, among others, Chattopadhyay and Duflo, 2004; Adams and Ferreira, 2009; Ahern and Dittmar, 2012; Iyer et al., 2012; Matsa and Miller, 2013; Gangadharan et al., 2016). Experimental research on affirmative action almost exclusively focuses on whether gender quotas encourage women to take part in tournaments (Schotter and Weigelt, 1992; Balafoutas and Sutter, 2012; Niederle et al., 2013; Leibbrandt et al., forthcoming).

outcome.[8] Importantly, ours is also the first study to analyze affirmative action and intergroup contact in the same experimental setting, allowing for a direct comparison of their impact.

Fourth, we re-estimated the impact of leader identity and the different policies, distinguishing towns in neighboring districts with a high vs low intensity of Hindu-Muslim conflict in the previous 30 years. We compare coordination under different treatments *within* each district, so that district-specific unobservables do not contaminate our findings. This novel design allows us to investigate how the efficacy of two policy interventions varies with a baseline measure of intergroup hostility. We find that conflict history does not significantly influence leader effectiveness in Hindu-led groups. However, intergroup contact increases Muslim leader effectiveness more in low conflict areas while AA decreases Muslim leader effectiveness primarily in high conflict areas. These results offer the first evidence of the relationship between conflict and coordination.[9]

Overall, our findings are relevant to research in a number of areas that are currently distinct from one another, including coordination, leader identity, quotas, segregation, in-group bias and conflict. The rest of the paper is structured as follows. Section 2 provides contextual information on religion and politics in India. Section 3 describes the data collection, Section 4 delineates the experimental design and Section 5 discusses the regression specifications. Section 6 presents the empirical results and Section 7 concludes.

2. Context: Religion and Leadership in India

India is a secular country, with the constitution enshrining the fundamental right to freely "profess, practice and propagate religion." India is also a religiously diverse country. Muslims are the largest religious minority in India, constituting 14.2% of the population or 172 million people according to the 2011 census. India has the third largest Muslim population in the world, next to Indonesia and Pakistan. Close to 40% of Muslims live in urban areas relative to 29% of Hindus. The standard of living of Muslims is generally lower than Hindus: 43% of Muslims are illiterate

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[8] The closest paper to ours is Gangadharan et al. (2016), who examine citizen reactions to the gender (rather than the religion) of the leader in an experimental setting. We differ from this paper by focusing on coordination rather than cooperation outcomes, and by investigating two specific policies and conflict histories.

[9] Previous work on post conflict policies is often either correlational, or conducted at the country or region level. The empirical and experimental literature on conflict primarily focuses on the origins of conflict (see Blattman and Miguel, 2010, for a review) and its impact on growth (Rodrick, 1999), human capital (Miguel and Roland, 2011), psychology (Bowles, 2008), trust, cooperation and reciprocity (Bauer et al., 2014; Bauer et al., 2016; Cassar et al., 2013; Gilligan et al., 2014; Cecchi et al., 2016; Grosjean, 2014) and political participation (Bellows and Miguel, 2009).

relative to 36% for Hindus, 33% of Muslims are employed relative to 41% for Hindus and 25% of Muslims fall below the poverty line compared to 22% for all Indian citizens (NITI Aayog, 2016).

Muslims in India are disadvantaged in many domains (The Economist, 2016), there is a significant degree of residential segregation (Field et al., 2008), and both Hindu and Muslim communities exhibit positive in-group bias in trust (Gupta et al., 2018). Violence between Hindu and Muslims has occurred frequently in India generating insecurity, displacement, segregation and loss of property and life (Varshney, 2002). Previous research indicates that violence tends to disproportionately impact Muslims (Mitra et al., 2014). For instance, between 1985 and 1987, in the ten states with significant Muslim populations, Muslims experienced 60% of all deaths related to religious riots, 45% of all injuries and 73% of property damage (Wilkinson, 2004, p 30).

Compared to their population share, Muslims are under-represented in political office: over the period 1980-2010, only 7.6% of state legislators were Muslims (Bhalotra et al., 2014). Muslims are under-represented compared to their population share in all states, with the exception of the Muslim-majority state of Jammu and Kashmir. The low political representation of Muslims would be inconsequential if Muslim and non-Muslim politicians made the same policy decisions, but the religious identity of politicians does matter for policy outcomes such as health, education and sex-selective abortions (see Bhalotra et al., 2014 and Bhalotra et al., 2018). There are no quotas for Muslims in central government positions. However, some quotas for Muslims have been implemented in civil service and educational institutions in five states (Government of India, 2014).

3. Site Selection and Subject Recruitment

3.1. Site Selection and Balance Across Treatment Arms

Based on data on the incidence of religious violence over 1980-2010 (Kaysser et al., 2015), we selected two pairs of neighboring districts in Uttar Pradesh, India's most populous state. Each district pair was composed of one high conflict district and one low conflict district (see map in Appendix Figure A1). One pair was in the western part of the state (Aligarh and Budaun) while the other was in the central part of the state (Allahabad and Pratapgarh).

The experiment was conducted in 44 sites in July 2017 with 1028 subjects. Within each district, we selected sites based on the following criteria: (i) they were officially listed as towns in the

census of 2011,[10] (ii) their population was below 50,000, (iii) they had a relatively high population share of Muslims, and (iv) selected towns were comparable in their demographics across high conflict and low conflict districts. The average town in our experimental sample has 40% Muslims in the population, compared to the overall state proportion of 19%.[11] We focus on towns rather than villages, as Muslims are more likely to live in urban areas and, related to this, inter-religious conflict is far more common in towns (Varshney, 2002). This has the added benefit of comprising of a more educated populace, reducing issues surrounding the understanding of the experimental tasks.

The 44 town level sessions consisted of 24 participants each, with a few exceptions due to recruitment difficulties.[12] This resulted in a sample of 1028 subjects and 257 groups. The 44 sites are randomly assigned to three different treatment arms: 14 sites are retained as control, and 15 each are assigned to the "Contact" treatment and to the "Affirmative Action" treatment, which are described below. The assignment is performed within each district (i.e. implicitly stratifying by high/low conflict status) and by further stratifying by Muslim population proportion and total population. We verify that census 2011 and respondent demographic characteristics are balanced across the different treatment arms (see Table 1, Panels A and B). The final distribution of sites and number of respondents is shown in Appendix Table A1.

3.2. Subject Recruitment and Group Formation

To recruit participants for the experiment, our research assistants visited both the Hindu and the Muslim sections of each town, and distributed flyers containing information about participant requirements (age and numeracy), remuneration, time and location of the experimental sessions. Flyers were also posted at prominent landmarks and distributed at shops, temples and mosques. Upon arrival, participants were screened for eligibility (over the age of 18 and could read numbers) and their names were recorded on a participant list that was not visible to other participants. Upon commencement of the experiment, an equal number of Hindus and Muslims were selected from

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[10] Towns in India are defined as (a) Statutory towns i.e. all places with a municipality, corporation, cantonment board or notified town area committee or (b) All other places which satisfied the following criteria: (i) A minimum population of 5,000; (ii) At least 75 per cent of the male main working population engaged in non-agricultural pursuits; and (iii) A density of population of at least 400 persons per sq. km.

[11] According to census 2011 figures, Hindus and Muslims account for more than 99% of the population of Uttar Pradesh state; all other religions (Christians, Sikhs, Jains, Buddhists etc) account for less than 1%.

[12] In 3 towns a session consisted of 20 participants and in 2 towns sessions consisted of 16 participants.

the list. Once seated, participants were given a number tag representing their identification number.[13] Individuals were assembled in a room and seated on mats, with four participants on each mat.

Individuals were then assigned to four-member groups (each called a "firm"), comprised of two Hindus and two Muslims. Upon commencement of the weakest link coordination task participants were informed that firm members were people within the session; they were told that the people sitting on their mat were *not* part of their firm. Individuals did not know who the other three in their group were; neither were they informed about the religious composition of their group. Effort choices in the coordination task were made using pen and paper, and participants were provided folders so that their effort choices were not visible to other players. They were also instructed and monitored not to look at other players' choices. Each session was run with 6 research assistants including one experimenter. The experimenter read out the instructions while the research assistants helped answer questions and checked responses to the control questions. (see picture in Appendix Figure A2).

4. Experimental Design

Each experimental session contained a pre-experiment survey and three tasks: a puzzle task, a weakest link coordination task (run across six rounds), and a social norms elicitation task. Out of the three tasks, one was chosen randomly for payment. The session concluded with a survey of attitudes and respondent characteristics. Subjects knew that the session had multiple stages but were not given instructions about any particular stage until reaching that stage. We explain each component below.

4.1. Pre-Experiment Survey

Prior to commencement of the incentivized tasks, subjects answered a brief survey about their personal characteristics including height, hair color, religion and eye color (see Appendix Table A2). The survey was designed to elicit the religion of the subject. An important feature of the survey was that possible responses for questions 1 (height), 2 (hair color) and 4 (eye color) were

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[13] In India, it is relatively easy to identity Muslims from their names. After recording participant names, research assistants would implicitly allocate names to religion. Religion was then cross-checked once subjects completed the pre-experiment questionnaire. Subject ID numbers were never matched with participant names, and the list of participant names were destroyed at the end of the session.

restricted such that all responses were the same. The only question with a differing response was question 3 which elicited the religion of the subject.

4.2. Puzzle Task

After the pre-experiment survey, all subjects participated in a jigsaw puzzle task. Each subject was allocated a 12-piece jigsaw puzzle. Participants completed the task individually in the control and affirmative action treatment groups, and in pairs in the contact treatment group. Our objective was to suppress competitiveness and have cooperative intergroup contact, since the latter has been shown to reduce prejudice (Paluck et al., forthcoming; Lowe, 2017). The time given for the puzzle assembly was twelve minutes and almost all participants were able to complete the task successfully in this time (the average time taken to complete the puzzles in pilots was about 8 minutes). If this task was chosen for payment, subjects were paid ₹ 400 for assembling the puzzle.

