

# Extinction threat and reciprocal threat reduction: Collective angst predicts willingness to compromise in intractable intergroup conflicts

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Eran Halperin,<sup>1</sup> Roni Porat,<sup>2</sup> and Michael J. A. Wohl<sup>3</sup>

## Abstract

Two experiments examined the impact of ingroup extinction threat on willingness to compromise with an adversary group. Specifically, Israel's ability to cope with a nuclear capable Iran was manipulated and Israelis' willingness to compromise with Hamas (Experiment 1) or the Palestinian Authority (Experiment 2) was assessed. In Experiment 1, extinction threat *decreased* willingness to compromise with Hamas—an effect mediated by heightened collective angst. Conversely, in Experiment 2, extinction threat *increased* willingness to compromise with the Palestinian Authority, again via collective angst. The reason for this inverted effect in Experiment 2 was perceived reciprocal threat reduction—the belief that compromise with the Palestinian Authority would reduce the Iranian threat (a belief not relevant to the issue of compromise with Hamas). Implications for the understanding of intergroup conflicts and peace making are discussed within the context of the role played by collective angst.

## Keywords

collective angst, extinction threat, intergroup emotions, Palestinian–Israeli conflict, threat reduction

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Over the course of human history, groups have gone to great lengths to harm and at the extreme, annihilate other groups of people. Before direct harm is ever inflicted, however, perceptions of intergroup threat can loom large. Indeed, the stress that stems from real or perceived threats posed by adversarial groups can avert attempts at peaceful resolutions to intergroup conflict. This peace-hampering process is especially likely when the group's very existence is perceived to be at

stake. Indeed, previous research has shown that under the veil of extinction threat, members often

<sup>1</sup>Interdisciplinary Center – Herzliya, Israel<sup>2</sup>Hebrew University and Interdisciplinary Center – Herzliya, Israel<sup>3</sup>Carleton University, Canada

## Corresponding author

Roni Porat, Interdisciplinary Center – Herzliya, Kanfei

Nesharim St., Herzliya 46150, Israel.

Email: porat.roni@gmail.com

act to fortify the ingroup in order to alleviate feelings of *collective angst* (Wohl & Branscombe, 2008). Specifically, when extinction threats are salient group members experience collective angst, resulting in greater adherence to group values and traditions (see Wohl, Branscombe, & Reysen, 2010). In these cases, collective angst manifest in responses aimed at strengthening the ingroup's vitality.

The type of response that follows feelings of collective angst varies across contexts (Wohl, Squires, & Caouette, 2012). That is, in accordance with a functional account of emotions (e.g., Keltner & Gross, 1999), while the general emotional goal of collective angst remains constant—to secure the ingroup's future—the specific response tendencies to achieve this goal are dependent on appraisals of the situation (see also, Fischer & Roseman, 2007; Halperin, Russel, Dweck, & Gross, 2011, for similar distinctions regarding anger). Thus, if peace with an adversary group is deemed possible then the best route to a secure future may be political dialogue and compromise via negotiation.

In other contexts, however, where peace is not linked to the reduction of the extinction threat, group members are likely to support uncompromising positions and even the initiation of aggressive or militant actions to pursue the goal of ingroup survival. Indeed, due to a plethora of issues including (mis)trust and zero-sum game perceptions, group members might be reluctant to compromise with the enemy (see Bar-Tal & Halperin, 2011; Kelman, 2005, 2007; Kramer, 1994; Ross & Ward, 1995).

In the current research we report the results of two experiments that test different kinds of relations between the experience of collective angst and the support for making compromises in intergroup conflicts. Specifically, using the ongoing Iranian nuclear threat faced by Israel as the backdrop, we assess when collective angst among Israelis is an obstacle to conciliatory political action as well as when it motivates the desire to compromise with Hamas or the Palestinian Authority (two Palestinian groups with whom Israel currently has adversarial relations).

## Extinction Threat

Previous research has shown extinction threats to be a significant motivator of ingroup emotions and behavior (Bourhis & Giles, 1977; Wohl & Branscombe, 2009; Wohl et al., 2010). For example, Wohl et al. (2010) demonstrated that group members under extinction threat are motivated to engage in ingroup strengthening behavior. Specifically, they showed that when Diaspora Jews are reminded of the Holocaust (a historical extinction threat) there is an associated heightened desire to, among other things, raise their children with Jewish values and traditions of the ingroup, donate to Jewish organizations, and marry a fellow Jew. Such extinction threat has also been shown to increase Jews' willingness to forgive Israel (the Jewish "homeland") for harms committed against Palestinians during the current conflict (Wohl & Branscombe, 2009).

The threat experienced when members feel that the future of their group is in question is similar in many respects to the existential concern outlined by terror management theory (TMT; Solomon, Greenberg, & Pyszczynski, 1991). According to TMT, people adhere to group values and traditions as a consequence of thoughts about one's *personal* demise. Extinction threat, on the other hand, is a group-level existential concern. Moreover, whereas the person knows that he or she will eventually die, this is not necessarily the case for groups. Indeed, groups (especially ethnic groups) are expected to have continuity into eternity (see Kahn, Klar, & Roccas, 2011; Sani et al., 2007). The consequence of extinction threat, however, is similar to what would be predicted by other existential theories like TMT—a nonconciliatory stance (or even aggressiveness) toward an adversary deemed to be the source of threat. In the case of extinction threat, the response of group members is motivated by the desire to protect the ingroup's future vitality.

Herein, however, we contend that extinction threat might also lead to compromise, but only if by compromising, intergroup tensions might be reduced. Specifically, contexts might exist in which compromise might move an adversary

group toward peace, thus reducing the extinction threat and ensuring the future vitality of the ingroup (as well as the outgroup). In other words, the perceived probability of a peace might shed light on the ebb and flow of group members' willingness to compromise with an adversary group when extinction threat is salient.

