Creating Coexistence: Intergroup Contact and Soccer in Post-ISIS Iraq

Salma Mousa*

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Abstract

Can intergroup contact build social cohesion after war? I answer this question by randomly assigning Iraqi Christians displaced by ISIS either to an all-Christian soccer team or to a team mixed with Muslims. I find persistent changes to behaviors toward Muslim peers: Christians with Muslim teammates are more likely to sign up for a mixed soccer team in the future (12 pp., $p < 0.08$), vote for a Muslim player (not on their team) to receive a sportsmanship award (16 pp., $p < 0.01$), and train with Muslims six months after the intervention ends (34 pp., $p < 0.01$). Players on mixed teams are also more likely to believe that coexistence is possible (63 SDs., $p < 0.01$). These results seem to be driven by changing norms around social contact as well as a positive experience, with top-performing teams being more likely to patronize a restaurant in Muslim-dominated Mosul. Contact was less effective, however, at shifting generalized tolerance toward Muslim strangers. These findings point to the potential for meaningful social contact to build coexistence after conflict — even if underlying prejudice remains unchanged.

Key Words: Conflict, intergroup contact, migration, Middle East

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On June 10 2014, the Islamic State of Iraq and Syria (ISIS) captured the Iraqi city of Mosul after only six days of fighting. ISIS' offensive culminated in a genocide against Yezidis, Christians, Shi'a, and other minorities, displacing 100,000 Christians to Iraqi Kurdistan overnight (Al-Ameen 2014). Many Christians believe their Muslim neighbors were complicit in these raids. These suspicions have discouraged Christians from returning to liberated areas, fueled support for self-defense militias, and heightened the potential for reprisal killings and future conflict (Center for the Prevention of Genocide 2016). At the same time, Muslim communities from neighboring villages have been migrating into Christian enclaves, leading Iraq's Christians to fear the dilution of their culture and identity (Green 2019). Christian-Muslim relations in northern Iraq continue to be marked by mutual distrust and de facto segregation.

How can coexistence be rebuilt after war? Countries recovering from war often backslide into violence and instability despite heavy international investment in state-building and peacekeeping (Samuels 2005). Long-lasting peace is thought to require a combination of institutional-level choices, such as power-sharing arrangements, and grassroots-level initiatives, which improve interactions between individuals. At the grassroots level, policymakers have turned to promoting dialogue and building local institutions to improve intergroup relations. Truth and reconciliation forums have been found to encourage civic participation and intergroup cooperation, but at the cost of re-triggering war traumas (Cilliers, Dube and Siddiqi 2016). Community-driven development (CDD) programs can also increase intergroup cooperation in some settings (Fearon, Humphreys and Weinstein 2009) but not others (Humphreys, de la Sierra and Van der Windt 2019; Casey, Glennerster and Miguel 2012; Humphreys, De la Sierra and Van der Windt 2013), suggesting that effects are contextual (Beath, Christia and Enikolopov 2012; Fearon, Humphreys and Weinstein 2015). Educational campaigns yield similarly mixed results when it comes to ethnic tolerance (Finkel, Horowitz and Rojo-Mendoza 2012; Blattman, Hartman and Blair 2014; Staub et al. 2005).

Intergroup contact stands out as a promising approach to building coexistence at the grassroots level. The 'contact hypothesis' proposes that interpersonal contact across group lines can reduce prejudice if it is positive, cooperative, endorsed by communal authorities, and places participants on equal footing (Allport, Clark and Pettigrew 1954). Such contact improved attitudes toward roommates from ethnic outgroups in South Africa (Burns, Corno and La Ferrara 2015), Norway (Finseraas and Kotsadam 2017), and in the United States (Carrell, Hoekstra and West 2015), and toward poor students (Rao et al. 2013), neighbors (Barnhardt 2009), and other caste groups in India (Lowe 2017). On the other hand, wordless physical exposure was found to worsen existing prejudice toward outgroups in Afghanistan (Condra and Linardi 2019), refugees in Greece (Hangartner et al. 2017) and toward ethnic (Enos 2014) and socioeconomic (Sands 2017) minorities in the United States. In addition, intergroup competition increased violence (Jha 2013) and weakened otherwise positive returns to social contact in India (Lowe 2017). These results suggest that positive and cooperative contact (conditions I label as *meaningful*) might hold the potential to rebuild tolerance — at least in times of peace.

It remains unclear, however, whether contact should have similarly positive effects in conflict settings. Fewer than 3% of the 515 contact studies reviewed in Pettigrew and Tropp's 2006 meta-analysis involved groups in conflict. These same groups

arguably have the most to gain from successful contact interventions, given the potential for conflict to spread to new regions via the experiences carried by displaced people (Ditlmann and Samii 2016; Salehyan and Gleditsch 2006). The evidence we do have suggests that ethnic prejudice is hard to dislodge relative to other types of prejudice (Paluck, Green and Green 2017). Methodological constraints also limit our knowledge of intergroup contact: outcomes are typically measured using short-term surveys or lab-in-the-field games that can struggle with external validity (Paluck, Green and Green 2017). It remains to be seen whether tolerance observed within an intervention can spill over into real-world behaviors, which are all the more critical in settings with an elevated risk of violence. If subjects return to their homogenous bubbles — exposed to the same social and structural barriers to tolerance as they were before the intervention — then "our current policies for encouraging contact may not be enough, even for those people the policies actually reach" (Enos 2014, p. 249).

I propose that meaningful contact based on a shared interest, where ethnic identity and politics take a backseat, can breed tolerance between hostile groups. Over time, contact with outgroup peers within such interventions can normalize contact outside of it. This is especially true when contact is endorsed by communal authorities, and when subjects have a positive experience. I test these ideas using a field experiment among Iraqis displaced by ISIS. I randomly assign amateur soccer players to an all-Christian team, or to a team mixed with Muslims, for a two-month league. Despite the atrocities suffered during war, I show that contact can improve everyday behaviors toward peers, acquaintances, and friends — 'weak ties' (Granovetter 1973) — from the outgroup, even if more generalized tolerance is stubborn to change.

I find that Christians with Muslim teammates are more likely to sign up for a mixed soccer team in the future (12 pp., $p < 0.08$), vote for a Muslim player (not on their team) to receive a sportsmanship award (16 pp., $p < 0.01$), and befriend Muslims (8 pp., $p < 0.18$). The treatment is self-sustaining at the half-year mark: Christians on diverse teams are 34 percentage points more likely to train with Muslims six months later ($p < 0.01$). These gains did not come at the expense of backlash effects among all-Christian teams, as shown by match-level data on yellow and red cards. The treatment had no effect, however, on the likelihood of attending a mixed social event (2 pp., $p < 0.28$) and patronizing a Muslim-owned restaurant (8 pp., $p < 0.34$) four months after the intervention ends. I also find mixed effects on attitudes: having Muslim teammates makes Christians more likely to believe in coexistence (0.63 SD, $p < 0.01$) but less likely to want Muslims as neighbors (0.16 SD, $p < 0.04$). Contact is thus weak at changing attitudes and behaviors toward Muslims writ large, but relatively effective at softening behaviors toward Muslims whom one knows personally (i.e. peers, acquaintances, and friends) in lasting ways.

This study makes three main contributions. First, this experiment is among the few causal tests of intergroup contact in a post-conflict setting. The results suggest that carefully designed intergroup contact can be a viable strategy for building grassroots coexistence after violent conflict. Second, I expand the range of outcomes typically used in studies of intergroup contact. Building on studies that measure behaviors toward outgroup members encountered in the intervention (e.g., Lowe (2017); Burns, Corno and La Ferrara (2015); Rao et al. (2013); Paluck (2009)), I add outcomes that test whether such behaviors generalize to outgroup strangers. To do this, I construct behavioral outcomes, like patronizing restaurants in noncoethnic

neighborhoods, that reflect the costlier outcome of comfort around the outgroup members in public spaces. By measuring real-world behaviors toward outgroup strangers, as well as spillover effects among local residents, this study can speak to the potential for intergroup contact to chip away at structural factors, like social segregation and communal norms, that keep communities divided.

Third, attempting to reconcile a contentious debate across the social sciences, I offer a systematic framework for understanding how prejudicial attitudes, behaviors, and social norms relate to each other (Blanchard et al. 1994; Rutland, Killen and Abrams 2010; Sherif 1935). Studies in contexts of high intergroup prejudice have found a consistent but surprising result: behaviors appear easier to change than attitudes. In Nigeria, a contact intervention among Christian and Muslim computer-training students found null results on prejudicial attitudes but decreases in discrimination (Scacco and Warren 2018). Likewise, a media-based study of extended contact in Rwanda found no effects on individual attitudes but positive changes to behaviors and social norms (Paluck 2009). I uncover a similar 'attitude-behavior gap' here. I propose that this gap can be explained by drawing a distinction between outgroup members whom one knows personally (e.g. peers encountered in an intervention), and outgroup strangers. Contact appears ineffective at improving prejudice toward outgroup strangers. It can, however, create and improve relationships with acquaintances across group lines. In the shadow of war where human safety is the first order concern, bolstering these 'weak ties' (i.e., secondary relationships outside of one's friends and family) may be a more feasible and worthwhile goal than uprooting latent prejudice (Granovetter 1977).

The rest of the paper is structured as follows. In Section 1, I draw on the social contact literature to generate empirical hypotheses. Section 2 provides context on the ISIS genocide and Christian-Muslim relations in northern Iraq. Section 3 lays out the empirical strategy. Section 4 outlines the main results, and Section 5 speaks to mechanisms that help explain these results while ruling out backlash effects among the control group. Finally, in Sections 6 and 7, I interpret the attitude-behavior gap present in the results and speak to their generalizability.

1 Can Contact Build Coexistence After Conflict?

Allport's intergroup contact hypothesis (1954) proposes that contact across group lines can reduce prejudice, forge friendships, and improve intergroup relations overall. Because tolerant individuals are more likely to select into contact, scholars have turned to experiments to isolate the causal effects of contact. Positive and cooperative contact (what I label *meaningful contact)* successfully reduced socioeconomic, ethnic, and caste-based prejudice in the United States, South Africa, and India, respectively (Burns, Corno and La Ferrara 2015; Rao et al. 2013; Lowe 2017), in line with meta-analytic evidence demonstrating that contact generally reduces prejudice (Paluck, Green and Green 2017; Pettigrew and Tropp 2006).

Should we expect contact to be similarly effective in conflict settings? Observational studies of contact rarely involve groups in conflict (Pettigrew and Tropp 2006), while no experimental studies of ethnic prejudice among adults over the age of 25 — who

may exhibit more deeply ingrained prejudice — were found in Paluck, Green and Green's 2017 meta-analysis. On the one hand, interventions aimed at reducing ethnic or racial prejudice generate "substantially weaker effects" relative to prejudice toward the elderly or the disabled, for instance, suggesting that the cleavages common to war are particularly unpliable (Paluck, Green and Green 2017). More broadly, ethnic violence solidifies group identities, ethnic prejudices, and anxieties around being physically proximate to the outgroup (Scacco and Warren 2018; Fearon and Laitin 2000; Beber, Roessler and Scacco 2014). Groups in conflict are also more likely to be residentially segregated, making intergroup interactions less likely in the first place, and possibly worsening prejudice (Enos and Gidron 2016; Kunovich and Hodson 2002).

On the other hand, there are many reasons to believe that contact can improve intergroup relations after conflict. Intense prejudice, together with few opportunities for antagonistic groups to meet, imply that such communities have a lot to gain when they *do* interact. This is because prejudice and social segregation feed into one another (Kasara 2014; Bhavnani et al. 2014; Condra and Linardi 2019). The more that groups stay apart, the more that encounters across group lines become stigmatized. Prejudice then lingers unchecked, making these encounters less likely and ultimately worsening both segregation and hostility. I argue that meaningful interactions can break this cycle. A string of such interactions normalizes interactions with the outgroup in familiar environments. Such interactions do not provide much information, however, about the outgroup as a whole: contact hits a wall when it comes to dealing with outgroup strangers. Positive contact can build local coexistence among classmates, colleagues, and peers whom one knows personally, but these contacts continue to be seen as exceptional in the broader scheme of ethnic conflict. This localized coexistence, however, builds community in important ways, especially when the risk of recurrent violence at the neighborhood level is high.

I hypothesize that grassroots interventions can build coexistence if four scope conditions are met. First, given the difficulty of bringing hostile groups together in the first place, members of both groups must be clearly incentivized to participate. Absent prejudice, it should be the case that members of both groups would participate in the program. Second, the program should be based on a shared skill or interest, rather than the express purpose of discussing the conflict. Only the most tolerant individuals typically self-select into intergroup dialogue initiatives (Pettigrew 1998), which also run the risk of re-triggering war traumas (Cilliers, Dube and Siddiqi 2016). The disadvantage of this approach, however, is that deep-seated grievances toward the outgroup may persist without being directly addressed. Third, it should be reasonably safe to interact with the outgroup. Individuals should fear neither retaliation from ingroup members nor the escalation of disagreements with outgroup members. Fourth, the outgroup must be geographically accessible. Even if neighborhoods are de facto segregated, the transaction costs of interacting should not be prohibitive.

These conditions tackle the first order problem of bringing segregated groups together, ideally in a setting relatively untainted by the weight of conflict. If these conditions are met, all but the most prejudiced individuals can theoretically be incentivized to engage in meaningful contact. Soccer leagues in the formerly ISIS-occupied Iraq satisfy these conditions: amateur athletes from both groups place a high value on participation, the intervention is based on a shared interest, intergroup relations are

stable enough that participation is unlikely to trigger violence, and Muslims and Christians live in proximate neighborhoods. The fulfillment of these conditions may help explain the positive findings from the few experimental studies of contact that we do have from post-conflict settings: meaningful contact increased cooperation between classmates in Bosnia-Herzegovina (Alexander and Christia 2011) and reduced discrimination in mixed classrooms in Nigeria (Scacco and Warren 2018).

Once segregated groups are brought together for a joint endeavor, the conditions considered key for activating the contact hypothesis are: 1) a positive experience, 2) a common goal, 3) cooperation to achieve that goal, 4) equal power status within the intervention, and 5) the endorsement of communal authorities, customs, or laws. I show that this study largely meets these conditions. By designing contact to be as optimal as possible, this experiment serves as a plausibility test: under ideal conditions, contact can build tolerance after war. Further, while I cannot experimentally distinguish between these conditions, Section 5 demonstrates the particular importance of the endorsement of communal authorities in encouraging uptake, and of a positive experience in amplifying treatment effects.

First, participants will likely vary in the degree to which they have a positive experience. Intergroup tensions are high, and few competitive sports teams would enjoy absorbing strangers for a high-stakes tournament even in the best of circumstances. Both of these factors undermine the positivity of the experience, and negative contact is known to disproportionately affect tolerance relative to positive contact (Graf, Paolini and Rubin 2014; Paolini, Harwood and Rubin 2010). Nevertheless, team performance can create a positive experience. Because team success is unrelated to treatment status (demonstrated in Table 7), I expect that treatment effects are amplified for players on top-performing teams. A successful season proves that cooperating with the outgroup can be productive and enjoyable, while opening the door to new friendships. A poor season, however, may amplify tensions.

Second, for mixed teams, this experiment satisfies the condition that groups should cooperate to achieve a common goal. All-Christian teams, however, encounter Muslims as opponents within the league. Previous work shows that groups will remain neutral (Lowe 2017) or gravitate toward hostility rather than friendship if contact is competitive (Amir 1976; Jha 2013). At the same time, another research agenda predicts the opposite effects of the competitive contact theory. Scholars have shown that secondary (Cameron et al. 2006), vicarious (Simonivitz, Kezdi and Kardos 2017), and even imagined (Crisp and Turner 2009) contact with outgroup members can reduce prejudice. If indirect contact theories hold, then all-Christian teams should become more tolerant over time by virtue of sharing a league with Muslims. By analyzing before-and-after changes among control teams, I can distinguish between these competing hypotheses on the effects of indirect and competitive contact.

