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# Reducing Prejudice with (Elaborated) Imagined and Physical Intergroup Contact Interventions

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## ABSTRACT

We evaluated whether elaborated imagined contact (EIC) and physical contact interactions reduced prejudice. British community adults ($n$=42) participated in two sessions at least one week apart. Participants exposed to an EIC intervention in the first session, and a physical contact intervention in the second session, reported increased favorable intergroup attitudes across sessions. Participants exposed to physical contact interventions in both sessions failed to show changes in intergroup attitudes.

## INTRODUCTION

Multicultural societies offer incredible variety in food, music, and opinions. This diversity, however, can also result in undesired contact between members of (disliked) social outgroups. Consequently, in social arenas like schools and workplaces, people are in contact with, and expected to cooperate with, those they harbor prejudices towards. Educators and employers offer workshops with the goal of fostering positive relations among people from diverse backgrounds. Presently, we evaluate the effectiveness of (elaborated) imagined and actual contact interventions in reducing prejudice. Given the rise in Islamophobia (PEW, 2010) we focus on contact with Muslims.

According to Allport's (1954) *contact hypothesis* four conditions facilitate positive intergroup relations: Equal status, common goals, intergroup cooperation, and support from authority. A meta-analysis by Pettigrew and Tropp (2006), however, revealed that although contact effects are maximized under optimal contact conditions, mere contact alone reduces prejudice. Despite this

encouraging finding, groups that would benefit most from contact are typically uninterested, unwilling, or even unable to engage in actual contact (Hodson, 2011).

The *imagined contact hypothesis* addresses this problem (Turner et al., 2007): Actively imagining neutral or positive intergroup contact can lower prejudice. A recent meta-analysis of over 70 studies demonstrates the effectiveness of imagined contact at reducing prejudice (Miles & Crisp, 2014). Elaborated imagined contact (EIC) interventions, involving detailed instructions, produce even greater prejudice reduction (Hodson, Dube, & Choma, 2013; Miles & Crisp, 2014), presumably by involving behavioral scripts. Imagined contact, especially EIC, offers a viable option for reducing prejudice, especially among those uninterested or unable to engage in actual contact. Even if actual contact between members of conflicting groups can be arranged, it is possible that some individuals might not be psychologically "ready". Imagined contacted, however, could "prepar[e] people for future contact" (Miles & Crisp, 2014, p. 4).

In the workplace, team building can create positive relations among people, including among those from diverse backgrounds (Yeager & Nafukho, 2012). Following this reasoning, work-oriented team building activities could effectively foster favorable intergroup attitudes. Importantly, team-building activities typically require actual (and sometimes physical) contact. If some people are not psychologically prepared for actual contact, even positive contact with outgroups could hinder the intervention efficacy. Preparing people for actual contact with imagined contact (Miles & Crisp, 2014), however, could reduce prejudice *and* facilitate positive future actual contact and less prejudice.

In the interpersonal domain, physical contact by an experimenter or confederate has previously boosted compliance with regard to a request (Kleinke, 1977; Willis & Hamm, 1980), or has increased courtship intentions among men touched by a woman (Guéguen, 2010). However, the intergroup contact literature rarely examines actual *physical* contact with an outgroup or its outcomes. Hence, we assess whether physical contact in the form of team-building exercises with a Muslim partner reduces prejudice. We also evaluate whether imagining contact in a session before an actual contact session reduces prejudice, over time. British community adults participated in two intervention sessions at least one week apart. Participants in a *Physical Contact (PC)* condition completed a physical contact intervention in Sessions 1 and 2; participants in an *EIC* condition completed an EIC intervention in Session 1 and a physical contact intervention in Session 2; and participants in a *One Intervention (OI)* condition completed a physical contact intervention in Session 2 only. Intergroup attitudes were assessed at four separate time points: Session 1-baseline, Session 1-post intervention, Session 2-pre-intervention, and Session 2-post-intervention. We expected that within condition, compared to baseline, participants exposed to EIC or physical contact interventions would report more favorable outgroup attitudes across sessions.

