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Effects of deterrence on intensity of group identification and efforts to protect group identity

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Abstract Group identification serves important functions such as motivating group members to work towards group goals and sustaining their efforts to maintain a positive group identity. Thus increasing or decreasing group identification has implications for group members' commitment to achieving group goals. We propose that group identification and group-level efforts to protect group identity can be reduced or enhanced by deterrents to feeling identified with the ingroup. To test this idea, we exposed participants to different types of deterrents to group identification: a reason for not liking the ingroup (Study 1), difficulty of achieving an ingroup goal (Study 2), and a threat to ingroup positive identity (Study 3). Group identification and strength of efforts to achieve a group goal increased with the strength of deterrence, to the point where it decreased in the strong deterrent condition. Implications for intergroup motivation and social identity are discussed.

Keywords Group identification · Motivation · Identity threats · Deterrence · Effort

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Introduction

Increasing or decreasing group identification serves important functions for its members, such as providing them with a shared goal of changing their situation through collective action (Doosje et al. 2002). This raises an important implication: if group identification drives commitment to group-level goals and the strength of efforts to achieve them, then a reduction in identification should lead to a withdrawal of efforts expended towards collective goals. Most motivational theories have focused their attention on the basic processes underlying the pursuit of individual goals (see Shah and Gardner 2008; Wright and Gendolla 2012). In this research, we propose that the pursuit of group goals powered by group identification follow the same motivational principles as pursuit of individual goals: strength of efforts is a function of ability to achieve a goal and the magnitude of obstacles to achievement (Brehm and Self 1989).

Group identification as an affective state with strong motivational properties is the focus of this research. Specifically, we use Brehm's emotional intensity theory (Brehm 1999) to show that identification and group-level efforts to protect group identity can be reduced or enhanced by deterrents to feeling identified with an ingroup. This theory assumes that affective or motivational states are shaped by deterrents working against their experience. Brehm (1999) conceptualized deterrents as stimuli or events that make it difficult for the person to perform the action provoked by an experienced emotion. These deterrents are called *instrumental* because they work against acts provoked by the emotion to fulfill its underlying function. To account for emotions that do not seem to urge instrumental actions (e.g., sadness), Brehm (1999) proposed the broader category of *affective deterrence*,

representing reasons for *not* feeling the experienced emotion (e.g., feeling happy but becoming aware of a reason for feeling angry). In the absence of deterrents, emotional intensity is a function of the importance of achieving whatever an emotion drives a person to do; approach, avoid, or remain passive. When the deterrent is low, emotional intensity should also be low, since little energy is required to achieve the function of the emotion. As the perceived magnitude of deterrence increases, so will emotional intensity, to the point set by the importance of attaining the function of the emotion. If the level of deterrence increases beyond that point, emotional intensity should drop substantially. This pattern of results is called a *cubic function.* Intensity is expected to be a cubic function of a salient reason for not feeling the emotion.

The cubic effect of *affective deterrence* on emotional intensity has been found for several emotions, such as anger, anxiety, sadness, happiness, love, positive and negative affect, and prejudiced affect (Brehm 1999; Brehm and Miron 2006; Miron and Brehm 2012). For instance, Miron et al. (2009) found that the intensity of love for one's romantic partner was a function of the importance of the partner's salient flaws: the more negative the flaw, the more intense the feelings of love, to a point where the flaw became too important and feelings of love decreased. Evidence for the nonmonotonic effect of *instrumental deterrence* on affect has also been found for a range of emotional states (Roberson and Wright 1994; Schmitt et al. 2008). For instance, Miron et al. (2011) investigated the effect of deterrence to prejudiced behavior on the intensity of prejudice. Deterrence was operationalized as difficulty of refusing to help a disliked outgroup, an organization for gay men and lesbians. Prejudiced affect toward the outgroup increased with the difficulty of refusing to help, but was reduced in the very difficult condition. Willingness to help the gay organization and amount of volunteered time also displayed similar nonmonotonic effects, and prejudiced affect mediated the effect of deterrence on helping.

Group identification as a motivational state

According to the social identity perspective (Tajfel and Turner 1986; Turner et al. 1987), when a social group becomes an important part of how individuals regard themselves, they will strive to maintain or enhance the favorability of that group membership. It follows that threats to group identity represent obstacles to collective self-regard, and thus influence the intensity of identification with the group and strength of resulting behavior to protect group identity (Branscombe et al. 1999a).