## Collective Angst

The emotions engendered by the process of social identification (i.e., that part of the self that is derived from group membership; Tajfel & Turner, 1986) have been useful for understanding intergroup behaviors (Mackie, Smith, & Ray, 2008). Indeed, once evoked, specific intergroup emotions have been shown to direct and regulate specific intergroup behaviors (Mackie, Devos, & Smith, 2000; Riek, Mania, & Gaertner, 2006). Recent studies in the context of intractable conflicts also demonstrate the specific influence of such discrete intergroup emotions on people's willingness to compromise for peace (Halperin, 2008, 2011).

According to Wohl and Branscombe (2008), collective angst is an intergroup emotion experienced when group members appraise a situation as potentially harmful to the ingroup's *future*. Collective angst is but one emotion in the vast family of intergroup emotions, but is uniquely situated in this array due to its future orientation. This particular emotion is of interest because of the unique human capacity to project the ingroup into the future in such a way as to influence contemporary action (Wohl & Branscombe, 2008). Group members who experience collective angst look for ways to circumvent the unwanted, but anticipated negative events.

Extinction threat salience has been shown to be one way to elicit collective angst among group members. For example, Wohl et al. (2010) showed that collective angst was elevated among French Canadians when the extinction threat posed by English Canada was made salient. In turn, collective angst heightened the desire to take action deemed able to protect the future of French Canadian culture (support for the

establishment of a French State in the Canadian province of Québec). Within Israel, an omnipresent extinction threat is Iran. Specifically, Iranian leaders have explicitly called for the destruction of the Jewish state and have threatened the use of force to do so (Zisser, 2010). For this reason Israelis are particularly concerned with the possibility of a nuclear Iran. To the extent that this extinction threat is salient among Israelis, collective angst should emerge and, in turn, heighten support for action that protects Israel's future.

## Extinction Threat and Willingness to Compromise

The extant literature on intergroup threat suggests that extinction threat should lead to extreme attitudes towards various outgroups and conservative political views that manifest in a reluctance to compromises in intergroup conflicts (see Duckitt & Fisher, 2003; Halperin, 2011; Jarymowicz & Bar-Tal, 2006; Jost, Glaser, Kruglanski, & Sulloway, 2003). In the current paper, we suggest that although this is probably the more frequent pattern, under some circumstances extinction threat can lead to the opposite effects. When negotiations are seen as a step toward securing the group's future vitality (i.e., removing/toning down the existential threat) then compromise becomes palatable.

Within the context of the Palestinian–Israeli conflict, Hamas (the party that controls the Gaza Strip) refuses to recognize the State of Israel and explicitly calls for its destruction. Thus, Israelis do not perceive Hamas as a willing partner in the peace process (Shamir & Shikaki, 2010). Conversely, the Palestinian Authority (the Palestinian party that controls the West Bank) recognizes the State of Israel and is perceived by Israelis as accepting of a two-state solution to the conflict and thus as a willing partner in the peace process (Shamir & Shikaki, 2010). Thus, to the extent collective angst is experienced via extinction threat (i.e., a nuclear capable Iran), Israelis should be willing to compromise with the Palestinian Authority, but not with Hamas.

## Overview of the Current Research

In two experiments, extinction threat to Israel is framed as stemming from a nuclear capable Iran. The goal of Experiment 1 was to replicate previous research by showing that in a context in which compromises are not expected to reduce the extinction threat, collective angst should reduce people's support for making compromises. Hence, in Experiment 1, we examine Israelis' willingness to compromise with Hamas as a function of the extinction threat posed by a nuclear Iran. With Hamas—a group with which advances in intergroup relations are deemed unlikely and not directly connected to potential reduction to the Iranian threat—collective angst should undermine willingness to negotiate.

The purpose of Experiment 2 was to assess a possible boundary condition for the well-established patterns tested in Experiment 1. We presumed that to secure Israel's future, compromise in the Palestinian–Israeli conflict must be seen not only as a way of achieving peace with the Palestinians, but also of reducing the threat posed by Iran. That is, compromise should be supported when it is perceived as resulting in *reciprocal threat reduction*. The notion of reciprocal threat reduction is central to the Israeli narrative of lasting peace in the broader Middle East. Indeed, Israelis believe that peace with the Palestinians can potentially promote enhanced international pressure on Iran to abandon their nuclear program (Zisser, 2010). Hence, in Experiment 2, we test the effect of extinction threat on Israelis' willingness to compromise with the Palestinian Authority. We hypothesized that with the Palestinian Authority—a group with which peace is seen as a possibility and potentially connected to the reduction of the Iranian threat—collective angst should promote willingness to negotiate and compromise.

By utilizing two distinct contexts of intergroup negotiations, we test our general hypothesis that the effect of extinction threat, via collective angst, on support for compromises is dependent on the perceived probability that compromise with the adversary group can reduce the

threat. Obviously, the same hypothesized model could have been tested more directly in a laboratory-based study in which the target of the compromise was manipulated. However, the ongoing conflict in the Middle East provides a real-world platform to examine our research questions and thus has more external validity than could be provided in the laboratory. As such, we compromised some experimental control for greater generalizability to ongoing intractable conflicts.

## Preliminary Study: A Tale of Two Fronts

Prior to the experimental examination of our thesis we sought to establish the differences between Israelis' perceptions of the two ongoing fronts on which the Palestinian–Israeli conflict is currently being fought and their perceived link to the Iranian nuclear threat. That is, the goal of the preliminary study was to empirically examine the distinct views of Israelis regarding negotiations with Hamas in the Gaza Strip (the focus of Experiment 1) and negotiations with the Palestinian Authority in the West Bank (the focus of Experiment 2) and how such negotiations could in turn reduce the existential threat Iran poses to the Israeli society.

Specifically, we hypothesized that two major differences exist between Israelis' perceptions regarding the two different contexts—the conflict with Hamas and that with the Palestinian Authority. First, we argue that Israelis believe they have the ability to achieve peace with the Palestinian Authority rather than Hamas. Second, we hypothesize that most Israelis believe that peace with the Palestinian Authority would reduce the perceived extinction threat posed by Iran. However, such reciprocal threat reduction hypothesis would not apply to negotiations with Hamas.

