Promoting the Peace Process by Changing Beliefs About Group Malleability

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Four studies showed that beliefs about whether groups have a malleable versus fixed nature affected intergroup attitudes and willingness to compromise for peace. Using a nationwide sample (N = 500) of Israeli Jews, Study 1 showed that believing groups were malleable predicted positive attitudes toward Palestinians, which predicted willingness to compromise. Next, experimentally inducing malleable vs. fixed beliefs about groups among Israeli Jews (Study 2, N = 76), Palestinian Citizens of Israel (Study 3, N = 59), and Palestinians in the West-Bank (Study 4, N = 53) (without mentioning the adversary) led to more positive attitudes toward the outgroup and, in turn, increased willingness to compromise for peace.

Ending long-standing conflicts represents an urgent global challenge. One major barrier to successful conflict resolution is each group's intensely negative attitudes toward the other group in the conflict (*1*). Because direct attempts to alter attitudes toward an adversary can backfire by bringing about defensive reactions (*2*), we tested the value of a more indirect route, focusing on beliefs about whether groups in general can change.

This focus was suggested by prior research showing that those who believe people are malleable (versus fixed) are less likely to attribute wrongdoing to a person's fixed qualities, less likely to recommend punishment for a wrongdoer, and more likely to recommend negotiation (*3*, *4*). More specifically, past research has demonstrated that when faced with negative behavior, people who believe human qualities are malleable are more likely to understand the behavior as stemming from people's current motivations and situations, rather than from their permanent traits (*3*). In line with this, their proposed solutions to the negative behavior involve steps that would alter motivations or situations, such as education or negotiation (*4*). For those who understand wrongdoing as emanating from fixed traits, however, punishment and retaliation are the favored responses (*4*). These belief-related differences, especially about the malleability of groups (*5*), would be particularly important in intergroup conflicts in which harmful behaviors are frequently enacted on both sides.

One such conflict is currently taking place in the Middle East. Beginning with a sample of Israeli-Jewish participants, we hypothesized that a general belief in the malleability (versus fixedness) of groups would be associated with (Study 1) and causally related to (Study 2) more positive attitudes toward Palestinians, and that these more positive attitudes would, in turn, predict greater willingness to make compromises for peace. But what about Palestinian citizens of Israel, historically the weaker side of the conflict, who have often been denied the full rights due to citizens (Study 3)? And, even more so, what about Palestinians in the West Bank, who are not citizens of Israel, who have been fighting for self-determination and sovereignty for 5 decades, have no stake in the continued existence of Israel, and many of whom belong to political and militant political groups (Study 4)? Would members of these groups be influenced by our manipulation, which induces malleable vs. fixed beliefs about groups? And if so, would they show changes in their attitudes toward Israeli Jews and in their willingness to make important compromises for peace?

In Study 1, a nationally-representative sample of 500 Israeli Jews was interviewed. We assessed their general beliefs about groups (whether they believed groups had a fixed inherent nature or not) through their level of agreement with statements such as: "Groups can't change their basic characteristics." We also assessed their attitudes toward Palestinians and their willingness to compromise with Palestinians (e.g., to evacuate settlements or compromise over the status of Jerusalem) (*6*). As expected, malleable beliefs about groups predicted significantly more positive attitudes toward Palestinians (r = .30, p < .001), which predicted greater willingness to compromise (r = 0.50, p < 0.001). (See Fig. 1A for a formal test of mediation (*7*)). The effect held controlling for gender and malleable beliefs about individuals (as opposed to groups) in this and the other 3 studies presented below, and also for political beliefs measured in Studies 1, 2, and 4.

To determine whether people's beliefs actually play a causal role, in Study 2, 76 Israeli-born Jewish participants were randomly assigned to read an article that portrayed

aggressive groups as having a fixed nature or a malleable nature. Neither article referred to Palestinians or the Israeli-Palestinian conflict. Later, as part of what was ostensibly another study, attitudes toward Palestinians and support for compromise with Palestinians were assessed (6). Although no mention was made of Palestinians in the articles, participants in the malleable condition had significantly more positive attitudes toward Palestinians ($M = 3.32$, $SD = 1.01$) than those in the fixed condition ($M = 2.83$, SD = 0.75; $t(74) = 2.43$, $d = 0.56$, $p < 0.05$). These more positive attitudes, in turn, predicted greater support for major compromises ($r = 0.45$, $p < 0.001$). (See Fig. 1B for a formal test of mediation).

