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In-Group/Out-Group Distinctions—Neuroscience Findings and Upshot

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Abstract

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Disciplines

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National Security Challenges: Insights from Social, Neurobiological, and Complexity Sciences

Topical Strategic Multi-Layer Assessment (SMA) and U.S. Army ERDC Multi-Agency/Multi-Disciplinary White Papers in Support of National Security Challenges

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3.5 In-group/out-group distinctions—neuroscience findings and upshot

Dr. Emile Bruneau

For many, the U.S. is viewed as “the enemy.” Obviously, safeguarding American lives requires addressing two components of threat from people who hold this view: decreasing their capability to do harm, and decreasing their motivation to do harm. While compromising an “enemy group’s” capability to harm the U.S. falls largely outside of the purview of social science, understanding and addressing the motivations behind violent aggression falls squarely in the realm of social psychology. Much research in social psychology has focused on more innocuous forms of intergroup conflict between arbitrarily assigned groups, or between ethnic groups in multicultural societies. Many (but not all) of the insights from these studies join an emerging focus specifically on the psychological biases affecting conflict groups to provide some guidelines for recognizing and addressing the root motivations of political violence.

Some of the forces driving conflict and inhibiting reconciliation are clear and tangible: competition for limited resources, a history of violence, and differences in cultural and religious beliefs. Inter-group antagonism and political violence can clearly be motivated by such factors: a young man might be motivated to commit an act of violence against the U.S. because his relative was killed by a drone strike; because he believes that his land or resources are being stolen; because he sees his cultural or religious beliefs threatened. Accompanying these socio-political factors is a collection of psychological factors that can also motivate hostility. The same young man could be tipped towards violence, for example, by extreme empathy for the suffering of in-group members, and lack of empathy for out-group members; because he views Americans as untrustworthy or irrational; because he views American motivations as unworthy rationalizations rather than reasonable justifications. These psychological biases can be just as potent as political factors in motivating intergroup aggression.

In this paper, we highlight examples of “hot” and “cold” psychological biases that help drive intergroup hostility and prevent the resolution of intractable conflicts, suggest how these biases can (and cannot) be reduced with positive interventions, and highlight the potential lessons for people tasked with safeguarding American national security.

3.5.1 Psychological biases

3.5.1.1 Empathy

Much of the time, we feel pain or sadness in response to another's suffering. A key component of this response is the suite of cognitive and affective capacities called empathy (Batson 2009): people recognize emotional experiences in others, experience matched sensations and emotions, and are motivated to alleviate the others' suffering, which frequently results in helping behaviors.

Empathy is a central pillar of modern human society: it serves simultaneously as "gas" for pro-social behavior (e.g., helping), and a "brake" on anti-social behavior (e.g., aggression). From a young age, typical people are affected by another's suffering: they "step into the other person's shoes," "feel their pain," and are motivated to help (Batson 2009). At other times, however, they feel (and do) nothing at all. This flexibility is another hallmark of human empathy. The lighter side of this ability is prominently displayed in professions that require frequent exposure to human suffering (doctors, nurses, social workers, and aid workers). Empathic regulation also allows us to make everyday decisions that require increasing others' (short-term) suffering for a greater good (e.g., preventing a child from playing with something that is dangerous to them, firing an ill-qualified employee, making a battlefield decision).

The darker side of empathic flexibility is often displayed in the context of intergroup relations. When an out-group is perceived as antagonistic, people respond less empathically to out-group members, but also more empathically to in-group members (Dovidio et al. 2010). It has been suggested that the motivation to help in-group members, and hostility toward people from other ethnic or racial groups, may have co-evolved in humans: group survival is more likely when many members are willing to fight in inter-group wars and even sacrifice themselves to protect others in their group (Choi and Bowles 2007). The most dramatic incidents of intergroup violence are consistent with these suggestions: most suicide bombers are not psychopaths, but rather may experience "parochial altruism," or high empathy selectively for their own group's suffering (Ginges et al. 2007). This suggests that the most useful metric of empathy for understanding political violence may be the gap between in-group empathy and out-group empathy, for which humans may have a particular susceptibility. We call this the "intergroup empathy bias."

