

## ARTICLE

# How our ideological out-group shapes our emotional response to our shared socio-political reality

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## Abstract

What shapes our emotional responses to socio-political events? Following the social identity approach, we suggest that individuals adjust their emotional responses to socio-political stimuli based on their ideological out-group's responses, in a manner that preserves the comparative and normative fit of ideological in-group–out-group categories. In Study 1 and Study 2 (pre-registered), Jewish-Israeli leftists and rightists were exposed to their ideological out-group's alleged emotional response to a stimulus associated with Israeli-Palestinian relations, which was either stereotypical (leftists expressing low anger and rightists expressing high anger) or non-stereotypical (leftists expressing high anger and rightists expressing low anger). Across studies, participants reported more positive affect towards their ideological out-group when its response to the stimulus was non-stereotypical versus stereotypical, yet their own response to the stimulus became more “extreme” (towards the low end of the anger scale for leftists, and towards the high end of the anger scale for rightists), shifting farther away from their ideological out-group norm. Our findings suggest that in highly polarized contexts, where “leftist” and “rightist” identities are largely defined in comparison to one another, the “positioning” of ideological groups relative to one another plays a role in shaping their responses to their shared socio-political reality.

## KEYWORDS

group-based emotions, intergroup relations, political ideology, self-categorization theory, social identity theory

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## INTRODUCTION

In polarized societies, political leftists and rightists tend to perceive, evaluate and react to salient socio-political issues in very different ways. For instance, in Israel, political rightists are more sceptical of concessions to Palestinians, respond with greater anger to Palestinian actions against Israel, and react more negatively to policies advocating for the separation of religion and state, as opposed to political leftists (Yair, 2022). Meanwhile, in the United States, conservatives are known to respond more critically to issues related to ethnic and racial diversity than their liberal counterparts, and are more likely to endorse a confrontational approach towards countries or groups that are perceived as threatening American interests (Pew Research Center, 2017).

These seemingly consistent differences raise the following question: do opposing ideological groups inherently differ in their emotional and attitudinal responses to socio-political issues, or do they regulate or modify their responses based on their ideological adversaries' responses? For example, would Jewish-Israeli rightists report even higher anger towards a particular Palestinian action if they learned that Jewish-Israeli leftists respond with non-stereotypical high anger? Similarly, would US liberals respond even more positively to affirmative action programmes for racial and ethnic minorities if they learned that conservatives show an atypically positive response?

This research explores how individuals' emotional response to politically relevant stimuli can be influenced by the emotional reactions of their ideological opponents. While previous studies have shown that the salience of one's oppositional out-group, or of its *stereotypical* positions, serve as cues for the in-group's reactions and attitudes (Goren et al., 2009; Ledgerwood & Chaiken, 2007; Nicholson, 2012; Ruys et al., 2007; Schubert & Häfner, 2003; Spears et al., 2004), our study is the first to directly test how the in-group's responses to political stimuli vary along with *variations* in the responses of their out-group. Following the social identity approach (Tajfel & Turner, 1979; Turner, 1985; Turner et al., 1987), we hypothesized that when the ideological out-group's response to a socio-political stimulus is non-stereotypically close to (rather than stereotypically distant from) the in-group norm, ideological in-group members will contrast their response *away* from that of the out-group by demonstrating a more extreme response to the stimulus, namely, align with a more extreme version of the in-group norm. We examined this hypothesis in the context of Jewish-Israeli leftists' and rightists' emotional responses to stimuli associated with the highly polarizing issue of Israeli-Palestinian relations.

### Competitive intergroup contexts and ideological intergroup relations

According to the social identity approach, which includes social identity theory (SIT; Tajfel & Turner, 1979) and self-categorization theory (SCT; Turner, 1985; Turner et al., 1987), individuals define themselves and others in terms of their social group memberships, from which they derive a sense of value. Positive in-group evaluations are achieved by ensuring that the in-group's norms and features are positively distinct from out-groups on relevant comparison dimensions (Tajfel & Turner, 1979; Turner, 1985).

This approach suggests that when intergroup relations are particularly competitive, in-group and out-group members are particularly likely to accentuate intergroup differences on group-defining domains (Tajfel & Turner, 1979; Turner et al., 1987). The relations between ideological sub-groups in society are often seen as constituting a prototypical example for such a competitive intergroup context. First, in many Western countries, the labels "leftist" and "rightist" are often seen to represent antagonistic social identities, although they do not necessarily reflect coherently organized and objectively antagonistic belief systems (Abramowitz & Saunders, 2006; Greene, 2004; Huddy, 2001; Malka & Lelkes, 2010). In other words, these groups are often defined precisely based on their divergent perspectives on politically relevant issues. Indeed, studies have shown that self-identified leftists and rightists, particularly in highly polarized contexts, tend to perceive the typical ideological positions of their ideological in-group and out-group as more divergent than they actually are (Graham et al., 2012; Harel et al., 2020). Second,

the presence of a shared common superordinate category (i.e. the nation) fosters competition over who represents this category best, thereby increasing group members' tendency to assert intergroup differentiation (Mummendey & Wenzel, 1999).

Previous research has shown that in such highly competitive intergroup contexts, the mere salience of one's oppositional out-group, or of its stereotypical positions, serve as cues for the in-group's own positions. For example, studies have shown that individuals adhere more closely to in-group norms when their oppositional out-group or its norms are made salient, compared to when they are not made salient (Ruys et al., 2007; Schubert & Häfner, 2003; Spears et al., 2004). This pattern was also demonstrated for oppositional ideological groups, with in-group members demonstrating more extreme positions when exposed to the ideological out-group or its prototypical positions, compared to when they are exposed to the in-group or not exposed to any reference group (Goren et al., 2009; Ledgerwood & Chaiken, 2007; Nicholson, 2012). These studies, however, did not vary the (perceived) out-group position, and consequently the extent of (perceived) intergroup differentiation. Will in-group members' responses to a politically relevant stimulus vary along with variations in their ideological out-group's response? More specifically, how will in-group members react when they learn that their out-group's response is non-stereotypically closer to, compared to stereotypically distant from, the in-group's norm?

## Social categorizations and the establishment of fit

According to the social identity approach, people tend to expect and maintain differentiation from comparison out-groups, particularly in highly competitive intergroup contexts. What, then, happens when the out-group supposedly violates this expected intergroup differentiation, by adopting norms or features that are closer than expected to the in-group's prototype? Research inspired by SIT shows that perceived intergroup similarity can have somewhat paradoxical, or ambivalent effects. On the one hand, it elicits more positive affect towards the out-group, indicating greater liking or attraction (see also Chen & Kenrick, 2002), supposedly because perceived or expected differences in the groups' norms and features are the source of mutual dislike (Brown & Abrams, 1986; Byrne et al., 1971; Elad-Strenger et al., 2019; Grant, 1993; McDonald et al., 2017; Schori-Eyal et al., 2019; Stephan, 2013). On the other hand, intergroup similarity on identity-relevant dimensions represents a threat to the in-group's positive distinctiveness (Hornsey & Hogg, 2000; Malovicki Yaffe et al., 2018; Spears et al., 1997), which in turn increases in-group favouring biases which are aimed at re-establishing intergroup differentiation (e.g. Brown & Abrams, 1986; Jetten et al., 2004; Roccas & Schwartz, 1993). Such attempts to clarify intergroup boundaries, which are also termed "reactive distinctiveness" (Jetten & Spears, 1996, 2003), are thought to be driven by individuals' motivation to maintain a sense of positive distinctiveness. Perceived threats to one's group identity, and its subsequent effects, are therefore thought to be particularly pronounced among those who are highly invested in their in-group and in asserting its distinct identity (Jetten & Spears, 2003).