Third, the design largely satisfies the equal power status criterion. Muslim and Christian teammates are equal in their status as players, though Muslims are always a numeric minority at either 25% or 28.6% of the squad. Team coaches, captains, and the bulk of spectators are also Christian, but another high-status figure, referees, are both Muslim and Christian.[1] Where

[1] Christian residents also attended more games, at a median of 18 matches relative to Muslim residents' 15.

equality matters most, however — on the field — all players are subject to the fundamentally equalizing effect of sports. Aside from the captainship, there is no official hierarchy between players, and all share the burden of contributing to the team effort. The idea of team sports as equalizers have rendered sports a popular backdrop for studies of prejudice (Kidd 2013; Ditlmann and Samii 2016; Lowe 2017).

Turning to the final condition of supportive norms, local Christian partners worked to offset the stigma around intergroup contact at the onset of the study. At baseline, most Christian participants reported that their friends and colleagues were exclusively fellow Christians (53.7%), and just 6.6% characterized their social circle as 'very' diverse. Playing soccer with Muslims was particularly unacceptable, with only two of the study's 51 teams training with Muslims at baseline, and significant pushback at the idea of mixed teams (described in Section 5). Despite these pressures, an NGO operated by the Syriac Catholic church endorsed the leagues. As an opinion leader in the Christian community, the church's endorsement counteracted the norm against interacting with Muslims, at least for the purpose of a soccer league.[2] As I outline in the scope conditions above, an endeavor that is clearly beneficial to one's ingroup can weaken taboos against contact. Church officials viewed soccer as a productive use of time for the community's young men, 35.2% of whom (in the study, $n = 433$) were unemployed or would otherwise spend their time idling in *shisha* cafeś. Approval from communal authorities made participating in the soccer leagues socially acceptable.

In sum, this experiment satisfies the conditions I outline for interventions to build coexistence in post-conflict settings, and the traditional conditions considered important for contact to unlock tolerance in general. This study represents a proof of concept that contact under optimal conditions can improve intergroup relations at the grassroots level after war. Whether any effects can extend to behaviors outside the intervention, however, remains to be seen. This research design is well-suited to capture not only the impacts of contact on real-world behaviors after ethnic violence, but also the importance of cooperative vs. competitive contact, as well as a positive experience, in shaping results.

2 Context: ISIS Genocide, Displacement, and Muslim-Christian Relations

An indigenous Christian community has inhabited Iraq for almost two millennia. Most Iraqi Christians consider themselves ethnic Assyrians, speak both Eastern Aramaic and Arabic, and subscribe to either to the Syriac Orthodox, Syriac Catholic, or Chaldean Catholic churches. Iraq's Christians are thus ethnically, religiously, and linguistically distinct from their compatriots. These distinctions, along with Assyrians' periodic agitations for autonomy, led to the targeting of Christians under the Ottomans (in conjunction with the Armenian genocide) in 1914, and later at the hands of the Iraqi army and their Kurdish allies in 1933. Often caught between the Arabization policies of Iraq and the Kurdification policies of Iraqi Kurdistan, the

[2]The operational partner for the first wave of the study was the Humanitarian Nineveh Relief Organization, an NGO operated by the Syriac Catholic church. Although HNRO was unable to support the second wave of the study, the organization continued to be associated with the project by reputation.

relationship between Christians and their Muslim neighbors in northern Iraq has been tense relative to that of Christians in Baghdad and other southern cities.

Despite attempts to Arabize Christian culture, Saddam Hussein largely tolerated Christians and even allowed them to play a prominent role in public life. Under the Ba'ath Party, which itself was founded by a Christian, the Deputy Prime Minister, Minister for Transport, Minister for Science and Technology, and Minister for Industry were all Christians. A close connection with the Ba'ath regime, however, made Christians targets for retribution when Hussein was toppled in 2003. Christians subsequently began to flee Iraq. The war itself, in addition to the rise of Islamist fundamentalism, shrunk one of the oldest continuous Christian communities in the world from around 1.5 million in 2003 (7% of the population) to as low as 300,000 in 2013 (Basu 2016).

The fall of Mosul in June 2014 ushered in a new period of violence against Christians. With unfettered road access to hundreds of Yezidi, Christian, and Shi'a towns, ISIS enslaved and killed thousands in what was formerly Iraq's most diverse province. Those they expelled — Muslim and Christian, Arab and Kurd — joined the three million Iraqis displaced by heavy fighting between the Iraqi Security Forces and armed groups from December 2013 to April 2017 (UNHCR 2017). The city of Qaraqosh typifies this exodus. An ancient hub of Assyrian and Babylonian civilization, Qaraqosh was emptied of its Christians for the first time in its history on August 6, 2014, when its residents were given hours to flee 50 miles away to Erbil, often on foot after reaching the Kurdish checkpoints. Most stayed in humanitarian camps, church accommodation, or private residences in the Christian suburb of Ankawa.[3] A Qaraqoshi mother-of-three interviewed by the author "brought enough clothes for my kids and myself for a couple of nights."[4] Qaraqoshis remained in Erbil for two and a half years.

Internally displaced people (IDPs) began to trickle back to their hometowns after Ninewa was liberated in the Battle of Mosul in October 2016. The major Christian cities in the area saw a return of around half of their previous population as of September 2018. The other half remain scattered around Iraq, or sought asylum abroad. Those that did return found their cities destroyed. In Qaraqosh, ISIS commanders and combatants had been living and looting for over two years. What ISIS did not loot, they torched on their way out of the city. Surviving homes, businesses, and churches were ransacked, peppered with bullet holes from firefights, and covered in hateful graffiti.[5] Of the 476 Qaraqoshi Christians in the study sample, 46% had their homes looted, 36% had their homes destroyed, and 16% of property owners had deeds taken by ISIS (a major source of land disputes). A small minority of respondents report family members killed or missing (4%) and three individuals each report arrest, sexual abuse, or torture.

The author's data show that Christians feel betrayed by Sunnis (around 45% of Muslims in the study), whom they view as ISIS collaborators. That some Sunnis 'chose' to live under ISIS rule rather than flee fuels this perception. Interviews with

[3] Of the n = 1,163 displaced Christians in the Erbil area surveyed by the author between March and August 2017, around 13% lived in camps.
[4] Author interview, 33 year-old female homemaker, September 2018. Qaraqosh, Iraq.
[5] ISIS fighters spray-painted the doors of Christian homes with phrases such as "get out, Jews" and "the Islamic State will return."

Qaraqoshi Christians reveal a view that Sunnis who remained in the town could have done more to keep Christian valuables and homes safe during displacement. One of the first Christians to return Qaraqosh told Public Radio International: "When I bump into [my Muslim neighbors] now, they turn their faces and walk away... They know what they did. They know they're guilty. I don't even say hello to them" (Hall 2017). Sensing this hostility, only 23.2% of Muslims in the study claim to feel comfortable in Christian areas. This power dynamic also manifests in Muslims reporting more tolerant attitudes than Christians: 68.2% of Muslims would not mind a Christian as a neighbor and 89.7% would consider selling land to Christians, whereas only 23.7% of Christians would sell land to Muslims, and a mere 21.1% are ready to accept a Muslim neighbor.

In contrast to Sunnis, Shi'ites (55% of Muslims in the study) were displaced and victimized by ISIS much like Christians. Most belong to the 100,000-strong Shabak ethnic minority and speak Shabaki, Kurdish, and Arabic. A common displacement experience has done little to ease historic tensions between Christians and Shi'ites in Qaraqosh. Encouraged by favorable land policies, residents of small Shabak villages have gravitated toward the urban center of Qaraqosh, tilting demographics away from a Christian supermajority.[6] Aside from some intermingling in schools, Muslims are largely seen as outsiders to Qaraqosh. Qaraqoshis view Muslims as diluting the culture and identity of Iraq's last Christian strongholds. One interviewee, a 56 year-old schoolteacher, lamented this perceived encroachment: "They have the entire country. Why can't they let us have Qaraqosh?... I really would not be comfortable if one of them [a Muslim family] moved next door. I would feel uncomfortable on my own block. Their traditions and their habits are different."[7] The activity of Shabak militias in the area has further stoked resentment.[8] These recent frictions have made social cohesion all the more challenging after return.

3 Empirical Strategy

Experimental Design

Despite the differences between Christians and Muslims in northern Iraq, amateur soccer is popular among both groups. As described by Putnam, Leonardi and Nanetti (1994), civic associations like amateur sports clubs are engines for social capital; their 'cross-cutting' nature is crucial for building social trust and cooperativeness between citizens. Team sports also fulfill many of the conditions seen as key for contact to reduce prejudice, notably cooperation to achieve a common goal and an equal power status. State, private sector, and civil society actors have subsequently focused on sports as a tool for community development since the 1920s (Kidd 2013). Researchers have, in parallel, documented a positive correlation between team sports and pro-social, civic, and cooperative outcomes (Ditlmann and Samii 2016; Lowe 2017).

[6] Saddam Hussein's Arabization policy in the 1980s encouraged Shabak to register as Arabs in exchange for land in the Qaraqosh area. Shabak have continued to purchase land and homes in Christian cities. Votes of recent Shabak arrivals also influenced the 2005 and 2009 elections, weakening the Christian bloc. Shabak comprised roughly one-tenth of Qaraqosh's population before the ISIS occupation and one-fifth after it.

[7] Author interview, 56-year old female schoolteacher, September 2018. Qaraqosh, Iraq.

[8] Stronger than their Christian counterparts, it is alleged that Shabak militia looted and damaged Qaraqosh in the immediate wake of ISIS' ouster, possibly to deter Christian return.

Intergroup sports also align with policymaker recommendations for integrating communities devastated by ISIS. A call to action by the International Organization for Migration (IOM) stresses the promise of "interventions that are specifically oriented around social cohesion... entail[ing] sustained, meaningful inter-personal contact," while the the International Republican Institute (IRI) proposes "positive, energetic, community events... centered on nonpolitical issues to facilitate engagement between [Iraqi] communities in lower-pressure environments" (International Organization for Migration 2019; Zupruk, Whelan and Brouch 2018). The same IRI report quotes a displaced Christian man in Ankawa as stating: "I am integrated in the community here. I have friends that I go out with to play football with... I feel more comfortable here than before."

Leveraging the social potential of team sports and the universal popularity of soccer in Iraq, the experiment comprised four soccer leagues, spread across two sites and two study waves. Two leagues took place in Ankawa (a suburb of Erbil) and two in the city of Qaraqosh. Like much of life in Ankawa and Qaraqosh, amateur sports teams are largely segregated by religion. Research staff randomly recruited 51 Christian teams out of the roughly 60 teams that train in these two areas. Captains were told that a local Christian-led NGO was working with a U.S.-based university to set up a ten-week soccer league for displaced people and returnees in the area.[9] Participants were then told of two conditions for participating. First, all players agree to complete a brief survey on the displacement experience and their views on Iraqi society before and after the league.

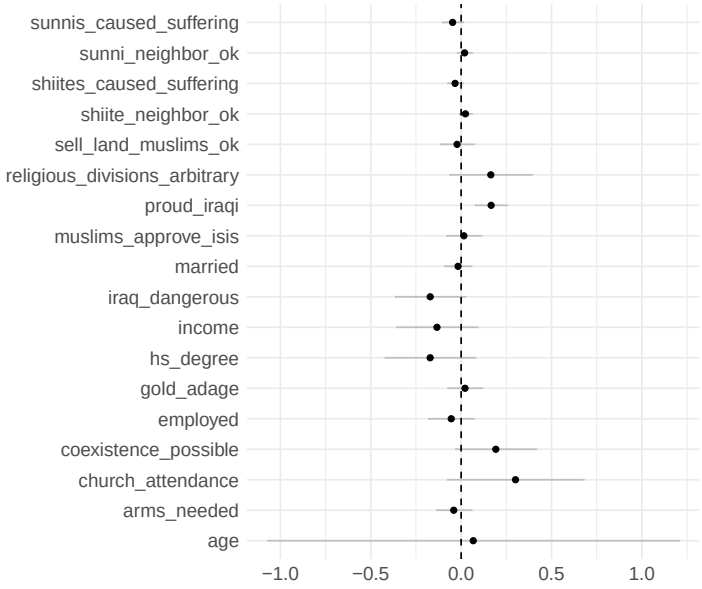
Second, each team would be allocated an additional three players who may or may not be Christian, bringing their team total from nine to twelve men.[10] Before the intervention, teams consisted of nine players apiece in accordance with the size of local fields. I accommodated this increase in team size by instituting a system for rotating players as substitutes (Section A:7.2). Treated teams thus received additional Muslim players while control teams received fellow Christians. All contacted teams accepted despite initially protesting the inclusion of added players, especially non-Christians. The added Christian players were drawn from rosters of the nine Christian teams not chosen for the study, while the added Muslim players were drawn from the rosters of local Muslim teams. Recruiting added players from similar teams helps to ensure that added players do not systematically differ on skill or motivation. Research assistants also ranked each added player's skill on a ten-point scale. These ratings occurred before the randomization, while these players were training with their original teams, meaning that they are not endogenous to any treatment effects. The difference between the average rating of added Christian (6.03) and Muslim (6.45) players is neither substantively meaningful nor statistically significant ($p < 0.27$). Neither are their differences in goals scored per game (0.131 vs. 0.135, $p < 0.71$, see Table 7). All Christian players are included in the study sample, and I control for whether the player is a core or added team member in the main analyses.

[9]The Humanitarian Nineveh Relief Organization, an Iraqi NGO affiliated with the Syriac Catholic Church and serving IDPs, was the operational partner for the Ankawa-based pilot league. Participants in the scale-up leagues were told that a U.S.-based university was sponsoring the leagues as a humanitarian endeavor for displaced Iraqis.

[10]In the pilot, the teams consisted of ten players, and received an additional four.

I conduct a block randomization based on baseline responses to an item capturing empathy toward Muslims.[11] I rank each team based on their average response to this item, and randomize within closely ranked pairs. I thus randomize which teams are selected to join the study, the treatment assignment, and the added players assigned to each team, conditional on treatment condition.[12] This selection process resulted in a modal participant who is 24 years old, unmarried, unemployed, attained a high-school degree, and has a household income of around $500 per month. He has few to no Muslim friends, believes Muslims are cursed, and would not consider selling land to Muslims, although he believes that Iraqis should treat each other as Iraqis first. Table 10 illustrates further descriptive statistics.

Figure 1: Balance Between Treatment and Control Group (n = 433)



Mean differences when subtracting the control group data at t_1 from the treatment group data at t_1, with 90% confidence intervals. Balance was achieved on the demographic covariates used in the analyses and on the survey outcomes taken as inputs for the attitudinal indices.

Of course, even players on all-Christian teams are exposed to Muslims by virtue of competing in the same league. I need a counterfactual of no exposure to Muslims at all (i.e., playing on an all-Christian team, in an all-Christian league) to parse out the effect of competing in a mixed league. To address this, I compare the experimental leagues with a non-experimental league made up of all-Christian teams, which I create for this study. This comparison league is the only league without any Muslim players. Teams in the comparison league receive an additional three Christian players drawn from rosters of other local teams, to hold constant the experience of training with new teammates. Assignment to the reference league is non-random, however: these teams were recruited based on location (a neighborhood of Ankawa where additional fields were available), and consisted of native Ankawites (who were not displaced) rather than Qaraqoshis (who were displaced).

[11] The item asks respondents to rate how much they have in common with Sunni Arabs, on a four-point scale with no neutral option.

[12] Players in the Qaraqosh-based leagues also experienced an fourth level of randomization: which league their team is assigned to. Leagues 2 and 3 took were identical in structure and took place simultaneously. Each league was capped at 14 teams to ensure a manageable number of games played, given the round-robin set up (see Section 7.2 in the Appendix for more information on the leagues' set-up).