## Method

### *Participants*

Data was collected from a convenience sample of train passengers in different parts of Israel. In

total, 173 Jewish passengers (79 women, 76 men, 18 did not identify their gender) completed the questionnaires. Their ages ranged between 18 and 75 years ( $M = 30.70$ ,  $SD = 17.91$ ). In terms of political orientations, 40.3% self-identified as rightists (hawks), 18.8% identified as leftists (doves), and the remaining 40.9% identified as “center.” With regard to religiosity, 35.8% defined themselves as secular, while 46.3% defined themselves as religious to some extent; 17.9% did not report their level of religiosity.

### *Procedure and Measured Variables*

After providing some sociodemographic information, participants were asked to what extent they believed that “If Israel achieves peace with the Palestinian Authority, the Iranian threat will dissipate.” Then, after answering a series of buffer questions, participants answered the very same question, in relation to Hamas. The order of the questions was counterbalanced and no order effects were observed. In addition, participants were asked whether Israelis believe that “a peaceful agreement with the Palestinian Authority would bring an end to the conflict and the violence in the Middle East” as well as whether “a prisoner exchange bargain deal with Hamas would bring an end to the conflict and the violence in the Middle East.” As with the previous pair of items, the order of these items was counterbalanced. Again, no order effects were observed. All items were anchored at 1 (*strongly disagree*) and 6 (*strongly agree*).

## **Results**

Paired sample analysis of variance (ANOVA) supported our main hypotheses regarding the different perceived nature of these two negotiation processes. Jewish Israelis accepted the plausible linkage between a successful negotiation and the reduction of the Iranian threat to a greater extent when it was connected to the negotiation with the Palestinian Authority ( $M = 3.15$ ,  $SD = 1.36$ ) than when it was connected to the negotiation with

Hamas ( $M = 2.39$ ,  $SD = 1.14$ ;  $t[159] = 7.23$ ,  $p < .001$ ,  $d = .60$ ). A similar pattern applied for the item that reflected whether or not an agreement on that specific issue would bring an end to the conflict and the violence in the Middle East. As predicted, Israelis believed that advances could be made in negotiations with the Palestinian Authority ( $M = 3.86$ ,  $SD = 1.47$ ) more so than negotiations with Hamas ( $M = 2.69$ ,  $SD = 1.27$ ;  $t[164] = 9.82$ ,  $p < .001$ ,  $d = .85$ ).<sup>2</sup> These findings indicate the diverse perceptions Israelis have towards these two fronts of the conflict. Thus, these results provide the basis for further investigation attempting to reveal the concrete political effects of extinction threat in each of these fronts.

## **Experiment 1: Extinction Threat and Negotiating With Hamas**

The purpose of Experiment 1 was to replicate previous findings and directly test the effect of extinction threat in the context of one conflict (a nuclear capable Iran) on conciliatory positions in intergroup conflict in another, though related, context (negotiations with Hamas). Specifically, we examined whether the extinction threat that stems from a nuclear capable Iran would influence perceptions about the ongoing internal debate concerning whether Israel should release hundreds of Palestinian prisoners in exchange for one captured Israeli soldier—Gilad Shalit—held by Hamas in Gaza since 2006. Based on public statements of both Israeli and Palestinian officials at the time of the experiment, Israel and Hamas were close to signing an agreement on a German-mediated prisoners’ exchange deal in which Hamas would release Shalit, and Israel would release about 1,000 Palestinian prisoners. Israeli public was divided regarding the aforementioned deal. Recently, on October 18, 2011 the bargain deal according to these very same principles has been signed and implemented.

Importantly, no link between the Iranian extinction threat and the Shalit negotiations was

made in the Israeli public discourse when negotiations were taking place. Hence, based on the theoretical framework we have presented in the first part of this article, and the results of our preliminary study, we hypothesized that Israelis who are led to believe that Israel is not prepared for an Iranian nuclear attack will oppose bargaining with Hamas for the release of Shalit. We also hypothesized that this effect would be mediated by the extent to which Israelis feel collective angst. Importantly, we did not include a measure of *reciprocal threat reduction* because it was not relevant for this particular context (as indicated in the preliminary study). Perhaps more importantly, we did not want to prime this possibility (where it did not previously exist) by including such a measure.

## Method

### *Participants*

Data were collected from a sample of Jewish train passengers in various locations across Israel. We wanted to include respondents with demographic characteristics paralleling the national averages. In total, 94 passengers (49 women, 44 men, one unidentified) completed the questionnaires. Their ages ranged between 19 and 54 years ( $M = 30.59$ ,  $SD = 7.66$ ). In terms of political orientations, 25.8% self-identified as rightists (hawks), 29% identified as leftists (doves), and 37.6% identified as "center" (seven participants did not specify their political orientation accounting for 7.5% of the sample). With regard to religiosity, 17.6% were observant, 24.2% were traditional, and 58.2% were secular Jews.

### *Procedure*

Extinction threat was manipulated by altering Israel's perceived coping capabilities with the Iranian threat. Participants were randomly assigned to one of three conditions (high extinction threat, low extinction threat, and control condition). Both in the high and the low extinction threat conditions, participants were exposed

to a short paragraph that was ostensibly written by a former Israeli Defense Force (IDF) senior intelligence officer in his latest book. Participants were told that the text revealed new information regarding how well Israel is prepared to deal with a future nuclear attack. In both texts, participants were told that Israel's security apparatus recently conducted a simulation aimed at testing its capability of dealing with the Iranian threat.

In the high extinction threat condition, participants were told that the simulation revealed that in case of a nuclear attack "Israel does not have the capabilities of preventing such an attack or deal properly with its consequences." They also read that

in "off the record" conversations, the Israeli chief of staff warned the prime minister that: "If Israel does not make an immediate change in policy, the state as we know it today might not exist in the future in light of the Iranian nuclear capabilities."