While SIT focuses on the motivational aspects of intergroup differentiation, SCT (Abrams et al., 1990; Hogg et al., 1990; Turner et al., 1987) conceptualizes differentiation as a cognitive and perceptual process (also termed "reflective differentiation"; Jetten & Spears, 1996, 2003). According to SCT, the content of social categories is selectively constructed in a context-specific manner such that it fits our background knowledge and expectations about these categories. One important aspect of fit, which serves as basis for our feature (content) attribution to social categories in any given context, is the extent to which the social categories show high intragroup similarity and high intergroup differentiation ("comparative fit"). SCT therefore predicts, consistent with SIT, that to the extent that people perceive the in-group and out-group as representing distinct social entities, they tend to preserve comparative fit by maximizing the differences between them, particularly when intergroup competition is salient.

When the out-group allegedly encroaches on valued in-group features or norms, comparative fit can be established in one of two ways: either by adopting the out-group's prototypical features and norms, or by contrasting away from the out-group and adopting a more "extreme" version of the in-group norm.

According to SCT, the latter option is more likely: According to this theory, another important aspect of fit is the extent to which each group complies with the normative content of their social category (“normative fit”). In other words, it is important that the observed differences between the groups follow a direction consistent with the normative, specific content of the stereotype relative to the category considered (Oakes et al., 1991). Thus, when a competitive intergroup context becomes salient, in-group members are expected to attribute traits to the in-group and out-group in such a way that both their “comparative” divergence from the out-group and “normative” fit with their in-group prototype are maintained. Consistent with this approach, previous research (e.g. Spears et al., 1997) has shown that intergroup similarity increases in-group members' tendency to perceive themselves in group-prototypical terms (i.e. self-stereotyping).

Inspired by this literature, we propose that in ideologically polarized contexts, ideological in-group members adjust their responses to socio-political stimuli to their ideological out-group's responses, in a manner that establishes or maintains the comparative and normative fit of ideological categories. More specifically, we hypothesized that an unexpected shift in the out-group's position towards that of the in-group will trigger divergence from the out-group in terms of its own responses to the stimulus (*H1*), despite simultaneously increasing intergroup liking (*H2*). To the extent that oppositional ideological groups are defined by their antagonistic responses to certain socio-political issues, ideological group members tend to maintain the expected divergence from their out-group on these issues (comparative fit) in a specific direction (normative fit). Assume, for example, that ideological *group a* stereotypically represents a more “lenient” response to certain socio-political stimuli than its opposing *group b*. If *group b* demonstrates unexpectedly high “leniency” towards these stimuli, *group a* is expected to re-adjust its relative position to *group b* by demonstrating even stronger “leniency” towards these stimuli.

This dynamic, however, would be seen slightly differently from the perspectives of SCT and SIT: While according to SCT, this response would constitute a “reflective” process of adjusting the in-group norm to the “new” out-group norm, SIT would conceptualize it as a “reactive” attempt to restore positive group distinctiveness, motivated by the desire for positive distinctiveness. To explore whether this differentiation process is indeed a motivated one, as proposed by SIT and the “reactive distinctiveness” hypothesis, we also examined the possibility that the hypothesized shift is driven by participants' self-reported desire to maintain distinctiveness from their ideological out-group (*H3*).

## Emotional responses to politics

We examine the hypothesized dynamic in the context of individuals' emotional responses to socio-political stimuli. Research on emotions in the socio-political sphere focuses on “group-based emotions,” which arise from one's group membership and reactions to stimuli relevant to the group as a whole (Mackie et al., 2000; Smith & Lazarus, 1993). Prior studies have shown that emotional responses to group-relevant stimuli significantly impact socio-political attitudes, policy choices and behaviours (Halperin, 2016; Lindner, 2009; Pliskin & Halperin, 2021).

While much group-based emotion research delves into emotional experiences and their effects on attitudes and actions, a growing body of work examines how exposure to others' emotional expressions influences observers' emotions and behaviours. Specifically, research on emotions as social information (EASI; van Kleef, 2009; Van Kleef et al., 2010), which is rooted in the social-functional approach to emotions (e.g. Frijda & Mesquita, 1994), explains how emotional expressions inform observers about the expresser's appraisals and social intentions, thereby shaping observers' thoughts, feelings and actions (Van Kleef, 2016; Van Kleef et al., 2010). In fact, emotional expressions serve as more robust indicators of the expresser's state of mind, enhancing the credibility of their message by signifying emotional investment in the situation (Van Kleef, 2016).

Research also suggests that people actively adjust their group-based emotions based on their in-group's perceived emotional norm, as inferred from fellow in-group members' expressions (Goldenberg et al., 2014; Hatfield et al., 1994; Porat et al., 2020). Regarding socio-political emotions, emotional

expressions from ideological in-group members are a critical reference point, as ideological groups are to a large extent defined by their evaluations and attitudes towards socio-political issues (Goren et al., 2009; Ledgerwood & Chaiken, 2007; Nicholson, 2012; Porat et al., 2016, 2019).

Emotional expressions also play a significant role in regulating intergroup relations, especially in the context of intergroup conflicts (Brett et al., 1998; Cohen-Chen et al., 2019; Elad-Strenger et al., 2019; Nadler & Liviatan, 2006; Van Kleef & Côté, 2007). This research shows that the emotions an out-group expresses towards the in-group impact the in-group's reciprocal emotions and behaviours. However, when it comes to opposing ideological subgroups in any given socio-political context, their relations are shaped not just by their emotions towards each other but also by their contrasting views, perceptions and emotions regarding their *shared socio-political reality*. Additionally, their shared superordinate (i.e. national) identity becomes a battleground for ideological groups vying to represent it best, creating a highly competitive intergroup context, in which maintaining and asserting intergroup differences are particularly likely (Mummendey & Wenzel, 1999).

Following the social identity approach (Tajfel & Turner, 1979; Turner, 1985; Turner et al., 1987), we propose that in politically polarized contexts, individuals' emotional responses to socio-political stimuli are not only anchored on the emotions of their ideological in-group, but are also anchored on, and shaped *in relation* to, the emotions expressed by their ideological out-group. Specifically, our main hypothesis was that (*H1*) when the ideological out-group's response to a socio-political stimulus is non-stereotypically close to (rather than stereotypically distant from) the in-group norm, ideological in-group members will contrast their response away from that of the out-group by demonstrating a more extreme response to the stimulus, namely, align with a more extreme version of the in-group norm. Consistent with previous findings (Brown & Abrams, 1986; Chen & Kenrick, 2002), we also hypothesized that (*H2*) ideological in-group members will report more positive affect towards their ideological out-group in the non-stereotypical versus stereotypical out-group response condition. Taken together, we hypothesized that while an unexpected shift in the out-group's emotional response towards that of the in-group will enhance intergroup liking, it will simultaneously trigger distancing from the out-group in terms of emotional response to the stimuli.

As previously mentioned, the social identity approach is divided on the question whether maintaining comparative and normative fit of social categories is motivated by conscious needs, consistent with SIT (Tajfel & Turner, 1986) and the “reactive distinctiveness” hypothesis (Jetten & Spears, 1996), or simply reflects the cognitive and perceptual outcome of social categorization processes, consistent with SCT (Turner et al., 1987). Most empirical research suggests the latter (Ledgerwood & Chaiken, 2007; Ruys et al., 2007; Schubert & Häfner, 2003; Spears et al., 2004). Nevertheless, as an additional, exploratory hypothesis, we also examined whether between-condition differences in individuals' emotional responses are moderated by participants' self-reported desire for distinctiveness from their ideological out-group (*H3*).

## The present research

We conducted a pilot study (the results of which are reported in the Appendix S1), and two online experiments (Study 1 and pre-registered Study 2), focusing on Jewish-Israeli leftists' and rightists' emotional responses to formal speeches by Palestinian authority figures. The issue of Israeli-Palestinian relations, commonly referred to as the “Israeli-Palestinian conflict” (for a critical discussion of this term, see Hakim et al., 2023), has created a deep ideological divide within the Jewish-Israeli society (Arian & Shamir, 2008; Smooha, 1993). In fact, differing perspectives on the Palestinians and on the desired relations between Israel and the Palestinians have become a defining feature in distinguishing the Jewish-Israeli “left” from the Jewish-Israeli “right” (e.g. Arian & Shamir, 2008), with rightists often adopting a more “hawkish” stance towards Palestinians compared to leftists (Shamir & Arian, 1999). When it comes to the issue of the Palestinians, Jewish-Israelis today identify less with

a particular political party and more with the “leftist” or “rightist” ideological camp as a whole (e.g. Arian & Shamir, 2001).