Christians from Ankawa are slightly more urbanized (less religious, more likely to be employed) than their coethnics in Qaraqosh, but are otherwise indistinguishable when it comes to baseline attitudes toward Muslims (Figure 8). I exclude data from the comparison league from the main analyses, but present results from the full sample in the appendix (see Table 11).

Table 1: League Descriptions

League Type	Site	Duration	Christian Pop.	N Teams	Sample (Christian)
1. Experimental (Pilot)	Ankawa	Mar. 2017 – May 2017	Displaced Qaraqoshis	14	196 (168)
2. Comparison*	Ankawa	Sept. 2018 – Nov. 2018	Ankawites	9	117 (117)
3. Experimental	Qaraqosh	Sept. 2018 – Nov. 2018	Qaraqoshi Returnees	14	182 (161)
4. Experimental	Qaraqosh	Sept. 2018 – Nov. 2018	Qaraqoshi Returnees	14	182 (161)
Total	–	–	–	51	677 (607)

*The reference league is excluded from the main analyses, but leveraged for exploratory analyses in Section 6.

Incentives created with the team captains, such as professional referees and uniforms, reserved fields, and trophies awarded to the top three teams, led to near-perfect compliance and committed participation throughout the ten weeks (Figure 2).[13] The vast majority (91.8%) of contacted participants were retained until the end of the study. The remaining participants dropped out after being consented into the study, but before treatment assignments were made. Injuries forced four players to drop out after treatment assignments were made.[14] Their replacements were consented into the study and added to the study sample using the same procedure for recruiting added players, described below. Including coaches, the 51 teams yield a sample of $n = 677$. Just under half of these ($n = 280$) are treated, while the remainder are in the control condition ($n = 280$) or in the comparison group ($n = 117$) used for exploratory analyses in Section 6. To integrate the new players, encourage buy-in, and build team identity, each team received new uniforms and attended a one-day team orientation.[15] Guidelines on substitutions in addition to a high-intensity format that requires regular rotations between players ensured roughly equal playing time between all team members.[16] Each team played at least 13 games over eight weeks, with semi-finalists playing for an additional two weeks.[17]

Estimation

For the main analysis, I estimate the average treatment effect (ATE) on a range of behavioral outcomes and attitudinal indices (Table 2). All estimates are ordinary least squares (OLS) where the treatment indicator represents assignment to a mixed soccer team, which occurs at the team level. I take several demographic items as covariates to increase precision, in addition

[13] Only 2% of matches played were forfeited due to absenteeism.
[14] These players suffered injuries during the course of play, meaning that injury reporting is not endogenous to outgroup tolerance.
[15] Orientations for treated and control teams were held separately to avoid contact spillovers between the two conditions.
[16] See Section 7.2 for more information on the league structure.
[17] Teams in the comparison league played at least eight games rather than 13, as there were nine teams in this league.

Figure 2: Photo of a typical league game, March 27, 2017

Matches were attended by hundreds of spectators, further enhancing players' stake in cooperation and motivating participation.

the outcome variable measured at baseline (t_1) where possible. The demographic covariates are: age, education, marital status, church attendance, income, whether the respondent is an added player or an original team member, the randomization block, and abuse inflicted by ISIS, asked last to avoid priming effects. Following Lin et al. (2013), I demean each covariate and interact it with the treatment indicator. This model has the benefit of increasing precision if covariates are predictive of outcomes, and yielding a consistent ATE estimator, without hurting asymptotic precision even if the model is incorrect.[18] This estimator also improves precision for analyses of heterogenous treatment effects related to covariates.

To address concerns that the effective sample size may be too small to trust asymptotic results, I conduct block-bootstrapped analyses to generate standard errors clustered at the team level. The number of clusters is either $n = 28$ or $n = 42$ depending on whether the outcome was measured during the pilot (Table 1).[19] The exploratory analyses that include the comparison league have $n = 51$ clusters. As a robustness check, I also show that the results hold with a permutation test (Table 18). The items in these indices, along with t_1 covariates, and heterogenous treatment effect analyses, were pre-registered.[20] Finally, missing data for covariates are imputed using multiple imputation by chained equations. Only 1.9% of rows contain a missing value requiring imputation.

Data and Outcome Measures

Building on sociological definitions of community that stress the importance of secondary relationships with the outgroup (Tönnies 2012; Granovetter 1977), I measure tolerance toward weak ties from the outgroup (e.g. teammates and peers encountered in the league), as well as outgroup strangers (e.g. local residents, restaurant patrons, and passersby that one does not know personally). In contrast to a focus on strong ties toward family and friends, measuring these secondary relations

[18] Interacting each covariate with the treatment indicator following Lin et al. (2013) is a deviation from the pre-analysis plan, but one which improves precision without substantive changes to point estimates.

[19] Attending the social event, signing up for a mixed team next season, and training with Muslims are measured among the full sample of 42 teams while the remaining outcomes are measured only after the pilot league (Table 1).

[20] EGAP registration #20170603AA (pilot) and AEA registration # AEARCTR-0003540 (scale-up).

is particularly important in settings like post-2003 Iraq, where social networks are marked by high levels of homophily, endogamy, and segregation within ethno-religious enclaves. I thus define coexistence as as repeated, peaceful interactions weak tie contacts from the outgroup. A second outcome of interest is generalized prejudice, which reflects relations toward outgroup strangers. Generalized prejudice may or may not affect coexistence, as suggested by the the complex relationship between prejudicial attitudes and behaviors (Blanchard et al. 1994; Rutland, Killen and Abrams 2010; Sherif 1935).

I measure attitudes and everyday behaviors capturing both coexistence and tolerance up to six months after the intervention ends. I co-design behavioral outcomes with local research staff, themselves Christians displaced by ISIS, and prototyped to ensure construct validity with participants via focus groups.[21] As a result, these outcomes are tailored to capture tolerance in an unimposing and locally relevant manner. I also assess how exposure to the intervention correlates with attitudes among local residents using panel surveys collected at two points in time: one week before the final game, and three months later. By proxying for exposure to the soccer leagues through ties of family and friendship, distance to the field, and the number of games attended, this descriptive analysis illuminates possible spillover effects.

The first set of behavioral outcomes reflects tolerance on the field (i.e., toward peers and acquaintances one encounters within the intervention). The endline (t_2) survey asks players if they agree to register for a mixed team next season, or whether they prefer teammates from their own group. The research staff also contact players six months after the league's end to record whether they regularly train with Muslims — either encountered on one's team, within the league, or recruited from the neighborhood.[22] This measure tells us whether the intervention persisted beyond its official conclusion. If newly mixed teams continue to train with Muslim teammates or recruit additional Muslim players — when the formal incentives to do so are gone — then the intervention was habit-forming and, at least by the half-year mark, self-sustaining. Finally, participants vote for an added player to receive a 'best newcomer' award focused on sportsmanship. This player cannot be on the respondent's team. Treated players thus choose a candidate from a list of 18 Muslim and 21 Christian players, while control teams choose a candidate from 18 Christian and 21 Muslim players — biasing this outcome in favor of the control group. Voting for a fellow Christian to receive this prize, which is unrelated to skill, signifies ingroup bias relative to voting for a Muslim player.[23]

The second set of behavioral outcomes reflects tolerance off the field (i.e., toward outgroup strangers one encounters outside of the intervention). First, all players are invited to attend a neighborhood social event. For one of the leagues, this event was a dinner around sunset time on the 8^{th} day of Ramadan, three weeks after the league.[24] It was common knowledge that this timing coincides with the fast-breaking meal (*iftar*) for Muslims. For most if not all, this dinner was the first

[21] The same Iraqi research assistants record all outcomes to avoid pro-social behavior encouraged by the presence of foreign observers (Cilliers, Dube and Siddiqi 2015).

[22] Players are asked who is on their current team roster rather than explicitly asking if they train with Muslims, to allay social desirability bias. All players were still playing soccer when contacted.

[23] Following the measure of ingroup favoritism Lowe (Lowe 2017), the prompt stresses that the award is based on sportsman-like conduct rather than skill, and that the winner will receive a trophy at the end-of-league event, a coveted reward.

[24] League 1 in Ankawa, described in Table 1.

Table 2: Primary Behavioral and Attitudinal Outcomes

Behavioral Outcomes

1. Attend mixed dinner event (five months post-intervention; three weeks for pilot)
2. Train with Muslims at least once a week (six months post-intervention)
3. Patronize restaurant in Mosul (one to four months post-intervention)
4. Donate $ survey compensation to Church vs. neutral NGO (two weeks to five months post-intervention)
5. Vote for Muslim player to receive sportsmanship prize (two weeks to five months post-intervention)
6. Register for mixed team in the future (two weeks to five months post-intervention)

Attitudinal Indices

1. Coexistence
   - 1.1 Believe that Iraq would be a better society if Iraqis treated each other as Iraqis first
   - 1.2 Believe that dividing Iraq into ethnic and religious groups is arbitrary
2. Muslims as Neighbors
   - 2.1 Comfortable with Shi'ite Shabak as Neighbor
   - 2.2 Comfortable with Sunni Shabak as Neighbor
   - 2.3 Comfortable with Shi'ite Arab as Neighbor
   - 2.4 Comfortable with Sunni Arab as Neighbor
3. Blaming Muslims
   - 3.1 Believe that Shi'ite Shabak are responsible for Christian suffering
   - 3.2 Believe that Sunni Arabs are responsible for Christian suffering

instance of intermingling since displacement three years prior. In the other leagues, the social event consisted of dinner, traditional dancing, and games four months after the league ended.[25] Players were encouraged to bring their families and friends, meaning that Christians were confronted with the possibility of socializing not only with Muslim players but with the latter's family members and friends as well. The outcome of interest is whether a player attended this mixed social event, and conditional on attendance, whether he brought his female family members.[26] This measure is an especially high bar for social trust, as Christian players expressed concern that bringing their wives to the event would invite the unwelcome gaze of other men. Bringing one's wife or sister meant that one trusted that other men in the environment would behave respectfully.

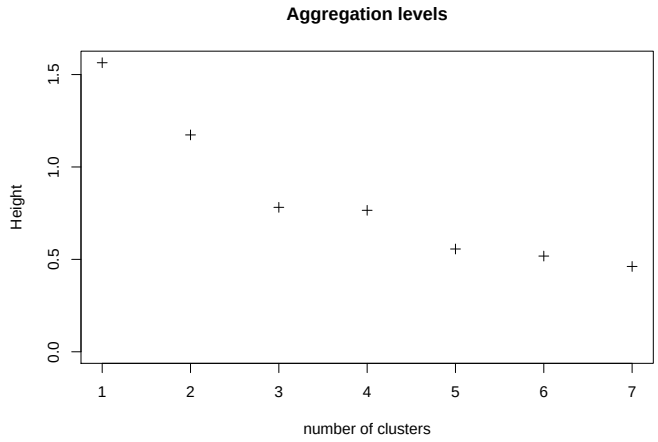
Second, I instituted a voucher system to track whether treated players are more likely to patronize businesses in Muslim neighborhoods. This outcome speaks to comfort around outgroup strangers, a crucial step toward overcoming social segregation in public spaces. All players received a voucher for two restaurants: (1) an $8 voucher for restaurant in Muslim-majority Mosul around 35 minutes away by car, and (2) a $5 voucher for a local, Christian-owned restaurant in Qaraqosh. The difference in

[25] This event was delayed due to flooding and scheduling conflicts with an annual tribal league, in which most Christian players were enrolled. However, this delay biases against finding treatment effects.

[26] This outcome was recorded by the research staff from direct observation at the event.

voucher values compensated for the logistical and psychological costs associated with visiting these locales. Author interviews revealed that many Christian Qaraqoshis had not visited Mosul since the ISIS occupation, despite it being a proximate, major city where many had attended university or worked previously.[27] Interviewees perceived Mosul as a hotbed of Islamist activity and sympathy, and voiced concerns over the city's security situation. Each voucher was stamped with the player's unique ID and was valid for four months after the intervention ended. The restaurant managers stored the vouchers such that I could track the amount spent and observe which vouchers were presented together. Visiting Mosul reflects comfort with Muslim strangers, whereas visiting the local Qaraqosh restaurant should only be affected by the treatment if contact increased sociability in general.

Figure 3: Scree Plot of Survey Item Clusters



The final set of outcomes consists of attitudes toward intergroup relations measured at t_1 and t_2. I combine similar survey items into an index to reduce measurement error. I do this by running an unsupervised hierarchical clustering algorithm on the t_1 data collected for a sample of Christian respondents (n = 198) with a dummy treatment vector. Using a data-driven method to identify latent clusters in the survey data removes subjectivity from the process of selecting items to form an index. The eight survey items of interest are then collapsed into three indices.[28] As a final step, I conduct a factor analysis on the four clusters to create scores that will serve as t_2 outcomes. The resulting indices — now dependent variables — cover the prospects for coexistence, comfort with Muslims as neighbors, and blaming Muslims for Christian suffering (Table 2). [29] The Cronbach's alpha for each index lies between 0.5 and 0.7, indicating strong internal consistency given the low number of items in each index.[30]

[27] Author interviews discussing community-wide social norms with four Christian residents aged 35 – 56, September 3 — 11, 2018, Qaraqosh, Iraq.

[28] The "elbow" in the scree plot produced by this method (Figure 4) plateaus sharply at four clusters, indicating that four primary indices should capture most of the variation in outcomes.

[29] Items 1.1 and 1.2 are taken from the 2004 survey of Iraqis by Moaddel, Tessler and Inglehart (2008).

[30] When running the hierarchical clustering model on the full sample of baseline data, two of the five indices produced by this method yielded a low Cronbach's alpha of 0.2 or below. These indices are described in the pre-analysis plan, but discarded here. I analyze their constituent items individually in Figure 9. I removed two items in the pre-registered 'Prospects for Peace' index (here labeled the 'Coexistence' index) for the same reason.

Two survey questions aim to measure ingroup bias in particular. The first asks respondents to choose a name from a list of fictional profiles (e.g., 'Mohammed from Baghdad') that reflects a person they would trust to receive a cash transfer on their behalf.[31] Only a fifth of the Iraqi population have bank accounts, with most relying on cash transfer agencies — prone to coethnic favoritism — to wire money domestically (Mousa 2013). The outcome of interest here is whether one trusts a Muslim to manage a financial transaction. If this exercise is too transparent to the respondent, however, it may instead measure the social acceptability of of coethnic favoritism. Social desirability in this context works toward such favoritism, downwardly biasing any treatment effects. The second ingroup bias measure is an item informing respondents that $1 will be donated on their behalf to an organization of their choosing. Donating to an explicitly Christian organization (most commonly, one's local church) is a manifestation of high ingroup bias, while donating to an organization that benefits both Muslims and Christians (e.g., a cancer ward or orphanage) represents low ingroup bias. The response options are familiar to most participants, limiting the possibility that this outcome picks up on the role of information relative to uncertainty.