On the other hand, the text of the low extinction threat condition stated that the simulation revealed that "Israel has the capabilities of preventing such an attack and deal properly with its consequences" and that in "off the record" conversations, the chief of staff told the prime minister that: "If Israel continues its current policy, the state as we know it today will continue to exist in the future, in light of the Iranian nuclear capabilities."

The control group was given a text concerning environmental issues. No threat-related information was included in this passage and no mention was made to Iran or its nuclear capabilities. The format, the structure, and word count, however, were similar in all three texts.

### *Measured Variables*

*Manipulation check.* Two items ( $\alpha = .85$ ) were used to assess participants' perceived national coping capabilities. These items were: "Israel's armed capabilities will enable it to cope with any future threat," and "The resiliency of the Israeli

state and society will enable Israel to survive any future attack,” anchored at 1 (*strongly disagree*) and 5 (*strongly agree*).

*Collective angst.* Five items adapted from Wohl and Branscombe (2009) were used to assess collective angst ( $\alpha = .92$ ). These items were: “I feel confident that Israel will survive”(reversed), “I feel secure about the future of Israel” (reversed), “I feel anxious about the future of Israel,” “I feel that Israel will always thrive”(reverse), and “I feel concerned that the future vitality of Israel is in jeopardy.” Items were anchored at 1 (*strongly disagree*) and 5 (*strongly agree*). High scores represented greater felt collective angst.

*Willingness to bargain with Hamas for Gilad Shalit.* We assessed Israelis’ willingness to bargain with Hamas for Gilad Shalit with a single item anchored at 1 (*strongly oppose*) and 5 (*strongly support*). This item asked participants the extent to which they “think that the Israeli government should exchange Shalit for about 1,000 Palestinian prisoners.”

## Results

### *Manipulation Check and Preliminary Analysis*

Our initial analysis revealed an effect of the experimental condition,  $F(2, 91) = 7.86, p = .001, \eta_p^2 = .14$  on the two-item scale assessing national coping capabilities. Given that the groups included unequal number of participants, we used Fisher LSD post hoc tests as a procedure for comparison. As expected, participants in the low extinction threat condition ( $M = 4.17, SD = 0.88$ ) scored significantly higher on the manipulation check scale than those in the high extinction threat condition ( $M = 3.39, SD = 0.80$ ),  $p = .001$ . While those in the high extinction threat condition scored significantly lower than the control condition ( $M = 4.11, SD = 1.03$ ),  $p = .02$ , no statistical differences in levels of perceived coping capabilities were found between the participants

in the low extinction threat and control conditions ( $p = .84$ ). Therefore, for the purpose of the main analysis, we collapsed across these two groups (identified as the collapsed low extinction threat condition).<sup>3</sup> In addition, we examined whether political orientation predicted our mediating variable (i.e., collective angst) and our dependent variable (i.e., support for bargaining with Hamas). Results indicate that while political stance did not predict levels of collective angst among participants  $\beta = -.06, t(92) = -0.64, p = .51$ , it did significantly predict support for bargaining with Hamas  $\beta = .34, t(92) = 3.52, p < .001$ . Finally, we also tested possible interactions of Condition  $\times$  Sex and Condition  $\times$  Political Orientation on all research variables, but neither of these interactions yielded significant results. As such, we collapsed across sex and political orientation for all subsequent analyses.

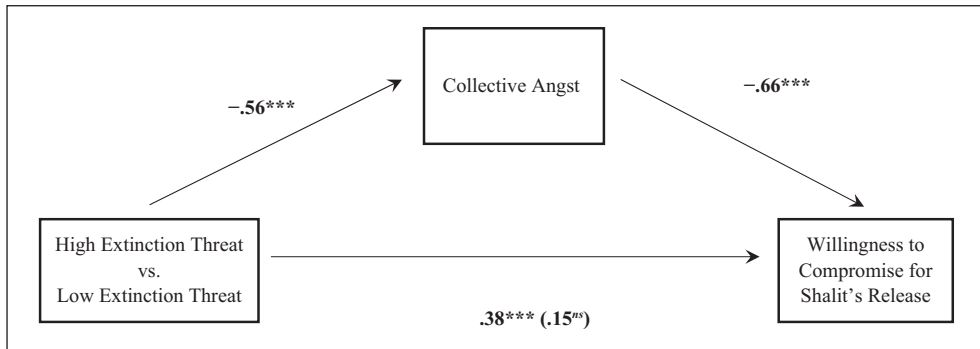
### *Main Analysis*

*Collective angst.* As we predicted, a one-way ANOVA revealed a main effect of the extinction threat manipulation,  $t(92) = 6.61, p < .001, d = 1.45$ . Specifically, levels of collective angst were significantly higher in the high extinction threat condition ( $M = 3.15, SD = 0.79$ ) than in the collapsed low extinction threat condition ( $M = 1.92, SD = 0.89$ ).

*Willingness to bargain with Hamas for Gilad Shalit.* A one-way ANOVA also showed a main effect of the extinction threat manipulation on willingness to exchange Shalit for 1,000 Palestinian prisoners,  $t(92) = -3.99, p < .001, d = .89$ . Israelis were less supportive of bargaining with Hamas for the release of Shalit under extinction threat due to Iran ( $M = 2.57, SD = 1.00$ ) than when threat was not present ( $M = 3.57, SD = 1.23$ ).

### *Mediation Analysis*

We next examined whether the association between the extinction threat manipulation and support for bargaining with Hamas for Shalit could be explained by collective angst. We employed Baron



**Figure 1.** Collective angst mediates the relationship between coping capabilities and support for the Shalit release bargain.

and Kenny's (1986) regression procedure for testing mediation. We know from the ANOVAs that there was a significant effect of the manipulation on both variables. Importantly, collective angst predicted support for bargaining,  $\beta = -.66, p < .001$ ; the more collective angst experienced, the less willing Israelis were to bargain with Hamas. We then proceeded to test the full mediation model (see Figure 1). The manipulation variable (0 = high extinction threat; 1 = collapsed low extinction threat) and collective angst were entered into a regression equation with support for bargaining as the dependent variable,  $R^2 = .24, F(2, 91) = 33.47, p < .001$ . The coefficient associated with collective angst,  $\beta = -.63, p < .001$ , but not the manipulation variable,  $\beta = .02, p = .82$ , significantly predicted support for bargaining with Hamas. The results indicate that, as we hypothesized, collective angst mediated the effect of the extinction threat manipulation on levels of support for the Shalit release bargain.