The divergence in Jewish-Israeli leftists' and rightists' perspectives towards the Palestinians is also evident in their prototypical emotional reactions to Palestinians' actions towards Israel (e.g. Halperin, 2016; Pliskin & Halperin, 2016). In the present research, we focused on Jewish-Israeli leftists' and rightists' anger responses towards formal speeches by Palestinian officials, in which they severely criticize or threaten Israel. Group-based anger, which is a particularly prevalent group-based emotion in conflict situations, is based on the appraisal of the out-group's actions towards the in-group as unjust and unfair (Averill, 1983; Mackie et al., 2000), and is associated with decreased support for concessions and increased support for aggressive policies towards the rival out-group (Cheung-Blunden & Blunden, 2008; Halperin et al., 2011; Mackie et al., 2000). Based on this definition, expressions of anger towards the Palestinians provide important information about the expressor's position towards them: they signal that the expresser perceives Palestinians' actions as illegitimate and immoral, that she believes Palestinians' actions frustrate her desired goals, and that she may object to concessions with the Palestinians and even be willing to support aggressive measures against them. Indeed, and consistent with their narrative of the Israeli-Palestinian relations, Jewish-Israeli rightists typically report higher levels of anger towards Palestinians and their actions against Israel than do leftists (Halperin & Gross, 2011; Porat et al., 2020).

Insofar as Jewish-Israeli leftists' and rightists' prototypical anger responses to Palestinians' actions can be represented, relative to one another, along an “anger” continuum (ranging from high to low anger), we operationalized the between-condition differences in anger in terms of directional “shifts” along that continuum (higher vs. lower anger), consistent with previous literature on group-based emotion regulation (see Halperin, 2016). Following the social identity approach, a “more extreme” response towards the low end of the anger scale for leftists, and towards the high end of the anger scale for rightists, would represent the process of establishing both comparative and normative fit of ideological in-group–out-group categorizations. Specifically, we hypothesized that rightists' anger towards the stimuli will be *higher* when leftists demonstrate non-stereotypically high (vs. stereotypically low) anger, whereas leftists' anger towards the stimulus will be *lower* when rightists demonstrate non-stereotypically low (vs. stereotypically high) anger towards the stimulus (*H1*). At the same time, we hypothesized that leftists and rightists will report more positive affect towards their ideological out-group in the non-stereotypical versus stereotypical condition (*H2*).

Finally, as an exploratory hypothesis, we examined whether the hypothesized “shift” in the in-group emotional response reflects a motivated process of “reactive distinctiveness”, consistent with SIT (Jetten & Spears, 2003). To this end, we asked participants explicitly about their desire for distinctiveness from their ideological out-group and tested this as a moderator of the predicted effect.<sup>1</sup> Insofar as the hypothesized “shift” in the in-group emotional response reflects a consciously motivated attempt to restore differentiation, we would expect a larger shift in emotional response among participants with high (vs. low) desire for ideological intergroup distinctiveness (*H3*).

All participants signed informed consent forms prior to data collection. Data files, SPSS syntax and output files of our studies were deposited in an online data repository: [https://osf.io/26kcz/?view\\_only=2a14d29665d74301af4be4963d246e06](https://osf.io/26kcz/?view_only=2a14d29665d74301af4be4963d246e06).

<sup>1</sup>An alternative would be to treat this variable as a mediator, measuring it right after the manipulation. We treated this variable instead as a moderator, which is measured before the manipulation, for two reasons. First, the “reactive distinctiveness” hypothesis views individuals' motivation to assert the in-group's positive distinctiveness as a moderator of the distinctiveness-differentiation relation (Jetten & Spears, 1996, 2003). Second, measuring the desire for distinctiveness right before participants' rate their own responses to the stimulus may have increased the risk of demand characteristics, namely, led participants to fit their own ratings to their interpretation of the purpose of this study. As expected, given that desire for distinctiveness was measured before the manipulation and that participants were randomly assigned to conditions, desire and condition were not statistically related in both studies, excluding desire for distinctiveness as a potential mediator (see Appendix S1 for analyses).

## STUDY 1

Study 1 examined hypotheses  $H1-H3$  by exposing self-identified Jewish-Israeli leftists and rightists to a speech by Mahmoud Abbas, head of the Palestinian authority, in which he threatens to “un-recognize” the state of Israel. Participants then read a bogus survey reporting that their ideological out-group supposedly expressed either a stereotypical or a non-stereotypical collective response to Abbas' speech: Leftists were exposed to rightists expressing stereotypically high versus non-stereotypically low anger, whereas rightists were exposed to leftists demonstrating stereotypically low versus non-stereotypically high anger.

### Participants

Based on the results of our pilot study (see Appendix S1), we conducted an a-priori power analysis (using G\*Power, Faul et al., 2009) for the sample size needed to detect a small-medium sized two-way interaction in an ANOVA ( $f=0.20$ ), with standard alpha (.05) and power (80%), yielding an estimated sample size of 195 participants. Given the hypothesized moderation effects ( $H3$ ), we also calculated the sample size needed to detect a small three-way interaction ( $f^2=0.02$ ) in a multiple regression (seven total predictors), yielding an estimated sample size of 395 participants. To account for the potential exclusion of participants who failed an attention check item (see below), we aimed to recruit at least 500 participants.

The initial sample included 513 Jewish-Israelis, which were recruited by a professional Israeli survey company to ensure broad sampling of both leftists and rightists. Based on participants' response to a political ideology measure, self-identified rightists received information about the alleged emotional response of leftists, and vice versa for self-identified leftists. In total, 272 self-identified rightists (1–3 on the political ideology scale) and 241 leftists (5–7 on the scale) participated in this study, while self-identified centrists (4 on the scale) were excluded from participation at the onset of the survey. Of the 513 leftists and rightists, we excluded 80 participants who failed the attention check item (all items are presented in the Appendix S1<sup>2</sup>), resulting in a sample of 433 participants (67% female; ages 18–89,  $M_{age}[SD]=29.93[9.09]$ ), of which 204 participants self-identified as rightists and 229 as leftists. A sensitivity power analysis (G\*Power; Faul et al., 2009) indicated that this sample size is sufficient for detecting a small-medium size effect in an ANOVA ( $f=0.13$ ;  $\eta p^2=.016$ ;  $H1-H2$ ), and a small-sized effect ( $f^2$ /partial  $r^2=.018$ ) in a multiple regression ( $H3$ ), based on standard alpha (.05) and power (80%).

### Procedure and measures

Participants completed a demographic questionnaire, including a *political ideology* item (1 = extreme right, 7 = extreme left; recoded such that 1–3 =>0[left] and 5–7 =>1[right]). This item was also recoded to represent the extremity of participants' political ideology (3 and 5 =>0, 2 and 6 =>1, 1 and 7 =>2), which was used as a covariate.

While there are pre-existing measures of perceived *intra*-group differentiation (see Leonardelli et al., 2010) and desire for intra-group distinctiveness (e.g. Badea et al., 2010), inspired by optimal distinctiveness theory (Brewer, 1991), we are not aware of any validated measures assessing individuals' desire for *inter*-group distinctiveness. Hence, we constructed an item with high face validity (“It is important to me that my ideological camp is different from the opposite ideological camp”) which was rated on a scale of 0 (=strongly disagree) to 6 (=strongly agree).

<sup>2</sup>Results held when including the participants who failed the attention check item in the analyses.

Participants then read an article describing a real speech given by Mahmoud Abbas at the time the study was conducted, in which he warns that if President Donald Trump fulfils his promise to relocate the US embassy to Jerusalem, Palestinians will consider “un-recognizing the state of Israel” (see Appendix S1 for full text). We chose this conflict-related stimulus to make the stereotypical emotional experience expected from each ideological group as clear as possible: we assumed that it would induce expectations for high anger among rightists, and for low anger among leftists (Goldenberg et al., 2014; Porat et al., 2016).