Would these results hold only for the "strong" group in a conflict, one that possesses most of the power? In Study 3, we tested the same psychological mechanism among Palestinian citizens of Israel (PCIs), a minority group in Israel constituting 19% of the population (6). On the one hand, PCIs are citizens of Israel, but on the other hand, they are perceived by many Israeli-Jews to be a hostile minority with intimate connections to the enemies of Israel who must be kept in check (8). Findings replicated Study 2 with a sample 59 PCIs, adjusting the materials to make them appropriate to the group and its context, and focusing on the compromises most relevant to their situation today. Although no mention was made of Israeli-Jews in the articles, participants in the malleable condition had significantly more positive attitudes toward Jews ($M = 3.82$, $SD = 0.82$) than those in the fixed condition ($M = 3.26$, SD = 1.10; $t(57) = 2.19$, $d = 0.58$, $p < 0.05$). These more positive attitudes, in turn, predicted greater support for major compromises ($r = 0.37$, $p < 0.01$). (See Fig. 1C for a formal test of mediation).

Would these results hold only for Palestinians who had a stake in compromising with Israel or would they hold also for Palestinians who were not citizens of Israel and many of whom were sworn enemies of Israel? Study 4 was conducted with 53 Palestinian adults in Ramallah, the capital of the Palestinian National Authority, over half of whom were members of political and militant organizations such as Fatah or Hamas (6). We repeated the procedure from Studies 2 and 3, again making appropriate changes to match the context. Once more, participants in the malleable condition had significantly more positive attitudes toward Israeli-Jews ($M = 3.64$, $SD = 1.49$) than those in the fixed condition ($M = 2.83$, SD = 1.21; $t(51) = 2.19$, $d = 0.60$, $p < 0.05$). These more positive attitudes, in turn, predicted greater support for major compromises ($r = 0.43$, $p < 0.01$). (See Fig. 1D for a formal test of mediation).

One noteworthy feature of Study 4 is that we assessed participants' willingness to meet with Israeli Jews and hear their point of view on the conflict. Research has shown that this type of measure significantly predicts actual involvement in intergroup contact (9). Moreover, willingness to meet

typically mediates the relation between attitudes toward another group and contact with them (9). Indeed, much longstanding psychological research shows that willingness or desire to act or interact is one of the most robust predictors of behavior (10). A review of this literature reveals that the prediction of behavior runs from 0.35 to 0.67 (10), and a meta-analysis of relevant studies yields an overall correlation of 0.54 (11). In the current study, participants in the malleable condition were significantly more likely to express interest in meeting with Israelis ($M = 4.08$, $SD = 1.62$) than were those in the fixed condition ($M = 2.41$, SD = 1.65; $t(51) = 3.72$, $d = 1.02$, $p < 0.01$). Interestingly, this measure was highly correlated with willingness to compromise ($r = 0.88$), supporting the validity of our compromise measures. Moreover, the indirect effect of the manipulation on this measure through improved attitudes was significant (indirect effect = 0.56, 95% CI = 0.07 to 1.14, $p < 0.05$).

Thus, in three key groups involved in a major conflict, groups varying in history, power, and aspirations, a manipulation that changed people's beliefs about the malleability of groups also altered their attitudes toward each other, as well as their desire to make central compromises in the interest of peace. These findings suggest the potential value of a new approach to intervening in longstanding conflicts, and one important next step would be a longitudinal intervention investigating the lasting effects of changing people's beliefs. It would also be interesting to determine whether adding a "beliefs about groups" component to existing conflict-resolution programs would boost their efficacy both in the short- and long-term.