We then used the Preacher and Hayes (2008) bootstrapping technique with 5,000 iterations to determine whether the indirect effect of extinction threat on willingness to bargain with Hamas, via collective angst, was significantly different than zero. The indirect effect was estimated to lie between .46 and 1.22 with 95% confidence interval. Because zero is not in the 95% confidence interval, the indirect effect is indeed significantly different from zero at  $p < .05$  (two-tailed).

## Discussion

The results of Experiment 1 provide strong support for our general hypothesis that perceived ability to contend or cope with an external threat in one intergroup context can influence how the group wants to engage an intergroup threat from a different source. Specifically, when Israelis believed their country was under extinction threat due to Iranian nuclear threat they were less willing to bargain with Hamas (in this case for the release of Shalit). Importantly, this effect was mediated by collective angst—support for bargaining decreased in the high extinction threat condition to the extent that participants experienced concern for Israel's future.

This research provides support for the notion that collective angst can drive intergroup relations (see Wohl et al., 2010; Wohl et al., 2012). The innate anxiety of annihilation creates an ever-present potential for anxiety that leads to the desire to bolster and defend existing societal beliefs (Hirschberger & Pyszczynski, 2011; Pyszczynski, Greenberg, & Solomon, 1997). For example, studies in the framework of the terror management theory have found that mortality salience increased Israelis' support for conducting violent acts in retribution of violent acts committed against them (Hirschberger, Pyszczynski, & Ein-Dor, 2009), as well as led right-wing Israelis to support violent resistance against policies that threatened their worldviews (Hirschberger &



Ein-Dor, 2006). Indeed, according to Bar-Tal and colleagues (Bar-Tal, 2001; Bar-Tal, Halperin, & de-Rivera, 2007) people who are concerned with their group's future are likely to have a defensive posture, reluctant to making compromises in ongoing negotiations.

The results show that perceived ability to cope with an extinction threat has implications not only for relations with the source of the extinction threat, but also for relations with other groups that pose a threat. If Israelis perceive themselves as unprepared to deal with an Iranian nuclear threat, signing an agreement with another intergroup rival like Hamas involves a high component of risk. The uncertainty and high perceived threat embedded within the feeling of collective angst that stems from Iran, in turn prevented people from taking (perceived unnecessary) risks with Hamas.

## Experiment 2: Negotiating With the Palestinian Authority

The purpose of Experiment 2 was to assess a possible condition under which collective angst might facilitate willingness to engage an adversary in negotiation. To address this possibility, we once again use the Palestinian–Israeli conflict as a backdrop. However, instead of assessing Israelis' willingness to compromise with Hamas under conditions of extinction threat, we turn our attention to the Palestinian Authority—a group with which, according to our pilot study, Israelis see a plausible linkage between a successful negotiation and the reduction of the Iranian threat.

Representatives in the Obama administration in the United States (USA) have also put forward the proposition that compromise with the Palestinian Authority might undercut Iran's ability to use nuclear weapons against Israel. Moreover, senior publicists both in the USA and Israel have repeatedly noted a possible reciprocal threat reduction between peace with the Palestinians and the Iranian threat (Ignatius, 2010; Jones, 2010; Patraeus, 2010; Rogin, 2010). Specifically, rhetoric has focused on the proposition that peace with the Palestinians via the Palestinian

Authority would enable the creation of a coalition (consisting of the USA and moderate Arab states) that could tackle the Iranian nuclear program thereby neutralizing the extinction threat to Israel.

In line with the aforementioned reasoning, we sought to test a chain model in which extinction threat would lead Israelis to express more collective angst, which in turn would lead them to make a stronger connection between the Iranian threat and the compromises required in the Israeli–Palestinian conflict (i.e., higher reciprocal threat reduction). Finally, we also hypothesized that the perceived reciprocal threat reduction between the two political domains would increase Israelis' willingness to make compromises in the negotiation with the Palestinian Authority.

## Method

### *Participants*

Akin to the preliminary study and Experiment 1, data were collected from a sample of Jewish train passengers in various locations around Israel. In total, 54 passengers (23 women, 31 men) completed the questionnaires. Their ages ranged between 18 and 71 years ( $M = 32.42$ ,  $SD = 11.97$ ). In terms of political orientations, 35.8% self-identified as rightists (hawks), 32.1% identified as leftists (doves), and the remaining 32.1% identified as “center.” With regard to religiosity, 44.4% defined themselves as secular, 53.8% defined themselves as religious to some extent (one subject did not report level of religiosity).

### *Procedure*

The extinction threat manipulation for Experiment 2 mimicked that of Experiment 1. However, because the low extinction threat and control conditions did not differ significantly on any of the measured variables in Experiment 1, and because the effect was driven by the high extinction threat condition, we included two (instead of three) conditions in the current experiment—extinction threat and a control condition that was identical to

the one used in the first study (i.e., the environmental text). We chose the control manipulation rather than the low extinction threat manipulation because we wanted a control condition that was not related to the Iranian nuclear threat or the Palestinian–Israeli conflict.

### Measured Variables

**Manipulation check.** The two manipulation check items used in Experiment 1 were used again for Experiment 2 ( $\alpha = .81$ ).

**Support for compromises with the Palestinian Authority.** Four items ( $\alpha = .85$ ) anchored at 1 (*strongly disagree*) and 5 (*strongly agree*) were used to test willingness to compromise. These items were: “Israel should begin negotiating the core issues with the Palestinians (borders, Jerusalem, security and refugees),” “Israel should not bend its stance with the Palestinians” (reversed), “Israel should not agree to evacuate any settlements during the negotiations” (reversed), and “In order to reach ‘end of conflict’ with the Palestinians, Israel will have to make some difficult compromises.” Higher scores represent greater willingness to compromise.