As empathy is such a fundamental psychological force, and is so dramatically affected by group identity, it is important to understand the root causes and consequences of group-based empathy. One of the “cleaner” ways to study the intergroup empathy bias (outside of the complexities of historical violence, ethnic rivalry, and religious differences) is to examine the effect in minimal groups—groups in which the boundary is arbitrary (e.g., red team and blue team). Children randomly assigned to color teams show greater empathy for in-group members than for out-group members when those children are socially rejected (Masten et al. 2010). Recent work in our lab with adults has shown that intergroup empathy biases (how bad and how good participants report feeling in response to in-group and out-group fortunes and misfortunes) are determined less by self-reported trait empathy, and more by how strongly group members identify with their own group relative to the other group. That is, the most dramatic differences in intergroup empathy bias (which characterize many people who commit acts of extreme violence) are better predicted by tribalism than sociopathy.

The intergroup empathy bias is established rapidly and difficult to shake; however, two methods are successful at decreasing this bias. In one version of our study, we provided one group of participants with a graphical representation of the in-group and out-group that presented them as overlapping networks of individuals, and another group with graphical representations of the in-group and out-group that presented them as distinct networks of individuals. Everything else about the study was identical in both conditions. Although both representations were bogus (and meaningless), the intergroup empathy bias was significantly decreased when groups were represented as more integrated and overlapping. Therefore, the mere perception of intergroup similarity or overlap can mitigate the intergroup empathy bias.

In another version of the study, we examined how framing the information affected the intergroup empathy bias. In this version, one group of participants was presented with “headlines” of in-group and out-group members’ fortunes/misfortunes, and another group was presented with the headlines embedded in a short narrative about each protagonist. We found that including the narrative significantly decreased the intergroup empathy bias by drawing participants’ attention away from group membership and towards individual experiences.

Characterizing the boundary conditions of the narratives (i.e., what types of information or style of narratives generate the greatest effect), and determining how effective these mitigating factors are in the context of real intergroup conflict is currently being investigated. However, these initial results suggest that the framing of the groups and the information can dramatically alter the intergroup empathy bias.

3.5.1.2 Reasoning

The combination of enhanced in-group empathy and failed out-group empathy may provide a “hot,” emotional motivation for political violence. At the same time, a group of “cold,” and seemingly more rational, biases may also drive hostility.

Humans are “naïve realists,” believing that they have an objective view of reality (Ross and Ward 1994, 1996). This creates a problem when we encounter disagreement with another. Naive realism predicts that people first assume that the other person lacks the correct perspective on the issues—“If only they knew what I knew, they would agree with me.” However, when simple exchange of information fails to resolve the disagreement, people quickly switch to the interpretation that the other person or group is inherently biased and irrational. For example, in a disagreement among students over academic policy, each side is more likely to ascribe “valid” reasons over “biasing” reasons for their own position, but “biasing” reasons over “valid” reasons for the student they disagree with (Pronin et al. 2004). This effect has also been demonstrated at the group level: when asked about their views of the conflict in the Middle East, Jewish and Arab American respondents each report that their own identities provide insights on the issues, while the others’ identity confers bias (Ehrlinger et al. 2005).

The greater the divide in opinion is, the more people assume that another’s views are based on non-normative factors like bias and ideology. The perception of out-group bias is thus exacerbated by another psychological bias: partisans tend to over-estimate their disagreements with the other group. This “false polarization bias” acts at the group level, amplifying the perception of disagreement between groups beyond the actual levels of disagreement, specifically for one’s most strongly held views (Chambers et al. 2006; Robinson et al. 1995).

The perception of out-group bias can fuel political violence. Perceiving the other as biased makes people less willing to cooperate or negotiate with the other side, and more inclined towards aggressive or competitive actions, like sanctions or shows of force (Kennedy and Pronin 2008). This has been hypothesized to lead to a “perception of bias-conflict spiral.” The first side sees the group differences as amplified, and differences in opinion are perceived as wider than they are; these differences in opinion accentuate the perception of the second side’s views as biased and irrational; seeing the second side as biased leads the first side to choose conflict-escalating behaviors and reduce the tendency towards rational negotiation; these actions reinforce the second side’s perception of the first side as irrational and biased, thus continuing the cycle. Altogether, this spiral of psychological effects drives partisans towards more adversarial options such as political violence.