Our research shows that even in the face of prolonged conflict, deeply rooted beliefs may be malleable, and mechanisms may exist for bringing more constructive attitudes to the fore. In thinking that groups have the potential to become better, adversaries may be more likely to bypass fixed, global, negative judgments (12) – judgments that delegitimize or dehumanize each other (13) – even when they have a long history of mutual animosity.

References and Notes

1. H. Kelman, in *Peacemaking in International Conflict: Methods and Techniques*, W. Zartman, Ed. (U.S. Institute of Peace Press, Washington, DC, 2007), pp. 61–107.
2. D. Bar-Tal, Y. Rosen, *Educ. Res.* **79**, 557 (2009).
3. C. Y. Chiu, Y. Y. Hong, C. S. Dweck, *J. Pers. Soc. Psychol.* **73**, 19 (1997).
4. C. Chiu, C. Dweck, J. Y. Tong, J. H. Fu, *Pers. Soc. Psychol.* **73**, 923 (1997).
5. R. J. Rydell, K. Hugenberg, D. Ray, D. M. Mackie, *Pers. Soc. Psychol. Bull.* **33**, 549 (2007).
6. See supporting material on *Science* Online.
7. K. J. Preacher, D. D. Rucker, A. F. Hayes, *Multivariate Behav. Res.* **42**, 185 (2007).

8. S. Smooha, *Arabs and Jews in Israel* (Westview, Boulder, CO, 1992).

9. A. Alreshoud, G. F. Koeske, *J. Soc. Psychol.* **137**, 235 (1997).

10. I. Ajzen, M. Fishbein, in *The Handbook of Attitudes*, D. Albarracín, B. T. Johnson, M. P. Zanna, Eds. (Erlbaum, Mahwah, NJ, 2005), pp. 173–221.

11. S. J. Kraus, *Pers. Soc. Psychol. Bull.* **21**, 58 (1995).

12. N. Haslam, L. Rothschild, D. Ernst, *Br. J. Soc. Psychol.* **39**, 113 (2000).

13. D. Bar-Tal, *J. Soc. Issues* **46**, 65 (1990).

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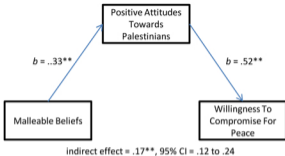Materials and Methods
Reference (*14*)

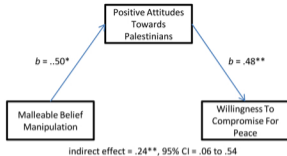17 January 2011; accepted 17 August 2011
Published online 25 August 2011; 10.1126/science.1202925

Fig. 1. Effect of malleable beliefs [(**A**); Study 1] and the malleable belief manipulation [(**B** to **D**); Studies 2-4, respectively] on willingness to compromise for peace, through its effect on positive attitudes toward the other group. b = unstandardized betas.
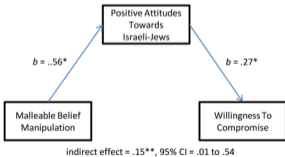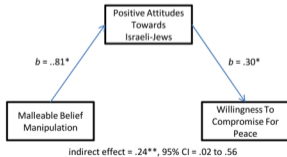
Panel A

Positive Attitudes Towards Palestinians

$b = ..33^{**}$

$b = .52^{**}$

Malleable Beliefs

Willingness To Compromise For Peace

indirect effect = .17**, 95% CI = .12 to .24

Panel B

Positive Attitudes Towards Palestinians

$b = .50^{*}$

$b = .48^{**}$

Malleable Belief Manipulation

Willingness To Compromise For Peace

indirect effect = .24**, 95% CI = .06 to .54

Panel C

Positive Attitudes Towards Israeli-Jews

$b = ..56^{*}$

$b = .27^{*}$

Malleable Belief Manipulation

Willingness To Compromise

indirect effect = .15**, 95% CI = .01 to .54

Panel D

Positive Attitudes Towards Israeli-Jews

$b = .81^{*}$

$b = .30^{*}$

Malleable Belief Manipulation

Willingness To Compromise For Peace

indirect effect = .24**, 95% CI = .02 to .56

* $P < .05$, ** $p < .01$

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