**Possible mediating variables.** The first hypothesized mediating variable, *collective angst* was measured with the same scale used in the previous studies with one minor difference. Due to English–Hebrew translation problems we dropped the following item from the original scale: “I feel that Israel will always thrive” (reverse-scored), thus leaving a 4-item scale ( $\alpha = .70$ ). The second hypothesized mediating variable, *perceived reciprocal threat reduction*, assessed the believed connection between compromises with the Palestinian Authority and the reduction of the Iranian threat. Two items ( $\alpha = .62$ ) were used: “America will invest more in dealing with the Iranian threat on Israel if Israel expresses more flexibility in its relations with the Palestinian Authority” and “Iran will be a threat to Israel whether a compromise is reached with the Palestinian Authority or not” (reversed). All items were

anchored at 1 (*strongly disagree*) and 5 (*strongly agree*).

## Results

### Preliminary Analyses

As expected, participants in the control condition ( $M = 4.40$ ,  $SD = 1.13$ ) scored significantly higher on the coping capabilities manipulation check scale than those in the extinction threat condition ( $M = 3.74$ ,  $SD = 1.08$ ),  $t(52) = 2.16$ ,  $p = .03$ ,  $d = .59$ . As in Experiment 1, we also examined whether political orientation predicted our mediating variables (i.e., collective angst and perceived reciprocal threat reduction) and our dependent variable (i.e., support for compromises with the Palestinian Authority). Results indicate that political orientation did significantly predict levels of angst,  $\beta = .37$ ,  $t(52) = 2.88$ ,  $p = .006$ , perceived reciprocal threat reduction,  $\beta = .49$ ,  $t(52) = 4.03$ ,  $p < .001$ , as well as support for compromises with the Palestinian Authority,  $\beta = .67$ ,  $t(52) = 6.61$ ,  $p < .001$ . Thus, we examined possible interactions of Condition  $\times$  Political Orientation as well as Condition  $\times$  Sex on all research variables. However these did not yield significant results. As such, we collapsed across sex and political orientation for all subsequent analyses.

### Main Effects

As predicted, levels of support for compromises with the Palestinian Authority were significantly higher in the high extinction threat condition ( $M = 4.17$ ,  $SD = 1.19$ ) than in the control condition ( $M = 3.45$ ,  $SD = 1.36$ ),  $t(52) = -2.06$ ,  $p = .04$ ,  $d = .57$ . Also in line with our predictions, the extinction threat manipulation significantly affected both hypothesized mediators. Participants in the extinction threat condition ( $M = 3.84$ ,  $SD = 0.08$ ) scored significantly higher on the collective angst scale than those in the control condition ( $M = 3.15$ ,  $SD = 1.10$ ,  $t[52] = -2.56$ ,  $p = .01$ ,  $d = .71$ ). In addition, participants in the extinction threat condition ( $M = 3.44$ ,  $SD = 1.02$ ) perceived the reciprocal threat reduction between the resolution

**Table 1.** Bivariate correlations among research variables.

	Mean (SD)	1	2	3	4
1. Coping capabilities	4.09 (1.14)	1			
2. Collective angst	3.47 (1.02)	-.56**	1		
3. Perceived "reciprocal threat reduction"	2.88 (1.08)	-.37*	.31*	1	
4. Support for compromises	3.78 (1.32)	-.42**	.30*	.47**	1

\*Correlation is significant at the 0.05 level (two-tailed).

\*Correlation is significant at the 0.01 level (two-tailed).

\*\*\*Correlation is significant at the .000 level (two-tailed).

of the Israeli–Palestinian conflict and the Iranian threat as higher than those in the control condition ( $M = 2.74$ ,  $SD = 1.09$ ),  $t(52) = -2.41$ ,  $p = .05$ ,  $d = .66$ .

### Chain Model Analysis

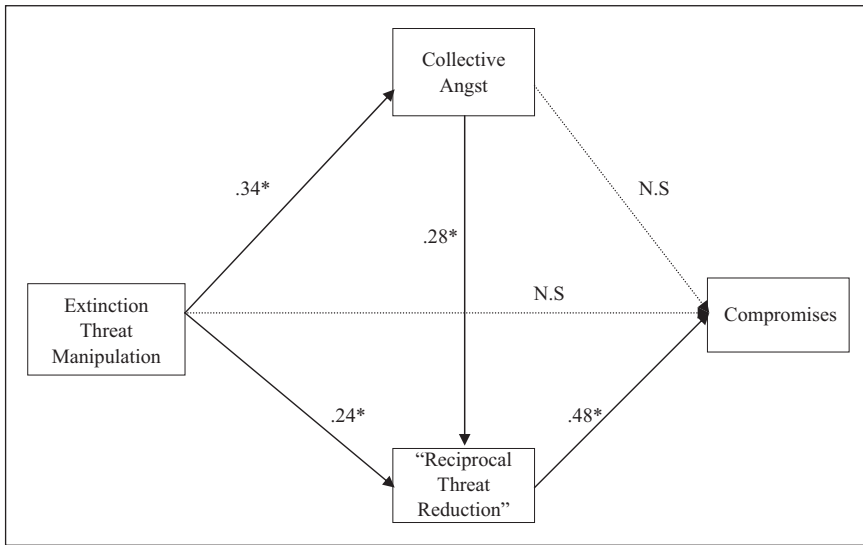
To test the hypothesized chain model in which collective angst and perceived reciprocal threat reduction mediated the effect of the extinction threat manipulation on support for making compromises in the context of the Israeli–Palestinian conflict, we used structural equation modeling with latent variables, using AMOS Version 7.0 (Arbuckle, 2006; see Table 1 for all bivariate correlations among research variables). The extinction threat manipulation was specified as exogenous in the model, collective angst and perceived reciprocal threat reduction as mediators, and support for compromises as an endogenous, dependent variable. In line with our prediction, collective angst was specified as the first mediator, and then the reciprocal threat reduction as the second one. Modification indices led to the addition of a direct path between the extinction threat manipulation and perceived reciprocal threat reduction.