Table 3: Data Collected

	Sample Size	Type	Description	Location
1. Player outcomes (Christian)	607	Experimental	Behaviors, survey data	Qaraqosh & Ankawa
2. Player outcomes (Muslim)	70	Descriptive	Behaviors, survey data	Qaraqosh & Ankawa
3. Survey of local residents	152	Descriptive	Representative panel survey	Qaraqosh
4. Survey of Christian IDPs	1152	Descriptive	Representative cross-section	Ankawa
5. Match infractions	239	Descriptive	Red cards, yellow cards	Qaraqosh & Ankawa
6. Referee ID	239	Experimental	Referee religious ID	Qaraqosh & Ankawa
7. Added player performance	95	Descriptive	Goals scored, skill rating	Qaraqosh & Ankawa
8. Team performance	37	Descriptive	Points accumulated, stage reached	Qaraqosh & Ankawa

Does exposure to Muslims via the league prompt spillover effects among local residents? I look for suggestive evidence of spillover effects using a descriptive analysis of survey data among local residents. I proxy for this exposure in three ways: living within walking distance of the leagues' soccer fields, having a friend or relative compete, and attending at least one match (all respondents are invited to the final game). The research team surveyed 152 randomly selected Christian and Muslim households in Qaraqosh one week before the leagues' end, and again three months later. The outcomes of interest are the following three items: 1) *"To what extent do you agree with this statement: it is arbitrary to divide Iraqis into ethnic and sectarian identities"*; 2) *"Would you prefer community activities like the soccer league to be mixed, or limit participation to those from your group?"*; and 3) *Do you think the league had a positive influence on your community?*" I expect that exposure to the leagues correlates with tolerant responses on these items. While unobservable factors likely correlate with league exposure and outgroup tolerance, this analysis provides exploratory evidence on the potential for contact

[31] The other profiles are 'Ali from Erbil' (a Muslim), 'Behnam from Erbil' (a Christian) and 'George from Beirut' (a Christian).

to change social norms beyond direct participants. Another survey fielded by the author of n = 1,152 Christian IDPs served a different purpose. I use this cross-sectional data to peg baseline attitudes toward Muslims among subjects relative to the general population of Christian IDPs.

4 Results

Table 4 summarizes the main results. Looking first at tolerance on the field, treated players are 12 percentage points more likely to report that they "would not mind" being assigned to a mixed team next season, 16 percentage points more likely to vote for a Muslim player (not on their team) to receive a sportsmanship prize, and 34 percentage points more likely to train with Muslims six months after the intervention ends. The training outcome does not merely capture the inertia of continuing to play with teammates: 15% of treated teams had recruited Muslim players from other teams in the league or from the neighborhood. Effects are weak to null when moving to tolerance off the field. Treated players are not more likely to attend a mixed social event, and although are 8 percentage points more likely to patronize a Muslim-owned restaurant in Mosul up to four months after the intervention ends, this result is not statistically significant ($p < 0.347$). Conditional on attending the social event, treated players brought their wives at almost identical rates as control players (15.2% vs. 17.3%, $p < 0.671$).

Treatment effects are strongest among the most successful teams, operationalized by reaching the semi-final. Interaction effects here range in magnitude from 30% to 40% (Table 6). No similar subgroup effects were found when analyzing baseline contact or empathy (Table 8). Neither do results differ by exposure to ISIS violence . The placebo outcome of visiting the local Christian-owned restaurant in Qaraqosh saw no treatment effects (treatment coefficient of 4%, $p < 0.602$). The effects on on-the-field behaviors survive the Benjamini and Hochberg (1995) multiple comparisons correction at the $\alpha = 0.05$ level.

Personal beliefs proved harder to change. Treated players became less comfortable with Muslims as neighbors (0.16 SDs, $p < 0.043$), which would undermine the already-precarious Christian presence in northern Iraq. Views on other salient issues, like blaming Muslim civilians for Christian suffering, remained unchanged. The ingroup bias measures — donating one's survey compensation to a cross-cutting organization, and trusting a Muslim with a financial transaction — were likewise stagnant. On the other hand, I do observe positive treatment effects for less salient beliefs. The coexistence index saw a large positive treatment effect of 0.63 SDs ($p < 0.001$). This index combines items stating that ethnic and religious divisions are arbitrary, and that Iraq would be a better society if citizens treated one another as Iraqis first. Relative to the other indices, the coexistence index most captures abstract attitudes rather than concrete policy positions.

I also find descriptive evidence of spillover effects. Moving from watching one game to watching thirteen (equivalent to the first phase of the league; Table 1) is associated with a 66.7% increase in the likelihood of endorsing community programs that cross group lines at the three-month mark, where game attendance itself is strongly predicted by having a family or friend playing in a league (Table 16). The three channels through which residents are exposed to the leagues are associated

Table 4: Main Results

	Control	Treated	Diff.	p-value [bb]	*n* [teams]
Behaviors on the Field					
Mixed Team Sign-Up	58.9%	71.3%	12.4	0.084 [0.107]	262 [28]
Vote Muslim	41.3%	57.9 %	16.6	0.014 [0.041]	262 [28]
Train w/ Muslims	19.3%	53.5%	34.2	0.000 [0.001]	433 [42]
Behaviors off the Field					
Event Attendance	25.0%	23.4 %	1.6	0.277 [0.849]	433 [42]
Visit Mosul	23.0%	31.4%	8.4	0.347 [0.365]	318 [28]
Donate Mixed NGO	72.4%	71.5%	0.9	0.682 [0.953]	262 [28]
Attitudinal Indices					
Coexistence	−0.37	0.26	0.63	0.000 [0.019]	262 [28]
Muslim Neighbor	−0.05	−0.21	0.16	0.043 [0.136]	262 [28]
Muslim Blame	−0.08	−0.25	0.17	0.407 [0.734]	262 [28]

Estimates based on an OLS model with controls for randomization block, age, education, income, church attendance, ISIS abuse, respondent type (added player, core player, or coach), and the outcome measured at t_1 where available (attitudinal outcomes, donation outcome, and training outcome). All covariates are interacted with the treatment indicator. Standard errors are clustered at the team level. Block bootstrapped standard errors drawn from 1,000 samples are presented in brackets. All variables are coded in a tolerant direction.

with tolerant attitudes: living within walking distance of a league field, having a family or friend competing, and attending the final game upon the research staff's invitation are associated with a 19% to 32% boost to the belief that league had a positive effect on the local community (Table 5). Three months later, game attendance and attending the final game upon the league staff's invitation — which included lengthy celebrations and a closing ceremony reiterating the league's 'fair play' messaging — persist in their correlation with positive attitudes.

5 Exploring Causal Pathways

The results show that intergroup contact improved tolerant behaviors on the field, and possibly off the field, accompanied by mixed attitudinal shifts. What drives these effects? I explore three mechanisms that loom large in the contact literature: changing social norms, increased information about the outgroup, and increased empathy. To these mechanisms, I add a fourth: a positive experience, here defined as team success.

Normalizing Contact: Social Norms and Spillover Effects

Playing with Muslim teammates increased the acceptability of interacting with Muslims within the realm of soccer, and for some, outside of it. Perhaps the strongest piece of evidence in support of changing norms was the gradual acceptance of the idea that soccer teams can include non-Christians. The dominant norm in both Ankawa and Qaraqosh is that teams are segregated by religion. At baseline, only two of the 51 teams in the study (3.9%) included non-Christian players. Players were hesitant to absorb unfamiliar teammates, especially non-Christians. One coach walked out of an early information session and threatened to pull his team if Muslims were included. Another team, formed by members of an Assyrian nationalist movement, made similar threats. Some players protested to the research staff that Muslims would "ruin the league" if they came to "our field" in the Christian enclave of Ankawa, even though the field in question is Muslim-owned and open to all communities.[32] Coaches agreed to include Muslim players on the condition that they remain a numeric minority on each team.

Christian interviewees underscored that "rarely would you see Muslims playing with a Christian team," and that "honestly, before, each community had their own team," noting that "this is the first time that Christians are playing with our Muslim brothers" and that "this league was the thing that brought us together."[33] Six months after the league ended, 66.7% of treated teams were regularly training with Muslims, compared to 9.5% of control teams. Some participants proposed to league staff that they invite all-Muslim teams from the area to participate in the future, showing that anxieties toward the outgroup had been tempered. One treated team in particular went out of their way to accommodate the continued presence of Muslims on their squad. When Muslim players confessed that taxi rides from their neighborhood to the field were getting unmanageably expensive, their Christian teammates agreed to share the $35 weekly cost despite a mean household income of $500 to $1,000 per month.[34] Another mixed team elected a Muslim player as their captain, entrusting him to represent the team to (Christian) league staff and manage important team affairs, such as pleading the case of a teammate due to miss an upcoming game after accumulating two yellow cards. Moreover, some intra-team disputes were resolved in favor of Muslim team members. These anecdotes bely an increased openness toward Muslims as a result of the treatment.

Treated players seemed more comfortable around their Muslim teammates off the pitch as well. For instance, some Christian players invited their Muslim teammates to watch the UEFA Champion's League final at a local restaurant and shisha café during the league's final days, with no prompting from the research staff.[35] Christian-owned cafés and social clubs in Ankawa enforce a strict sectarian door policy: national ID cards are checked to ensure that only Christians (or foreigners) are granted entry. These Christian players would almost certainly have had to negotiate with the café management and security staff to allow their Muslim guests in. Evolving attitudes toward the social event also illustrated a newfound comfort around Muslims.

[32] Field notes, Kellsey Beal, March 2017. Erbil, Iraq.
[33] Interview conducted by Marie-Helene Carleton and Micah Garen, with a Christian league player in his early 30's, April 2019. Qaraqosh, Iraq.
[34] Field notes, Kellsey Beal, April 2017. Erbil, Iraq.
[35] Field notes, Kellsey Beal and Rabie Zakaria, June 2017. Erbil, Iraq.

Some Christian players expressed concern over the prospect of Muslim players bringing unfamiliar family members to this event, voicing a hesitation to bring their wives lest they be leered at by the newcomers. At the time of the event six months later, noticing the absence of their Muslim teammates at the start of dinner, several Christian attendees phoned them to encourage them to attend. These anecdotes reflect small but important challenges to the segregated status quo in Ankawa and Qaraqosh. As one Qaraqoshi staff member remarked, "even if it's a little bit, it changed something."[36]

Five months after the league ended, one popular Christian player remarked: "The important thing is the result, but there is another important thing, that all of us [from different communities] are together on one team. When the game is over we hug, kiss, congratulate each other even when we lose... that was really a huge thing. We see each other in the neighborhood, call each other, invite each other for a glass of tea or coffee at home or in a café ... we're still in touch."[37] The emergence of intergroup friendships — one of the contact hypothesis's key predictions — was also noted by Muslim players: "in a soccer game, there isn't this idea of which community you're from... you're playing, you're competing, and friendships will grow." Muslim players, for their part, demonstrated weakly positive shifts along most of the survey outcomes from t_1 to t_2.[38] Suggestive of the emergence of cross-group friendships, treated players were 8 percentage points more likely to report that their friends were "mainly mixed" or "mainly non-Christians" relative to the control group ($p < 0.18$, Figure 9).

Norm shifts are generated by a dynamic interaction between bottom-up and top-down forces (MacGinty 2010). Intergroup contact in this study was endorsed by influential figures, like coaches and local leaders, in ways that likely diffused norms among players. During the inaugural weeks of the league, Christians spoke Neo-Assyrian Aramaic (unintelligible to the Arabic-speaking Muslim players) and did not introduce themselves during orientation sessions.[39] The coaches made a point to speak in Arabic and their players followed suit, pointing to the influence of communal authority figures in moderating intergroup contact as predicted by contact scholars (Allport, Clark and Pettigrew 1954). A local Christian NGO, known to be operated by the Syriac Catholic Church, also lent operational and symbolic support to the first wave of the study, and advertised this support on their Facebook page and through the league's promotional materials. Local research staff described the NGO's stamp of approval as key in encouraging participation.

Tolerant norms also permeated the town of Qaraqosh at large. The leagues gained substantial local traction, with hundreds of spectators lining the field to watch big games (Figure 2). The league staff took measures to welcome local residents, such as providing bleachers, concession stands, and activities for children. A Facebook group announcing schedules, reporting scores, and live streaming matches attracted over 2,600 members.[40] A survey of a random sample of 154 Qaraqoshis revealed

[36] Interview, Rabie Zakaria, March 2019. Qaraqosh, Iraq.

[37] Interview conducted by Marie-Helene Carleton and Micah Garen, with a Christian league player in his early 30's, April 2019. Qaraqosh, Iraq.

[38] Figure 7 looks at survey items making up the trust indices that were posed to both Muslims and Christians. Of the eight eligible items, six demonstrated shifts in a pro-tolerant direction when comparing t_1 and t_2 surveys in difference-in-means t-tests. A sample size of 55 renders these differences statistically insignificant although perhaps indicative, especially given that social desirability bias likely encouraged Muslims to over-report tolerant responses at t_1.

[39] Field notes, Kellsey Beal, April 2017. Erbil, Iraq.

[40] At the time of this writing in April 2019, the page has a 5/5 rating, over 9,000 photos (many uploaded by fans), and some videos viewed over 3,000 times.

Table 5: Spillover Effects on Local Residents

	Attitudinal Outcomes				
	Pro-Leagues (t_1)	Pro-Secular (t_1)	Pro-Leagues (t_2)	Pro-Secular (t_2)	Pro-Mixed Activities (t_2)
	(1)	(2)	(3)	(4)	(5)
Walking Distance	0.192*	0.067	−0.165	−0.037	−0.067
	(0.112)	(0.178)	(0.215)	(0.173)	(0.167)
Family or Friend	0.324***	0.351*	0.322	0.134	−0.250
	(0.117)	(0.186)	(0.256)	(0.207)	(0.199)
Games Watched	0.0002	−0.0004	−0.009	−0.004	0.015***
	(0.003)	(0.005)	(0.007)	(0.005)	(0.005)
Attended Final	–	–	1.075***	0.486***	−0.236
			(0.225)	(0.181)	(0.175)
Constant	3.318***	3.182***	2.514***	2.919***	1.078***
	(0.131)	(0.209)	(0.476)	(0.383)	(0.370)
Observations	121	121	102	102	102
Adjusted R^2	0.100	0.012	0.164	0.065	0.047

Note: *p<0.1; **p<0.05; ***p<0.01

Models 1 and 3 analyze agreement that "the soccer leagues had a positive effect on our community" (4-point scale). Models 2 and 4 analyze agreement with the following statement: "Dividing the Iraqi people into Sunnis, Shi'is, and Kurds is artificial and contrary to the reality of the Iraqi society" (4-point scale). The t_1 survey was administered from the league's final week (November 10, 2018) through to December 17, 2018, and the t_2 survey was administered from March 1, 2019 to March 9, 2019 (three months after the league concluded). Model 5 analyzes responses to the following statement: 'Would you prefer community activities like the soccer league to be mixed, or limit participation to those from your group?' (3-point scale). All models control for age and gender.

that 81% had attended at least one game (with a median of 17 games attended) despite only 52.8% of respondents having relatives or friends competing. Open-ended responses reveal that residents viewed the leagues as an "example of coexistence" and "strengthening" of ties between different communities, lauding the fact that the "tournament is bringing us all together." Manipulation checks confirmed that virtually all residents were aware that Muslims were participating in the league.[41]

The half of Qaraqoshi residents (47.2%) without family or friends competing were still exposed to the leagues by virtue of three factors: the city's compact size (73.2% lived within walking distance of a league field), the placement of league fields next to major churches or town centers, and the tight-knit nature of community life in Qaraqosh. These factors likely accelerated the diffusion of pro-contact norms. One to four weeks after the final match, 96.2% of residents sampled "strongly agreed" that the league had a positive influence on their community, with 88.6% affirming the arbitrariness of ethnic and religious boundaries. These responses are mediated by the intensity of exposure (Table 5). Support for these propositions dropped, however, when the same respondents were surveyed three months after the league ended (78.6% and 80.9% respectively).

The predictive power of attending the final game, upon the league staff's invitation, is longer lasting: attendance correlates with the view that the league was a positive influence on the community, and the idea that sectarianism is arbitrary, at the three-month mark (Table 5). The final was marked by fanfare, messaging around sportsmanship and community spirit, and residents witnessing the positive impacts of diversity first-hand. Along the same lines, each additional game watched is associated with a 1.5% increase in support for future programs that cut across group lines, such as women's volleyball tournaments or gardening clubs (Table 5). All in all, exposure to the intervention therefore correlates with support for intergroup contact within soccer leagues and within other programs in the city, as well as a broader rejection of sectarianism. I cannot precisely measure social networks, but the high degree of interconnectedness between Qaraqoshis likely facilitated these exposure effects.[42]

Team Success

A positive experience is thought to be crucial for contact to build tolerance (Graf, Paolini and Rubin 2014; Paolini, Harwood and Rubin 2010; Pettigrew and Tropp 2006). To rule out the concern that team success is post-treatment — in other words, that teams perform better as a result of being diverse — I show balance across treatment and control on three measures of team performance: the skill rating of added players (measured at baseline), goals scored by added players, and total points accumulated by the team at the end of the league (Table 7).