If empathy biases and naïve realism are a consequence of the human condition, and these psychological biases are present at the interpersonal as well as intergroup levels, is there any way to get past them? Although the vast majority of work on cognitive biases has been devoted to categorizing and describing them, the few studies that have attempted to ascertain how stable these biases are over time provide some tentative hope. For example, our own work (described below) has shown that, given the right intervention conditions, empathy biases and higher level cognitive biases can be altered between different cultural groups (Americans and Mexican immigrants), and even groups embroiled in intractable conflict (Israelis and Palestinians).

3.5.2 Conflict resolution interventions

When two groups are in conflict, prejudice, discrimination, and open hostility can thrive. Each group’s perception of the other is characterized by failures of empathy and perceptions of bias. Conflict resolution and prejudice-reduction programs aim to turn this situation around by using several types of interventions: perspective-taking, role playing, simulation, and positive intergroup contact. The general hypothesis of these programs is that improving attitudes for specific out-group members can enhance attitudes towards the out-group as a whole, thus engendering a willingness to help and reluctance to harm out-group members.

Understanding the causes and contexts of interventions, and the short and long-term effects of interventions on both groups, is critical to better un-

derstanding the positive effects and unintended consequences of conflict resolution efforts. Unfortunately, well-controlled empirical studies of prejudice-reduction and conflict resolution programs remain rare, and relevant data are scarce (Paluck and Green 2009). There are a handful of documented successful interventions. For example, Chileans' empathy towards native Mapuche, and Bosnian Serbs' empathy towards Bosnian Muslims, was increased by perspective-taking (Čehajić et al. 2009). In an impressive large-scale field study, a radio drama in Rwanda depicting positive intergroup interactions increased empathy of Hutus towards Tutsis (Paluck 2009). A conflict resolution program in Sri Lanka demonstrated that the positive effects of interventions can be long-lasting: relative to control groups, Sinhalese participants in a 4-day intergroup workshop expressed enhanced empathy towards Tamils, even a year after participating in the program (Malhotra and Liyanage 2005). Another study conducted by our lab in the Middle East illustrated that positive effects from interventions can act very rapidly, improving attitudes of Israeli and Palestinian participants for each other even after a 20-minute interaction with an out-group member (Bruneau and Saxe 2012). Furthermore, increased empathy can lead to improved attitudes towards, and willingness to help the out-group (Batson et al. 1997; Hodson 2008; Pettigrew and Tropp 2008). For example, increasing empathy increased donations to an out-group charity (Malhotra and Liyanage 2005), and forgiveness for past atrocities (Cehajic et al. 2008).

However, perhaps more striking than the handful of successes is the dearth of successful interventions. In fact, while success is possible, interventions designed to improve intergroup attitudes are often ineffective, and empathy, positive attitudes, and helpful intentions toward an out-group can also *decrease* following perspective-taking. For example, metastereotypes—thoughts about how one (as a majority group member) may be evaluated by an out-group member—are activated when individuals empathize with an out-group member in the context of an intergroup interaction. These thoughts have the deleterious effect of interrupting other-focused empathic responses that are required for prejudice reduction. Moreover, among relatively high-prejudice participants, empathy-induction can elicit overtly *negative* reactions to a nearby out-group member (Vorauer and Sasaki 2009).

Intergroup interventions can also fail for one of the groups involved. A meta-analysis of conflict resolution programs based on the “Contact Hypoth-

esis” found that, although the programs generally improve attitudes of the majority group towards the minority group, they are ineffective for improving attitudes of minority group members towards the majority group (Tropp and Pettigrew 2005). Similarly, an intervention in the Middle East fashioned after Sesame Street was generally successful at improving attitudes of Israelis towards Palestinians, but not the other way around (Cole et al. 2003). This raises the possibility that interventions may interact with group membership to produce asymmetric effects. There is ample anecdotal evidence, and some longitudinal data (Hammack 2011), to suggest that attitudes of disempowered group members may even get worse over time, as they return from their intergroup encounter with trust and hope to find structural inequality intact. Generating temporary intergroup trust may therefore provide a short-term gain that sets up the potential for a negative rebound. Although the idea that asymmetric power may interact with interventions has received little attention, recent studies have supported this notion. For example, a more “assimilationist” orientation more effectively predicts positive interracial orientations among majority group members, while “integration” representations are more effective at predicting positive interracial orientations among minority group members (Dovidio et al. 2001; Van Oudenhoven et al. 1998; Verkuyten and Brug 2004).