4.3. Weakest Link Coordination Task

After the puzzle task, subjects were randomly allocated to groups of four individuals, which we label "firms." Each firm was comprised of two Hindu and two Muslim "employees." The task structure is closely related to the minimum effort corporate turnaround game designed by Brandts et al. (2006), which is based on the minimum effort or weakest link coordination game of Van Huyck et al. (1990).

The task is run across six periods. In each period employees decide how many hours (H) to devote to firm activities. Their choices vary between 0 and 20 in intervals of 5: $H_i \in \{0, 5, 10, 15, 20\}$. Employees' payoffs for each period are determined by equation (1) below, where *i* indexes individuals and *j* indexes groups. The payoff table is illustrated in Appendix Table A3, where the units are Indian rupees.[14] Participants were shown the payoff table but not the payoff equation. Working is costly, each hour worked costing an employee ₹25. Thus, payoffs are decreasing in the employee's own hours of effort, but they are increasing in the minimum hours worked in the firm. Coordinating on any of the available effort levels is a Nash equilibrium.

(1) $\pi_{ij} = 500 - 25H_{ij} + [\min_j (H_{ij}) * 40]$

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[14] 1 US dollar is around 68 Indian rupees.

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Given the payoff equation, it is only worthwhile for profit maximizing employees to raise their effort level if this will increase the minimum effort of the firm. For a profit maximizing employee to increase their effort by 1 unit, for example, from 0 to 5 hours, they must believe there is an 85.5% probability that each of the other three employees increase their effort.[15] Given this, previous work has found that play often evolves towards the payoff-dominated equilibrium in which all players choose the lowest possible effort level (Brandts et al., 2006).

The task is split into two stages. The first stage repeats the coordination game described above across four periods (rounds). Employees work in the same firm across all periods. At the end of each period subjects are informed of the firm's minimum effort. Employees are never informed of individual firm members' effort choices. The first stage is designed to induce coordination on an inefficient equilibrium with low levels of effort, which we label "coordination failure" (Brandts et al., 2015). The absence of feedback about individual effort levels makes it more difficult to escape coordination failure in the turnaround game (Brandts and Cooper, 2006).

The second stage introduces a leader, and runs for two further periods. The leader's role within each firm is to suggest a non-binding number of hours to work. In our experimental setting, all leaders are appointed and participants cannot elect or change the leader. Leaders do not have the scope to communicate with their employees beyond proposing an effort level, similar to other papers in the "leading by example" literature (Güth et al., 2007, Gächter et al., 2012, Gangadharan et al., 2016). All firm employees are informed of the leader's proposal, and they are told the characteristics of their firm leader taken from the pre-experiment survey.[16]

Half of the firms in each session are assigned Hindu leaders and half are assigned Muslim leaders. Leader identity is randomly allocated, and the player in each group who will be the leader is also randomly selected. Our estimates for the impact of introducing a leader are thus specific to leader identity. It is important to remember that the religious composition of firms is the same across all firms, regardless of the leader's religion. Leader characteristics other than religion, in particular, gender, age, and family income are balanced across Hindu and Muslim leaders, though Muslim leaders are less likely to have gone to college and more likely to pray several times a day,

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[15] To derive this probability, solve for p where $500 = 375(1 - p^3) + 575(p^3)$

[16] In particular, employees are given the responses to the survey in the same layout as the survey. They are told that the survey responses are the characteristics of the leader. To avoid making the research question salient, which might induce socially desirable response bias, subjects are given all the leader's characteristics, not just the leader's religion.

similar to the variation observed in the overall population. We verify that participant characteristics with regard to demographics, education, income and religiosity are balanced across groups with Hindu or Muslim leaders (Appendix Table A4).

After being informed of the leader's effort proposal and leader characteristics at the start of the fifth period, similar to the earlier periods, employees are informed of their group's minimum effort in the previous period. All employees including the leader must then decide how many hours to work. The leader's effort, just like the effort of other employees, is not visible to the group. The coordination game is repeated for two periods with the same leader, but with a new effort proposal by the leader in each period. If this task is selected for payment, players are paid their coordination game payoffs from two randomly selected periods.

We have two additional treatment arms where the same weakest link game is played, but with changes to the environment in which the leaders operate, designed to mimic commonly proposed policy interventions. We describe these treatments below.

4.3.1. Affirmative Action (AA) Treatment

Affirmative action policies, such as quotas, are common in both government and business to increase participation of disadvantaged or minority groups. To measure the impact of quotas on behavioral reactions to leaders of different religions, we randomize a third of the groups within each district into an AA treatment. The game is conducted exactly as in the control arm described above, with one important exception. Upon the introduction of a leader at the beginning of period 5, subjects are told that "similar to many government positions, 50% of the leadership positions in this game will be reserved. Reservation will be made based on some characteristic in the initial survey." Since the only variation in characteristics in the initial survey is the subject's religion, this is an indirect method of communicating to subjects that the 50% quota will be defined on religion.

Along with information on the leader's characteristics (height, eye color, hair color, religion), employees with a Muslim (Hindu) leader are then informed that their leader is in a reserved (unreserved) position. About 70% of respondents correctly identified that the reservation was done

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on the basis of religion, with the rest citing other leader characteristics or saying "don't know."[17] So here, as in the control arm, half of all groups within a session are assigned to Muslim leaders. However, only subjects in the AA treatment are made aware of this information; subjects in the control or contact arms are not told anything about the overall composition of leaders. By comparing the control and the AA treatment arms (and thus effectively comparing a Muslim leader with a Muslim leader who is leading through a quota) we can observe the impact of publicly announced quotas on the ability of leaders to coordinate groups.

4.3.2. Contact Treatment

We also investigate the impact of a randomized intervention that increases intergroup contact on citizen responses to leaders of different religious identity. The key difference between this treatment and the control arm is the implementation of the puzzle task. Unlike in the control arm and AA treatment, where puzzles are assembled individually, subjects in the contact treatment assemble the jigsaw puzzle with a partner from the other religion. The puzzle partner is a person sitting on the same mat as the participant, and therefore not a member of the same firm (see picture in Appendix Figure A3). Our survey confirms that only 14% of participants incorrectly identified the religion of their puzzle partner. Subjects are encouraged to talk with their partner during the 12 minutes allowed for the puzzle. Importantly, subjects in the sample towns often live in separate Hindu and Muslim communes, which limits interaction between the two communities. By comparing the control arm and the contact treatment we can infer the impact of intergroup contact on the ability of leaders to coordinate groups. A potential concern is that interacting with anyone, not necessarily from a different religion, prior to the coordination game may affect coordination. We expect that any such effect is small in this setting since the puzzle game is not competitive and does not require a second player to complete. Importantly, as we shall see below, we can reject this concern because we see no differences in minimum effort in the contact vs the control arm *before* the leader is introduced.

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[17] Our estimates, which are intent to treat estimates, will therefore under-estimate the impact of religion-based reservation. Sample size considerations precluded the inclusion of a treatment with Hindu leaders being reserved and, in practice, quotas are usually for population minority groups.

4.4. Survey

After the coordination game, participants participated in a social norms elicitation task, which could also be selected for payment. We do not analyze this task in this paper. After the completion of the task, participants answered a short questionnaire about their views on politics and inter-religious violence, and about their demographic and economic profile.

4.5. Experimental Procedure

At the start of a task, instructions were read aloud by the experimenter to establish common knowledge. To determine whether subjects understood the instructions, each participant answered a set of control questions in private both before the first period and at the start of the fifth period (when the leader is introduced). The experimenter and research assistants cross-checked the answers and started the experiment once satisfied that subjects understood the task. Prior to reading the weakest link coordination task instructions, subjects were given the payoff table shown in Appendix Table A3.

To ensure the anonymity of the leader, in all sessions, the leader's proposed effort was elicited after the control questions were answered, but before collecting the control question answer sheets i.e. it was not possible to identify a leader by seeing who was writing a suggested effort, since everyone was answering control questions.

At the end of the session, each subject was privately paid in cash for one of the tasks (excluding the pre-experiment survey). The average payoff was ₹ 610 including a ₹ 200 show up fee. This constitutes about 2.5 days' wage for a semi-skilled laborer.

5. Empirical Strategy

Our main outcome variable is the minimum effort exerted in the group in each round. This is the key determinant of player payoffs and is the standard measure of coordination in the weakest link literature (Brandts and Cooper, 2006). We test whether leaders improve coordination by estimating the following specification:

(2) $MinGroupEffort_{kjt} = \alpha + \beta Leader_{kjt} + X'_{kj}\gamma + \varepsilon_{kjt}$; t=1,2,...6

where *MinGroupEffort_{kjt}* is the minimum effort exerted by group *k* in town *j* in period *t*, and *Leader_{kjt}* is a dummy variable that takes value one for periods 5 and 6, when a leader is introduced. This regression therefore compares the group's minimum effort in periods with a leader to periods without a leader. *X_{kj}* is a suite of control variables that includes town fixed effects, demographic controls (average age, education, gender mix and monthly household income of the group members) and a control for religiosity based on prayer frequency. Standard errors are clustered at the group level. We run specification (2) separately for Hindu and Muslim leaders to examine whether leader identity matters for coordination outcomes. Recall that half of all groups within each town are randomly assigned to have Muslim leaders.

We then examine whether leader effectiveness varies across different policy environments by comparing coordination outcomes for the same leader identity (Hindu or Muslim) across the different treatment groups as follows:

(3) $MinGroupEffort_{kjt} = \alpha + \beta_1 Leader_{kjt} + \beta_2 Leader_{kjt}*AA_j + \beta_3 Leader_{kjt}*Contact_j + X'_{kj}\gamma + \varepsilon_{kjt}$; $t = 1,2,...,6$

In equation (3), *AA_j* is a dummy that equals one if town *j* was randomly assigned to the affirmative action treatment and *Contact_j* equals one if the town was randomly assigned to the contact treatment. We estimate equation (3) separately for Muslim and Hindu leaders. β_1 then captures the impact of the leader on coordination in the control arm, β_2 estimates the differential impact of the leader in an AA environment and β_3 estimates the differential impact of the leader in an environment with pre-game contact between members of the different religions.