After reading the article, participants learned that a survey was conducted among their ideological out-group members (leftists or rightists). This survey, they were told, assessed leftists' or rightists' collective levels of group-based anger (i.e. expressed by most ideological in-group members) in response to the speech (at this stage the results of the survey were yet to be presented). Participants were asked to indicate the *expected collective out-group anger response* (“How do you think most leftists/rightists rated their anger level towards the speech, when asked to do so in the survey?”), on a scale ranging from 0 (=very low anger) to 10 (=very high anger). This item was used to ensure that for the chosen article, the anger response expected of rightists is indeed higher than that expected of leftists.

Participants were then randomly assigned to one of two experimental conditions, in which we manipulated the alleged emotional response of the ideological out-group, using the same procedure used by Goldenberg et al. (2014) to manipulate collective group-based emotions: In both conditions, participants were shown the percentages of out-group participants who “reported high levels of anger at the speech”. In the *stereotypical out-group response condition*, leftists were informed that “81% of rightists reported high levels of anger at the speech”, whereas rightists were informed that “only 19% of leftists reported high levels of anger at the speech”. In the *non-stereotypical out-group response condition*, leftists were informed that “only 19% of rightists reported high levels of anger at the speech”, whereas rightists were informed that “81% of leftists reported high levels of anger at the speech”.

Next, participants rated the extent to which they themselves experienced anger at the speech on a five-item scale (“When I read Abbas speech, I felt anger”, “When I read Abbas' speech, I felt that what he says is unfair towards Israel”, “Reading about one-sided steps made by the Palestinians, like the one described in the speech, makes me feel rage”, “Reading Abbas' speech made me feel upset”, “When I read the speech, I felt unhappy with what Abbas says”; rated on a 0–6 scale<sup>3</sup>;  $\alpha = .94$ ). We were interested in the extent to which participants' emotional response to the stimulus shifts *away* from the alleged out-group response and aligns with a more extreme version of the in-group norm. As this process would be represented by an *increase* in anger among rightists and by a *decrease* in anger among leftists in the non-stereotypical versus stereotypical conditions, leftists' scores on the anger scale were reverse coded, such that for both leftists and rightists, higher scores represent a shift towards increased comparative fit and normative fit. In other words, this recoded scale captures the extent to which participants' own anger response represents *normative differentiation from the out-group*.<sup>4</sup>

Then, participants rated their *positive affect towards their ideological out-group* (three items: “considering their response to the survey, I feel' satisfied/angry [RC]/disappointed [RC] with leftists/rightists”; 0–6 scale;  $\alpha = .69$ ). Participants were also asked to rate their *surprise* with their out-group's response (0–6 scale), used as a manipulation check to ensure that the stereotypical out-group response is indeed more consistent with participants' expectations than the non-stereotypical response. Finally, participants read a debriefing form clarifying that the information presented in our manipulations was written especially for this study.

<sup>3</sup>The measure of participants' own anger used a different metric than the manipulation and the expected out-group anger ratings, to avoid providing participants with a numeric anchor to their responses.

<sup>4</sup>All results held when using participants' raw anger ratings instead of the re-coded normative differentiation scale; see Appendix S1.



## Results

### Preliminary analyses

Table 1 shows means, standard deviations and correlations between the main study variables. To ensure that the non-stereotypical response manipulation indeed violated leftists' and rightists' expectations of their out-group's response, compared to the stereotypical response condition, we first tested whether leftists expected higher levels of anger from rightists than rightists expected of leftists. Indeed, an independent sample *t*-test revealed a significant difference between leftists and rightists in *expected out-group anger* ( $t(431) = -17.01, p < .001, 95\% \text{ CI of difference } [-4.36, -3.46]; \text{Cohen's } d = 2.38$ ), with leftists expecting higher anger from rightists ( $M[SD] = 7.87[2.12]$ ) than rightists from leftists ( $M[SD] = 3.96[2.65]$ ).

Then, to ensure that participants are more surprised when their ideological out-group's response to the speech is non-stereotypical versus stereotypical, we conducted a two-way ANOVA to examine the effects of condition (stereotypical vs. non-stereotypical) and ideology (leftists/rightists) on *surprise with the out-group's response to the survey*. The experimental condition had a significant main effect on surprise ( $F(1,429) = 315.64, p < .001, \eta^2 = .42$ ), which was qualified by a condition  $\times$  ideology interaction ( $F(1,429) = 6.01, p = .015, \eta^2 = .01$ ). As expected, surprise with the out-group's response was higher when the response was non-stereotypical versus stereotypical, among both rightists ( $M[SD] = 3.88[1.94]$  vs.  $M[SD] = 1.39[1.74], p < .001$ ) and leftists ( $M[SD] = 3.87[1.84]$  vs.  $M[SD] = 0.59[1.16], p < .001$ ), with the difference being larger among leftists (Mean difference = 3.28, 95% CI of difference [2.84, 3.72]) than among rightists (Mean difference = 2.49, 95% CI of difference [2.01, 2.95]). These results suggest that the non-stereotypical response condition indeed violated leftists' and rightists' expectations of their out-group's response, compared to the stereotypical response condition.

### Primary analyses

*The effects of the ideological out-group's anger response on the in-group's normative differentiation from the out-group (H1)*

We conducted a two-way ANOVA to examine the interactive effects of condition (stereotypical/non-stereotypical out-group response) and ideology (leftists/rightists) on participants' *normative differentiation* scores, namely, on the extent to which participants' anger responses become more extreme by shifting away from the out-group's norm. The manipulated out-group response had a significant main effect on normative differentiation scores ( $F(1,429) = 12.91, p < .001, \eta^2 = .03$ ), which was not moderated by political ideology ( $F(1,429) = 2.18, p = .140, \eta^2 = .01$ ). Consistent with *H1*, normative differentiation was higher in the non-stereotypical ( $M[SD] = 4.28[1.37]$ ) versus the stereotypical ( $M[SD] = 3.74[1.62]$ ),  $p < .001, 95\% \text{ CI of difference: } [0.23, 0.80]$  condition. In other words, participants demonstrated more extreme anger responses (towards the low end of the anger scale for leftists, and towards the high end

TABLE 1 Means, standard deviations and bivariate correlations between the variables of Study 1, across experimental conditions.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	7
1. Left-wing ideology (dummy-coded)	.53	.50	1					
2. Desire for distinctiveness	2.71	2.14	-.004	1				
3. Expected out-group response	6.03	3.08	.63***	.03	1			
4. Surprise with out-group response	2.41	2.24	-.11*	-.06	.13**	1		
5. Positive affect towards out-group	3.60	1.42	.13**	.01	.03	.52***	1	
6. Normative differentiation from out-group	4.01	1.52	-.13**	.10*	-.17***	.20***	-.03	1

\*\*\* $p < .001, **p < .01, *p < .05$  (two-tailed significance).

of the anger scale for rightists) when their out-group's response was non-stereotypical versus stereotypical (leftists' and rightists' "raw" anger scores in each condition are presented in the Appendix S1, p. 16). Results held when controlling for the extremity of participants' political ideology (see Appendix S1).

*The effects of the ideological out-group's anger response on the in-group's positive affect towards the out-group (H2)*

We conducted a two-way ANOVA to examine the interactive effects of the experimental condition (stereotypical/non-stereotypical out-group response) and political ideology (leftists/rightists) on participants' *positive affect towards the ideological out-group*. The analysis revealed a significant main effect for condition ( $F(1,429) = 190.44, p < .001, \eta^2 = .31$ ), which was qualified by political ideology ( $F(1,429) = 5.62, p = .018, \eta^2 = .01$ ). Consistent with H2, positive affect towards the ideological out-group was higher when its response was non-stereotypical, among both leftists ( $M[SD] = 4.45[.86]$  vs.  $M[SD] = 3.16[1.04]$ ,  $p < .001$ ) and rightists ( $M[SD] = 4.30[1.35]$  vs.  $M[SD] = 2.47[1.39]$ ,  $p < .001$ ), with the difference being larger among rightists (Mean difference = 1.83, 95% CI of difference [1.51, 2.15]) than among leftists (Mean difference = 1.29, 95% CI of difference [0.99, 1.60]). Results held when controlling for the extremity of participants' political ideology (see Appendix S1).