One example of identity threat is the immoral actions of ingroup members. When such actions arise, they can threaten the positivity of group identity and feelings of identification or connectedness, as well as mobilize efforts to protect group image (Doosje et al. 2006; Klein et al. 2011). Stronger identification with the ingroup is associated with more emotional investment and greater concern for group welfare (Barreto and Ellemers 2000; Branscombe et al. 1999a, b). As a result, stronger identification is associated with stronger negative reactions to threats, such as discrimination against outgroups (Branscombe et al. 2007; Miron et al. 2010) and justification of ingroup immoralities (Branscombe and Miron 2004). Finally, high identifiers often incite collective action in disadvantaged groups (Veenstra and Haslam 2000). This evidence suggests that *ingroup identification is a motivational state that drives the achievement of collective-level goals.*

Research has conceptualized group identification in many ways—defining oneself as a group member, seeing oneself as similar to other group members, feeling satisfied or a sense of solidarity with the group, to name a few (Deaux 1996; Tajfel 1981). Recently, Leach et al. (2008) described group identification as a multidimensional construct with two components: (1) group-level self-investment (i.e., satisfaction, solidarity, and centrality) and (2) self-definition (i.e., self-stereotyping and perceived ingroup homogeneity). *Satisfaction* reflects one's positive feelings about the ingroup and one's membership in it. *Solidarity* reflects one's psychological bond with their group members and feeling committed to them. *Centrality* refers to the salience and importance of group membership. *Self-stereotyping* refers to viewing oneself in terms of group membership and as similar to other group members. Finally, *ingroup homogeneity* refers to seeing oneself as similar to an ingroup prototype and the ingroup as distinct from outgroups. Self-investment focuses more on affective group identification, whereas self-definition focuses more on cognitive group identification.

These various conceptualizations of identification raise an important question—is group identification inherently motivational, or does one component of identification function more motivationally than the other? We examine this question from an emotional intensity perspective by treating group identification as a dependent variable. To date, most research has focused on identification as an independent variable to predict responses to identity threats. We expect that, when measuring both affective and cognitive group identification, only the affective component will be sensitive to identity threats. In the present research, we view identity threats as obstacles to maintaining a positive group identity, and anticipate that affective identification will vary as a cubic (rather than linear) function of these obstacles. We aim to add clarity to the importance of threat magnitude in determining the intensity of identification and subsequent efforts to achieve identity-protecting group goals.

Goals of the current experiments

While previous work has argued that feelings of identification have a strong motivational component, no research has used the conceptualization offered by Brehm's emotional intensity theory to carry out an experimental test of this assumption. The theory states that emotions have effort-related motivational properties and the evidence comes from a change in the intensity of the experienced emotion as a function of the magnitude of the obstacle to emotion. Across three experiments, we manipulated both types of deterrence–affective and instrumental.

In Study 1, we varied affective deterrence in the form of a reason for not liking the ingroup or a reason for not wanting to belong to it. According to social identity theory, group identity and identification should become particularly strong when the intergroup context is unstable or "insecure" (Tajfel 1978). Exposure to negative information about the ingroup, particularly when that information impedes current and future group goals, should act as a deterrent to identification with the group. An interesting situation is when ingroup members become aware of the discrepancy between individual investments in the group and negative group outcomes. Thus, in Study 1, deterrence to participants' positive group identity as high school students was manipulated by varying the severity of negative information about their chances of finding employment after graduation. In this study, we focused on the most clearly affective component of group identification, collective self-investment (Leach et al. 2008), by measuring *satisfaction* with the ingroup school. Other theorists have conceptualized group identification as satisfaction with the ingroup (Deaux 1996; Tajfel and Turner 1986).

In Study 2, we manipulated instrumental deterrence by varying the difficulty of achieving a positive ingroup goal, namely how much extra work students needed to do in order for their school to obtain additional resources. Group identification was measured by assessing both collective self-investment (affective identification) and collective self-definition (cognitive identification) with items adapted from Deaux (1996) and Leach et al. (2008). In Study 3, we manipulated magnitude threat to positive group identity by varying the negativity of information about ingroup morality (an important facet for group members; Leach et al. 2007). Then we measured three of the most affective identification subcomponents found by Leach et al. (2008)—group solidarity, group satisfaction, and group centrality. In addition, we measured magnitude of efforts to protect positive group identity in the form of justification for ingroup immorality.

Across the three experiments, we expected that group identification would be high in the control condition. Identification will increase in response to a moderate obstacle compared to a low obstacle and will decrease again in response to a high obstacle. Moreover, we expected that identification would decrease significantly in the low and high deterrent conditions compared to the control condition. In addition, in Study 3, we expected that efforts to protect positive group identity follow the same cubic pattern, and group identification would mediate the effect of deterrence on the strength of these motivated attempts to protect identity.

Experiment 1

Method

Participants and procedure

Fifty-eight Italian high school volunteers participated in the study during a regular school day. Students were handed a formal letter ostensibly written by their School Director. This letter stated that their own school (*Liceo Classico*, the ingroup) had been selected to collaborate with a rival school (*Liceo Scientifico*, the outgroup) in order to produce a shared school newspaper. This letter was provided to encourage participants to categorize themselves at the group-level, as members of their school.