For both specifications (2) and (3), we run a robustness test in which we restrict the analysis to periods 5 and 6, and control for the group-specific minimum effort in period 4 and the leader's proposals in periods 5 and 6. This enables us to test whether the impact of leader identity can be attributed to differences in the leader's proposal, or to differences across groups in the coordination outcome in previous rounds of the game. In this robustness check, since there is no variation in the *Leader* variable across periods within a town, we cannot include town fixed effects.

6. Leader Identity and Coordination Outcomes

6.1. Leader Identity and Coordination in the Control Group

Consistent with previous research, we find that groups tend to coordinate on the low-effort equilibrium in the absence of a leader. The average minimum group effort is less than three hours at the end of period 4 (Figure 1). Introducing Muslim leaders significantly improves minimum group effort in periods 5 and 6, but introducing Hindu leaders does not. The efficiency gain in Muslim-led groups is large: minimum group effort increases by 1.07 hours, compared to the average of 3.45 hours in the pre-leader periods 1 through 4 (Table 2, column 1). In contrast, the presence of Hindu leaders leads to a decline of 0.488 in minimum group effort, which is not statistically significantly different from zero (Table 2, column 2 and 4). The effect of leadership on minimum effort is lower than in Brandts et al., (2015) who find that a randomly selected leader increases minimum effort from 3.33 to 11.25.[18]

The estimates are robust to controlling for the demographic and religious characteristics of group members (columns 3 and 4). The difference in coordination gains between Muslim and Hindu leaders is statistically significant (column 5). This holds even when we restrict the sample to periods 5 and 6, and control for the leaders' proposal and for minimum effort in period 4 (Table 2, column 6).

The results are robust to using town random effects instead of town fixed effects, using an ordered probit specification rather than OLS, and to controlling for town*mat fixed effects to ensure that participants are correctly responding to the effort choices of their firm members rather than the effort choices of those seated on the same mat (results available upon request).

6.2. Potential Mechanisms: Leader Preferences vs Citizen Reactions to Leader Identity

We investigated why Muslim leaders might induce greater coordination than Hindu leaders. As discussed in the Introduction, leaders can influence outcomes through their preferences, or through citizen reactions to them. In general, preferences are difficult to comprehensively measure, but in our lab-in-field setting, leader preferences are proxied by leaders' effort proposals. We find that Muslim leaders propose 10.5 hours on average, compared to 9.4 hours for Hindu leaders (Appendix Table A5), but the difference is not statistically significant (Appendix Table A6,

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[18] For comparison purposes the minimum effort in Brandts et al. (2015) is rescaled.

column 1). The distribution of proposals by leader identity in the control arm is in Appendix Figure A4, and a Kolmogorov-Smirnov test shows that the two distributions are not different (p value 0.452). In any case, as shown above, the difference in minimum group effort is robust to controlling for leader proposals (Table 2, column 6). We can therefore reject leader preferences as an explanation of the greater effectiveness of Muslim leaders.

As a result, we can conclude that our findings are driven by citizen reactions to leader identity. In the rest of this section, we examine three elements of citizen reactions: citizen perceptions of leader competence; citizen beliefs about the effort that members of their group (including the leader) will exert; and indicators of in-group bias in individual effort choices. We have survey measures of citizen perceptions and beliefs, and experimental measures of individual effort. We are also able to leverage the fact that, within our sample there is variation across towns in whether Muslims are a minority or a majority of the population.

One possibility is that citizens *perceive* Muslim leaders as more competent simply because they have achieved a leadership position despite being from a disadvantaged minority group. We examined the competence hypothesis in two ways. First, we examined responses to a question in our post experiment survey asking "Do you think Muslim leaders are less capable relative to Hindu leaders?" We find that 27% of Hindus and 10% of Muslims agree with this statement, revealing that Muslims have more faith in Muslim leaders than Hindus. However, the *response* to Muslim leaders does not differ significantly with the fraction of the group that believes Muslim leaders are less competent (Appendix Table A7, columns 1 and 2). This undermines the competence explanation.[19] Second, we examined whether the response to Muslim leaders is different in towns that have experienced Muslim mayors; 17 out of 44 towns in our sample elected Muslim mayors in the most recent urban local council elections of 2012. We find that in towns with Muslim mayors, there is a lower minimum effort response to Muslim leaders (Appendix Table A7, columns 3 and 4). This also undermines the competence explanation.

A second potential driver of citizen reactions is that they depend on beliefs about how other group members will react to leader identity (since it is group minimum effort that drives individual

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[19] Willingness to raise effort in response to the leader's proposal may depend on a subjects' belief that the leader will behave consistent with their proposal. We find that Muslim leaders are more likely to follow their own proposals. 79% of Muslim leaders in the control group make effort choices that equal or exceed their own proposals, compared to 65% of Hindu leaders, a difference that is statistically significant (p-value=0.004). This is interesting but it does not on its own explain why Muslim and Hindu individuals respond differently to Muslim leaders.

payoffs). To probe beliefs our survey asked individuals to estimate the hours worked by their fellow employees. Using these data we control for beliefs and find that this does not change the coefficients on leader effectiveness (see Appendix Table A7, columns 5 and 6).[20] Notice that this specification also controls for the possibility that revealing the leader's religious identity may have changed employees' beliefs about the religious composition of the group even though nothing was explicitly stated about this, since the leader is one of the four in the group whose effort counts towards minimum effort. Overall, this suggests that beliefs about the behavior of others is not the main driver of our results.

A final possibility is that in heterogeneous groups, where in-group discrimination may exist, leader identity could impact individual effort by activating such biases. Previous research shows that minority groups are more prone to engage in in-group discrimination (Bisin and Verdier, 2011; Gupta et al, 2018). To investigate this, we examine individual effort decisions, hypothesizing that Muslims supply less effort in Hindu-led groups and more effort in Muslim led groups. We expect the same pattern among Hindus, but with smaller responses if, as the majority group, they have weaker in-group bias. We estimate the following specification:

$$(4)\ IndividualEffort_{ikjt} = a + bLeader_{kjt} + X_{ikj}'g + w_{ikjt}\ ;\ t = 1,2,...,6\ and$$

where $IndividualEffort_{ikjt}$ is the effort choice of individual i in group k (of town j) and period t. As before, X_{ikj} includes town fixed effects, demographic controls and religious controls, and standard errors are clustered at the group level. We should however emphasize that individuals' effort choices depend on both their own reactions to the identity of the leader and their expectations of how other individuals in the group will react to the leader's proposal and the leader's identity. Thus, the regressions above are not strictly comparable to the group minimum effort regressions which isolate the role of leader identity.

We report specification (4) in Appendix Table A8 for each of four cases: Muslim *vs* Hindu employees under Muslim leaders *vs* Hindu leaders. We find that Muslim employees exhibit significantly higher effort choices in groups with a Muslim leader (compared to the earlier periods

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[20] It is plausible that individuals react differently to their beliefs about the leader's effort than about the effort of other members of the group. To assess this, we controlled for participants' beliefs about the hours worked by their leader, but again the coefficients of interest did not change significantly (Appendix Table A7, columns 7 and 8).

without any leader), but do not change their effort choices when confronted with a Hindu leader (Appendix Table A8, columns 1 and 2). Similarly, Hindu employees do not change their effort choices when faced with a leader of the other religion (column 3). However, in contrast to Muslims, Hindu employees significantly reduce their effort choices in groups with a leader from their own religion (column 4). Statistical tests confirm that the differences in individual effort are significantly different across the two types of leaders, for both Muslim and Hindu employees (p-values 0.088 and 0.001 respectively). We verify that these results are robust to excluding the leader's effort choices from this analysis and focusing purely on employees (Appendix Table A8, columns 5-8).

On average, Muslims are a minority group in India. However, in our sample, the proportion of the population that is Muslim varies dramatically from 12% to 89% across the experiment sites, and in 16 out of 44 towns Muslims are a population majority. We leverage this variation to examine whether the results are different in Muslim-majority versus Muslim-minority towns. Consistent with in-group bias being stronger in minority groups, we find that minimum group effort under Muslim leaders increases by a statistically significant 1.7 hours in towns where Muslim are in a minority, but by a statistically insignificant 0.2 hours in towns where Muslims are in a majority (Appendix Table A7, column 9). Although the difference is not statistically significant, the magnitude of the difference is compelling. There is no similarly large difference for Hindu led groups (column 10).

To summarize, our investigations indicate that the ability of Muslim leaders to induce greater coordination towards Pareto-superior equilibria is associated with in-group preferences being enhanced when faced with a leader from the same religion, and such activation possibly being stronger when the individual is part of a social minority group in the local area.

6.3. Leader Impacts in Different Policy Environments

In this subsection we analyze the impact of leaders under two different policies that have been proposed to redress societal disadvantage and conflict: affirmative action (AA) and intergroup contact. As described earlier, Muslims in India tend to be economically and socially disadvantaged and incidents of inter-religious violence occur every year in India.

We know of no previous investigation of AA impacts on coordination, although this seems like a first order question when AA is used to address imbalances among conflictual groups. There

is a large literature on intergroup bias which typically finds that contact reduces prejudice but less effectively for ethnic or racial prejudice.[21] No previous study has examined the impact of intergroup contact on coordination. During subject recruitment, we noticed considerable residential segregation of Muslims and Hindus in some of our study sites, making the contact treatment pertinent.[22]

We examine the impact of contact and AA on minimum group effort using equation (3). We find that introducing leaders on average results in somewhat higher coordination in the AA treatment and significantly higher coordination in the contact treatment arm than in the control arm (Table 3, column1). The effect of contact on coordination is significantly larger than the effect of AA (p value 0.05). In addition, the impacts of the two interventions differ significantly by leader identity. Intergroup contact improves minimum group effort under both Muslim and Hindu leaders compared to the control group, but the difference is larger for Hindu leaders. For Muslim leaders, intergroup contact increases group minimum effort to 2.07 hours, compared to the 1.07 hour improvement in the control group, and this difference is not statistically significant (column 2). Under Hindu leaders there is a small decline in group minimum effort in the control group but a large and statistically significant increase of 2.755 hours in the contact treatment group (column 3). Minimum group effort in the contact treatment is thus almost the same across Muslim and Hindu leaders (see Figure 2).