[41] All 27 spectators surveyed during the pilot correctly identified that the league included Muslim players. Religion is easily identified in this context, both because of the close-knit nature of the Christian community (making outsiders quick to spot), and because player names were printed on the back of each uniform.

[42] Qaraqoshis are so interconnected that most respondents had connections to both treated and control teams.

Subgroup analyses run the risk of over-stating effect sizes due to the sample size (Gelman and Carlin 2014). With this constraint in mind, playing on a successful team — operationalized by advancing to the knock-out semifinal stage — improved attitudes rather than behaviors (Table 6). Interacting team success with treatment status, however, produces statistically significant interaction terms for three of the six behaviors (Table 6), including patronizing a restaurant in Muslim-dominated Mosul. These results imply that success can encourage positive attitudes, but the addition of contact is needed to boost tolerant behaviors. Anecdotally, participants seemed more willing to absorb players that had a concrete impact on the scoreline. When a Muslim striker scored several goals in the same match, one participant remarked that he would have preferred "a Muslim player who plays like *that*" instead of the less prominent Christian players that his team received. By the same token, Christian players seemed more quick to criticize the underperformance of Muslims as opposed to fellow Christians, including for minor transgressions like arriving a few minutes late to training. Successful teams also played together for an additional two weeks, potentially suggesting added returns to bundling dosage with a positive experience.

Absorbing talented players in and of itself, however, does not seem to systematically shape treatment effects. When operationalizing team performance by a team receiving added players in the 25^{th} skill percentile, neither this measure of performance nor its interaction with the treatment indicator yield statistically significant results (Table 14). How does team success relate to the talent of added players? Only one of the seven teams categorized as receiving the most talented players managed to reach the semifinal, underscoring that individual merit does not map perfectly onto team performance. The highest-scoring Muslim player in the league, for instance, happened to be assigned to bottom-three team. Having talented teammates is therefore not enough to build tolerance — the team must be successful too.

Table 6: Heterogenous Effects by Team Success

	Outcome								
	Attend	Train	Mosul	Donate	Vote Muslim	Mixed Team	Coexistence	Muslim Neighbor	Muslim Blame
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treated	0.010	0.335**	−0.119	−0.065	0.219**	0.068	0.422**	−0.173	0.147
	(0.099)	(0.144)	(0.097)	(0.063)	(0.087)	(0.074)	(0.173)	(0.148)	(0.152)
Success	0.004	0.200	−0.104	−0.146	0.234	0.070	−0.165	0.315	0.023
	(0.138)	(0.259)	(0.081)	(0.115)	(0.186)	(0.101)	(0.245)	(0.504)	(0.241)
Treated:Success	0.340**	0.306	0.395*	0.300*	−0.105	0.293**	−0.230	−0.236	−0.093
	(0.167)	(0.289)	(0.227)	(0.176)	(0.245)	(0.131)	(0.334)	(0.550)	(0.302)
Constant	0.327**	0.177*	0.386**	0.529***	0.382**	0.393*	−0.070	0.047	0.029
	(0.149)	(0.097)	(0.177)	(0.138)	(0.161)	(0.213)	(0.333)	(0.229)	(0.533)
Clustered S.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	399	399	231	221	183	231	231	231	231
R^2	0.196	0.365	0.228	0.122	0.238	0.174	0.170	0.283	0.291
Adjusted R^2	0.127	0.349	0.103	−0.027	0.082	0.041	0.031	0.163	0.172

Note: *p<0.1; **p<0.05; ***p<0.01

Models are the same as those used for the main analyses (Table 4) with the addition of an interaction term to reflect team success, operationalized using a binary indicator for advancing to the semi-finals, and its lower order terms. Models 1 — 6 analyze behavioral outcomes, while Models 7 — 10 analyze attitudinal indices. The behavioral outcomes, from left to right, are: attending the social event, training with Muslims six months after the intervention, donating to a mixed NGO, voting for a Muslim player to receive a sportsmanship prize, and registering for a mixed team next season.

Table 7: Balance Table: Team Performance

	Control	Treatment	p-value	*n*
Added Player Rating	6.03	6.45	0.27	95
Added Player Goals	0.131	0.135	0.71	99
Team Total Points	16.79	20.50	0.32	28

Other Mechanisms: Empathy and Information

In addition to changing norms, scholars posit that contact can build tolerance by increasing empathy and information about the outgroup. Contact is thought to induce empathy by highlighting similarities, thereby reducing perceived social distance between the ingroup and the outgroup. When analyzing the two survey items that directly measure empathy, however — having a "a little" or "a lot" in common with the two Muslim outgroups encountered in the study — I find null results when the Muslims in question are Sunni Arabs, and negative treatment effects for Shi'ite Shabak (Figure 9). Similarly, breaking down results by baseline empathy toward Muslims does not produce consistently significant interaction effects, although I run into small sample constraints (Table 8). Previous work also stresses that contact can fill information gaps, often measured by a rejection of inaccurate stereotypes. I record two survey outcomes that capture stereotypes about Muslims: that they are cursed, and that most Sunnis supported ISIS. Neither outcome was affected by the treatment (Figure 9). This may be a disadvantage of apolitical contact: underlying grievances with the outgroup are not explicitly confronted.

Previous work shows that information must be new to affect outcomes (Dunning et al. 2017). In this case, contact provided neither new information on commonalities between groups, nor new facts about Muslims. Because Muslims and Christians have lived side by side in the Ninewa plains for centuries, the barrier to tolerance may not necessarily be a lack of knowledge about the outgroup. The most obvious commonality that this intervention would highlight, a shared love of soccer, is old news for Christian players — it is common knowledge that the region's Muslims have their own teams and tournaments. Several coaches also proposed inviting Muslim teams to compete in future editions of the league, confirming an awareness of parallel Muslim teams. If anything, intergroup contact made Christians less likely to perceive Shi'ite Muslims as similar to them. Even if social contact highlights differences, which post-conflict communities are keenly aware of, it can still improve tolerant behaviors. Fortunately, it seems that hostile groups do not need to view each other as similar in order to coexist.

Why Cooperation Matters

Introducing intergroup contact in the aftermath of war can risk misunderstandings spiraling into violence, or competitive contact breeding resentment (Lowe 2017; Jha 2013). Paluck, Green and Green's 2017 review warns that naturalistic studies

Table 8: Heterogenous Effects by Baseline Contact and Empathy

	Dependent Variables					
	Mix Team	Vote Muslim	Train Muslim	Mix Team	Vote Muslim	Train Muslim
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.411**	0.407**	0.053	0.492**	0.467***	0.093
	(0.167)	(0.187)	(0.151)	(0.175)	(0.177)	(0.149)
Contact : Treat	0.036	0.103	−0.102	–	–	–
	(0.141)	(0.150)	(0.134)			
Empathy : Treat	–	–	–	−0.019	0.029	0.066
	–	–	–	(0.096)	(0.075)	(0.064)
Team Clustered S.E.	✓	✓	✓	✓	✓	✓
Observations	231	183	231	231	183	231
R^2	0.133	0.177	0.311	0.114	0.161	0.309
Adjusted R^2	0.051	0.081	0.245	0.029	0.063	0.243

Note: *p<0.1; **p<0.05; ***p<0.01

Models are the same as those used for the main analyses (Table 4), with the addition of an interaction term either reflecting baseline contact with Muslims or baseline empathy, as well as the lower order term. Outcomes are: registering for a mixed team (models 1 and 4), voting for a Muslim player to receive a sportsmanship prize (Models 2 and 5), and training with Muslim players (Models 3 and 6). These outcomes had the most robust treatment effects in the main analyses.

are likely to involve some amount of negative contact experiences, such as misunderstandings or outright conflict that could negatively affect outcomes. Proxying for aggression using yellow and red cards, I do not find evidence of increased hostility among those on all-Christian teams. Table 9 demonstrates that the prevalence of cards does not differ across match types: matches that bring together all-Christian teams with mixed teams are not more hostile than matches between two treated or two control teams. Control participants also do not seem to become more prejudiced over time (Figure 6). Together, these results on backlash effects suggest that competitive contact does not worsen prejudice, but does not alleviate it either.[43]

Experimental evidence reveals that both Muslim and Christian players contained potential conflict by censuring aggressive speech and actions toward outgroup members. The 6% of games (randomly) officiated by a Muslim referee saw an average of

[43]This analysis will be updated to include match-level data from over 500 games by October 2019.

Table 9: Referee Identity and Infractions

	Dependent Variables:		
	Total Cards (1)	Yellow (2)	Red (3)
Intercept	3.41***	3.30***	0.11
	(0.53)	(0.48)	(0.12)
Both Treated	0.10	−0.12	0.22*
	(0.50)	(0.45)	(0.11)
Mixed Status	0.04	−0.05	0.09
	(0.47)	(0.42)	(0.11)
Muslim Ref	−0.28	−0.20	−0.07
	(0.99)	(0.89)	(0.22)
Goal Controls	✓	✓	✓
Matches	239	239	239
R^2	0.02	0.03	0.02
Note:	*p<0.1; **p<0.05; ***p<0.01		

around 3 cards given out, as compared with an average of almost 3.5 cards for games overseen by Christian officials, although this result is not statistically significant (Table 9). Anecdotally, the usually expressive Christian players did not dispute any of the Muslim referees' decisions, with players advocating for hiring a Muslim referee who was viewed as "very fair" for future leagues. Players regularly challenged opponents and referees from their own group but seemed to deliberately avoid confronting those from the outgroup. This behavior accords with ingroup censuring: a cooperative, ingroup policing strategy that prevents disagreements from escalating (Fearon and Laitin 1996; Ditlmann and Samii 2016; Cikara and Paluck 2013) and is associated with improved outgroup regard (Avenanti, Sirigu and Aglioti 2010). It is rational for the outnumbered Muslim players to avoid conflict. The restraint exercised by Christian players, on the other hand, points to an awareness that personal disputes could become dangerous given the tense political context. Some intra-team disputes were also observed to be resolved in favor of Muslim teammates, perhaps rooted in the same desire to avoid escalation. It is important to keep in mind, however, that the leagues were a highly regulated environment overall. The presence of referees and local security forces at each game may have played an important role in containing backlash effects.

6 Discussion: The Attitude-Behavior Gap

To sum up, contact improved relationships with Muslim teammates and acquaintances encountered within the league, and changed norms around the acceptability of contact among local residents. Team success was also decisive in converting contact into tolerance, with added behavioral returns to reaching the league's knock-out phase. A puzzle remains, however: why was contact more effective at changing behaviors rather than attitudes?

It may be the case that I observe intermediate results on attitudes, or that survey-based results are too inherently noisy to interpret (Bound, Brown and Mathiowetz 2001). There is empirical precedent, however, for a similar attitude-behavior gap in other post-conflict settings (Paluck 2009; Scacco and Warren 2018). I outline four possible explanations for such a gap. First, attitudinal change is emotionally and cognitively burdensome (Bem 1972; Laird and Bresler 1992; Ito et al. 2006; Guadagno et al. 2010; Wilson and Musick 1999). The psycho-social toll of war likely makes attitudinal change even more taxing. Reducing prejudice is notoriously difficult when issue salience is high (Broockman, Kalla and Sekhon 2017), when the type of prejudice is ethnic or religious (Paluck, Green and Green 2017), and in the wake of violence (Fearon and Laitin 2000; Beber, Roessler and Scacco 2014) — all of which are true in post-ISIS Iraq.

Second, standard survey items on prejudice could take on a sharpened meaning after war, becoming akin to policy positions known to be unaffected by contact (Finseraas and Kotsadam 2017). Commonly used items on comfort with outgroup neighbors, or the willingness to sell land to outgroups, may be read as support for increasing the number of (often poorer) Muslim residents in Qaraqosh. Given the gradual disappearance of Christian from Iraq, and the high housing prices in Christian areas, these items may not capture prejudice. A similar logic explains the lack of movement on the survey donation outcome. Christians rely heavily on the church for material and spiritual assistance: In a 2017 survey of Christian IDPs (n = 1,163), I find that nearly half received emergency aid from the church, and a third attend church once a week or more. Two of the study's four leagues were adjacent to prominent churches and six teams (11.5%) named themselves after specific churches. The centrality of the church to Christian identity and wellbeing raises the possibility that the survey donation outcome is nearly orthogonal to intergroup tolerance (Makari 2007). Consistent with this interpretation, the sole index that did touch on salient opinions — the coexistence index — yielded a substantively and statistically significant treatment effect (Table 4).

Third, it is possible that reporting positive attitudes toward Muslims deviates from the narrative of Christian victimization, which carries a high social cost. Such costs could explain the lack of movement on the index attributing blame to Muslims for Christian suffering. The narrative of Christians as victims and Muslims as perpetrators is foundational to Christian identity in post-2003 Iraq and motivates Christian asylum cases (*Background Information on the Situation of Non-Muslim Religious Minorities in Iraq* N.d.; Emeriau 2019). Social norms shape individual preferences for reconciling with perceived

ISIS collaborators (Kao and Redlich Revkin 2018). These conventions against expressing positive beliefs about Muslims throw light the negative treatment effect on the Muslim neighbors index (0.16 SD, p-value < 0.04, Table 4). Christians on mixed teams, who became the friendliest toward Muslims, might have experienced cognitive dissonance as a result of this conditioning to resent, fear, and blame Muslims on the whole. An empathy-building intervention in Israel sparked a backlash in attitudes for the same reason (Gubler, Halperin and Hirschberger 2015). The susceptibility of survey items to social desirability bias (here, in an intolerant direction) further underlines the importance of measuring real-world behaviors.

All of these theories explain some part of attitude-behavior gap. I highlight another dimension to this gap, however: the distinction between internal and external tolerance. Studies of prejudice traditionally measure attitudes toward the outgroup as a whole (i.e., external tolerance), but behaviors that reflect tolerance toward the individual outgroup members encountered within the intervention (i.e., internal tolerance). This co-linearity between internal and external tolerance, and attitudes and behaviors, respectively, has made it difficult to assess how far the impacts of contact truly extend. This experiment is well-suited, however, to give us leverage on whether the behavioral effects of contact can extend to the outgroup as a whole. It does so by capturing behaviors toward Muslims on one's team, one's league, and Muslim strangers outside of the intervention. To be sure, the behaviors measured here do not differ solely on whether they reflect internal or external tolerance. They also vary in psychological and material costliness. Visiting Mosul, for instance, entails a 40-minute journey by car that requires some degree of emotional and economic investment. This costliness when it comes to navigating interactions with outgroup strangers, however, is typical of the real world. The results show that contact can build internal tolerance — no small feat when the risk of recurrent violence is high — but is relatively effective at building external tolerance.

Building on Granovetter (1973), I propose that social ties can be viewed as concentric circles that vary in strength. At the innermost core of one's social network, we find strong ties with family and friends. At the intermediate level, we have ties with acquaintances, peers, and colleagues. Both of these circles contain contacts whom we know personally. Finally, the outermost circle houses strangers with whom we have no personal connection. I propose that contact appears best-equipped to create, normalize, and improve relationships with weak ties — people whom we know, but who we are not particularly close to. I also find evidence that contact forged new friendships, suggesting that contact can build new, strong ties across group lines that permeate the core of social networks. Contact is less effective, however, at improving tolerance toward outgroup strangers. For any given interaction an outgroup stranger, negative stereotypes will win out (Brewer and Kramer 1985; Hamilton and Trolier 1986), as contact fails to inhibit the automatic activation of prejudicial heuristics (Kawakami, Young and Dovidio 2002; Devine 1989). Bolstering weak ties nevertheless gets to the heart of building community, which is all the more important when deep segregation and distrust are the norm.