## METHOD

### Participants and procedure

White British community adults ($n$=42; $mean_{age}$=32.68, $SD$=13.54, range 18-65 years) participated in a "first impressions" study. Individually, participants completed two sessions at least one week apart and were paid £8/session.

**Session 1 (S1)**. After providing consent and receiving payment, participants completed questionnaires including measures of demographics and intergroup attitudes, and then were randomly assigned to intervention conditions. (*OI* participants completed intergroup attitudes at the beginning and end of the questionnaire). Those in the *OI* and *EIC* conditions selected a number from an envelope to allegedly match them with a partner for Session 2. *OI* participants were thanked, dismissed, and reminded of Session 2.

*EIC* participants "imagine[d] what it would be like to meet another person for the first time" (modified from Turner et al., 2007). They imagined interacting with "a man named Matak living in London", "whose family was originally from Algeria, a predominantly Muslim country". They imagined an experimenter facilitating a team-building activity 'Thumb Wars' (modified from Sobel, 1983) whereby an experimenter has the participant and Matak join hands and attempt to get as many 'pins' as possible in 30secs. Two attempts were simulated. Participants imagined that for the second trial Matak suggests taking turns pinning each other's thumbs to maximize pins. Next, participants listed what they envisioned in the imagined scene, completed an intergroup attitudes measure, were thanked and reminded to return.

In contrast, *PC* participants were reminded that the study concerned "first impressions" before meeting "Matak", a confederate in his early 30s (Black, with a short trimmed beard). The experimenter then facilitated an actual 'Thumb War' (providing a physical analogue of the simulation in the EIC condition). Alone in an adjacent room, participants then listed what occurred in the exercise, completed an intergroup attitudes measure, were thanked and reminded to return for Session 2.

**Session 2 (S2)**. After payment, participants first completed intergroup attitudes measures (the third assessment of attitudes) and were told that the number selected in Session 1 matched them with another participant. Participants were brought to a room to meet Matak. In the *OI* condition, Matak introduced himself, shook the participant's hand, and asked where the participant was from, sharing that he is "from London, but my family is originally from Algeria, a predominantly Muslim country in Africa." In the *EIC* condition, Matak introduced himself, shook hands with the participant, and declared "they read a scenario to me last time about someone with your name." For those in the *PC* condition (who had met Matak in Session 1), Matak states "Hey, we get to be partners again! How are you doing?!"

The experimenter then facilitated the team-building activity "Wrist Loops" (Heck, 2011). Each person was given a piece of string with two loops at the end to put their hands through. Before placing on the second loop, the experimenter crossed the two strings; the participant and Matak were tasked with disentangling the strings. After 2 minutes, they were given a helpful hint, with Matak then guiding the participant to successfully untangling the strings. The confederate was trained to provide a similar interaction across participants. In a private room, participants completed an intergroup attitudes measure, were verbally debriefed and thanked. The confederate completed measures of perceived interaction comfort.

## Measures

**Intergroup attitudes**. A widely-used thermometer scale from 0-*extremely unfavorable* to 100-*extremely favorable* with intervals of 10 was employed. For each of the four time points, scores were created by averaging ratings of four groups (alphas<.90): Muslims, British Muslims, immigrants, and foreigners. Higher scores indicated more favorable intergroup attitudes.

**Interaction comfort**. From 1-*not at all* to 7-*extremely* the confederate rated how comfortable he felt (5 items, alpha=.78) and perceived the participant to feel (5 items; alpha=.76) with their interaction. Mean scores for self-comfort and participant-comfort were created by averaging ratings of five adjectives: Awkward, uncomfortable, anxious, tense, and frustrated. Higher scores indicated greater discomfort.

## RESULTS

Results of an ANOVA revealed that intergroup attitudes did not significantly differ between conditions at S1-baseline. A 4 x 3 mixed-model ANOVA was conducted with Time (S1-baseline, S1-post-intervention, S2-pre-intervention, S2-post-intervention) as a within-subject variable and Contact Condition (SI, EIC, PC) as a between-subject variable. The main effects of Time and Condition were not significant, $p$=.169 and $p$=.870, respectively. The hypothesized two-way interaction was significant, Wilk's lambda=.59, $F(6,74)=3.74$, $p$=.003, eta squared=.23. Within the *OI* condition, intergroup attitudes at S2-post were significantly more tolerant than S1-post and S2-pre ($p$s<.05; means: 75.4; 74.0; 76.9; 78.7). Within the *EIC* condition, compared to S1-baseline, intergroup attitudes at the three subsequent time points were significantly more favorable ($p$s<.025; means: 74.8; 78.1; 80.0; 79.8). Within the *PC* condition, intergroup attitudes did not significantly differ across time (all $p$s >.109; means: 75.7; 76.5; 74.2; 74.5).