Participants then received a short questionnaire. The questionnaire consisted of three sections. The first section requested basic demographic data (age, gender). The second section ostensibly provided participants with important information about their employment prospects. Here participants read about their *chances* of finding employment as a graduate of their school, in comparison to graduates of other local schools. This information served as a manipulation of deterrence. The third and final section consisted of two questions allegedly aimed at providing participants an opportunity to express their felt satisfaction with their school. These questions served as a measure of ingroup identification. Participants completed the questionnaires both individually and anonymously. Then, they were debriefed and thanked for their participation.

Deterrence manipulation

Deterrence to participants' positive ingroup identity was manipulated by varying the severity of negative information about their chances of finding employment after graduation. Participants were randomly assigned to one of four conditions. In the *low deterrence* condition, participants read that "after attendance at Liceo Classico, students have a 20 % less chance of being employed, compared with students from other schools." Thus, in this condition, participants received mildly negative information about the consequences of attending

the ingroup school. By contrast, in the *moderate* and *high deterrence* conditions, this percentage was increased to 40 % (difficult but not impossible to secure employment) and 80 % (nearly impossible to secure employment), respectively. In the control condition, no reference was made to employment. Participants simply completed the dependent measures.

Dependent measures

We focused on the most clearly affective component of group identification, collective self-investment, by measuring satisfaction with the ingroup school. Participants responded to the following two statements: "I consider Liceo Classico an excellent social environment" and "I would recommend attendance of Liceo Classico to persons/friends I esteem very much." Responses were provided on scales ranging from 1 (I do not agree at all) to 7 (I do agree completely), Cronbach's $\alpha = .74$.

Results and discussion

In all three studies, after examining the overall cubic effect of deterrence, we conducted polynomial contrasts with a pooled error term to test whether the intensity of group identification followed the predicted cubic pattern. The following planned polynomial contrasts were used: +1 −1 0 0 (to compare control to low deterrence), 0 +1 1 0 (to compare low to moderate deterrence), 0 0 +1 −1 (to compare moderate to high deterrence), and +1 0 0 −1 (to compare control to high deterrence condition).

As shown in Fig. 1, the overall cubic effect was significant, $F(1, 54) = 27.23$, $p < .001$, $MSE = 1.16$. Satisfaction with the ingroup decreased from the control ($M = 6.64$, $SD = .63$) to low deterrence condition ($M = 4.63$, $SD = 1.52$), $t(54) = 5.03$, $p < .001$, increased from the low to moderate condition ($M = 6.13$, $SD = .72$), $t(54) = 3.86$, $p < .001$, and decreased from the moderate to high condition ($M = 4.69$, $SD = 1.20$), $t(54) = 3.57$, $p < .001$. The control and high deterrence conditions differed significantly from each other, $t(54) = 4.71$, $p < .001$. The results of Study 1 indicate that the negative consequences of group membership can systematically deter feelings of satisfaction with the ingroup. The noteworthy implication of this effect, based on emotional intensity theory, is that relatively trivial, negative information about one's group can undermine emotional connectedness with that group. Moreover, an increase in identification emerged in response to increasingly negative information. This increase cannot be explained as dissonance reduction in response to negative information about the ingroup. A dissonance explanation would predict a greater increase in satisfaction in the high deterrence condition (with even more negative or dissonant information) than in the moderate deterrence condition.

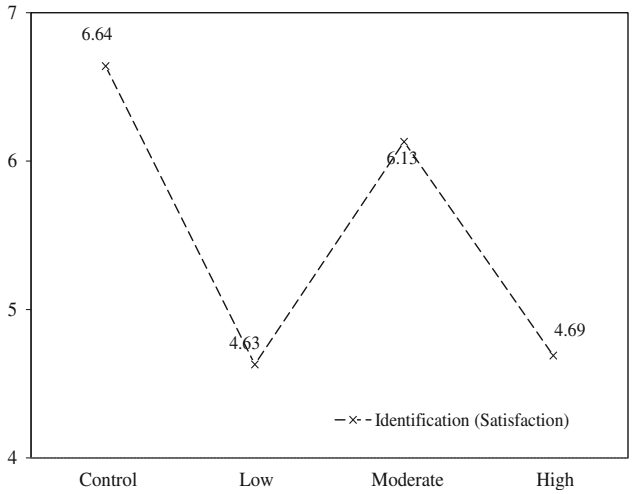

Fig. 1 Satisfaction with ingroup school as a function of deterrence magnitude (negative information about the chances of finding employment upon graduation: low deterrence = 20 % less chance; moderate deterrence = 40 % less chance; high deterrence = 80 % less chance) in Experiment 1

In Study 2, we measured the affective and cognitive components of group identification (Leach et al. 2008). Since only the affective component of identification should be influenced by deterrence, we expected to find deterrence effects on the more affective measure, but not on the more cognitive measure (cf. Brehm et al. 2009). In addition, we examined change in group identification as a function of deterrence by measuring identification both before and after exposure to deterrence. This provided a more stringent test of emotional intensity theory.