The AA treatment, on the other hand, significantly decreases the effectiveness of Muslim leaders. Minimum group effort increases by a small and insignificant 0.23 hours for Muslim leaders in the AA group, much smaller than the 1.07 hour improvement obtained in the control arm (Table 3, column 2). For Hindu leaders, we find a large and statistically significant improvement in minimum group effort in the AA treatment: Hindu leaders improve average minimum group effort by 1.90 hours, which is only a little bit smaller than the improvement achieved under intergroup contact (column 3). These results are consistent with the hypothesis of increased backlash towards AA recipients and greater in-group solidarity among non-recipients.

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[21] See, among others, Allport (1954), surveys in Pettigrew and Tropp (2006) and Paluck et al. (forthcoming).
[22] Previous research on AA typically looks at whether the group upon whom the quotas are conferred benefits. There is some evidence that prolonged exposure to gender quotas improves outcomes for girls and women (Beaman et al., 2009, 2012) but other evidence that AA can generate backlash against the beneficiaries of quotas if they are perceived to be less skilled, increase in-group solidarity among non-beneficiaries (Bisin and Verdier, 2011; Gangadharan et al., 2016; Leibbrandt et al., forthcoming; Ip et al., 2018).

We verify that these differences do not arise because of differences in leader proposals across treatment arms. Muslim leaders do not make statistically different proposals from Hindu leaders across any of the treatment arms (Appendix Table A6, column 2), and our results go in the same direction and even become more significant after we restrict to the last two periods and control for leader proposals (Table 3, columns 4 and 5). [23]

Similar to the analysis for the control group, we examine individual effort decisions using the following specification separately for Hindu and Muslim employees under Hindu and Muslim leaders:

$$(5)\ IndividualEffort_{ikjt} = f_0 + f_1 Leader_{kjt} + f_2 Leader_{kjt} * AA_j + f_3 Leader_{kjt} * Contact_j + X_{ikj}'g + z_{kjt}$$

We find that the main driver of the different results across treatment arms is the effort choice of Hindu individuals. Muslim employees significantly increase effort when a Muslim leader is introduced (as discussed earlier), and this does not vary across treatment arms (Appendix Table A9, column 1). Hindu employees do not increase their effort when a Muslim leader is introduced, and again this is not significantly different across treatment arms, and a similar pattern is observed for Muslim employees in Hindu-led groups (columns 2 and 3). However, Hindu employees chose lower effort levels in Hindu-led groups in the control treatment, but they choose significantly higher effort in both the AA treatment and in the contact treatment (column 4). Particularly for the AA treatment this is consistent with the AA literature (Gangadharan et al., 2016) which identifies stronger in-group behavior in the majority group as a result of the introduction of AA.

According to Ip et al. (2018), differences in the outcome of gender quotas may be a result of differences in the belief about the existence of a gender skill gap. To explicitly test whether perceptions of skill differences can explain differences in coordination under AA under Muslim and Hindu leaders we again use the question from our post experiment survey that asks whether Muslim leaders are less capable than Hindu leaders, but this time comparing answers across treatment arms. The minimum group and individual effort responses to Muslim or Hindu leaders under AA are not significantly different for groups in which more individuals assess Muslim leaders as less capable (p-value = 0.567 for Muslim leaders and 0.645 for Hindu leaders.) This

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[23] The gender of an individual's puzzle partner may also be important. We re-estimate equation (4) for the contact group participants, interacting leader with female puzzle partner. We find that participants with female puzzle partners respond less to the introduction of a leader, but the difference is not statistically significant.

suggests that the documented backlash against Muslim leaders under AA is generalized rather than dependent on perceived skill differences between Muslim and Hindu leaders. The results discussed so far average across areas with different histories of Hindu-Muslim conflict. It seems plausible that past conflict influences in-group behavior and, thereby, citizen responses to leader identity. We examine this in the next section.

6.4. Does Conflict History Matter?

We examine whether coordination outcomes under the two types of leaders in the treatment arms vary with whether the district has a high or low exposure to conflict over the period 1980-2010. This is pertinent since both policies have the potential to correct for historical grievances. It is important to note that the aim of this exercise is not to compare outcomes in high and low conflict areas directly, since many other observable and unobservable characteristics may differ across high conflict and low conflict areas.[24] Instead, we take advantage of the fact that we randomly allocated towns to different treatments within districts characterized by high vs low conflict and we compare behavior across these randomized treatments *within* each conflict setting. Thus, we do not aim to identify the causal impact of prior conflict, but rather the effectiveness of Muslim vs Hindu leaders in each of two groups of areas with different conflict histories.

What differences might we expect based on conflict history? If areas with a history of intergroup conflict are also areas where in-group favoritism and out-group discrimination are higher, then it is likely that the majority group will react more adversely to an AA policy. The impact of conflict on the effectiveness of intergroup contact is more ambiguous. On the one hand, conflict-affected areas may be precisely those where intergroup contact is most limited to begin with, and so the contact treatment may have a larger effect. On the other hand, a history of conflict may reduce the receptiveness of individuals of both groups to contact.

We find some significant differences in the effectiveness of the two interventions by the history of conflict in the district. Muslim leaders improve minimum group effort in the control and contact treatments only in low conflict areas (Table 4, column 1). In high conflict areas, Muslim leaders

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[24] Most of the characteristics documented in Table 2 are similar across towns in high conflict and low conflict districts, with the exception that female labor force participation and wage work are more common in the high conflict towns, possibly reflecting the fact that inter-religious violence in India is concentrated in more urbanized areas (results available on request).

have no impact on coordination in the control or contact arms, and an adverse effect on coordination in the AA arm (column 2).

The impact of Hindu leaders on coordination is less sensitive to the history of conflict in the district, with the exception that coordination improvements in the contact treatment arm are in fact higher in high conflict areas (Table 4, columns 3 and 4). Hindu leaders do not improve coordination in the control arm but they do significantly improve it under both the AA and the contact treatments relative to the control, in both high conflict and low conflict areas.

7. **Conclusions**

We conducted a lab-in-the-field coordination game in India with a view to identifying the impact of the religious identity of leaders on their ability to improve coordination in mixed-religion groups. We find that minority (Muslim) leaders improve coordination, but majority (Hindu) leaders do not. We show that this cannot be explained by differences in leader proposals (preferences) and we suggest that it may be explained by stronger preferences by the minority for their own group. Our results provide the first evidence that leader identity is important in citizen decisions to coordinate economic actions, over and above the effects of differences in leaders' preferences.

We test the effectiveness of leaders under both affirmative action and intergroup contact policies. We find lower effectiveness of (minority) Muslim leaders and greater effectiveness of (majority) Hindu leaders under affirmative action. These results are consistent with affirmative action generating backlash against its recipients, and increasing in-group solidarity among non-recipients. We also find that policies that encourage intergroup contact improve the effectiveness of both Hindu and Muslim leaders.

Finally, we examine differences in our results according to whether the towns are in districts with a greater or lesser history of inter-religious conflict. We find that the positive effect of Muslim leaders on group coordination stems from low conflict areas, intergroup contact does not increase the effectiveness of Muslim leaders in high conflict areas and affirmative action policies actually worsen group coordination. The effectiveness of Hindu leaders, on the other hand, does not vary much across areas of high or low conflict.

Our findings contribute novel evidence to research on coordination failure and on leader identity by bridging the two domains of research. In addition to documenting the role of citizen

reactions to leader identity in heterogeneous communities, our work provides useful guidance to the policy and contextual constraints on the role of leaders in resolving coordination problems.

Our results are likely to be of general interest, as many societies are diverse, and civil conflict is rife. Blattman and Miguel (2010) estimate that, between 1960 and 2006, 20% of nations experienced at least ten years of civil war. The literature on ethnic diversity and civil conflict has grown rapidly but no previous work has examined the role of leadership: if minority ethnic or religious groups had leadership representation proportional to their size, would overall coordination and efficiency improve? Does affirmative action that corrects for imbalance in representation work to improve coordination, and how does this vary with whether the local (group) leader is in place through a quota or not? Similarly, does increasing non-competitive contact between the two groups lead to better coordination outcomes and, again, does this depend upon leader identity? Finally, does a history of conflict jeopardize the effectiveness of these interventions, or to what extent is remediation easier where high levels of conflict have not yet emerged? We address all of these questions, and thus contribute also to research on social integration and civil conflict. Importantly, our results for leader identity apply, in principle, not only to political leadership but also to leadership positions in other domains, for instance, in the police forces or the judiciary.

References

Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, *94*(2), 291-309.

Ahern, K.R., and A. Dittmar (2012). The changing of the boards: The impact on firm valuation of mandated female board representation. *Quarterly Journal of Economics* 127:1:137–197.

Allport, G. (1954). *The Nature of Prejudice*. New York, NY: Basic Books.

Ashraf, N. and Bandiera, O. (2017). Social Incentives in Organizations. Working Paper.

Balafoutas, L. and Sutter, M. (2012). Affirmative action policies promote women and do not harm efficiency in the lab. *Science*, 335: 579-582.

Barnhardt, S. (2009). Near and dear? Evaluating the impact of neighbor diversity on interreligious attitudes. Working paper.

Bauer, Michal, Alessandra Cassar, Julie Chytilová, and Joseph Henrich. (2014). War's Enduring Effects on the Development of Egalitarian Motivations and In-Group Biases. *Psychological Science* 25(1): 47–57

Bauer, Michal, Christopher Blattman, Julie Chytilová, Josph Henrich, Edward Miguel, and Tamar Mitts. (2016). Can War Foster Cooperation? *Journal of Economic Perspectives,* 30(3): 249–74.

Beaman, L., Chattopadhyay R., Duflo E., Pande R. and Topalova P. (2009). Powerful women: does exposure reduce bias? *Quarterly Journal of Economics* vol. 124(4), pp. 1497-1540.