The concept of weak ties is especially useful when we consider the results from the comparison league, which had no Muslims at all. When pooling data from the comparison league, the treatment effect on attending a mixed social event increases from

almost zero to 12 percentage-points (a change from $p < 0.277$ to $p < 0.187$), and the treatment effect on visiting Mosul increases from 8 to 12 percentage points (a change from $p < 0.347$ to $p < 0.091$; Tables 4 and 11). Comparison league players are indistinguishable from the rest of the sample when it comes to baseline prejudice (Figure 8), but their league experience was markedly different. These players had no exposure to Muslims, whereas players on control teams encountered (and befriended) Muslims within their league eco-system. As a result, no comparison league players visited Mosul, while 23% of control players and 34% of treated players did (Table 12). When it comes to external tolerance toward outgroup strangers, weak ties toward fellow league participants seems to be doing most of the legwork as opposed to strong ties toward fellow teammates. We here see the importance of weak ties not only in easing intergroup tensions among interconnected individuals, but also in potentially providing the key to unlocking generalized tolerance toward outgroup strangers as well.

7 Conclusion

Ongoing civil wars in the Middle East and Africa, worsening sectarianism across the Arab world, and a dearth of policies aimed at reintegrating communities hit by ISIS in particular have reinvigorated the question of how to build social cohesion in the wake of violence. Recent experimental evidence highlights the potential for social contact to improve relationships between groups. Despite its potential, however, we know little about whether contact can build lasting tolerance outside of the intervention setting, and even less about its impact in conflict zones. This study provides causal evidence on both of these questions by measuring the impact of intergroup contact on attitudes and real-world behaviors among Iraqis displaced by ISIS.

I find that being randomly assigned to compete on a soccer team with Muslim teammates increased tolerant behaviors toward Muslim peers up to six months after the intervention ended. Contact was less effective, however, at shifting generalized tolerance toward Muslim strangers. The lasting behavioral effects toward Muslim peers are robust to several study waves, robustness checks, and a comparison group with a reference group, and do not come at the cost of exacerbating prejudice among the control group, as has been the case in other studies of Muslim-Christian contact (Scacco and Warren 2018). Even if generalized tolerance remains stubborn to change, bolstering 'weak ties' with the outgroup nonetheless builds everyday coexistence, cooperation, and community.

Turning to the question of pathways, contact primarily built tolerance by normalizing contact with Muslims. Two-thirds of mixed teams had integrated Muslims as core team members six months after the intervention ended, indicating that contact can be habit-forming after formal incentives to interact fall away. As Pettigrew (1998) writes, "repetition makes intergroup encounters comfortable and 'right.'" The endorsement of local leaders and coaches also played an important role in bolstering these new norms, which spilled over to the close-knit residents of Ankawa and Qaraqosh in the short term. A

successful team performance was likewise decisive in unlocking tolerance, with the top-performing teams being more likely to patronize a restaurant in Muslim-dominated Mosul — an especially high bar for comfort around Muslims.

Following experimental findings from other post-conflict settings (Paluck 2009; Scacco and Warren 2018), the results affirm that prejudice reduction interventions can improve the treatment of outgroups even if prejudicial beliefs appear to persist. I propose that differentiating between personal and impersonal connections can shed light on these 'attitude-behavior' gaps. I hypothesize that contact does little to improve generalized distrust and prejudice toward outgroup strangers, but is relatively effective at shoring up the weak ties and secondary relationships key to day-to-day coexistence and community-building. In contexts where the risk of violence is high, improving these interactions is important even if the effects on attitudes are inconclusive. I thus agree with Greenwald and Pettigrew (2014) that "the connection of prejudicial attitude to discriminatory behavior is not something to be assumed but, rather, something that requires empirical demonstration."

These findings hold several policy implications. First, interventions seeking to build social cohesion after conflict should consider aiming to change everyday behaviors rather than personal beliefs. Improving daily interactions in contexts where open hostility is the norm is a worthwhile and feasible goal, and seems achievable regardless of underlying prejudice. Second, outcomes measuring tolerance outside of an experiment are valuable yardsticks for change. Behavioral outcomes can be customized to track the lived experience of everyday coexistence in a given context. Such behaviors are ultimately the quantity of interest, especially when the outcome of greatest policy interest is behavioral. Third, engaging the local community as peripheral participants holds the potential to accelerate norm shifts, although more experimental work on spillover effects of contact is needed.

Amateur sports associations are remarkable for their potential to activate the contact hypothesis and build social capital, as well as their ubiquity across the globe.[44] Nonetheless, I propose that other interventions can facilitate meaningful contact after conflict if participation is mutually beneficial, based on a shared interest, unlikely to trigger violence, and accessible to both groups in spite of social segregation. I borrow two more conditions from contact scholars. I posit that endorsement from communal authorities is needed to encourage uptake in the first place, and that a positive experience is decisive in amplifying the effects of contact. Classrooms, dormitories, and civic associations are low-hanging fruit for policymakers interested in building social cohesion in unimposing ways, and have produced positive findings in other experimental settings (Alexander and Christia 2011; Burns, Corno and La Ferrara 2015; Carrell, Hoekstra and West 2015; Rao et al. 2013; Lowe 2017). Generalizability also depends on the particularities of the study sample. As a minority group in the study sites, the Muslim communities here are routinely exposed to Christians, making them amenable to a contact intervention. Yet these

[44] According to the 2010 — 2014 wave of the World Values Survey, about 22% of the world's population report membership in a sports association (Inglehart and Puranen 2014), not to mention those exposed to these associations second-hand.

effects likely represent a lower bound on the impact of contact, because the leagues mainly attracted young Christian men harboring extreme views toward the outgroup even when compared to the general population.[45]

The results support the idea that cross-cutting associations — those based on a joint skill or interest rather than an immutable identity — can build social capital and forge weak ties between groups in ways that build community (Putnam, Leonardi and Nanetti 1994; Granovetter 1973; Banfield 1967). By extension, these results undermine the argument that some societies are bound by path dependency to remain "uncivic" and resistant to policy interventions (North 1990; Zamagni 1978; Putnam, Leonardi and Nanetti 1994; Sabetti 1996; Fukuyama 2001). The promise of injecting such settings with meaningful contact can inform the $612 million allotted by USAID for civil society, conflict mitigation, and reconciliation activities in 2016 (USAID 2017) and the millions of dollars spent globally on programs focused on exposure to outgroups (McKone 2015). Civil society actors in Iraq recommend building social cohesion by "helping to ensure sustained, meaningful inter-personal contact" specifically through "positive, energetic community events" that build "stronger inter-ethnoreligious relations based on common experiences between and within groups" (International Organization for Migration 2019; Zupruk, Whelan and Brouch 2018). Iraqi NGOs have proven willing and able to collaborate with research and policy partners on issues of diversity, and were crucial in brokering peace accords that prevented post-ISIS revenge bloodshed and facilitated the return of 380,000 displaced Iraqis — saving the U.S. an estimated $150 million per month (Lindborg 2017).

This study serves as a proof of concept that, under optimal conditions, contact can improve intergroup relations after war. Ultimately, external validity is best determined by replicating the results from multiple internally valid studies in other contexts, and other post-conflict settings warrant more work on contact. Further research is needed to answer the call put forth by Paluck, Green and Green (2017) to identify which of these conditions are necessary, sufficient, or optimal in order to activate the tolerance-building effects of contact. Future studies should also assess how effects may differ depending on whether existing units are diversified (e.g., embedding contact into pre-existing soccer teams) vs. constructed from scratch, and the type of prejudice at hand (e.g. migrant-native cleavages). Nevertheless, the results show that optimizing contact for meaningful interactions — as opposed to the wordless exposure that often marks daily life in segregated areas — can rebuild communities after war, and possibly sidestep the negative effects of ethnic diversity on social cohesion documented elsewhere (Putnam 2007; Alesina and La Ferrara 2000; Sands 2017; Enos 2014; Hangartner et al. 2017; Steinmayr 2016).

[45] Figure 10 shows that the study participants are consistently more prejudiced toward Muslims than their counterparts from the general population (n = 1,115). 35.1% of participants agreed that "even if a Muslim is made of gold, [he] will burn a hole in your pocket."

References

Al-Ameen, Shaida. 2014. "Christians displaced again by Iraqi violence." *Al-Monitor* .
URL: *https://www.al-monitor.com/pulse/originals/2014/07/iraq-christians-displaced-mosul-isis-crisis.html*

Alesina, Alberto and Eliana La Ferrara. 2000. "Participation in heterogeneous communities." *The quarterly journal of economics* 115(3):847–904.

Alexander, Marcus and Fotini Christia. 2011. "Context modularity of human altruism." *Science* 334(6061):1392–1394.

Allport, Gordon Willard, Kenneth Clark and Thomas Pettigrew. 1954. *The nature of prejudice*. Addison-Wesley Reading, MA.

Amir, Yehuda. 1976. The role of intergroup contact in change of prejudice and ethnic relations. In *Towards the elimination of racism*. Elsevier pp. 245–308.

Avenanti, Alessio, Angela Sirigu and Salvatore M Aglioti. 2010. "Racial bias reduces empathic sensorimotor resonance with other-race pain." *Current Biology* 20(11):1018–1022.

Background Information on the Situation of Non-Muslim Religious Minorities in Iraq. N.d. . Forthcoming.

Banfield, Edward C. 1967. *The moral basis of a backward society*. Free Press.

Barnhardt, Sharon. 2009. "Near and Dear? Evaluating the Impact of Neighbor Diversity on Inter-Religious Attitudes." *Unpublished working paper* .

Basu, Moni. 2016. "In biblical lands of Iraq, Christianity in peril after ISIS." *CNN* .

Beath, Andrew, Fotini Christia and Ruben Enikolopov. 2012. *Winning hearts and minds through development? Evidence from a field experiment in Afghanistan*. The World Bank.

Beber, Bernd, Philip Roessler and Alexandra Scacco. 2014. "Intergroup violence and political attitudes: evidence from a dividing Sudan." *The Journal of Politics* 76(3):649–665.

Bem, Daryl J. 1972. Self-perception theory. In *Advances in experimental social psychology*. Vol. 6 Elsevier pp. 1–62.

Benjamini, Yoav and Yosef Hochberg. 1995. "Controlling the false discovery rate: a practical and powerful approach to multiple testing." *Journal of the Royal statistical society: series B (Methodological)* 57(1):289–300.

Bhavnani, Ravi, Karsten Donnay, Dan Miodownik, Maayan Mor and Dirk Helbing. 2014. "Group segregation and urban violence." *American Journal of Political Science* 58(1):226–245.

Blanchard, Fletcher A, Christian S Crandall, John C Brigham and Leigh Ann Vaughn. 1994. "Condemning and condoning racism: A social context approach to interracial settings." *Journal of Applied Psychology* 79(6):993.

Blattman, Christopher, Alexandra C Hartman and Robert A Blair. 2014. "How to promote order and property rights under weak rule of law? An experiment in changing dispute resolution behavior through community education." *American Political Science Review* 108(1):100–120.

Bound, John, Charles Brown and Nancy Mathiowetz. 2001. Measurement error in survey data. In *Handbook of econometrics*. Vol. 5 Elsevier pp. 3705–3843.

Brewer, Marilynn B and Roderick M Kramer. 1985. "The psychology of intergroup attitudes and behavior." *Annual review of psychology* 36(1):219–243.

Broockman, David E, Joshua L Kalla and Jasjeet S Sekhon. 2017. "The Design of Field Experiments With Survey Outcomes: A Framework for Selecting More Efficient, Robust, and Ethical Designs." *SSRN* .

Burns, Justine, Lucia Corno and Eliana La Ferrara. 2015. Interaction, prejudice and performance. Evidence from South Africa. Technical report Working paper.

Cameron, Lindsey, Adam Rutland, Rupert Brown and Rebecca Douch. 2006. "Changing children's intergroup attitudes toward refugees: Testing different models of extended contact." *Child development* 77(5):1208–1219.

Carrell, Scott E, Mark Hoekstra and James E West. 2015. The impact of intergroup contact on racial attitudes and revealed preferences. Technical report National Bureau of Economic Research.

Casey, Katherine, Rachel Glennerster and Edward Miguel. 2012. "Reshaping institutions: Evidence on aid impacts using a preanalysis plan." *The Quarterly Journal of Economics* 127(4):1755–1812.

Center for the Prevention of Genocide, Simon Skjodt. 2016. "'Our Generation is Gone': The Islamic State's Targeting of Iraqi Minorities in Ninewa [Bearing Witness Report].".

Cikara, Mina and Elizabeth Levy Paluck. 2013. "When going along gets you nowhere and the upside of conflict behaviors." *Social and Personality Psychology Compass* 7(8):559–571.

Cilliers, Jacobus, Oeindrila Dube and Bilal Siddiqi. 2015. "The white-man effect: How foreigner presence affects behavior in experiments." *Journal of Economic Behavior & Organization* 118:397–414.

Cilliers, Jacobus, Oeindrila Dube and Bilal Siddiqi. 2016. "Reconciling after civil conflict increases social capital but decreases individual well-being." *Science* 352(6287):787–794.

Condra, Luke N and Sera Linardi. 2019. "Casual Contact and Ethnic Bias: Experimental Evidence from Afghanistan." *The Journal of Politics* 81(3):000–000.

Crisp, Richard J and Rhiannon N Turner. 2009. "Can imagined interactions produce positive perceptions?: Reducing prejudice through simulated social contact." *American Psychologist* 64(4):231.

Devine, Patricia G. 1989. "Stereotypes and prejudice: Their automatic and controlled components." *Journal of personality and social psychology* 56(1):5.

Ditlmann, Ruth K and Cyrus Samii. 2016. "Can intergroup contact affect ingroup dynamics? Insights from a field study with Jewish and Arab-Palestinian youth in Israel." *Peace and Conflict: Journal of Peace Psychology* 22(4):380.

Dunning, T, G Grossman, M Humphreys, S Hyde and C McIntosh. 2017. *Information and Accountability: A New Method for Cumulative Learning*. Cambridge University Press.

Emeriau, Mathilde. 2019. "Learning to be Unbiased: Evidence from the French Asylum Office." *Unpublished working paper* .

Enos, Ryan D. 2014. "Causal effect of intergroup contact on exclusionary attitudes." *Proceedings of the National Academy of Sciences* 111(10):3699–3704.

Enos, Ryan D and Noam Gidron. 2016. "Intergroup behavioral strategies as contextually determined: Experimental evidence from Israel." *The Journal of Politics* 78(3):851–867.

Fearon, James D and David D Laitin. 1996. "Explaining interethnic cooperation." *American political science review* 90(4):715–735.

Fearon, James D and David D Laitin. 2000. "Violence and the social construction of ethnic identity." *International organization* 54(4):845–877.

Fearon, James D, Macartan Humphreys and Jeremy M Weinstein. 2009. "Can development aid contribute to social cohesion after civil war? Evidence from a field experiment in post-conflict Liberia." *American Economic Review* 99(2):287–91.

Fearon, James D, Macartan Humphreys and Jeremy M Weinstein. 2015. "How does development assistance affect collective action capacity? Results from a field experiment in post-conflict Liberia." *American Political Science Review* 109(3):450–469.

Finkel, Steven E, Jeremy Horowitz and Reynaldo T Rojo-Mendoza. 2012. "Civic education and democratic backsliding in the wake of Kenya's post-2007 election violence." *The Journal of politics* 74(1):52–65.

Finseraas, Henning and Andreas Kotsadam. 2017. "Does personal contact with ethnic minorities affect anti-immigrant sentiments? Evidence from a field experiment." *European Journal of Political Research* 56(3):703–722.