Experiment 2

Method

Participants and procedure

Seventy-four Italian university volunteers participated in the study. Students were approached in their classroom and read a formal letter, ostensibly written by their Department Head. This letter announced that their university (*Università San Raffaele*, the ingroup) would compete with another local university (*Università Cattolica*, the outgroup) for additional funding from the Italian Ministry of Education. This funding would then be used to improve campus instruction and facilities (such as computer labs, cafeterias, or the library). As in Experiment 1, the letter was provided

to encourage participants to categorize themselves at the group-level, as members of their university group.

Participants then received a four-part questionnaire. The first part requested basic demographics (age and gender). The second part asked two sets of questions about participants' university identification. These questions assessed collective self-investment and self-definition. The third part of the questionnaire manipulated difficulty of achieving a group goal—college students were asked to agree with an extra academic load in the immediate future in order to win a competition for extra financial resources from the Italian Ministry of Education. This part of the questionnaire ended with a manipulation check on the perceived strength of deterrence. The fourth part of the questionnaire again presented the identification measures (self-investment and self-definition). To reduce potential suspicion, participants read that the second set of questions was similar but not identical to the one presented earlier. We used the difference between the first and second set of identification questions as the dependent measure. The questionnaire was completed individually and anonymously.

Deterrence manipulation

We manipulated deterrence by varying the difficulty of achieving a positive ingroup goal (winning the funding competition). Participants were randomly assigned to one-of-four conditions. Students were asked to agree to extra coursework consisting of reading a *small* (vs. *moderate* vs. *substantial*) number of additional pages, written in a foreign language (i.e., English for the Italian students), in order to pass future examinations. In the low deterrence condition, students read that they would be required to study 5 extra pages of English language material to pass each examination in their classes, in order to graduate. In the *moderate* and *high* conditions, the magnitude of requested extra load increased to 10 and 70 extra pages, respectively. Finally, in the control condition, students were told that the Ministry was still deciding whether to award funding to one or more universities. No mention was made of the extra coursework required to obtain this funding. Instead, students read a short, neutral excerpt about subfields in psychology. Afterwards, participants were thanked and debriefed.

Manipulation checks

As a check on the manipulation of deterrence, we measured the extent to which participants perceived the difficulty of achieving the ingroup goal as small, moderate, or large by asking participants the following question, "Personally, I think that this extra academic load in exchange for the financial benefits for San Raffaele is: scarcely heavy, moderately heavy, or exceedingly heavy."

Dependent measures

As a measure of group identification, we assessed collective self-investment and self-definition (Leach et al. 2008) on bipolar scales ranging from 0 to 12.50 cm (scale neutral midpoint = 6.25 cm). *Self-investment* was measured by tapping *centrality:* "How important is for you to belong to San Raffaele?" (Absolutely unimportant—Extremely important), *satisfaction*: "Right now I am…" (Very unsatisfied about belonging to San Raffaele—Very satisfied about belonging to San Raffaele), and *solidarity* (6 items, Cronbach's $\alpha_s = .91$ and .94 for pre- and post-scales, respectively), e.g., "Right now I feel…" (Completely detached from San Raffaele—Completely integral to San Raffaele), (Completely hostile to San Raffaele—Complete solidarity with San Raffaele), (Extremely distant from San Raffaele and its deeds—Completely emotionally identified with San Raffaele and its deeds). *Self-definition* was measured by tapping into its two core components of *individual self-stereotyping*: "Right now, I see myself as…" (Extremely different from the "typical student" from San Raffaele—Extremely similar to the "typical student" from San Raffaele), and perceived *ingroup homogeneity* (5 items, $\alpha_s = .87$ and .91): e.g., "Right now, students from San Raffaele seem to me to have…" (Very different characteristics from each other—Mostly shared characteristics with each other), "Right now, I see students from San Raffaele…" (as unique individuals, rather different from one another—as persons forming a unitary, homogeneous group). A principal component analysis indicated the presence of two components: self-investment (*affective group identification*; 8 items, Cronbach's $\alpha_s = .92$ and .94) and the self-definition (*cognitive group identification*; 6 items, Cronbach's $\alpha_s = .84$ and .86).

Results and discussion

Manipulation check

The extent to which participants perceived difficulty of achieving the ingroup goal as small, moderate, or high (coded as 1, 2, and 3, respectively) was examined by the Kruskal–Wallis test, a typical nonparametric alternative to ANOVA. This test showed that participants perceived the low deterrent (5 extra pages) as weaker than the *moderate* deterrent (10 extra pages), and the *moderate* deterrent as weaker than the *high* deterrent (70 extra pages), *mean ranks* = 18.84, 24.12, and 39.00, for the low versus moderate versus high deterrence conditions, $\chi^2(2) = 20.47$, $p < .001$. This suggests that the relative perceived strength of deterrents increased with increasing academic load.