Beaman, L., Chattopadhyay R., Duflo E., Pande R. and Topalova P. (2012). Female leadership raises aspirations and educational attainment for girls: a policy experiment in India. *Science* vol. 335(6068), pp. 582-586.

Besley, Timothy and Coate, Stephen, (1997), An Economic Model of Representative Democracy, *The Quarterly Journal of Economics*, **112**, (1), p. 85-114.

Bellows, John, and Edward Miguel. (2009). War and Local Collective Action in Sierra Leone. *Journal of Public Economics*, 93(11–12): 144–57.

Bertrand, M. and Duflo, E. (2017). Field Experiments on Discrimination. *Handbook of Economic Field Experiments*, 1:309–393.

Bhalotra, S., Clots-Figueras, I. and Iyer, L. (2018). Religion and Abortion: The Role of Politician Identity. Working paper.

Bhalotra, S., Cassan, G., Clots-Figueras, I. and Iyer, L. (2014). Religion, politician identity and development outcomes: evidence from India. *Journal of Economic Behavior and Organization*, 104, 4–17.

Bhavnani, Rikhil R. (2017). Do the Effects of Temporary Ethnic Group Quotas Persist? Evidence from India. *American Economic Journal: Applied Economics*, 9(3): 105-23.

Bhavnani, R., Donnay, K. , Miodownik, D. , Mor, M. and Helbing, D. (2014), Group Segregation and Urban Violence. *American Journal of Political Science*, 58: 226-245.

Bisin, A. and Verdier, T. (2011). The Economics of Cultural Transmission and Socialization. In Benhabib, J., Bisin, A., and Jackson, M.O., eds, *Handbook of Social Economics*, Vol. 1A, The Netherlands: North-Holland, pp. 339-416.

Blattman, C., and Miguel, E.. (2010). Civil War. *Journal of Economic Literature*, 48 (1): 3-57.

Bowles, S. (2008). Being Human: Conflict: Altruism's Midwife. *Nature*, 456(7220): 326–27.

Bowles, S., Foley, D. and Halliday, S. (forthcoming) *Microeconomics: Competition, Cooperation & Conflict*.

Brandts, J., & Cooper, D. J. (2006). A change would do you good... an experimental study on how to overcome coordination failure in organizations. *American Economic Review*, 96 (3), 669-693.

Brandts, J., & Cooper, D. J. (2007). It's what you say, not what you pay: an experimental study of manager-employee relationships in overcoming coordination failure. *Journal of the European Economic Association*, 5 (6), 1223-1268.

Brandts, J., Cooper, D. J., & Fatas, E. (2007). Leadership and overcoming coordination failure with asymmetric costs. *Experimental Economics*, 10 (3), 269-284.

Brandts, J., Cooper, D. J., & Weber, R. A. (2015). Legitimacy, communication, and leadership in the turnaround game. *Management Science*, 61 (11), 2627-2645.

Brandts, J., D. J. Cooper, E. Fatas, and S. Qi (2016). Stand by me - Experiments on help and commitment in coordination games. *Management Science,* 62 (10), 2916–2936.

Brollo, F. and Troiano, U. (2016). What happens when a woman wins an election? Evidence from close races in Brazil. *Journal of Development Economics*, 122, 28-45.

Burgess, Robin, Jedwab, Remi, Miguel, Edward, Morjaria, Ameet and Padró i Miquel, Gerard (2015). The value of democracy: evidence from road building in Kenya. *American Economic Review*, 105 (6), 1817-1851.

Burns, J., L. Corno and E. La Ferrara (2015). Interaction, prejudice and performance: Evidence from South Africa. Working paper.

Cartwright, Edward, Joris Gillet and Mark Van Vugt. (2013). Leadership by Example in the Weak-Link Game. *Economic Inquiry*.

Cassar, Alessandra, Pauline Grosjean, and Sam Whitt. (2013). Legacies of Violence: Trust and Market Development. *Journal of Economic Growth* 18(3): 285–318.

Cecchi, F, K. Leuveld, M.J. Voors. (2016). Conflict exposure and competitiveness: experimental evidence from the football field in Sierra Leone Econ. *Dev. Cult. Change*, 64 (3), pp. 405-435.

Chin, A. and N. Prakash. (2011). The Redistributive Effects of Political Reservation for Minorities: Evidence from India. *Journal of Development Economics*, 96 (2): 265-277.

Coleman, J. S. (1987). Norms as social capital. In G. Radnitzky & P. Bernholz (Eds.), Economic imperialism (pp. 133-155). New York: Paragon

Chattopadhyay,R. and Duflo, E. (2004).Women as policymakers : evidence from a randomized policy experiment in India. *Econometrica,* 72(5),1409–1443.

Devetag, G. and Ortmann, A. (2007). When and why? A critical survey on coordination failure in the laboratory. *Experimental Economics*, 10, 331-344

Dahl, Gordon, Andreas Kotsadam and Dan-Olof Roth (2018). Does Integration Change Gender Attitudes? The Effect of Randomly Assigning Women to Traditionally Male Teams. NBER Working Paper 24351.

Enos RD and Gidron N (2016). Intergroup Behavioral Strategies as Contextually Determined: Experimental Evidence from Israel. *Journal of Politics,* 78(3):851–867.

Field, E., Levinson, M., Pande, R., & Visaria, S. (2008). Segregation, Rent Control, and Riots: The Economics of Religious Conflict in an Indian City. *American Economic Review, 98*(2), 505-510.

Gächter, S., Nosenzo, D., Renner, E., Sefton, M., (2012). Who makes a good leader? Cooperativeness, optimism, and leading-by-example. *Economic Inquiry* 50, 953-967.

Gangadharan, L., T. Jain, P. Maitra, and J. Vecci (2016). Social Identity and Governance: The Behavioral Response to Female Leaders. *European Economic Review*, 90: 302–25

Gilligan, Michael J., Benjamin J. Pasquale, and Cyrus Samii. (2014). Civil War and Social Cohesion: Lab-in-the-Field Evidence from Nepal. *American Journal of Political Science,* 58(3): 604–19.

Glaeser, Edward L. (2005). The Political Economy of Hatred. *Quarterly Journal of Economics,* 120, 45-86.

Government of India (2014). Status of Reservation of OBC in Various States. Ministry of Social Justice and Empowerment. Government of India. Available http://pib.nic.in/newsite/PrintRelease.aspx?relid=108754

Grosjean, Pauline. (2014). Conflict and Social and Political Preferences: Evidence from World War II and Civil Conflict in 35 European Countries. *Comparative Economic Studies,* 56(3): 424–51.

Gupta, G., Mahmud, M., Maitra, P., Mitra, S., and Neelim, A. (2018). Religion, Minority Status and Trust: Evidence from a Field Experiment. *Journal of Economic Behavior and Organization*, 146, 180 - 205.

Güth, W., M. V. Levati, M. Sutter, and E. Van Der Heijden. (2007). Leading by Example with and without Exclusion Power in Voluntary Contribution Experiments. *Journal of Public Economics*, **91**, 1023–42.

Hoff, K. (2000). Beyond Rosenstein-Rodan: the modern theory of coordination problems in development. *Proceedings of the Annual World Bank Conference on Development Economics*, 145-188.

Hoff, K., and Stiglitz, J. (2001). Modern economic theory and development. In G. M. Meier & J. E. Stiglitz (Eds.), *Frontiers of development economics: The future in perspective*. New York: Oxford University Press.

Hogg MA (2001). A social identity theory of leadership. *Pers Soc Psychol Rev,* 5: 184–200

Ip, E., Leibbrandt, A., Vecci, J., (2018). How Do Gender Quotas Affect Hierarchical Relationships? Complementary Evidence from a Respresentative Survey and Labor Market Experiments, CESifo Working Paper Series 6915, CESifo Group Munich.

Iyer, L., A. Mani, P. Mishra, and P. Topalova (2012). The power of political voice: Women's political representation and crime in India. *American Economic Journal: Applied Economics,* 4(4), 165–193.

Kaysser, N., Bhalotra S., Clots-Figueras I. and Iyer L. (2015). Hindu-Muslim violence in India 1950-2010: an update of the Varshney-Wilkinson dataset on Hindu-Muslim violence in India. Work in progress.

Kremer, M. (1993). The O-Ring Theory of Economic Development. *Quarterly Journal of Economics*, 108(3), 551-575.

Leibbrandt, A., Wang, L.C., Foo, C., (forthcoming). Gender Quotas, Competitions, and Peer Review: Experimental Evidence on the Backlash Against Women. *Management Science.*

List, J. A., and D. Lucking-Reiley (2002). The effects of seed money and refunds on charitable giving: Experimental evidence from a university capital campaign. *Journal of Political Economy,* 110, 215–233.

Lowe, M. (2017). Types of contact: A field experiment on collaborative and adversarial caste integration. *Working Paper.*

Matsa, D. A., & Miller, A. R. (2013). A female style in corporate leadership? Evidence from quotas. *American Economic Journal: Applied Economics*, 5(3), 136-69.

Meyersson, E. (2014). Islamic rule and the empowerment of the poor and pious. *Econometrica*, 82(1), pp. 229–69.

Miguel Edward, Roland Gerard. (2011). The Long-Run Impact of Bombing Vietnam. *Journal of Development Economics*, 96 (1-15).

Mitra, Anirban, and Debraj Ray. (2014). Implications of an Economic Theory of Conflict: Hindu-Muslim Violence in India. *Journal of Political Economy*. 122 (4): 719–65.

Niederle, M., Segal, C., Vesterlund, L. (2013). How costly is diversity? Affirmative action in light of gender differences in competitiveness. *Management Science*. 59(1), 1-16.

NITI Aayog. (2016). Eliminating Poverty: Creating Jobs and Strengthening Social Programs. Occasional Paper 2. Government of India. Available at http://niti.gov.in/writereaddata/files/OccasionalPaper_No2_Poverty.pdf

Osborne, Martin and Slivinski, Al, (1996). A Model of Political Competition with Citizen-Candidates, *The Quarterly Journal of Economics*, **111**, (1), p. 65-96

Paluck, Elizabeth Levy and Green, Seth and Green, Donald P., (forthcoming). The Contact Hypothesis Revisited. *Behavioural Public Policy.*

Pande Rohini. (2003). Can Mandated Political Representation Provide Disadvan.taged Minorities Policy Influence? Theory and Evidence from India. *American Economic Review*, 93 (4) 1132-1151

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.