Fukuyama, Francis. 2001. "Social capital, civil society and development." *Third world quarterly* 22(1):7–20.

Gelman, Andrew and John Carlin. 2014. "Beyond power calculations: Assessing type S (sign) and type M (magnitude) errors." *Perspectives on Psychological Science* 9(6):641–651.

Graf, Sylvie, Stefania Paolini and Mark Rubin. 2014. "Negative intergroup contact is more influential, but positive intergroup contact is more common: Assessing contact prominence and contact prevalence in five Central European countries." *European Journal of Social Psychology* 44(6):536–547.

Granovetter, Mark S. 1973. "The strength of weak ties." *American journal of sociology* 78(6):1360–1380.

Granovetter, Mark S. 1977. The strength of weak ties. In *Social networks*. Elsevier pp. 347–367.

Green, Emma. 2019. "The Impossible Future of Christians in the Middle East." *The Atlantic* .
URL: *https://www.theatlantic.com/international/archive/2019/05/iraqi-christians-nineveh-plain/589819/*

Greenwald, Anthony G and Thomas F Pettigrew. 2014. "With malice toward none and charity for some: Ingroup favoritism enables discrimination." *American Psychologist* 69(7):669.

Guadagno, Rosanna E, Adam Lankford, Nicole L Muscanell, Bradley M Okdie and Debra M McCallum. 2010. "Social influence in the online recruitment of terrorists and terrorist sympathizers: Implications for social psychology research." *Revue internationale de psychologie sociale* 23(1):25–56.

Gubler, Joshua Ronald, Eran Halperin and Gilad Hirschberger. 2015. "Humanizing the outgroup in contexts of protracted intergroup conflict." *Journal of Experimental Political Science* 2(1):36–46.

Hall, Richard. 2017. "Iraqi Christians are slowly returning to their homes, wary of their neighbors." *Public Radio International* .

Hamilton, David L and Tina K Trolier. 1986. "Stereotypes and stereotyping: An overview of the cognitive approach.".

Hangartner, Dominik, Elias Dinas, Moritz Marbach, Konstantinos Matakos and Dimitrios Xefteris. 2017. "Does Exposure to the Refugee Crisis Make Natives More Hostile?" *American Political Science Review* pp. 1–14.

Humphreys, Macartan, Raul Sanchez De la Sierra and Peter Van der Windt. 2013. "Fishing, commitment, and communication: A proposal for comprehensive nonbinding research registration." *Political Analysis* 21(1):1–20.

Humphreys, Macartan, Raul Sanchez de la Sierra and Peter Van der Windt. 2019. "Exporting democratic practices: Evidence from a village governance intervention in Eastern Congo." *Journal of Development Economics* .

Inglehart, R., C. Haerpfer A. Moreno C. Welzel K. Kizilova J. Diez-Medrano M. Lagos P. Norris E. Ponarin and B. Puranen. 2014. "World Values Survey: Round Six - Country-Pooled Datafile." *Madrid: JD Systems Institute* .

International Organization for Migration. 2019. Taking Stock of Refugee Resettlement: Policy objectives, practical tradeoffs, and the evidence base. Technical report International Organization for Migration.

Ito, Tiffany A, Krystal W Chiao, Patricia G Devine, Tyler S Lorig and John T Cacioppo. 2006. "The influence of facial feedback on race bias." *Psychological Science* 17(3):256–261.

Jha, Saumitra. 2013. "Trade, institutions, and ethnic tolerance: Evidence from South Asia." *American political Science review* 107(4):806–832.

Kao, Kristen and Mara Redlich Revkin. 2018. "To Punish or to Pardon?: Reintegrating Rebel Collaborators After Conflict in Iraq." *Reintegrating Rebel Collaborators After Conflict in Iraq (November 1, 2018). The Program on Governance and Local Development Working Paper Series at the University of Gothenburg* (17).

Kasara, Kimuli. 2014. "Does Local Ethnic Segregation Lead to Violence?: Evidence from Kenya." *Evidence from Kenya (February 25, 2014)* .

Kawakami, Kerry, Heather Young and John F Dovidio. 2002. "Automatic stereotyping: Category, trait, and behavioral activations." *Personality and Social Psychology Bulletin* 28(1):3–15.

Kidd, Bruce. 2013. A new social movement: Sport for development and peace. In *Sport and Foreign Policy in a Globalizing World*. Routledge pp. 36–46.

Kunovich, Robert M and Randy Hodson. 2002. "Ethnic diversity, segregation, and inequality: A structural model of ethnic prejudice in Bosnia and Croatia." *The Sociological Quarterly* 43(2):185–212.

Laird, James D and Charles Bresler. 1992. "The process of emotional experience: A self-perception theory." *Sage Publications, Inc* .

Lin, Winston et al. 2013. "Agnostic notes on regression adjustments to experimental data: Reexamining Freedman's critique." *The Annals of Applied Statistics* 7(1):295–318.

Lindborg, Nancy. 2017. "Stabilize Iraq After ISIS, Try a Method That Works." *United States Institute of Peace* .

Lowe, Matt. 2017. "Types of Contact: A Field Experiment on Collaborative and Adversarial Caste Integration." *MIT Working Paper* .

MacGinty, Roger. 2010. "Hybrid peace: The interaction between top-down and bottom-up peace." *Security dialogue* 41(4):391–412.

Makari, Peter E. 2007. *Conflict & cooperation: Christian-Muslim relations in contemporary Egypt*. Syracuse University Press.

McKone, Kelly. 2015. *Reconciliation in practice*. United States Institute of Peace.

Moaddel, Mansoor, Mark Tessler and Ronald Inglehart. 2008. "Foreign occupation and national pride: The case of Iraq." *Public Opinion Quarterly* 72(4):677–705.

Mousa, Falah. 2013. "Overview of Banking System in Iraq." *Arab Business Review* .
URL: *http://www.arabbusinessreview.com/en/article/overview-banking-system-iraq*

North, Douglass C. 1990. *Institutions, institutional change and economic performance*. Cambridge University Press.

Paluck, Elizabeth Levy. 2009. "Reducing intergroup prejudice and conflict using the media: a field experiment in Rwanda." *Journal of personality and social psychology* 96(3):574.

Paluck, Elizabeth Levy, Seth Green and Donald P Green. 2017. "The Contact Hypothesis Revisited." *SSRN* .

Paolini, Stefania, Jake Harwood and Mark Rubin. 2010. "Negative intergroup contact makes group memberships salient: Explaining why intergroup conflict endures." *Personality and Social Psychology Bulletin* 36(12):1723–1738.

Pettigrew, Thomas F. 1998. "Intergroup contact theory." *Annual review of psychology* 49(1):65–85.

Pettigrew, Thomas F and Linda R Tropp. 2006. "A meta-analytic test of intergroup contact theory." *Journal of personality and social psychology* 90(5):751.

Putnam, Robert D. 2007. "E pluribus unum: Diversity and community in the twenty-first century the 2006 Johan Skytte Prize Lecture." *Scandinavian political studies* 30(2):137–174.

Putnam, Robert D, Robert Leonardi and Raffaella Y Nanetti. 1994. *Making democracy work: Civic traditions in modern Italy*. Princeton university press.

Rao, Gautam et al. 2013. "Familiarity does not breed contempt: Diversity, discrimination and generosity in Delhi schools." *Job Market Paper* .

Rutland, Adam, Melanie Killen and Dominic Abrams. 2010. "A new social-cognitive developmental perspective on prejudice: The interplay between morality and group identity." *Perspectives on Psychological Science* 5(3):279–291.

Sabetti, Filippo. 1996. "Path dependency and civic culture: some lessons from Italy about interpreting social experiments." *Politics & Society* 24(1):19–44.

Salehyan, Idean and Kristian Skrede Gleditsch. 2006. "Refugees and the spread of civil war." *International Organization* 60(2):335–366.

Samuels, Kirsti. 2005. "Post-conflict peace-building and constitution-making." *Chi. J. Int'l L.* 6:663.

Sands, Melissa L. 2017. "Exposure to inequality affects support for redistribution." *Proceedings of the National Academy of Sciences* p. 201615010.

Scacco, Alexandra and Shana S Warren. 2018. "Can social contact reduce prejudice and discrimination? Evidence from a field experiment in Nigeria." *American Political Science Review* pp. 1–24.

Sherif, Muzafer. 1935. "A study of some social factors in perception." *Archives of Psychology (Columbia University)* .

Simonivitz, Gabor, Gabor Kezdi and Peter Kardos. 2017. "Seeing the World Through the Other's Eye: An Online Intervention Reducing Ethnic Prejudice." *American Political Science Review* pp. 1–8.

Staub, Ervin, Laurie Anne Pearlman, Alexandra Gubin and Athanase Hagengimana. 2005. "Healing, reconciliation, forgiving and the prevention of violence after genocide or mass killing: An intervention and its experimental evaluation in Rwanda." *Journal of social and clinical psychology* 24(3):297–334.

Steinmayr, Andreas. 2016. "Exposure to refugees and voting for the far-right:(unexpected) results from Austria.".

Tönnies, Ferdinand. 2012. Gemeinschaft und gesellschaft. In *Studien zu Gemeinschaft und Gesellschaft*. Springer pp. 27–58.

UNHCR. 2017. "Iraq emergency." *UNHCR* .

USAID. 2017. "Shared Progress, Shared Future: Agency Financial Report, Fiscal Year 2016." *United States Agency for International Development* .

Wilson, John and Marc Musick. 1999. "The effects of volunteering on the volunteer." *Law and Contemp. Probs.* 62:141.

Zamagni, Vera Negri. 1978. *Industrializzazione e squilibri regionali in Italia: bilancio dell'età giolittiana*. Mulino.

Zupruk, Brian, Ashleigh Whelan and Emily Brouch. 2018. Social and Political Perspectives of Iraqi IDPs from Ninewa and their Host Communities. Technical report International Republican Institute.

Appendix

7.1 Descriptive Statistics

Table 10: Sample Descriptive Statistics and Balance (n = 433)

	Control (n = 259)	Treated (n = 174)	p-value*
Demographics			
Age	24.06	23.99	0.91
Married	0.15	0.18	0.52
Employed	0.31	0.30	0.38
High School	0.80	0.79	0.80
Income $\leq$ \$500	0.53	0.48	0.35
"Good" Health	0.57	0.50	0.26
ISIS Abuse	0.32	0.33	0.88
Church $\geq$ 1x/week	0.09	0.07	0.37
Had Muslim Friends	0.23	0.21	0.81
Attitudes (t_1)			
Muslims Cursed	0.61	0.67	0.43
Anti-Sectarian	0.72	0.69	0.49
Sell Land to Muslims OK	0.25	0.23	0.58
Sunnis Approve of ISIS	0.41	0.42	0.30

*P-value testing the null hypothesis of no difference between the groups. All variables are binary, except age. ISIS abuse defined as property theft, physical or sexual abuse, torture, arrest, or the kidnappings of family members. "Had Sunni Friends" refers to respondents who report having at least a few Sunni Arab friends before displacement. The "Muslims Cursed" variable refers to agreement with the prejudiced folk saying that "even if a Muslim is a piece of gold, [he] will burn a hole in your pocket." Anti-sectarian refers to agreeing or strongly agreeing with the saying that "Iraq will be a better society if people treat one another as Iraqis, rather than Christians, Shi'is, Sunnis, or Kurds."

7.2 League Set-Up

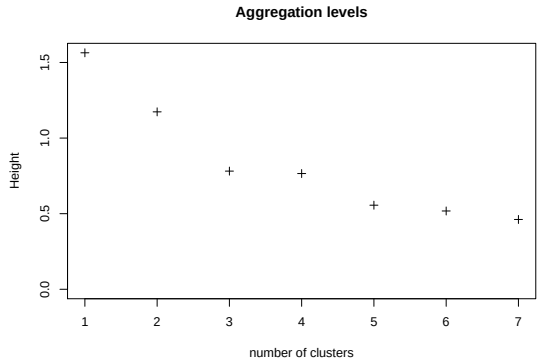
The teams play 6-a-side, 60-minute matches on a half-pitch, the common format among the amateur teams. The intensity of this set-up means that players must alternate regularly. Coaches are also instructed to ensure that players rotate regularly. Taken together, all team members should play for roughly the same number of minutes each game. An additional constraint is that each player must sit out at least two games over the course of the league to accommodate the 6-a-side or 7-a-side format, depending on the field capacity.

The games proceeded in two broad phases. Phase One is a classic round-robin set-up. Each team plays 13 matches over 8 weeks to reach a total of about 26 hours on the pitch per player when warm-up and cool-down time are taken into account. Phase Two entails knock-out semi-finals played by the four highest-scoring teams (three points for a win, one for a draw, and zero for a loss). The number of additional hours played by teams that qualify for the semi-finals ranges from two to four.

7.3 Generating Attitudinal Indices

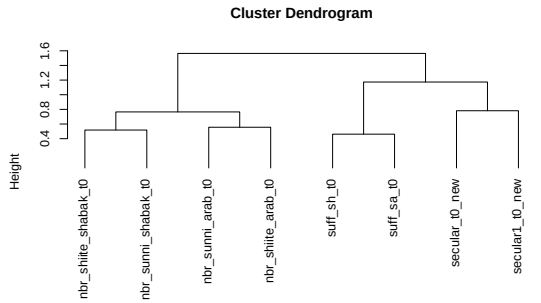
I use an unsupervised hierarchical model to detect latent clusters among the survey items. This data-driven method of identifying latent dimensions generates the scree plot below, indicating that there are three clear latent variables present in the data. The items in these indices align closely with theoretic expectations and can be labeled as belief in coexistence, the acceptance of Muslim neighbors, and blaming Muslims for Christian suffering (Table 2).

Figure 4: Scree Plot of Survey Item Clusters



The scree plot generated by the clustering algorithm suggests there are four clearly delineated latent dimensions in the survey data, which I take as the key attitudinal indices. The individual items that make up these clusters can be seen in Figure 5 below:

Figure 5: Dendrogram (Tree) Diagram of Attitudinal Clusters



Each node in the above diagram represents the joining of two or more clusters; the locations of the nodes on the vertical (or horizontal) axis represent the distances at which the respective clusters are joined.