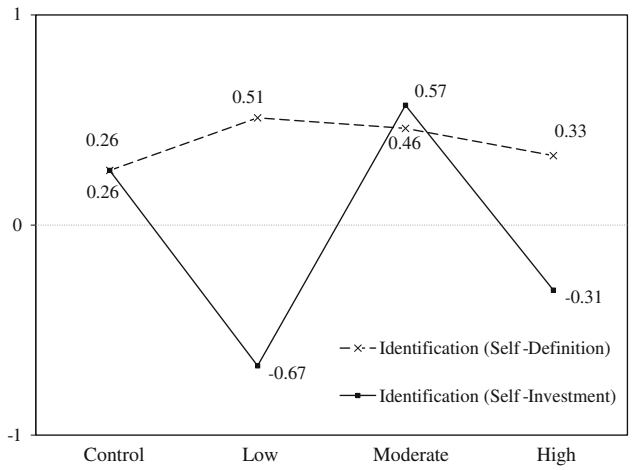

Fig. 2 Intensity of group identification (self-investment and self-definition) as a function of deterrence magnitude in Experiment 2. Positive values represent an increase, relative to a zero baseline, in group identification; negative values represent a decrease

Group identification

In this study, group identification was measured twice—*before* and *after* the deterrence manipulation—to examine within-participant shifts in identification. We computed two difference scores (post–pre manipulation), one for *self-investment,* and the other for *self-definition.* An ANOVA was conducted to determine whether deterrence affected *self-definition*. As expected, the linear, quadratic and cubic effects were not significant; all Fs $< .59$, all ps $> .44$, suggesting that deterrence did not influence the cognitive component of ingroup identification. However, the analysis revealed the predicted cubic pattern for *self-investment*, $F(1, 70) = 18.32$, $p < .001$, $MSE = .92$ (see Fig. 2). *Self-investment* declined from the control ($M = .26$, $SD = .88$) to the low ($M = -.67$, $SD = 1.10$) deterrence condition, $t(70) = 3.06$, $p = .003$, increased from the low to moderate ($M = .57$, $SD = .81$) condition, $t(70) = 3.92$, $p < .001$, and decreased from the moderate to high ($M = -.31$, $SD = 1.01$) condition, $t(70) = 2.66$, $p < .01$. The control and high conditions only marginally differed from each other, $t(70) = 1.78$, $p = .08$. This shows that deterrence influenced the affective component of group identification.

The results of Experiment 2 revealed that the strength of affective group identification followed the cubic pattern predicted by emotional intensity theory. Moreover, these results reveal a dissociation between the affective and cognitive aspects of identification: in the *low* and *high* deterrence conditions, *despite* strong cognitive self-definition, we find lessened affective self-investment.

In the next experiment, we tested whether deterrence shapes affective group identification in a different social context. We also tested the idea that affective group identification drives the strength of efforts to achieve a group goal by showing that (1) deterrence affects the strength of these efforts in the same way it affects intensity of affective identification and (2) affective identification mediates the effect of deterrence on protection of ingroup identity.

Experiment 3

In this experiment we focused on a different type of deterrent to identification—threats to the morality of group identity. Negative information about ingroup's actions can make it difficult for ingroup members to continue liking the group and to remain committed to it (see Miron et al. 2009 for a comparable explanation). For this reason, information about ingroup harm perpetrated against an outgroup can act as a deterrent to ingroup members' feelings of group identification. We propose that—depending on its severity—ingroup harm can reduce or intensify feelings of identification (e.g., group solidarity). Furthermore, perception of ingroup harm can increase or reduce the strength of efforts expended to protect positive group identity, such as justifying or legitimizing the harm. These efforts are powered by identification with the ingroup.

Indeed, prior research suggests that strong ingroup identification may lead to increasing efforts to protect ingroup identity, especially when the perceived morality of the ingroup is in question. Strongly identified group members are less likely to accept threatening information about the group's past (Doosje et al. 2006), more likely to minimize perception of harm by the ingroup, and more likely to focus on outgroup actions or attributes that justify negative ingroup behavior, compared to those who are weakly identified (Branscombe and Miron 2004). Thus, we measured justification of negative ingroup behavior as an outcome of ingroup identification. Maitner et al. (2007) had participants read three accounts about aggressive acts perpetrated by the ingroup (the U.S.) against outgroups and were asked to report the extent to which the acts were justified, as well as the extent to which they support comparable future acts. As predicted, greater identification was associated with greater justification for ingroup aggression. Moreover, justification was a mediator of the relationship between identification and support for intergroup actions. Based on these results, we hypothesized that both affective group identification and efforts to protect the ingroup's identity would be influenced by the magnitude of threat to the group's moral image.

Method

Participants and procedure

Forty-four students from the University of Wisconsin-Oshkosh, USA, participated in exchange for course credit.

All participants indicated American citizenship. Participants read that the study examined perceptions of the United States based on reports from news and human rights organizations, as well as that independent observers had confirmed the accuracy of these reports. They were asked to provide their opinion of one of the reports. Participants next answered various demographic questions (including a question about their citizenship) to encourage them to categorize as Americans.