Our hypothesized model fit the data well,  $\chi^2(2) = 2.30$ ,  $p = .32$ ; NFI = .93, CFI = .99, IFI = .99, RMSEA = .05. Standardized parameter estimates are presented in Figure 2. As expected, the extinction threat manipulation was positively associated with collective angst ( $\beta = .34$ ,  $p < .001$ ), which in turn predicted the perceived

reciprocal threat reduction ( $\beta = .28$ ,  $p < .001$ ). As mentioned, reciprocal threat reduction was also directly predicted by the manipulation ( $\beta = .24$ ,  $p < .001$ ), suggesting that the extinction threat manipulation led to increased perceived reciprocal threat reduction both directly and through the mediation of collective angst. Finally, perceived reciprocal threat reduction turned out to be a strong and powerful predictor of support for compromises in the negotiation with the Palestinians ( $\beta = .48$ ,  $p < .001$ ). Interestingly, the paths between the extinction threat manipulation and support for compromises on the one hand, and collective angst and support for compromises on the other hand, were not significant.

### Alternative Chain Models

To further support our model, we examined two alternative models that could potentially gain some theoretical support. The first one is a direct model in which both mediators were positioned as exogenous variables in parallel to the original exogenous variable—the extinction threat manipulation. The fit measures show that the model fitted the data poorly,  $\chi^2(3) = 10.9$ ,  $p = .01$ ; NFI = .57, IFI = .65, CFI = .59, RMSEA = .22. Finally, we also examined a model with a reversed causal relation, that is, perceived reciprocal threat reduction predicted collective angst and not vice versa. As we expected, the fit measures of that model were also poor,  $\chi^2(2) = 9.3$ ,  $p = .01$ ; NFI = .63, IFI = .69, CFI = .62, RMSEA = .26.



**Figure 2.** Collective angst and perceived “Reciprocal Threat Reduction” mediate the effect of extinction threat manipulation on support making compromises in the negotiation with the Palestinians. Results from a Structural Equation Model.

## Discussion

The results of the second experiment confirm our initial hypothesis—cases in which negotiation and compromises with one group are perceived as potential buffers in the face of the extinction threat posed by another group led to an increase in the support for making compromises. Interestingly, the findings also show that these hypothesized relations are mediated through both collective angst and enhanced perceived reciprocal threat reduction between the two sources of threat. The results point to the potential constructive role extinction threat and collective angst can play in intergroup relations.

## General Discussion

Intergroup relations are complex and become more so within a strained or adversarial context. To move relations forward there is often a need to negotiate and compromise. Even with this knowledge, and even with the desire for peace, willingness to negotiate with an adversary group can ebb and flow. In the current research, we

examined the effect of extinction threat on willingness to support conciliatory actions with an adversary. Specifically, we examined Israelis’ willingness to compromise with either Hamas or with the Palestinian Authority to the extent that they perceived Israel as able to cope with a nuclear capable Iran.

Our framework for understanding when compromise will or will not be supported stems from a functional account of emotion (Keltner & Gross, 1999). Specifically, we started with the notion that while each emotion has a single, unique emotional goal, the more practical action tendencies that are meant to serve that goal may vary depending on the specific context and appraisals. This framework led us to the following hypothesis: support for conciliatory actions following an extinction threat will vary depending on whether or not such actions are perceived as capable contributors to the effort of reducing the extinction threat. When advances in the peace process are deemed possible and deemed an extinction threat buffer, willingness to negotiate should be enhanced, that is, a dove stance should be taken, following an extinction threat. However,

if advances and extinction threat reduction are deemed impossible through the peace process, extinction threat should lead to a hard line or hawkish stance in terms of willingness to negotiate.

Instead of assessing this hypothesis directly in a laboratory setting by altering the target of the potential compromise, we used two different real-world negotiation situations—Israel's adversarial relations with Hamas as well as with the Palestinian Authority. To be clear, it is not appropriate to compare the situation between Israel and the Palestinian Authority with the situation between Israel and Hamas. There are clear differences between the compromise Israel would be required to make with Hamas and the compromise Israel would be required to make with the Palestinian Authority, to say nothing of the difference in the very nature of the intergroup relations that Israel has with these two groups. Indeed, we were able to demonstrate the distinct nature of these two adversarial relations in the eyes of Israelis in the preliminary study. Specifically, results of this study revealed that Jewish Israelis accepted the plausible linkage between a successful negotiation and the reduction of the Iranian threat much more when it was connected to the negotiation with the Palestinian Authority than when it was connected to the negotiation with Hamas. With this knowledge, we examined the opposite roles extinction threat (and by extension collective angst) can play during the process of intergroup negotiation in two different experiments—one with Hamas as the target group and the other with the Palestinian Authority as the target group.

In Experiment 1, we manipulated the presence of an extinction threat by telling Israelis that Israel could or could not contend with a nuclear attack by Iran. We then assessed willingness to negotiate with Hamas. As predicted, Israelis were less willing to bargain with Hamas—a group that according to their beliefs, cannot contribute to the reduction of the Iranian threat—when they believed Iran's nuclear program was an extinction threat to Israel. It seems that in hope of strengthening their future, Israelis refused to negotiate

with a group that is perceived as illegitimate partner in peace, especially when faced with a threat to their very existence. Put another way, Israelis were reluctant to engage their enemy or support peaceful resolutions to the intergroup conflict to the extent that an extinction threat heightened collective angst.

Importantly, the results of the current research also demonstrated an avenue of hope for peace. Experiment 2 showed that in the context of negotiations with the Palestinian Authority—with which Israelis do believe that an agreement is plausible that can reduce the Iranian threat—perceived inability to contend with the Iranian nuclear threat led to greater willingness to negotiate and compromise. Furthermore, results supported the hypothesized chain that leads to willingness to negotiate and compromise. Specifically, extinction threat resulted in a heightening of collective angst and belief that negotiating with the Palestinian Authority would reduce the Iranian threat. The outcome of this chain was a greater willingness to compromise with the Palestinian Authority to achieve a peace agreement between Israelis and Palestinians (in the West Bank).