*Desire for intergroup distinctiveness as moderating the in-group's normative differentiation from the out-group (H3)*

To examine whether self-reported desire for intergroup distinctiveness moderates the effects of the out-group's collective anger response on participants' own anger response, we conducted a three-way interaction analysis employing Hayes' (2018) PROCESS regression procedure (model 3). In this analysis, condition (stereotypical/non-stereotypical out-group response), ideology (leftists/rightists) and desire for intergroup distinctiveness were set as predictors, and *in-group normative differentiation from the out-group* was set as the dependent variable. The effect of condition was significant ( $b = -.54, SE = 0.14, t = -3.82, p < .001, [CI] = [-0.82, -0.26]$ , partial  $r^2 = .03$ ). However, neither the condition  $\times$  desire for distinctiveness interaction was significant ( $b = -.03, SE = 0.07, t = -.49, p = .624, [CI] = [-0.17, 0.10]$ , partial  $r^2 = .001$ ) nor was the condition  $\times$  ideology  $\times$  desire for distinctiveness interaction ( $b = .10, SE = 0.14, t = .72, p = .470, [CI] = [-0.17, 0.37]$ , partial  $r^2 = .001$ ). These results suggest that contrary to H3, the effect of the out-group's collective anger response on participants' own anger response was not moderated by self-reported desire for intergroup distinctiveness.

## Discussion

The results of Study 1 indicated that, as hypothesized, Jewish-Israeli leftists' and rightists' emotional response to a socio-political stimulus varied along with variations in the emotions expressed by their ideological out-group. More specifically, when their ideological out-group response was non-stereotypically close to (compared to stereotypically distant from) the prototypical in-group norm, leftists and rightists demonstrated more positive affect towards the out-group, yet shifted their own emotional response to the stimulus farther away from their out-group's response, demonstrating a more "extreme" response to the stimulus itself.

Consistent with the social identity approach, these findings point towards the ambivalent effects of intergroup similarity in competitive intergroup contexts: while it increases intergroup liking (attraction; see also Chen & Kenrick, 2002), it also triggers intergroup differentiation (divergence) along relevant comparison dimensions (e.g. Brown & Abrams, 1986). Specifically, our findings support the basic assumptions of SCT (Turner et al., 1987), which emphasizes the dynamic process of establishing both comparative and normative fit as an essential part of the cognitive and perceptual process of social categorization. Contrary to the assumptions of SIT (Tajfel & Turner, 1979), and the "reactive distinctiveness" hypothesis (Jetten & Spears, 2003) our findings did not support the proposition that this process is motivated by a conscious desire for intergroup distinctiveness. It is possible that, consistent with the reasoning of SCT (Turner et al., 1987), the observed effects indeed reflect an automatic, rather than a deliberate, process of re-establishing comparative and normative

fit by aligning with a more “extreme” in-group norm when exposed to a more “moderate” out-group norm. An alternative possibility is that our single item measure of desire for intergroup distinctiveness failed to fully capture this theoretical construct. In Study 2, we conducted a pre-registered, higher-powered replication of Study 1, using a multi-item measure of desire for intergroup distinctiveness. Finally, it is possible that the in-groups' more extreme responses to the stimulus derives from perceived validation by the out-group response, which supposedly “legitimizes” the in-group's norm, rather than reflecting a process of re-establishing comparative and normative fit. In Study 2, we also tested whether the hypothesized effects are mediated by perceived validation by the out-group response.

## STUDY 2

Study 2 conducted a high-powered, pre-registered<sup>5</sup> replication and extension of Study 1. Alongside *H1–H3*, we also examined the possibility that the hypothesized shift in the in-group's anger response is mediated by perceived validation of the in-group's own positions towards the stimulus (*H4*). We treated perceived validation as a potential mediator in the relations between the manipulated out-group response and participants' own response, for two reasons: First, perceived validation by the out-group is a direct response to the manipulated out-group response and was therefore measured right after the manipulation. Second, perceived validation by the out-group is a more proximal response to the out-group's position than participants' own response to the stimulus.

In this study, self-identified Jewish-Israeli leftists and rightists read a speech by a Palestinian official, this time Mohammad Shtayyeh, the Prime Minister of the Palestinian National Authority. As in Study 1, participants then read the results of a bogus survey, in which their ideological out-group supposedly expressed either a stereotypical or a non-stereotypical collective anger response to the speech: Leftists were exposed to stereotypically high versus non-stereotypically low collective anger of rightists, whereas rightists were exposed to stereotypically low versus non-stereotypically high collective anger of leftists.

## Participants

Based on the results of Study 1, and to increase the power for detecting two- and three-way interactions, we conducted an a-priori power analyses for the sample size needed to detect a small-sized two-way interaction effect ( $f^2 = 0.10$ ) in an ANOVA, and a small sized three-way interaction in a multiple regression ( $f^2 = 0.02$ ; seven total predictors), based on standard alpha (.05) and 90% power.<sup>6</sup> These analyses yielded a sample of 1054 participants for the ANOVA and of 528 participants for the multiple regression. Given the large number of participants who failed the attention check in Study 1, we added a second attention check item (see Appendix S1). Therefore, we aimed to recruit at least 1300 participants for the initial sample.

1315 Jewish-Israelis (717 rightists and 598 leftists, who did not participate in Study 1) were recruited to participate in this online study via an Israeli survey company. As in Study 1, self-identified centrists (4 on the political ideology scale) were excluded from participation at the onset of the survey. Of the 1315 participants who constituted the original sample, we excluded 399 participants who failed one or more of the attention check items.<sup>7</sup> The final sample included 916 participants (57% female; ages 18–84,  $M_{\text{age}}(SD) = 40.81[13.15]$ ), of which 455 participants self-identified as rightists and 461 as leftists. A sensitivity power analysis (G\*Power; Faul et al., 2009) indicated that this sample size is sufficient for detecting a small-sized effect in an ANOVA

<sup>5</sup>[https://osf.io/g82pb/?view\\_only=9c01dd37bc0f4c7d9468bb34a8ac77ce](https://osf.io/g82pb/?view_only=9c01dd37bc0f4c7d9468bb34a8ac77ce).

<sup>6</sup>We originally aimed for 80% power (see pre-registration) but decided to conduct a more high-powered study.

<sup>7</sup>Results held when including the participants who failed the attention check in the analyses.

( $f^2 = 0.09$ ;  $\eta p^2 = .008$ ), and a small-sized effect ( $f^2$ /partial  $r^2 = .011$ ) in a multiple regression, based on standard alpha (.05) and 90% power.

## Procedure and measures

The procedure and measures were identical to those used in Study 1, with three modifications: First, we constructed two three-item scales to measure *desire for distinctiveness*, one representing the individual's desire for distinctiveness between one's own ideological in-group and the ideological out-group (e.g. "It is important to me that the differences between the values and positions of my ideological camp and of the opposite ideological camp are as clear as possible";  $\alpha = .76$ ; Items were inspired, in part, by a distinctiveness threat scale constructed by Schmid et al., 2009), and the other representing the individual's desire to be personally distinct from their opposite ideological group (e.g. "It is important for me to know that I am different from the ideological camp opposite to mine";  $\alpha = .88$ ). Both scales (see Appendix S1 for items) were rated between 0 (=strongly disagree) to 6 (=strongly agree). Since a principal component factor analysis with direct oblimin rotation on all six items yielded one factor (explained variance: 63%), we used the combined scale ( $\alpha = .88$ ) in our analyses.

Second, participants read a new article, in which the Palestinian authority figure blames Israel for intentionally spreading the COVID-19 virus within the Palestinian territories (see Appendix S1 for full text), to reflect current events at the time of the study. Participants then rated the *expected collective out-group anger response* to a survey (as in Study 1) and were randomly assigned to two experimental conditions identical to the ones used in Study 1.