To manipulate deterrence to group identification, participants were then given an excerpt from a report ostensibly assigned to them at random. All participants received the same excerpt with the exceptions noted below. They were asked to read the excerpt carefully as they would later be asked for their opinion about it:

> Since the war in Afghanistan began after the terrorist attacks on the United States on September 11th, 2001, the Kandahar province in Southwestern Afghanistan has been a focal point for military efforts to reign in Al Qaida and Taliban forces. While progress is being made by the United States, the cost to the local Pashtun tribes, who have no affiliation with any terrorist organization, is a cause for concern. In Shorabak, a once thriving town of 10,000 inhabitants, a *very small* segment of the population has been killed by the United States' efforts to eliminate insurgent fighters.

Deterrence manipulation

More specifically, we manipulated deterrence by varying the extent of ingroup harm in the excerpt they read. Participants were randomly assigned to one of four conditions. They read that either a *very small* segment, a *moderately large* segment, or the *vast majority* of the Afghan population had been killed by the United States' efforts to eliminate terrorists (low, moderate, and high deterrence, respectively). Participants in the control condition read that "the cost to the local Pashtun tribes, who have no affiliation with terrorist organizations, still needs to be assessed."

Dependent measures

To assess the effectiveness of the deterrence manipulation, we measured perceptions of the severity of harm done to Afghan civilians with one item, "How severe are the civilian casualties depicted in this report?" Responses were provided on scales ranging from 1 (not at all) to 9 (very much). We predicted a linear effect of deterrence on perceived harm to civilians.

As a measure of group identification, we included items that measured three aspects of collective self-investment: *group solidarity* (2 items, Cronbach's $\alpha = .77$, "To what extent did you feel a bond with other Americans while reading the report?" and "To what extent did you feel solidarity with other Americans while reading the report?"), *group satisfaction* (3 items, Cronbach's $\alpha = .97$, "To what extent did you feel pleased with yourself as an American/glad to be an American/proud of Americans while reading the report?"), and *group centrality* (2 items, Cronbach's $\alpha = .93$, "While reading the report, to what extent did you think that being an American was a central part of your identity/an important part of how you see yourself?"). Responses were provided on scales ranging from 1 (not at all) to 9 (very much). A principal components analysis indicated the presence of only one component, so we averaged all items to create a group identification measure (7 items, Cronbach's $\alpha = .92$).

As a measure of identity protection, we assessed the extent to which participants justified the war, "How justified are the U.S. war efforts in Afghanistan?" and "How justified are the civilian casualties depicted in this report?", on scales ranging from 1 (not at all) to 9 (very much). Given that justifications are theoretically based on affect (Crandall and Eshleman 2003), we expected endorsement of justifications to vary as a cubic function of deterrence—mirroring the intensity of affective identification.

Results and discussion

Manipulation check

We expected a linear effect of deterrence on appraisals of harm severity. Indeed, this is what we found, $F(1, 40) = 12.14$, $p = .001$, $MSE = 5.55$. Participants in the moderate deterrence condition reported more severe casualties ($M = 6.33$, $SD = 2.18$) than those in the low condition ($M = 4.36$, $SD = 2.58$), $t(39) = 2.28$, $p = .03$, whereas participants in the high condition ($M = 7.90$, $SD = 1.10$) reported more severe casualties than those in the low condition, $t(40) = 3.44$, $p = .001$. Having shown the effectiveness of the manipulation, we conducted polynomial contrasts tests (weights $+1\ -1\ +1\ -1$) to test for the cubic effect of deterrence on identification and justification efforts (see Fig. 3).

Group identification

Deterrence had a significant overall cubic effect on group identification, $F(1, 39) = 11.66$, $p = .002$, $MSE = 2.89$. Figure 3 shows that affective identification decreased from control ($M = 5.22$, $SD = 2.09$) to low deterrence ($M = 3.61$, $SD = 1.08$), $t(39) = 2.79$, $p = .008$, increased from low to moderate deterrence ($M = 5.78$, $SD = 1.80$), $t(39) = 2.84$, $p = .004$, and decreased from moderate to

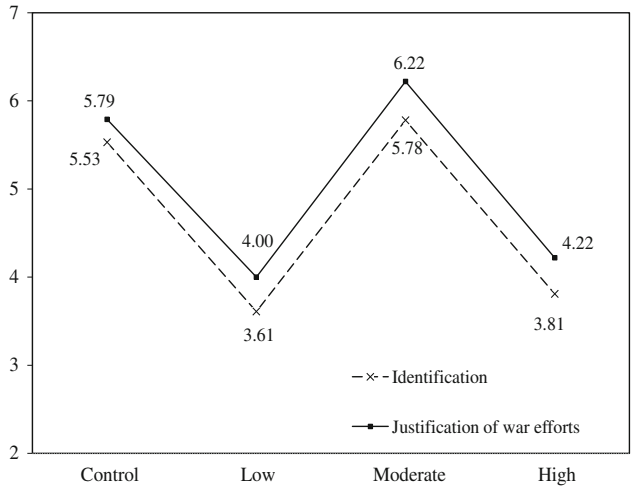

Fig. 3 The effect of deterrence magnitude (severity of news about Americans' harm to Afghan civilians) on group identification and justification of war efforts in Experiment 3

high deterrence ($M = 3.81$, $SD = 1.52$), $t(39) = 2.46$, $p = .02$. In addition, as expected, the intensity of identification in the high deterrent condition was greater than in the control group, $t(39) = 2.36$, $p = .02$.