### *Implications of the Current Findings*

Previous research (e.g., Halperin, 2011; Maoz & McCauley, 2005, 2009) has demonstrated that perceptions of threat negatively influenced the probability of a successful negotiation process. In this light, the results of Experiment 1 are not surprising. Furthermore, recent studies in the field of emotions in individual conflicts (e.g., Cesario, Plaks, Hagiwara, Navarrete, & Higgins, 2010; Fischer & Roseman, 2007) as well as intergroup conflicts (e.g., Gayer, Tal, Halperin, & Bar-Tal, 2009; Halperin et al., 2011; Reifen-Tagar, Halperin, & Federico, 2011; Spanovic, Lickel, Denson, & Petrovic, 2010) have demonstrated the pluripotentiality of emotions, that is, seemingly negative emotions like anger can sometimes be constructive in the context of conflict and negotiations. Indeed, the behavior elicited from the experience of a particular emotion depends

on how the relations between the ingroup and an adversarial group are framed. For example, Spanovic et al. (2010) showed that fear of the outgroup was related to increased motivation for aggression in the context of an ongoing conflict, but was negatively related to aggression in a conflict that had been resolved. In line with this finding, the results of the current research suggest that collective angst has pluripotentiality—it undermines willingness to compromise in some contexts, but will facilitate it in others.

The current studies build on, but also extend these previous findings in at least four different ways. First, we were able to manipulate rather than simply measure extinction threat and collective angst. Thus, we were able to show a causal path toward (and away from) willingness to compromise with an adversary group. Second, while previous research has shown an association between how threatening an outgroup is perceived to be and willingness to compromise with that very same group, we showed that the effects of extinction threat from one group can impact conciliatory actions targeted at another group. Third, while the Spanovic et al. (2010) study demonstrated constructive association between fear and attitudes toward an adversary group in a resolved conflict, we showed how collective angst could be constructive in an ongoing conflict (in terms of willingness to compromise with the adversary group). Finally, the current research is (to our knowledge) the first to examine the mechanism through which collective angst can positively influence the course of the negotiations—perceived reciprocal threat reduction.

The current research also provides some practical insights for those actively involved in attempts to resolve long-term intergroup conflicts in general and the conflict in the Middle East in particular. Since negative intergroup emotions like collective anger, humiliation, and angst are inherent part of almost any protracted intergroup conflict, regulation of these emotions constitutes one of the most important, yet frustrating, challenges. The results of the current research suggest that to influence intergroup relations in a

positive way we should not aim to alter the magnitude of the experienced emotion, but instead alter the specific response tendencies elicited by the emotion (see Halperin et al., 2011).

### *Limitations and Future Directions*

Some limitations of the current research should be noted. First, we used community samples in all three studies instead of standard student samples. However, given that student samples in Israel, as well as in other Western societies, are biased toward the secular political left, and given the centrality of the participants' political orientation for our investigation, we decided to use a more heterogeneous sample that would better represent the various political views within the Israeli society. Second, we focused on one side of the conflict without a proper examination of the other party—Palestinians in the case of the current work. For example, it would be interesting to assess Palestinians' willingness to compromise with right- versus left-leaning political parties in Israel when collective angst is heightened. Moreover, some attention to differences in the power balance might influence the pattern of results. One notable question is whether collective angst can play a similar constructive role among the weaker party in a conflict, or whether it is only the privilege of the strong party.

Importantly, as already mentioned, we used two different real-world negotiation situations to test our hypothesized model. This was done instead of directly manipulating all relevant research variables in a unified laboratory experiment. Although we believe that our approach has clear merits, future studies should manipulate rather than measure reciprocal threat reduction alongside collective angst. Spencer, Zanna, and Fong (2005) suggest that manipulating the mediators in a model is the best way to assess the validity of a chain model. Doing so would also enable comparisons between the proposed model and alternative models (e.g., a model in which reciprocal threat reduction moderates rather than mediates the effect of collective angst on support for compromises).

## Conclusion

The current findings are unique and intriguing since they highlight a psychological process that at times can be considered as a powerful obstacle for peace, but under different circumstances can also be seen as a peace facilitator. Interestingly, by using real-world events and highly involved population, we also uncovered the concrete circumstances under which collective angst operates as either a peace barrier or a peace facilitator. The results suggest that, maybe counterintuitively, peace processes can benefit if adversarial groups are made to recognize that their mere existence might be in danger, especially if it is coupled with the recognition that peace can enhance their coping capabilities with the extinction threat.

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## Notes

1. All authors contributed equally to this research.
2. It is important to note that we also examined whether political orientation predicted these variables. We found that it did indeed significantly predicted both perceived threat reduction with respect to negotiations with the Palestinian Authority  $\beta = .32$ ,  $t(147) = 4.12$ ,  $p < .001$ , as well as perceived threat reduction with respect to negotiations with Hamas  $\beta = .18$ ,  $t(149) = 2.30$ ,  $p = .02$ . Moreover we found that political orientation significantly predicted people's beliefs on whether a peaceful agreement with the Palestinian Authority would bring an end to the conflict and the violence in the Middle East  $\beta = .32$ ,  $t(149) = 4.23$ ,  $p < .001$ , as well as their beliefs on whether a prisoner exchange bargain deal with Hamas would bring an end to the conflict and the violence in the Middle East  $\beta = .20$ ,  $t(149) = 2.50$ ,  $p = .01$ .
3. It is important to note that no statistically significant differences were found between the control condition and the low extinction threat condition on all of the research variables (collective angst:  $t[59] = -.00$ ,  $p = .99$ ; willingness to bargain with Hamas:  $t[59] = 0.869$ ,  $p = .38$ ).

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