Polania-Reyes, S. (2016). Coordination as unintended benefit: Lab-in-the-field evidence from a conditional cash transfer program. Working Paper.

Quota Project (2016). Global database of quotas for women. International IDEA and Stockholm University. Available: http://www.quotaproject.org (accessed May 23, 2017).

Rao, Gautam (2018). Familiarity Does Not Breed Contempt: Diversity, Discrimination and Generosity in Delhi Schools. Working Paper.

Rodrik, Dani. (1999). Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses. *Journal of Economic Growth*, 4(4): 385–412.

Scacco, Alexandra and Shana Warren (2018). Can Social Contact Reduce Prejudice and Discrimination? Evidence from a Field Experiment in Nigeria. *American Political Science Review* 1-24. doi:10.1017/S0003055418000151

Schotter, A., and K. Weigelt (1992). Asymmetric Tournaments, Equal Opportunity Laws and Affirmative Action: Some Experimental Results. *Quarterly Journal of Economics*, 107(2), 511–539.

The Economist (2016). India's Muslims: An uncertain community, October 29. Available: https://www.economist.com/asia/2016/10/29/an-uncertain-community

Van Huyck, J. B., R. C. Battalio, and R. O. Beil (1990). Tacit Coordination Games, Strategic Uncertainty, and Coordination Failure. *American Economic Review*, 80, 234-248.

Varshney, A. (2002). *Ethnic Conflict and Civic Life: Hindus and Muslims in India*. New Haven: Yale University Press.

Weber, Roberto, Camerer, Colin, Rottenstreich, Yuval and Knez, Marc. (2001). The Illusion of Leadership: Misattribution of Cause in Coordination Games. *Organization Science*. 12. 10.1287/orsc.12.5.582.10090.

Wilkinson, S. (2004). *Votes and Violence: Electoral Competition and Ethnic Riots in India*. Cambridge: Cambridge Univ. Press

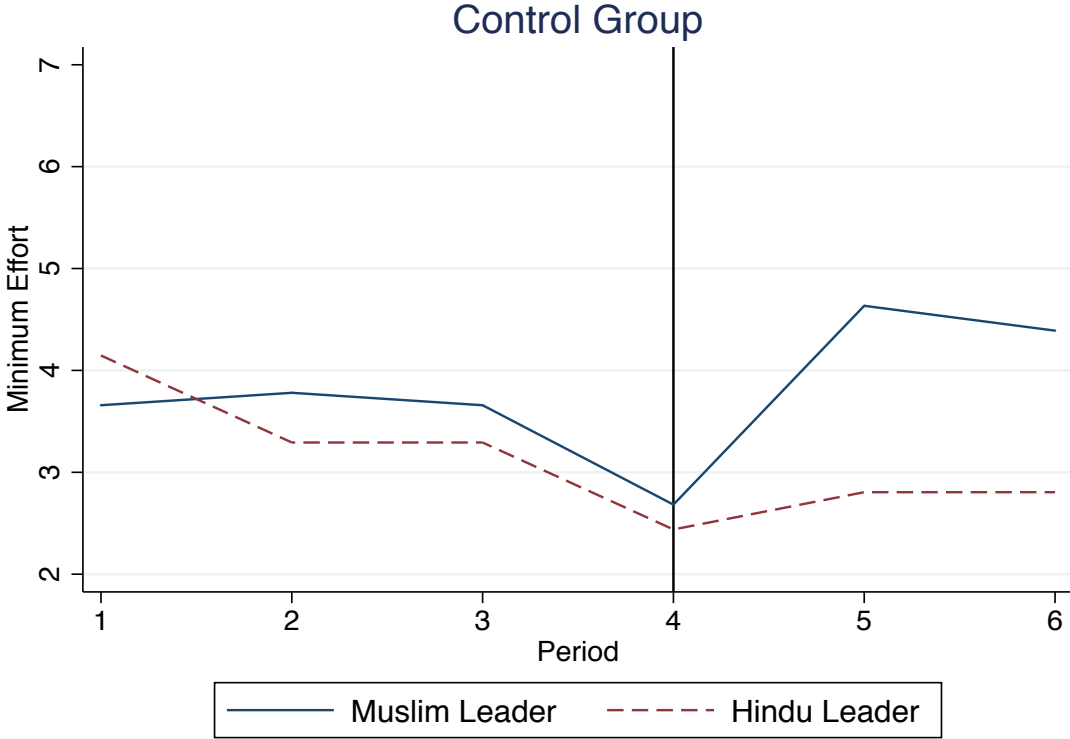**Figure 1**
Leader Identity and Coordination (Control Group)

Figure 2
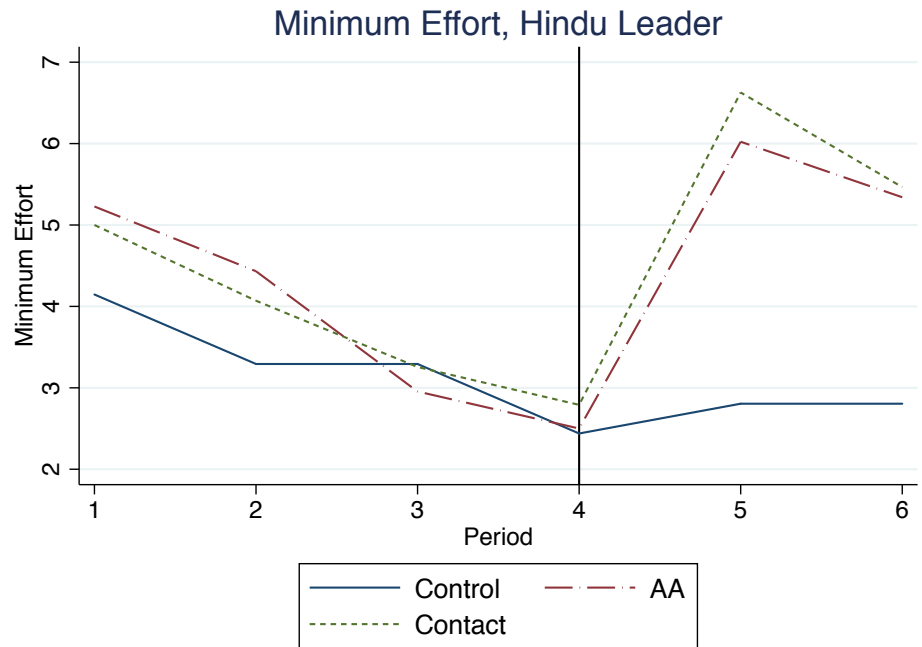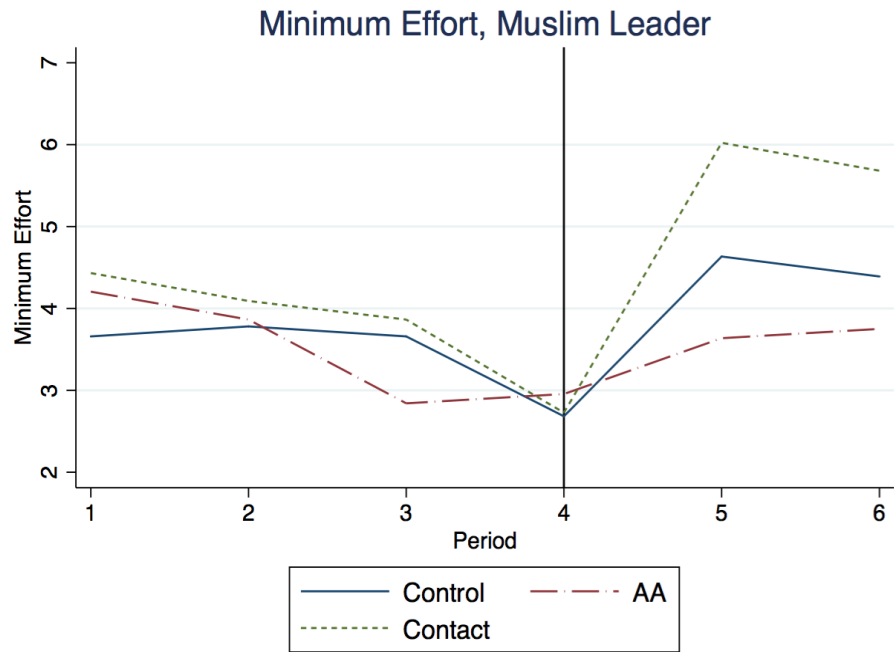**Leader Effectiveness Across Policy Environments**

Table 1

Demographic Characteristics Across Towns in Different Treatment Groups

	Control	Contact	AA	p-value of difference (Contact v Control)	p-value of difference (Control v AA)
Panel A: Census 2011 characteristics					
Total Population	13709	14646	14011	0.727	0.917
Fraction Muslim	0.43	0.40	0.38	0.803	0.631
Women per 1000 men	913	908	902	0.665	0.415
Girls per 1000 boys (age 0-6)	919	911	904	0.738	0.463
Fraction literate	0.58	0.57	0.58	0.808	0.978
Fraction women literate	0.50	0.49	0.50	0.880	1.000
Fraction SC	0.13	0.13	0.13	0.986	0.949
Fraction ST	0.00	0.00	0.00	0.488	0.323
Work participation, male	0.46	0.47	0.46	0.355	0.837
Work participation, female	0.11	0.14	0.14	0.167	0.262
Fraction working men in household enterprise	0.07	0.08	0.07	0.612	0.912
Fraction working men in non-agri and non-HH enterprise	0.65	0.60	0.64	0.555	0.894
Panel B: Experiment participant characteristics					
Male	0.67	0.60	0.60	0.065	0.059
Age	24.1	24.7	22.5	0.382	0.014
Scheduled Caste or Scheduled Tribe	0.16	0.13	0.16	0.357	0.847
Other Backward Caste	0.58	0.50	0.51	0.055	0.091
Only primary education	0.13	0.12	0.12	0.646	0.686
Completed grade 10	0.23	0.19	0.24	0.132	0.909
Completed grade 12	0.39	0.35	0.37	0.347	0.659
Completed college	0.25	0.34	0.27	0.007	0.497
Family monthly income <=Rs 5,000	0.19	0.21	0.16	0.568	0.335
Family monthly income Rs 5,000-10,000	0.31	0.30	0.29	0.875	0.574
Family monthly income Rs 10,000-15,000	0.24	0.19	0.22	0.147	0.507
Family monthly income Rs 15,000-30,000	0.17	0.23	0.23	0.069	0.063
Family monthly income > Rs 30,000	0.09	0.07	0.11	0.302	0.550
Pray several times a day	0.26	0.28	0.25	0.412	0.856
Pray once a day	0.61	0.58	0.60	0.519	0.811
Pray less than once a day	0.14	0.13	0.15	0.889	0.577

Notes: p-value of difference is calculated by regression on the treatment dummies and using robust standard errors.