Identity protection efforts

Deterrence also had a significant cubic effect on the *justification of Americans' war efforts* item, $F(1, 40) = 7.30$, $p = .01$, $MSE = 4.69$. Participants in the low deterrence condition ($M = 4.00$, $SD = 1.84$) reported that the war efforts were less justified than those in the control condition ($M = 5.79$, $SD = 2.42$), $t(39) = 2.05$, $p = .05$. Participants in the moderate condition ($M = 6.22$, $SD = 2.11$) reported that the war efforts were more justified than those in the low or high conditions, respectively, $t(39) = 2.28$, $p = .03$ and $t(39) = 2.03$, $p = .05$. Participants in the high deterrence condition ($M = 4.20$, $SD = 2.15$) tended to report that war efforts were less justified than those in the control condition, $t(39) = 1.77$, $p = .08$. Interestingly, the *justification of casualties in Afghanistan* item was not influenced by deterrence, as the F-values for the linear, quadratic, or cubic effects were not significant, all Fs < 1.00, all ps $> .32$. This suggests that deterrence affects only subjective justification, rather than a more objective appraisal of harm as participants found it more difficult to justify killing of civilians than to justify the war efforts.[1]

[1] As part of an exploratory analysis, we measured the following emotional responses: good mood, bad mood, uncomfortable, guilty, ashamed, angry, happy, frustrated, helpless, hopeless, excited, sad, regret, calm, outraged, pride, discouraged, and apathetic. We

Mediation analysis

We conducted a mediation analysis to test whether identification mediated the effect of deterrence on justification of war efforts. For this analysis, we recoded deterrence as a variable with the following levels: $+1$ -1 $+1$ -1. This allowed us to contrast the control/moderate deterrence conditions to the low/high deterrence conditions, as we made comparable predictions for the collapsed conditions. The newly coded deterrence variable had a significant effect on group identification and justification of war efforts, $\beta = -.41$, $p = .006$, and $\beta = -.51$, $p = .001$. When deterrence and identification were included as predictors of justification, deterrence no longer had a significant effect, $\beta = .03$, $p = .81$, whereas identification continued to have a significant effect, $\beta = .82$, $p < .001$. This indirect effect was significant; the 95 % bootstrap confidence interval, $CI_{95} = (-3.00, -.84)$, excluded the value of 0 (Preacher and Hayes 2004).

Thus, while the appraised harm severity showed a significant linear increase from the low to the high deterrence condition, the cubic effect of deterrence on justification of war efforts, together with the results of the mediation analysis, suggest that efforts to protect the group identity (an important ingroup goal) are affected by identity threats and driven by ingroup identification. These results reemphasize the key role that group identification plays in the development of justification for war actions (e.g., Bar-Tal 2013).

General discussion

Across three experiments, we found that affective group identification and efforts to achieve identity-protecting

Footnote 1 continued
previously theorized that Brehm's emotional intensity paradigm could be used to detect specific emotional responses instigated in a situation because only the experienced emotion would show a cubic pattern from deterrence (Miron et al. 2011). Thus, we expected that only the primary emotion elicited would reveal a cubic pattern following the deterrence manipulation. Out of all specific emotions, only pride showed a significant cubic effect, $F(1, 40) = 5.62$, $p = .02$, $MSE = 3.37$. Pride decreased from the control ($M = 5.29$, $SD = 1.94$) to low deterrence ($M = 3.82$, $SD = 1.94$), $t(40) = 1.99$, $p = .05$, increased from low to moderate deterrence ($M = 5.67$, $SD = 1.94$), $t(40) = 2.12$, $p = .05$, but did not decrease significantly from moderate to high deterrence ($M = 4.70$, $SD = 1.42$), $t(40) = 1.15$, $p = .26$. While this finding should be interpreted with caution since only one in 18 emotions was significant, it remains possible that pride was the only emotion experienced by the participants. This could further suggest that group identification is strongly associated with feelings of ingroup pride; these two measures were indeed highly correlated in Study 3, $r = .67$, $p < .001$. Taken together, the results seem consistent with previous work (Brewer 1999; Cialdini et al. 1976) and support our view of identification as mobilizing group members' commitment to achieving ingroup goals.

group goals are malleable and responsive to the manipulation of the magnitude of obstacles to group identification. These findings have important implications for our conceptualization of ingroup identification as motivating group members to work towards ingroup goals and sustaining their efforts to achieve these goals.