Third, after rating their own *anger at the speech* (five items, 0–6;  $\alpha = .89$ ), *surprise with the out-group's anger response* (single item), and *positive affect towards the ideological out-group* (three items;  $\alpha = .75$ ), participants rated the extent to which the out-group response *validates their ideological in-group's positions towards the speech* ("In their responses to the survey, I felt that rightists/leftists give validity to the positions of my own political camp towards the speech"; 0–6 scale). As in Study 1, participants' ratings of their own anger to the speech were recoded to represent *in-group normative differentiation from the out-group*, such that higher scores represented higher normative differentiation (higher anger for rightists and lower anger for leftists).<sup>8</sup> Finally, participants read a debriefing form identical to the one in Study 1.

## Results

### Preliminary analyses

Table 2 shown means, standard deviations and correlations between the main study variables. As in Study 1, an independent sample *t*-test revealed a significant difference between leftists and rightists in *expected out-group anger levels* ( $t(914) = -19.69$ ,  $p < .001$ , 95% CI of difference  $[-3.69, -3.02]$ ; Cohen's  $d = 2.58$ ), with leftist participants expecting higher anger levels from rightists ( $M[SD] = 8.40[1.96]$ ) than rightists from leftists ( $M[SD] = 5.04[3.08]$ ).

As in Study 1, we then conducted a two-way ANOVA to examine the interactive effects of condition (stereotypical vs. non-stereotypical) and ideology (leftists/rightists) on *surprise with the out-group's response to the survey*. The analysis revealed a significant main effect for condition ( $F(1,912) = 437.42$ ,  $p < .001$ ,  $\eta p^2 = .32$ ), which was qualified by political ideology ( $F(1,912) = 38.72$ ,  $p < .001$ ,  $\eta p^2 = .04$ ). An examination of this interaction revealed that, as expected, both leftists and rightists were more surprised when their ideological out-group anger response was non-stereotypical (leftists:  $M[SD] = 3.94[1.79]$ ;

<sup>8</sup>As in Study 1, results held when using raw anger scores as the dependent variable (see Appendix S1).

TABLE 2 Means, standard deviations and bivariate correlations between the variables of Study 2, across experimental conditions.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Left-wing ideology (dummy-coded)	.50	.50	1						
2. Desire for distinctiveness	3.04	1.42	-.02	1					
3. Expected out-group response	6.73	3.78	.55***	-.01	1				
4. Surprise with out-group response	2.44	2.17	-.04	.07*	-.04	1			
5. Perceived validation by out-group	2.52	1.98	-.27***	.16***	-.14***	.32***	1		
6. Positive affect towards out-group	3.38	1.64	.23***	-.21***	.13***	.25***	.05	1	
7. Normative differentiation from out-group	3.58	1.93	-.79***	.00	-.51***	.06	.26***	-.20***	1

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$  (two-tailed significance).

rightists:  $M[SD]=3.40[2.03]$ ) versus stereotypical (leftists:  $M[SD]=0.79[1.32]$ ,  $p<.001$ ; rightists:  $M[SD]=1.69[1.84]$ ,  $p<.001$ ), with the difference being larger among leftists (Mean difference = 3.16, 95% CI of difference [2.84, 3.48]) compared to rightists (Mean difference = 1.71, 95% CI of difference [1.39, 2.03]), as in Study 1.

## Primary analyses

*The effects of the ideological out-group's anger response on the in-group's normative differentiation from the out-group (H1)*

We conducted a two-way ANOVA to examine the interactive effects of condition (stereotypical/non-stereotypical out-group response) and ideology (leftists/rightists) on the *in-group's normative differentiation from the out-group*. The out-group response condition had a significant main effect on normative differentiation ( $F(1,912)=5.74$ ,  $p=.017$ ,  $\eta^2=.01$ ), which was not qualified by political ideology ( $F(1,912)=1.13$ ,  $p=.289$ ,  $\eta^2=.00$ ). Consistent with *H1* and results of Study 1, normative differentiation was higher in the non-stereotypical ( $M[SD]=3.67[1.96]$ , 95% CI [3.58, 3.79]) versus the stereotypical ( $M[SD]=3.50[1.91]$ , 95% CI [3.39, 3.61]) condition. In other words, participants demonstrated more extreme anger responses (towards the low end of the anger scale for leftists, and towards the high end of the anger scale for rightists) when their out-group's response was non-stereotypical versus stereotypical leftists' and rightists' "raw" anger scores in each condition are presented in the Appendix S1, pp. 22–23). Results held when controlling for the extremity of participants' political ideology (see Appendix S1).

*The effects of the ideological out-group's anger response on the in-group's positive affect towards the out-group (H2)*

We conducted a two-way ANOVA to examine the interactive effects of the experimental condition (stereotypical/non-stereotypical out-group response) and political ideology (leftists/rightists) on participants' *positive affect towards the ideological out-group*. The analysis revealed a significant main effect for condition on satisfaction with the out-group's response ( $F(1,912)=228.24$ ,  $p<.001$ ,  $\eta^2=.20$ ), which was qualified by political ideology ( $F(1,912)=152.92$ ,  $p<.001$ ,  $\eta^2=.14$ ). Consistent with *H2* and with Study 1, both leftists and rightists were significantly more positive towards their ideological out-group when its response was non-stereotypical (leftists:  $M[SD]=3.88[1.28]$ ; rightists:  $M[SD]=4.25[1.51]$ ) versus stereotypical (leftists:  $M[SD]=3.63[1.14]$ ,  $p=.050$ ; rightists:  $M[SD]=1.81[1.42]$ ,  $p<.001$ ), with the difference being larger among rightists (Mean difference = 2.44, 95% CI of difference [2.19, 2.69]) compared to leftists (Mean difference = 0.24, 95% CI of difference [0.002, 0.49]). Results held when controlling for the extremity of participants' political ideology (see Appendix S1).

*Desire for intergroup distinctiveness as moderating normative differentiation from the out-group (H3)*

We conducted a three-way interaction analysis employing Hayes' (2018) PROCESS regression procedure (model 3), with condition (stereotypical/non-stereotypical out-group response), ideology (leftists/rightists) and the combined "desire for intergroup distinctiveness" scale as predictors, and *normative differentiation from the out-group* as the dependent variable. As in Study 1, condition had a significant main effect ( $b=.19$ ,  $SE=0.08$ ,  $t=2.56$ ,  $p=.011$ ,  $[CI]=[0.05, 0.34]$ , partial  $r^2=.03$ ), but neither the condition  $\times$  desire for distinctiveness interaction ( $b=.01$ ,  $SE=0.05$ ,  $t=.25$ ,  $p=.800$ ,  $[CI]=[-0.12, 0.09]$ , partial  $r^2=.00$ ), nor the condition  $\times$  ideology  $\times$  desire for distinctiveness interaction ( $b=.15$ ,  $SE=0.11$ ,  $t=1.41$ ,  $p=.160$ ,  $[CI]=[-0.06, 0.36]$ , partial  $r^2=.001$ ) were significant.<sup>9</sup> These results suggest that contrary to *H3*, and consistent with the results of Study 1, the effects of the out-group's collective anger response on

<sup>9</sup>Non-significant results were also obtained when using each of the two original "desire for distinctiveness" scales, separately, as moderators.

normative differentiation from the out-group is not moderated by participants' self-reported desire for intergroup distinctiveness.