7.4 Over-Time Changes among Control Group and Muslim Participants

Figure 6: Shifts in Tolerant Attitudes among Control Group (t_1 to t_2) (n = 189)

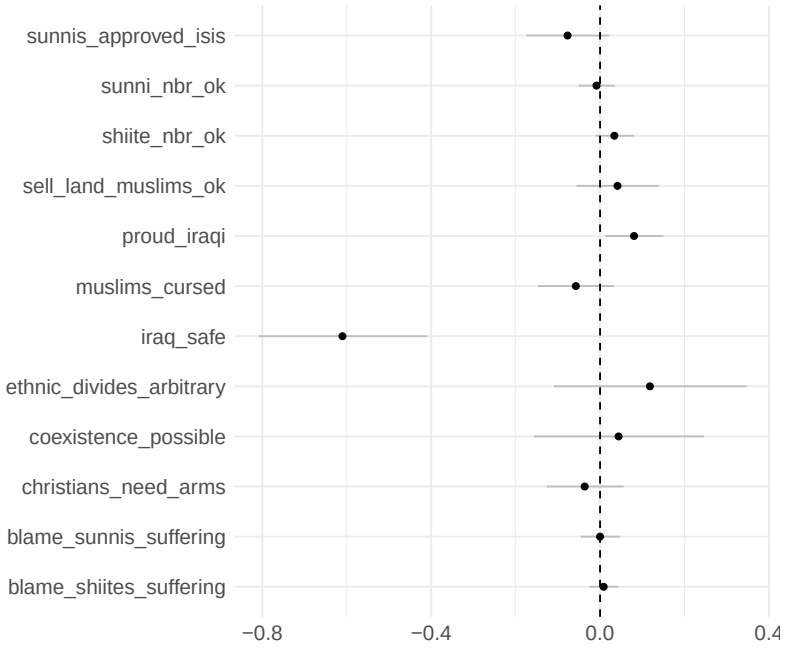
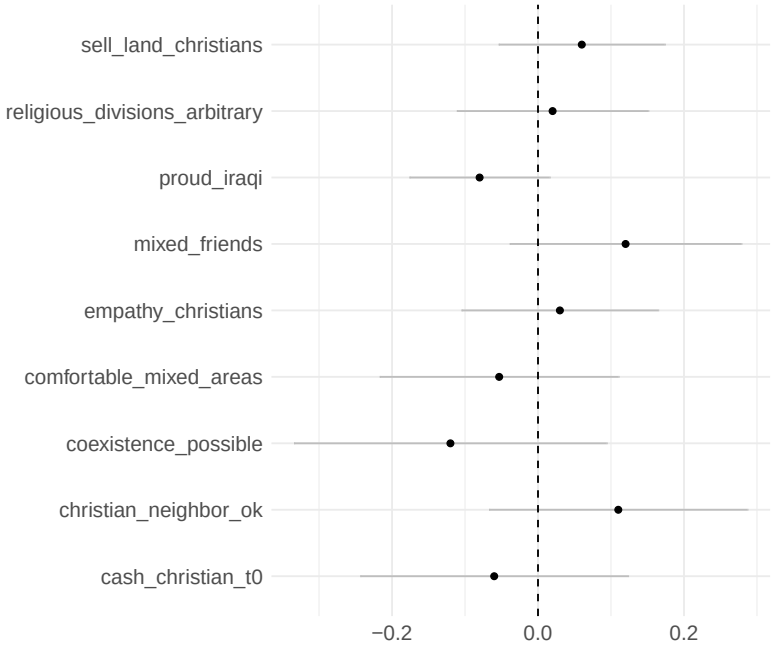


Figure 7: Shifts in Tolerant Attitudes among Among Muslims from t_1 to t_2 (n = 55)



7.5 Additional Analyses and Robustness Checks

Figure 8 shows that Christians in the Ankawa and Qaraqosh study sites are roughly comparable on a range of attitudinal and demographic variables, allowing for a meaningful interpretation of the quasi-pure control league.

Figure 8: Baseline Balance: Ankawa vs. Qaraqosh Leagues (n = 265)

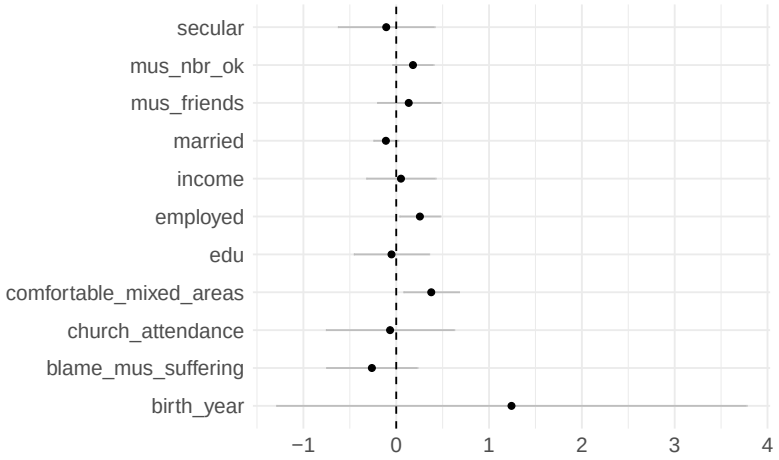


Figure 9 below breaks down the survey indices into their component parts, showing the ATE for individual survey items.

Figure 9: Treatment Effects: Individual Survey Items

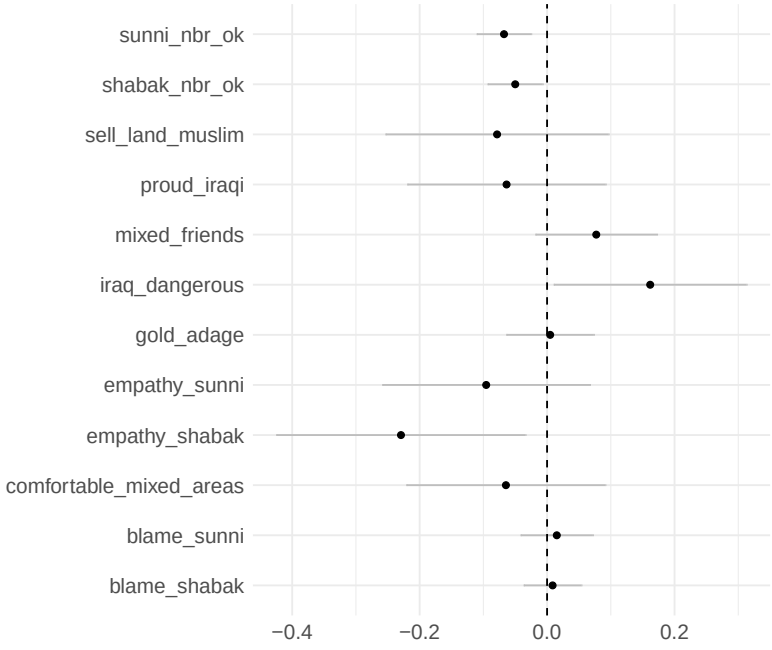


Table 11 below displays the main results for the full sample, pooled with the quasi-pure control league.

Table 11: Main Results (Full Sample)

	Control	Treated	p-value
Behavioral Outcomes			
Event Attendance	29.0%	45.0 %	0.078 [0.086]
Mixed Team Sign-Up	49.9%	57.0%	0.070 [0.076]
Train w/ Muslims	7.55%	61.3%	0.000 [0.006]
Vote Muslim	42.5%	63.5%	0.011 [0.045]
Visit Mosul	12.7%	24.2%	0.091 [0.120]
Donate Neutral NGO	60.0%	66.8%	0.814 [0.346]
Attitudinal Indices			
Coexistence	−0.27	−0.04	0.049 [0.153]
Muslim Neighbor	0.45	0.15	0.021 [0.040]
Muslim Blame	0.04	0.14	0.434 [0.795]

Estimates based on an OLS model with controls for randomization block, age, education, income, church attendance, ISIS abuse, respondent type (added player, core player, or coach), and the outcome measured at t_1 where available (attitudinal outcomes, donation outcome, and training outcome). All covariates are interacted with the treatment indicator. Standard errors are clustered at the team level. Block bootstrapped standard errors drawn from 1,000 samples are presented in brackets. Sample sizes are: n = 481 for going to Mosul (37 clusters), n = 433 for event attendance and training with Muslims (51 clusters), and n = 265 for the remaining outcomes (37 clusters). All variables are coded in a tolerant direction.

I present the raw means for each of the key outcomes across both treatment conditions below. Raw means align closely although imperfectly with the covariate-adjusted estimates in Table 4, which is to be expected given the sample size. The three attitudinal indices are centered at a mean of zero with a standard deviation of 1. The following outcomes are calculated on a sample of $n = 242$, as they were asked only in Wave Two: donating to a neutral NGO, mixed team sign-up, voting for a Muslim player to receive a sportsmanship award, and the attitudinal indices. The going to Mosul outcome is calculated on a sample of $n = 318$, while event attendance has a sample of $n = 410$. To maintain consistency with the main results presented throughout the paper (Table 4), the comparison league is excluded from this table.

Table 12: Raw Means

	t_0 Control	t_0 Treated	t_1 Control	t_1 Treated	p-value*
Behavioral Outcomes					
Event Attendance	–	–	35.6% (2.91)	44.2% (3.77)	0.483
Mixed Team Sign-Up	–	–	49.3% (4.27)	60.6% (4.82)	0.059
Train w/ Muslims	10.87% (2.66)	0.00% (0.00)	18.2% (2.01)	62.1% (3.69)	0.003
Vote Muslim	–	–	30.7% (4.94)	53.7% (5.14)	0.016
Visit Mosul	–	–	23.0% (1.36)	31.4% (3.23)	0.347
Donate Neutral NGO	67.4 % (4.27)	74.0% (4.05)	68.4% (4.38)	72.5% (4.54)	0.695
Attitudinal Outcomes					
Belief in Coexistence	0.02 (0.09)	−0.09 (0.10)	−0.01 (0.09)	0.14 (0.09)	0.017
Muslim Neighbor	0.05 (0.09)	0.13 (0.06)	−0.16 (0.10)	−0.18 (0.07)	0.314
Muslim Blame	0.08 (0.07)	−0.04 (0.11)	−0.15 (0.08)	0.08 (0.11)	0.206

*Based on an OLS model regressing each outcome on the treatment indicator and clustering standard errors at the team level.

Table 13: Heterogenous Treatment Effects by Team Success: Attitudinal Outcomes

	Attitudinal Index			
	Coexistence	Intergroup Attitudes	Muslim Neighbors	Muslim Blame
	(1)	(2)	(3)	(4)
Treated	0.248*	−0.001	−0.256**	0.016
	(0.142)	(0.117)	(0.129)	(0.139)
Success	−0.083	0.917***	1.258**	−0.218*
	(0.096)	(0.249)	(0.600)	(0.122)
Treated:Success	−0.015	−0.353	−0.249	0.089
	(0.193)	(0.244)	(0.422)	(0.229)
Constant	−0.658	−0.320	−0.277	0.151
	(0.527)	(0.490)	(0.582)	(0.795)
Observations	231	231	231	231
Adjusted R^2	0.047	0.109	0.182	0.180
Residual Std. Error (df = 204)	1.012	0.954	0.934	0.905

Note: *p<0.1; **p<0.05; ***p<0.01

Models are the same as those used for the main analyses (Table 4) with the addition of an interaction term to reflect team success (a binary indicator for advancing to the semi-finals) and its lower order terms.

Table 14: Heterogenous Effects by Added Player Rating

	Behavioral Outcomes					
	Attend	Train	Mosul	Donate	Vote	Mixed Team
Treated	−0.102	0.666***	−0.069	0.030	0.205*	0.165**
	(0.068)	(0.121)	(0.083)	(0.062)	(0.114)	(0.077)
Success	−0.126	0.214	0.233	0.322	0.178	0.198
	(0.087)	(0.249)	(0.153)	(0.206)	(0.125)	(0.135)
Treated:Success	0.097	−0.039	0.162	−0.220	0.122	−0.231
	(0.110)	(0.277)	(0.183)	(0.194)	(0.157)	(0.145)
Constant	0.443	0.153	0.664***	0.680*	0.371	0.072
	(0.327)	(0.189)	(0.201)	(0.362)	(0.286)	(0.364)
Observations	231	231	231	200	183	231
R^2	0.266	0.808	0.236	0.114	0.189	0.120
Adjusted R^2	0.177	0.784	0.139	−0.020	0.065	0.013
Note:						*p<0.1; **p<0.05; ***p<0.01

Models are the same as those used for the main analyses (Table 4) with the addition of an interaction term to reflect team success (a binary indicator for receiving an added player in the 25th skill percentile, as rated by research assistants) and its lower order terms. Outcomes, from left to right, are: attending the social event, training with Muslims six months after the intervention, donating to a mixed NGO, voting for a Muslim player to receive a sportsmanship prize, and registering for a mixed team next season.

Table 15: Heterogenous Effects by ISIS Abuse

	Outcome								
	Attend	Train	Mosul	Donate	Vote Muslim	Mixed Team	Coexistence	Muslim Neighbor	Muslim Blame
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treated	0.107	0.506***	−0.025	0.042	0.250***	0.169**	0.375**	−0.061	0.016
	(0.088)	(0.128)	(0.107)	(0.073)	(0.077)	(0.083)	(0.171)	(0.143)	(0.108)
ISIS Abuse	−0.076	0.044	−0.098	0.031	0.300**	0.106	0.048	0.479**	−0.057
	(0.077)	(0.067)	(0.126)	(0.063)	(0.129)	(0.114)	(0.237)	(0.242)	(0.142)
Treated:ISIS Abuse	−0.035	−0.230**	−0.036	−0.188	−0.212	−0.151	−0.019	−0.694**	0.534*
	(0.106)	(0.109)	(0.149)	(0.173)	(0.158)	(0.169)	(0.333)	(0.307)	(0.276)
Constant	0.397***	0.269**	0.432***	0.493***	0.425***	0.466**	−0.214	0.041	0.059
	(0.143)	(0.113)	(0.164)	(0.150)	(0.158)	(0.203)	(0.312)	(0.234)	(0.471)
Clustered S.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	399	399	231	221	183	231	231	231	231
R^2	0.158	0.285	0.101	0.061	0.163	0.111	0.086	0.193	0.251
Adjusted R^2	0.121	0.253	0.024	−0.023	0.077	0.035	0.004	0.120	0.184

Note: *p<0.1; **p<0.05; ***p<0.01

Models are the same as those used for the main analyses (Table 4) with the addition of an interaction term to reflect exposure to ISIS abuse, operationalized using a binary indicator for experiencing physical abuse, sexual abuse, torture, arrest, being forced to pay the *jizya* tax, family members disappearing, and its lower order terms. Models 1 — 6 analyze behavioral outcomes, while Models 7 — 10 analyze attitudinal indices. The behavioral outcomes, from left to right, are: attending the social event, training with Muslims six months after the intervention, donating to a mixed NGO, voting for a Muslim player to receive a sportsmanship prize, and registering for a mixed team next season.

Table 16: Games Watched by Local Residents (n = 117)

	Estimate	Std. Error	t-value	Pr(>|t|)
Walking Distance	−3.80	3.16	−1.20	0.23
Family or Friend	18.38***	2.93	6.27	0.00
Male	5.02*	2.96	1.69	0.09
Age	0.19	0.12	1.60	0.11
Christian	6.67	5.67	1.18	0.24

Note: *p<0.1; **p<0.05; ***p<0.01.

Dependent variable is the number of games a respondent reports attending. Residual standard error = 15.18 on 117 degrees of freedom. Multiple R-squared = 0.2774. Adjusted R-squared = 0.2466. F-statistic = 8.985 on 5 and 117 DF, p-value: 0.00.

Table 17: Opposition Team Identity and Match-Level Aggression

	Dependent Variable		
	Total Cards	Yellow	Red
	(1)	(2)	(3)
Intercept	2.45	2.51**	−0.06
	(1.52)	(1.25)	(0.46)
Mixed	0.19	0.15	0.04
	(0.56)	(0.56)	(0.23)
Both Treated	0.07	−0.08	0.15
	(0.69)	(0.69)	(0.28)
Referee F.E. & Goals	✓	✓	✓
Observations	98	98	98
R^2	0.13	0.15	0.06
Adjusted R^2	0.02	0.04	−0.06
Note:		*p<0.1; **p<0.05; ***p<0.01	

Table 18: Permutation Test

	Z	p-value
Behavioral Outcomes		
Event Attendance	1.773	0.076
Mixed Team Sign-Up	1.743	0.081
Train w/ Muslims	9.087	0.000
Vote Muslim	3.135	0.002
Go to Mosul	1.677	0.094
Donate Neutral NGO	0.660	0.506
Attitudinal Outcomes		
Coexistence	2.13	0.033
Muslim Neighbors	−1.628	0.103
Muslim Blame	0.944	0.345

Permutation test based on 5,000 resamples and clustered at the team level. Estimated using an OLS model regressing the outcome on the treatment indicator.

7.6 Generalizability

Figure 10 compares the League 1 sample with the general population from which it is drawn using a representative survey of displaced Christians in the Erbil area. Despite being around 11% more likely to believe that it is important to teach tolerance to children, Christian players have lower baseline levels of tolerance and trust toward Muslims, arguably making it harder to find positive treatment effects among this sample.

Figure 10: Comparison of Christian Participants (n = 168) and Displaced Christian Population (n = 1,115)