Table 2
Leader Identity and Coordination (Control Group)

Dependent variable: Minimum Effort in the Group

	(1) Muslim Leaders	(2) Hindu Leaders	(3) Muslim Leaders	(4) Hindu Leaders	(5) All Leaders	(6) All Leaders
Leader (Period>4)	1.067**	-0.488	1.067**	-0.488	-0.488	
	(0.494)	(0.381)	(0.508)	(0.392)	(0.379)	
Muslim Leader * (Period>4)					1.555**	
					(0.620)	
Muslim Leader					-0.492	1.272**
					(0.616)	(0.618)
Observations	246	246	246	246	492	164
R-squared	0.281	0.258	0.477	0.435	0.309	0.536
Town FE	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes	Yes	Yes
Religious Controls	No	No	Yes	Yes	Yes	Yes
Experimental Controls	No	No	No	No	No	Yes

Standard errors in parantheses, clustered at group level. *** p<0.01, ** p<0.05, * p<0.1. Demographic controls include gender, age, education and monthly household income; religious controls include dummies for whether the participant prays several times a day or once a day; experimental controls include the leader's proposal and the group minimum effort in period 4. Columns 1-5 include data from all periods; Column 6 is restricted to periods 5 and 6 only.

Table 3
Policy Environments and Leader Effectiveness

Dependent variable: Minimum Effort in the Group

	(1)	(2)	(3)	(4)	(5)
	All Leaders	Muslim Leaders	Hindu Leaders	Muslim Leaders	Hindu Leaders
Leader (Period>4)	0.290	1.067**	-0.488		
	(0.318)	(0.495)	(0.382)		
Leader (Period>4)*AA	0.776	-0.840	2.391***	-1.625*	2.370***
	(0.531)	(0.814)	(0.671)	(0.837)	(0.627)
Leader (Period>4)*Contact	1.880***	1.007	2.755***	1.738**	2.850***
	(0.494)	(0.752)	(0.651)	(0.801)	(0.676)
p-value for Leader*AA=Leader*Contact	0.054	0.034	0.634	0.000	0.476
Observations	1542	774	768	258	256
R-squared	0.214	0.258	0.340	0.365	0.399
Town FE	Yes	Yes	Yes	No	No
Demographic Controls	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes
Experimental Controls	No	No	No	Yes	Yes

Standard errors in parantheses, clustered at group level. *** p<0.01, ** p<0.05, * p<0.1. Demographic controls include gender, age, education and monthly household income; religious controls include dummies for whether the participant prays several times a day or once a day; experimental controls include the leader's proposal and the group minimum effort in period 4. Columns 1-3 include data from all periods; Columns 4 and 5 are restricted to periods 5 and 6 only.

Table 4

Does a History of Conflict Matter for Leader Effectiveness across Policy Environments?

Dependent variable: Minimum Effort in the Group

	(1) Muslim Leaders Low Conflict Areas	(2) Muslim Leaders High Conflict Areas	(3) Hindu Leaders Low Conflict Areas	(4) Hindu Leaders High Conflict Areas
Leader (Period>4)	1.181**	0.978	-0.486	-0.489
	(0.577)	(0.770)	(0.555)	(0.537)
Leader (Period>4)*AA	0.757	-2.176**	2.236**	2.520***
	(1.194)	(1.036)	(1.020)	(0.912)
Leader (Period>4)*Contact	2.014*	0.320	1.663**	3.470***
	(1.100)	(1.027)	(0.780)	(0.939)
Observations	336	438	330	438
R-squared	0.417	0.282	0.401	0.328
Town FE	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes
Experimental Controls	No	No	No	No

Standard errors in parantheses, clustered at group level. *** p<0.01, ** p<0.05, * p<0.1. Demographic controls include gender, age, education and monthly household income; religious controls include dummies for whether the participant prays several times a day or once a day.

Appendix

Table A1
Number of Sites and Respondents Across Different Treatment Arm

		Control	Contact	Affirmative Action	Total
Total					
	# sites	14	15	15	44
	# groups	82	87	88	257
	# respondents	328	348	352	1028
Low-conflict districts					
	# sites	6	6	7	19
	# groups	36	35	40	114
	# respondents	144	140	160	456
High-conflict districts					
	# sites	8	9	8	25
	# groups	46	52	48	150
	# respondents	184	208	192	600

Table A2
Pre-Experiment Survey

	Question	Response
1	What is your height?	1.☐ 0-4 feet 2.☐ 4.1-7 feet
2	Is your hair colour black?	1.☐ Yes 2.☐ No
3	What is your religion?	1. ☐ Muslim 2. ☐ Hindu 3. ☐ Christian 4. ☐ Buddhist
4	Is your eye colour blue?	1. ☐ Yes 2. ☐ No

Table A3
Coordination Game Payoff Matrix

	Minimum of the Hours Spent by Other Employees				
	0	5	10	15	20
My Hours working	0	₹ 500	₹ 500	₹ 500	₹ 500	₹ 500
	5	₹ 375	₹ 575	₹ 575	₹ 575	₹ 575
	10	₹ 250	₹ 450	₹ 650	₹ 650	₹ 650
	15	₹ 125	₹ 325	₹ 525	₹ 725	₹ 725
	20	₹ 0	₹ 200	₹ 400	₹ 600	₹ 800

Table A4

Experiment Participant Characteristics Across Groups with Hindu and Muslim Leaders

	Hindu leader	Muslim leader	p-value of difference
Male	0.64	0.60	0.235
Age	23.7	23.8	0.755
Scheduled Caste or Scheduled Tribe	0.16	0.13	0.172
Other Backward Caste	0.51	0.55	0.172
Only primary education	0.12	0.12	0.812
Completed grade 10	0.23	0.21	0.333
Completed grade 12	0.37	0.37	0.770
Completed college	0.28	0.30	0.457
Family monthly income <=Rs 5,000	0.17	0.20	0.126
Family monthly income Rs 5,000-10,000	0.31	0.29	0.568
Family monthly income Rs 10,000-15,000	0.25	0.19	0.031
Family monthly income Rs 15,000-30,000	0.19	0.23	0.126
Family monthly income > Rs 30,000	0.09	0.09	0.818
Pray several times a day	0.26	0.27	0.780
Pray once a day	0.59	0.60	0.918
Pray less than once a day	0.15	0.14	0.619

Notes: p-value of difference is calculated by regression on the Muslim leader dummy and using robust standard errors.

Table A5
Summary Statistics of Key Variables

	Hindu Leaders			Muslim Leaders		
	Control	AA	Contact	Control	AA	Contact
Minimum effort in group (rounds 1-4)	3.29	3.78	3.78	3.45	3.47	3.78
	4.40	*4.14*	*3.96*	*4.34*	*3.44*	*4.28*
Minimum effort in group (rounds 5-6)	2.80	5.68	6.05	4.51	3.69	5.85
	3.92	*3.86*	*4.65*	*4.53*	*4.37*	*4.73*
Leader Proposal (rounds 5-6)	9.39	12.22	11.98	10.49	11.88	11.65
	6.23	*4.52*	*5.31*	*5.67*	*4.67*	*4.51*
Individual effort (Hindus)	7.41	9.45	9.67	9.75	9.19	9.36
	6.26	*5.82*	*5.75*	*6.46*	*6.11*	*5.72*
Individual effort (Muslims)	8.51	9.88	10.23	9.41	9.72	9.57
	6.35	*5.47*	*5.54*	*6.16*	*5.48*	*5.81*

Standard deviations in italics

Table A6

Do Leader Proposals Across Leader Identity and Treatment /

Dependent variable: Leader Proposal (Periods 5 and 6)

	(1)	(2)
	Across Leader Identity	Across Treatments
	Control Group	All Groups
Muslim Leader	1.093	0.923
	(0.979)	(1.000)
Muslim Leader * AA		-1.855
		(1.329)
Muslim Leader * Contact		-1.730
		(1.442)
Observations	164	504
R-squared	0.512	0.308
Mean for Hindu leaders in control group	9.390	9.390
Town FE	Yes	Yes
Demographic Controls	Yes	Yes
Religious Controls	Yes	Yes

Standard errors in parantheses, clustered at group level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.
Demographic controls include gender, age, education and monthly household income;
religious controls include dummies for whether the participant prays several times a day or
once a day.

Table A7

Why Do Muslim Leaders Induce More Coordination than Hindu Leaders?