*Perceived validation by the out-group response as mediating the effects of the out-group response on the in-group's normative differentiation from the out-group (H4)*

As an extension of Study 1, we examined the possibility that the observed shift in participants' emotional response to the stimulus is mediated by their perceived validation by the non-stereotypical (vs. stereotypical) out-group response. Thus, we first conducted a two-way ANOVA to examine the interactive effects of the experimental condition (stereotypical/non-stereotypical out-group response) and political ideology (leftists/rightists) on participants' *perceived validation by the out-group response*. The experimental condition had a significant main effect on perceived validation ( $F(1,912) = 35.12, p < .001, \eta^2 = .04$ ), which was qualified by political ideology ( $F(1,912) = 7.04, p = .008, \eta^2 = .01$ ). Both leftists and rightists perceived their in-group positions to be significantly more validated when the out-group response was non-stereotypical (leftists:  $M[SD] = 2.20[1.71]$ ; rightists:  $M[SD] = 3.60[1.94]$ ) versus stereotypical (leftists:  $M[SD] = 1.79[1.73], p = .020$ ; rightists:  $M[SD] = 2.54[2.06], p < .001$ ), with the difference being larger among rightists (Mean difference = 1.06, 95% CI of difference [0.71, 1.40]) compared to leftists (Mean difference = 0.40, 95% CI of difference [0.06, 0.74]). Results held when controlling for the extremity of participants' political ideology (see Appendix S1).

To examine whether perceived validation mediated the effects of the out-group's collective anger response on participants' own anger response, we conducted a moderated mediation analysis employing Hayes' (2018) PROCESS bootstrapping command with 5000 iterations (model 8; see Figure 1). In this analysis, condition (stereotypical/non-stereotypical out-group response) was set as the independent variable, ideology (leftists/rightists) as a moderator, perceived validation as the mediator, and *in-group's normative differentiation from the out-group* as the dependent variable. Out-group response had a significant main effect on *perceived validation by the out-group's response* ( $b = 1.06, SE = 0.17, t = 6.05, p < .001, [CI] = [0.71, 1.40]$ ). Consistent with the ANOVA, this effect was qualified by ideology ( $b = -.65, SE = 0.25, t = -2.65, p = .008, [CI] = [-1.14, -0.17]$ ), such that leftists, and particularly rightists, felt that their in-group position is validated more when their out-group response is non-stereotypical versus stereotypical condition. The effect of perceived validation on *in-group's normative differentiation from the out-group* was not significant ( $b = .03, SE = .02, t = 1.61, p = .107, [CI] = [-0.01, 0.07]$ ), and so were the indirect effects of condition on normative differentiation via perceived validation, among rightists ( $.04, SE = 0.02, [CI] = [-0.01, 0.09]$ ) and among leftists ( $.01, SE = 0.01, [CI] = [-0.005, 0.04]$ ).

These results suggest that contrary to H4, the shifts in participants' own anger responses are not significantly explained by increased perceived validation by the out-group response, in the non-stereotypical versus the stereotypical condition.

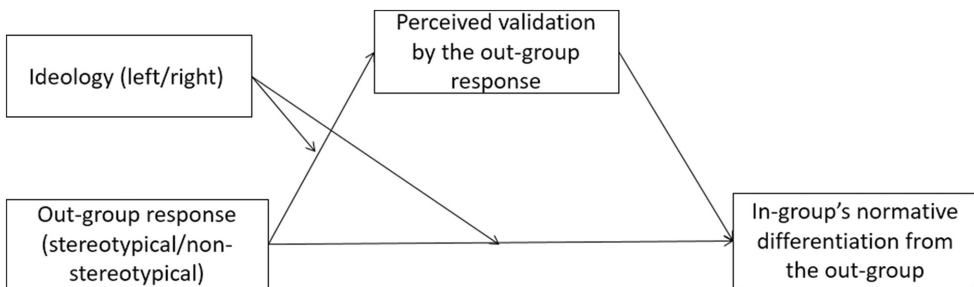


FIGURE 1 Conceptual diagram of moderated mediation analysis (Study 2).

## Discussion

Study 2 replicates and extends the results of Study 1. As in Study 1, and consistent with the assumptions of the social identity approach, both leftists and rightists demonstrated more extreme responses to the stimulus (i.e. leftists expressed lower anger and rightists higher anger) when their out-group's anger towards the stimulus was non-stereotypical (i.e. closer to the ideological in-group norm) versus stereotypical (i.e. distant from the ideological in-group norm). At the same time, they demonstrated more positive affect towards the out-group in the non-stereotypical versus stereotypical condition.

As in Study 1, our results suggest that this “shift” in anger response was not moderated by self-reported desire for intergroup distinctiveness, despite using an extended measure of this moderator in Study 2. As a further extension of Study 1, Study 2 suggests that the observed shift in anger response was also not mediated by perceived validation of the in-group's positions towards the stimulus. Although participants' own views were more strongly validated when their ideological out-group response was non-stereotypical versus stereotypical, perceived validation was not associated with a change in participants' own emotions response to the stimulus between experimental conditions.

## GENERAL DISCUSSION

The present research suggests that in ideologically polarized contexts, individuals adjust their emotional responses to socio-political stimuli to the emotions expressed by their opposing ideological out-group. In two experiments, we examined how self-identified Jewish-Israeli leftists and rightists respond to stimuli involving the Palestinians, a particularly polarizing issue in Israeli politics, given varying responses of their ideological out-group to these stimuli. In both experiments, both leftists and rightists reported more positive emotions towards their ideological out-group when its response to the stimulus was non-stereotypical (i.e. closer to the ideological in-group's norm) versus stereotypical (i.e. distant from the prototypical in-group norm). This finding is consistent with the similarity-attraction hypothesis (e.g. Brown & Abrams, 1986; Chen & Kenrick, 2002). However, our results uncover a more complex pattern: in line with our main hypothesis, participants' own emotional response to the stimulus became more extreme, shifting farther away from their out-group's alleged response, in the non-stereotypical compared to the stereotypical conditions. More specifically, rightists' anger towards the stimuli was *higher* when leftists demonstrated non-stereotypically high (vs. stereotypically low) anger, whereas leftists' anger towards these stimuli was *lower* when rightists demonstrated non-stereotypically low (vs. stereotypically high) anger. Our findings indicate that variations in the out-group's response to socio-political stimuli, which signal a violation of expected intergroup differentiation, triggers distancing from the out-group in terms of the in-group's own response.

This pattern is consistent with the basic assumptions of the social identity approach (Tajfel & Turner, 1979; Turner et al., 1987), which suggests that competing groups strive to maintain intergroup distinctiveness on group-defining features, particularly when intergroup competition becomes salient. From an SCT perspective (Oakes & Turner, 1986; Turner, 1985), it can be understood as an expression of competing groups' tendency to establish comparative fit and normative fit of in-group–out-group categories, which is an essential part of social categorization. We demonstrate how this process presents itself in individuals' dynamic regulation of their emotional responses to salient socio-political events. Specifically, our findings suggest that in highly polarized contexts, where “leftist” and “rightist” identities are largely defined in comparison to one another, the relative “positioning” of ideological groups plays a role in shaping their emotional responses to their shared socio-political reality.

The fact that the *direction* of participants' shift in emotional responses mirrored the *direction* of the shift in their ideological out-group's responses (increased anger in response to increased anger, decreased anger in response to decreased anger), does not infer intergroup affinity. Quite to the contrary, establishing intergroup differentiation (“comparative fit”) while ensuring that both groups comply with the normative content of their social category (“normative fit”) could only be achieved by adopting a



more extreme version of the in-group's norm, namely, by mirroring the direction of the shift in the out-group's position. If ideological in-group members were motivated to reward the out-group for its unexpected shift, or reciprocate it, they would more likely shift their positions towards the out-group's, rather than away from it. This may be the case when the out-group's non-stereotypical response is perceived or framed as a gesture made towards the ideological in-group (e.g. Doosje & Haslam, 2005), which was not the case in the present research.

Is it possible that in-group members' emotional response to the stimulus shifts between conditions because they feel that their prototypical positions are validated by the out-group's non-stereotypical response, which "legitimizes" adopting a more extreme version of the in-group norm? Our findings do not support this potential explanation. Although in-group members perceived a non-stereotypical out-group response as more in-group validating than a stereotypical out-group response, perceived validation was not associated with change in participants' own anger responses between conditions. The fact that perceived validation did not emerge as a significant mediator may also suggest that Jewish-Israeli leftists and rightists do not place much value on their out-group or its positions, and therefore do not assign value to being validated by the out-group. This possibility aligns with the notion that the shift in the in-group's position is not likely a reciprocal gesture towards the out-group, as gestures are typically reserved for individuals or entities we hold in high regard. Nevertheless, future studies should investigate whether the value attributed to the out-group by in-group members could act as a potential moderating factor.