Our own work shows an asymmetric effect of intervention type on attitudes of Israelis and Palestinians towards each other. In a study conducted simultaneously in Tel Aviv and Ramallah, Israelis and Palestinians were exposed to a member of the other group in a surprise, on-line interaction in which they either wrote about “one or two of the most difficult aspects of life in [their] country” (“perspective-giving”), or read what a member of the other group wrote about this topic, summarizing that view at the end (“perspective-taking”). We found that Israeli biases towards Palestinians significantly changed only in the perspective-taking condition, and Palestinian biases towards Israelis significantly changed only in the perspective-giving condition (Bruneau and Saxe 2012). This pattern was replicated in Arizona when the same study was conducted with Mexican immigrants and white Arizonans, suggesting that the effectiveness of the interaction depends upon group power. Two pieces of evidence suggest that the benefits for Palestinians in the perspective-giving condition were not due only to speaking, but hinged critically on feeling “heard”: first, the amount of positive change was correlated with how well they felt their Israeli partner summarized what they had said (and was independent of how sympathetic they felt their interaction partner was), and second, there was no change in

intergroup bias following a control condition where Palestinians wrote about the same topic, but had no interaction partner.

3.5.3 Potential applications of social science

One of the challenges faced by the U.S. is how to decrease anti-American sentiment and prevent violent attacks on U.S. citizens. Here we have highlighted a couple of psychological forces, both “hot” and “cold,” that could drive an individual towards violence: an intergroup empathy gap (simultaneously providing the “gas” to protect your group, and relieving the “brake” to aggress against the “other”) and a perception of out-group irrationality based on naïve realism. We have also examined a number of conflict resolution efforts, both by social scientists and private organizations, that have tried to address intergroup biases. The successes and failures of experimental manipulations and conflict resolution efforts provide useful lessons for people hoping to improve attitudes of others towards the U.S.

3.5.3.1 Framing can mitigate intergroup biases

Increasing the perception of group similarity can lessen both “hot” and “cold” intergroup biases. This frame can even be established by essentially meaningless graphical representations. Framing information about group members in short narratives also decreases the intergroup empathy bias; the effect of narrative framing on “cold” cognitive biases has not yet been examined.

3.5.3.2 It is dangerous to rely on one’s own (or one’s group’s) intuitions regarding possible interventions for another group

The past research on conflict resolution programs reviewed here suggests that these efforts are often unproductive or even counter-productive, particularly for the disempowered group members. Formal conflict resolution programs are generally started by extremely well meaning members of the empowered group; social scientists are predominantly white males. It is possible that the intuitions brought by these people selectively serve the psychological needs only of the empowered group, often with the unintended consequence of driving the disempowered group even further away.

3.5.3.3 When engaging across group boundaries, it matters who speaks (and whether they perceive that they were heard)

A recent audit of dialogue programs in Israel found that the less Palestinians spoke (relative to Israelis), the less effective the program was for the Palestinian participants (Hammack 2011). Our work suggests that this effect is causal: members of the relatively disempowered groups benefit most when they are given the opportunity to speak (and feel heard). People who perceive the U.S. as their “enemy out-group” may therefore benefit from being given a forum to speak, as long as the listener is able to make them feel understood (but not necessarily agreed with). This also suggests that members of the most disempowered group should be given the floor first during negotiations.

3.5.4 Summary

The psychological edifice erected between group members, often without their conscious awareness, combines with socio-political barriers to drive members of conflict groups towards aggressive intergroup behaviors and away from intergroup reconciliation. Crucially, group membership interacts with these psychological forces, potentially rendering uniform interventions less effective for one of the groups; in some conditions, well meaning interventions aimed at decreasing intergroup hostilities can even have an ironic effect.

3.5.5 Acknowledgments

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3.6 Neurobiology of sacred values and implications for radicalization process

Dr. Greg Berns

3.6.1 Introduction

Beliefs are components of the brain's model of the world within which it resides. Beliefs help interpret states of the world, formulate predictions of events of the world, and influence courses of action to take or not take in response to those interpretations and predictions. Consequently, knowing the beliefs held by others can inform estimates, and explanations, of actions (or reactions) based on those beliefs (Fishbein and Ajzen 2010). However, as beliefs vary widely across contexts and content, all beliefs are