Potential motivation and deterrence effects

Deterrence effects on group identification, like the ones observed in this research, should occur only when group members believe it is possible and worthwhile to cope successfully with a deterrent. Work on energization model of motivation underscored the importance of perceived ability (efficacy) to cope with the difficulty of achieving an instrumental goal—a variable said to affect the level of *potential motivation*, the maximum justified effort individuals are willing and able to exert for goal achievement (Wright and Brehm 1989; Wright and Pantaleo 2013). In the social identity domain, Ellemers et al. (1990) provided preliminary evidence for this process. In their work, participants were assigned to a low or high status group, and were led to believe that it was *possible* or *impossible* that the status hierarchy would change during the study. For members of the low status groups, an unstable status hierarchy resulted in greater identification than a stable hierarchy, suggesting that collective action occurs when it is *possible* to achieve a higher status position.

Relative deprivation theory argues that the feasibility of more favorable group outcomes could elicit dissatisfaction with the *status quo*, which should foster collective action directed at social change (Walker and Mann 1987). Information about the positive outcomes of a competing outgroup or prospects of better positive outcomes can function as deterrents, thus placing our research at the intersection of emotional intensity theory, the energization model of motivation, and relative deprivation theory. Future work could profitably vary deterrence strength in the context of a manipulation of stability of group status to explore the capacity of deterrents to influence group-level affect, motivation, and behavior.

Effort-based cognitive narrowing and its effects on intergroup relations

According to Silvia and Brehm (2001), strong emotions and affective states have the power to monopolize key attentive resources and to keep them focused on a relevant goal. If affective identification both *reflects* and *implies* the mobilization of attentional and energetic resources needed to cope with obstacles to group identification, then high levels of affective identification should also focus members' attention on events that concern the group. While this happens, however, few cognitive resources will remain for the monitoring of other potentially relevant aspects of one's social environment, including the intergroup context (e.g., the emergence of new opportunities, opinions, points of views, or perspectives). This form of motivationally driven cognitive narrowing—a form of disregard of *multiple* social views—takes place despite the fact that those new pieces of social information might be pivotal for a mutually satisfactory management of group processes and intergroup relations. Although limited in time, reduced perspective-taking among strongly identified group members might undermine communication and understanding within and between social groups. It could also help explain some uncertainty-reducing, effort-related cognitive rigidity observed among high-identifiers (Hogg and Abrams 1993). Reducing group identification through the use of low deterrence would allow group members to redirect their attentive and emotional resources to the richness of their broader social environment (Pantaleo 2011).

Value creation from emotion intensity

Our studies complement Higgins's (2006) research on value creation. According to Higgins, the value we attach to a particular target (an object, person, or group) depends on hedonic experiences *and* motivational and emotional engagement with that target. From this perspective, opposing or interfering forces (i.e., *deterrents*) represent an important factor in engagement intensity. This means that a deterrent would enhance the value of a target for the person exposed to a deterrent because it interferes with the present emotional or motivational state. In the literature on intergroup relations, this is comparable to studies showing that perceiving discrimination against one's group (an opposing force to a positive social identity) actually enhances ingroup identification and subjective well-being (Branscombe et al. 1999b; Jetten and Branscombe 2006). Indeed, obstacles can increase the importance of social identities for adapting to the present intergroup context.

As our work suggests, deterrents to group identification do shape strength of emotional–motivational engagement towards an ingroup—a variable that we conceptualized as affective identification (solidarity, etc.) and efforts expended to protect the group. Emotional intensity theory and Higgin's value creation model could be integrated by determining the value of the emotional goal following exposure to the deterrent. Consistent with Higgins's theorizing, the present studies suggest that obstacles to group identification can increase group attractiveness. This would essentially change the actual level of motivation that group members would be willing to exert on the group's behalf. Still, a different measure of value creation is needed to assess increased valuing of the ingroup as an outcome

independent of group identification. Such outcomes can involve attributes that a deterrent is not expected to directly influence, such as, for instance, ingroup resourcefulness or creativity, when the deterrent only threatens group morality.

Deterrence force and investment in collective goals

A common way that people manage their group identities in the face of devaluation is to disidentify from their group. However, it is not always clear when this occurs. Sometimes people will decrease their group identification to protect themselves (Steele 2011); sometimes they will increase identification to protect their group (Branscombe et al. 1999a, b). In fact, this could occur regardless of prior group identification (Klein et al. 2007). From an emotional intensity perspective, deterrence offers a useful explanation for why group identification varies in response to identity threats. When threats reflect low or high deterrent force, people are more likely to withdraw their effort from collective goals in order to protect themselves. Conversely, when threats reflect moderate or unknown deterrent force, people are more likely to invest their effort into collective goals in order to protect their group. Thus, the force placed on the motivational system shapes commitment to collective goals in a nonlinear manner. In addition, the deterrent force may shift group members' focus from collective goals to personal-level goals. Future research should consider how deterrence—both magnitude and type—shapes individual investment in collective outcomes.

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