Dependent variable: Minimum Effort in the Group

	(1) Muslim Leaders	(2) Hindu Leaders	(3) Muslim Leaders	(4) Hindu Leaders	(5) Muslim Leaders	(6) Hindu Leaders	(7) Muslim Leaders	(8) Hindu Leaders	(9) Muslim Leaders	(10) Hindu Leaders
Leader (Period>4)	0.925	-0.138	1.833***	-0.167	1.067**	-0.488	1.067**	-0.488	1.739***	-0.326
	(0.754)	(0.487)	(0.669)	(0.619)	(0.509)	(0.393)	(0.509)	(0.393)	(0.589)	(0.498)
Leader* Fraction believe that Muslim leaders are less competent	0.801	-2.492								
	(2.478)	(2.288)								
Leader*Town has Muslim mayor			-1.208	-0.506						
			(0.959)	(0.798)						
Beliefs about average hours worked by other employees in the group					-0.036	0.444*				
					(0.191)	(0.237)				
Beliefs about average hours worked by leader of the group							0.350*	0.577***		
							(0.199)	(0.144)		
Leader*Muslim population majority									-1.531	-0.368
									(1.021)	(0.800)
Observations	246	246	246	246	246	246	246	246	246	246
R-squared	0.488	0.439	0.484	0.436	0.477	0.456	0.492	0.490	0.481	0.436
Town FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Experimental Controls	No	No	No	No	No	No	No	No	No	No

Standard errors in parantheses, clustered at group level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Demographic controls include gender, age, education and monthly household income; religious controls include dummies for whether the participant prays several times a day or once a day.

Table A8
Leader Identity and Individual Effort (Control Group)

Dependent variable: Effort Choice of Participant

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Sample excludes leaders			
	Muslim Leaders		Hindu Leaders		Muslim Leaders		Hindu Leaders	
	Muslim Employees	Hindu Employees	Muslim Employees	Hindu Employees	Muslim Employees	Hindu Employees	Muslim Employees	Hindu Employees
Leader (Period>4)	1.157**	0.377	0.015	-1.156***	1.875***	0.377	0.015	-1.891***
	(0.434)	(0.531)	(0.517)	(0.408)	(0.662)	(0.531)	(0.517)	(0.657)
Observations	486	498	486	480	240	498	486	234
R-squared	0.309	0.278	0.242	0.280	0.409	0.278	0.242	0.403
Town FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Experimental Controls	No	No	No	No	No	No	No	No

Standard errors in parantheses, clustered at group level. *** p<0.01, ** p<0.05, * p<0.1. Demographic controls include gender, age, education and monthly household income; religious controls include dummies for whether the participant prays several times a day or once a day; experimental controls include the leader's proposal and the group minimum effort in period 4. Data includes effort choices of both leaders and employees in columns (1)-(4).

Table A9
Leader Identity and Individual Effort in Different Policy Environments

Dependent variable: Effort Choice of Participant

	(1) Muslim Leaders Muslim Employees	(2) Muslim Leaders Hindu Employees	(3) Hindu Leaders Muslim Employees	(4) Hindu Leaders Hindu Employees
Leader (Period>4)	1.157***	0.377	0.015	-1.156***
	(0.427)	(0.522)	(0.509)	(0.401)
Leader (Period>4)*AA	-0.628	-0.420	0.088	2.524***
	(0.615)	(0.730)	(0.652)	(0.666)
Leader (Period>4)*Contact	-0.163	0.712	0.602	2.392***
	(0.672)	(0.670)	(0.670)	(0.680)
p-value for Leader*AA=Leader*Contact	0.497	0.089	0.390	0.863
Observations	1494	1524	1506	1506
R-squared	0.197	0.153	0.178	0.231
Town FE	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes
Religious Controls	Yes	Yes	Yes	Yes
Experimental Controls	No	No	No	No

Standard errors in parantheses, clustered at group level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Demographic controls include gender, age, education and monthly household income; religious controls include dummies for whether the participant prays several times a day or once a day; experimental controls include the leader's proposal and the group minimum effort in period 4. Data includes effort choices of both leaders and employees.

Figure A1
Districts Chosen for Experimental Sites
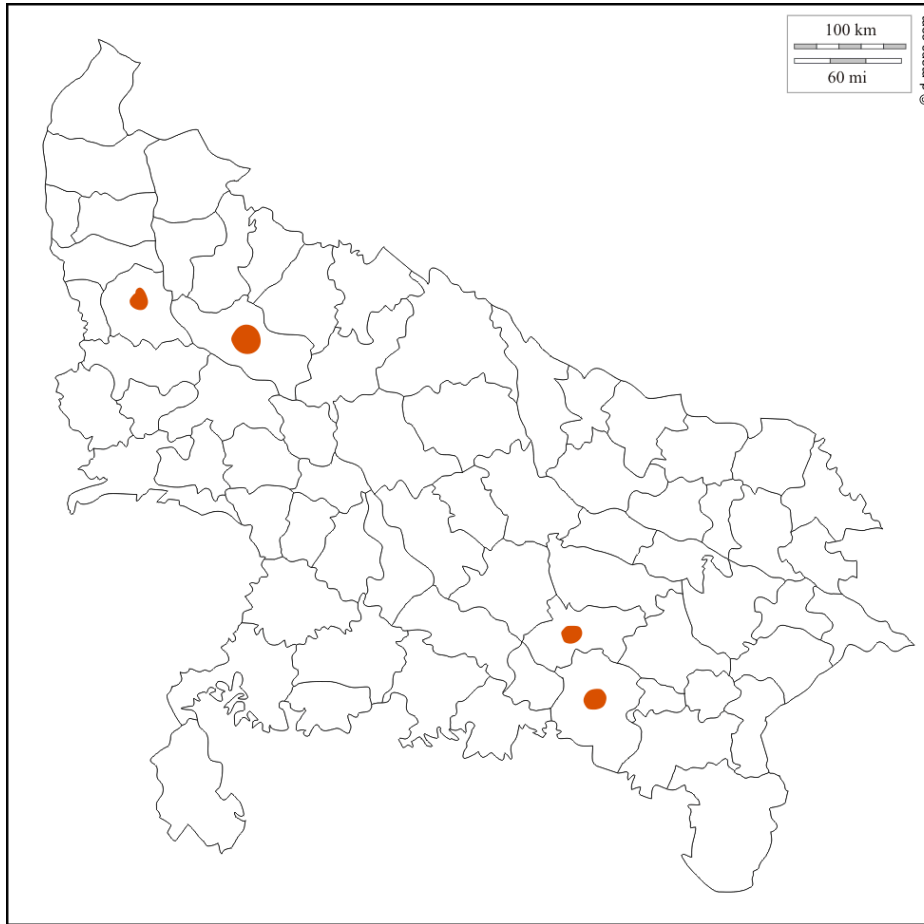
Notes: Map of districts in Uttar Pradesh state, India. Sites chosen are Aligarh (high-conflict) and Budaun (low-conflict) in the western part of the state and Allahabad (high-conflict) and Pratapgarh (low-conflict) in the central part of the state.

Figure A2
Experimental Setting and Layout of Player Locations

Four players were seated on each mat. Participants were told that the people on the mat were not part of their firm. Participants were provided folders so that their effort choices were not visible to other players. They were also instructed not to look at other players' choices. Each mat also had a research assistant to explain the experimental procedures to the participants.
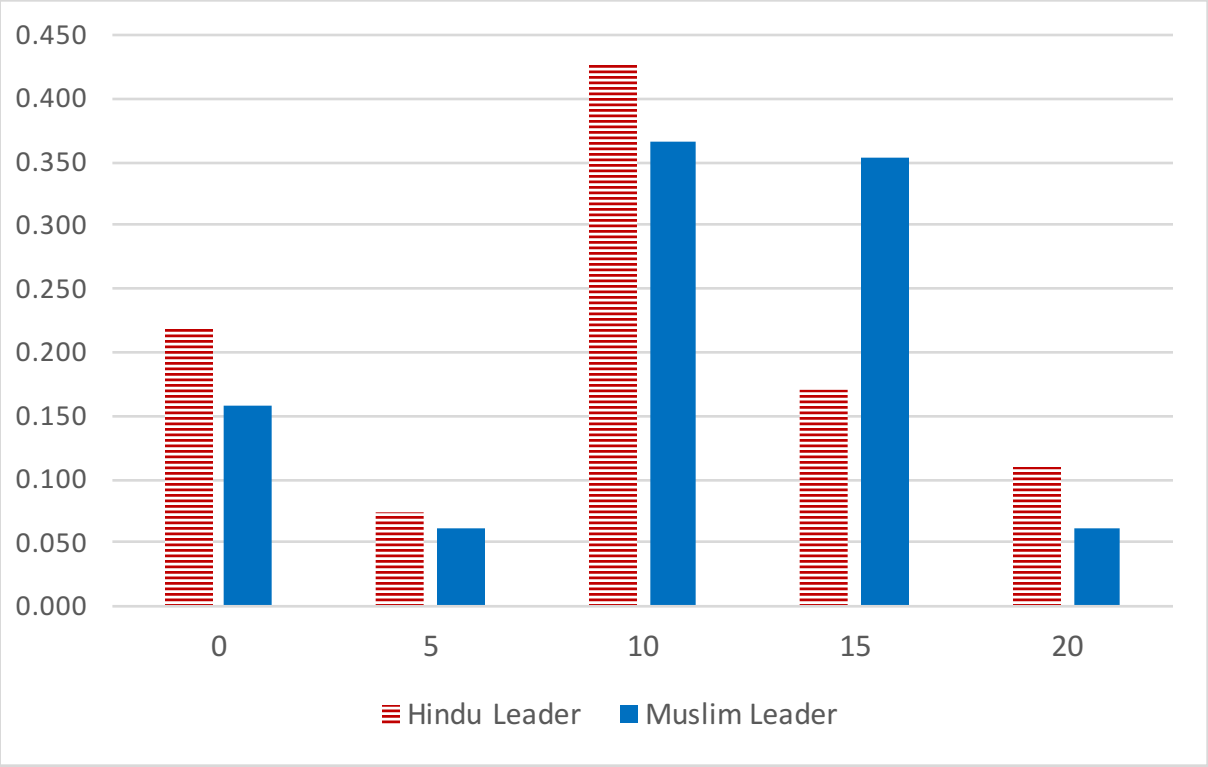
Figure A3
Puzzle Game in Different Groups

A. Solve Individually in Control and AA Groups

B. Solve with a Partner in the Contact Group

Figure A4
Leader Identity and Leader Proposals (Histogram)

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