Although the confederate rated himself and the participant as being more comfortable in the EIC condition than the other two conditions, the two one-way ANOVAs were not statistically significant ($p$s >. 05). Ratings for the OI, EIC and PC conditions, respectively were: 2.2, 1.7, 2.1 (for the confederate's rating of himself) and 2.6, 1.98, 2.24 (for the confederate's ratings of the participant).

## DISCUSSION

In a two-session study with White community adults in Britain, we evaluated team-building exercises as a means to introduce physical contact and/or simulated physical contact, to reduce prejudice. Participants in the EIC condition, who completed an EIC intervention in the first session (imaging thumb wars) and followed by an actual physical contact intervention in the second session (wrist loops), reported significantly reduced prejudice. Specifically, these participants reported more favorable attitudes after the EIC intervention, and their favorable intergroup attitudes remained stable across sessions. These findings are consistent with the imagined contact hypothesis (Turner et al., 2007) and Miles and Crisp's (2014) assertion that imagined contact is an optimal strategy for "preparing people for future contact" (p. 4). The physical contact intervention following the EIC intervention failed to further increase intergroup

attitudes. It is possible that a ceiling effect was present, with intergroup attitudes already very positive after the EIC intervention.

Notably, participants exposed to the PC condition, who completed two physical contact interventions (thumb wars and wrist loops), did not report more favorable intergroup attitudes across sessions. These participants were presumably psychologically unprepared for physical contact with a Muslim, and as a result, did not benefit from actual intergroup contact. Future research is needed to test this possibility specifically.

Participants in the OI condition completed a physical contact intervention (wrist loops) during the second session only. Unlike participants in the PC condition (who failed to show prejudice reduction), OI participants reported increased tolerance over time. Unfortunately the comfort ratings did not shed light in this context.

In summary, the findings from the present study suggest that *imagining* intergroup contact, before engaging in *actual physical contact,* is a particularly effective strategy for promoting favorable intergroup attitudes. Indeed, the EIC intervention on its own was sufficient for promoting tolerant intergroup attitudes. Businesses and community organizations might consider utilizing EIC; in addition to being efficacious, it is both efficient and cost-effective.

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**APPENDIX A – Correlation Matrix for ANOVA Variables**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Condition | -- | | | | | |
| 2. Intergroup attitudes-S1 baseline | .01 | -- | | | | |
| 3. Intergroup attitudes-S1 post-manipulation | .07 | .97* | -- | | | |
| 4. Intergroup attitudes-S2 pre-manipulation | -.08 | .90* | .93* | -- | | |
| 5. Intergroup attitudes-S2 post-manipulation | -.11 | .87* | .89* | .98* | -- | |
| 6. Confederate's self-comfort | -.03 | .02 | -.02 | .04 | .04 | -- |
| 7. Confederate's participant-comfort | -.16 | -.01 | -.02 | .02 | .06 | .66* |

*$p$ <.001.

**AUTHORS' NOTE**

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Gordon Hodson is a Professor of Psychology at Brock University in Canada. His research interests include stereotyping, prejudice, and discrimination, with a focus on ideology, emotions (disgust, empathy), intergroup contact/friendship, and dehumanization. He has served as an Associate Editor at the *Journal of Experimental Social Psychology* (JESP), and recently co-edited *Advances in Intergroup Contact* (Hodson & Hewstone, 2013, Psychology Press).

Jaysan Charlesford is a Doctoral Candidate in the School of Psychology at Plymouth University in the UK. His research interests include prejudice and intergroup relations (e.g., intergroup contact, prejudice reduction, meta-stereotyping).