Importantly, our findings do not support the proposition that the observed effects are driven by participants' conscious, self-reported desire for intergroup distinctiveness, as SIT would predict (Tajfel & Turner, 1986). Consistent with the reasoning of SIT, the "reactive distinctiveness" hypothesis (Jetten & Spears, 1996, 2003) suggests that low intergroup distinctiveness increases differentiation particularly among highly identified group members, because they are most invested in the group and in asserting its positive distinctiveness. Insofar as the desire for intergroup distinctiveness can be seen as a proxy for investment in the in-group, our findings do not support this identity-investment moderation proposition, as did other studies who directly measured variations in in-group identification as underlying perceived distinctiveness threat (e.g. Owuamalam & Matos, 2022). This lack of support for the moderation proposition could suggest that, consistent with SCT (Turner, 1985; Turner et al., 1987) and with previous research (Ledgerwood & Chaiken, 2007; Ruys et al., 2007; Schubert & Häfner, 2003; Spears et al., 2004), producing contrast from an oppositional out-group may not necessarily be a motivated process but can also be seen as the mere cognitive and perceptual outcome of in-group versus out-group categorization.

This being said, future studies are encouraged to find additional ways to empirically capture the motivational underpinnings of intergroup contrast processes. A potential avenue for future research is to experimentally manipulate participants' desire for intergroup distinctiveness by inducing high versus low intergroup competition, particularly in contexts that are less polarized to begin with. In the highly polarized context in which we conducted our study, participants' desire for distinctiveness scores may have also not been sufficiently varied to produce significant results in a moderation analysis. Therefore, more research is needed to examine this dynamic in contexts that vary in the degree of ideological polarization, and regarding other polarizing issues which constitute defining features of the ideological divide. It is also possible that the tendency to produce and maintain the comparative and normative fit of ideological categories is weaker in less polarized societies (Brewer, 1999). Furthermore, it is possible that contrast processes may prove more motivated or "reactive" in intergroup contexts where groups are not as strongly defined based on representing attitudinal opposites (e.g. ethnic in-group and out-group).

In our research, we focused on emotional responses to political stimuli, which are thought to function as robust indicators of attitudes and behavioural tendencies (Halperin, 2011). Nonetheless, future research is encouraged to explicitly examine the ways in which the observed patterns extend to participants' policy preferences and behaviours. It is likely that a violation of the ideological intergroup differentiation in policy preferences may similarly lead ideological in-group members to distance their policy positions farther away from those of their ideological out-group. In addition, future studies are encouraged to explore whether similar patterns emerge with regard to other

prominent group-based emotional responses to political stimuli, such as those of fear or empathy, or even with regard to more enduring emotional sentiments such as hatred towards the out-group (see Halperin, 2016). In particular, focusing on positive group-based emotions like empathy or hope, could introduce another crucial variation to our studies: whether it is leftists or rightists who are anticipated to demonstrate higher (vs. lower) levels of these emotions. In all our studies, leftists were expected to demonstrate lower anger compared to rightists. While one might argue that leftists may generally be perceived as less prone to anger than rightists due to their allegedly higher social status (relying on the “hunchback stereotype”, see Owuamalam et al., 2016), in our studies, the expectation of leftists to exhibit less anger is highly stimuli-specific. Studies on group-based emotions show that rightists' and leftists' anger reactions to socio-political stimuli, and the attribution thereof, strongly depend on their acceptance of the prevailing status quo on the given issue and on the extent to which the event/stimulus violates ideology-congruent values and norms (Elad-Strenger et al., 2020; Proch et al., 2019). In the current studies, Jewish-Israeli rightists were expected to feel more anger towards Palestinians because higher anger serves their narrative about the conflict (Bar-Tal, 2013; Porat et al., 2019). However, this higher attribution of anger may not hold true in all situations. An intriguing counterexample in Israel is the ongoing judicial reform promoted by the elected government, which aims to weaken the Supreme Court. Leftists express more anger than their rightist counterparts towards this reform, as it challenges the established status quo accepted by the Israeli left (Israeli Democracy Institute, 2023). We encourage future studies to explore these hypotheses using socio-political stimuli that are expected to elicit higher levels of anger among leftists than among their right-wing counterparts.

In conclusion, our findings shed new light on the important role of the competitive relations between ideological groups in dynamically shaping citizens' emotional responses to political stimuli. While previous studies have shown that the mere salience of an opposing group, or of its prototypical positions, trigger attitudinal or behavioural contrast from the out-group's attitudes or behaviours (Ledgerwood & Chaiken, 2007; Ruys et al., 2007; Schubert & Häfner, 2003; Spears et al., 2004), our studies are the first to demonstrate how varying the out-group's actual positions leads in-group members to adjust their own positions, such that they are anchored on, or shaped *in relation* to, the positions of their out-group.

These findings contribute to the literature in several ways. First, they contribute to psychological research on political attitudes, which primarily focuses on the stable psychological traits that shape them, by demonstrating the dynamic nature of socio-political positions and the role of the ideological out-group as a contextual frame of reference for these positions. Second, they contribute to political scientific research, which is primarily concerned with the institutional structures and contextual processes that shape citizens' political positions, by demonstrating the critical role of identity-related dynamics in these processes. Finally, our findings advance our understanding of the implications of the competitive relations between ideological subgroups in society. While studies have demonstrated that greater animosity towards the ideological out-group is linked to a stronger motivation to differentiate oneself from the out-group (e.g. Druckman et al., 2020), our findings reveal a paradoxical phenomenon: Ideological groups appear to polarize their emotional responses to socio-political stimuli precisely when ideological intergroup similarity seems high, even as they simultaneously de-polarize in terms of their animosity towards their ideological out-group. This process of maximizing ideological intergroup differences when intergroup similarity increases may stem from intergroup competition, but may also perpetuate it. In the long run, this tendency towards maintaining attitude divergence may intensify hostility and mutual closed-mindedness between members of rival political camps, restrict the scope and depth of political discourse, and hamper governments' ability to effectively address problems whose solutions require bipartisan support (Kamarck, 2015).

The observed process in which an out-group moving towards the in-group can push in-group members further towards “the extreme” is of critical importance when contemplating interventions to reduce ideological intergroup animosity. Our findings suggest that attempts to mitigate this animosity by encouraging exposure to intergroup similarities on group-defining features, such as issue positions,

might inadvertently exacerbate the ideological divide even further. Is polarization, then, inevitable, given that even when the out-group adopts a position similar to theirs, people become more extreme in their positions? In fact, we believe that interventions which consider identity dynamics could be particularly effective in mitigating ideological intergroup hostility, if they do not rely on perceived intergroup similarity along group-defining features. For instance, increasing the salience of inclusive social categorizations, such as a common superordinate identity shared by both groups (Gaertner & Dovidio, 2014), or inducing intergroup similarity on dimensions that are not group-defining, and less likely to provoke further polarization. In essence, our findings highlight the importance of considering not only the emotions of ideological groups towards each other or their emotions towards their shared reality but also the paradoxical relations between the two, in any interventions aimed at addressing ideological polarization.

## AUTHOR CONTRIBUTIONS

**Julia Elad-Strenger:** Conceptualization; investigation; writing – original draft; methodology; project administration. **Amit Goldenberg:** Conceptualization; writing – review and editing; methodology. **Tamar Saguy:** Conceptualization; writing – review and editing; methodology; supervision. **Eran Halperin:** Conceptualization; methodology; writing – review and editing; resources; supervision.

## CONFLICT OF INTEREST STATEMENT

The authors report no conflict on interests related to this work.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in OSF at [https://osf.io/26kcz/?view\\_only=2a14d29665d74301af4be4963d246e06](https://osf.io/26kcz/?view_only=2a14d29665d74301af4be4963d246e06).

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