

# Intergroup Threat Increases Implicit Stereotyping

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## ABSTRACT

Although many theories of intergroup relations propose that threat leads to outgroup hostility, relatively little research has examined the effects of collective threat on stereotyping. Two studies were conducted to test the hypothesis that intergroup threat leads to greater implicit stereotyping of the threatening group. In Study 1, White participants exposed to information portraying Asians as collectively threatening implicitly stereotyped Asians more than did participants who were not threatened. In Study 2, collective threat again resulted in greater stereotypic processing of Asians, which was also associated with increases in collective self-esteem. These findings suggest that implicit stereotyping following threat may serve to restore collective self-esteem.

*Key words:* Collective Threat, Collective Self-esteem, Implicit Stereotyping, Intergroup Relations.

## RESUMEN

Son muchas las teorías de relaciones intergrupo que proponen que la amenaza genera hostilidad exogrupal, pero es escasa la investigación que ha examinado los efectos de la amenaza colectiva sobre la estereotipia. Se realizaron dos estudios para contrastar la hipótesis de que la amenaza intergrupo genera mayor estereotipia implícita del grupo amenazante. En el Estudio 1, participantes blancos a los que se les proporcionaba información en la que los asiáticos aparecían como colectivamente amenazantes estereotipaban implícitamente a los asiáticos más que los participantes no amenazados. En el Estudio 2, de nuevo la amenaza colectiva generaba mayor procesamiento estereotípico de los asiáticos, lo que iba también asociado con un aumento de la autoestima colectiva. Estos resultados sugieren que la estereotipia implícita que surge de la amenaza colectiva puede servir para restaurar la autoestima colectiva.

*Palabras clave:* amenaza colectiva, autoestima colectiva, estereotipia implícita, relaciones intergrupo.

Perceived threat from an outgroup, directed toward the self or a social group to which one belongs, is a potent source of intergroup bias. Such threat, which can range from fear of individual outgroup members to group-level feelings of relative deprivation, has been implicated in a variety of cognitive and behavioral biases. Increases in group cohesiveness (Turner, Hogg, Turner, & Smith, 1984), self-stereotyping (Spears, Doosje,

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& Ellemers, 1997), and intergroup discrimination (Roccas & Schwartz, 1993), have all been documented as reactions to threat. Threat may thus serve as an important root of intergroup conflict.

The premise that threat leads to intergroup hostility is central to many theories of intergroup relations. Realistic group conflict theory (Campbell, 1965; LeVine, 1972; Sherif, 1966) proposes that competition over limited resources leads to the emergence of real or imagined threats to the ingroup, which results in conflict between groups. Similarly, according to the integrated threat theory of prejudice (Stephan & Stephan, 2000), threats to a group's existence, power, safety, values, or norms, can be causal antecedents of outgroup hostility. From the perspective of social identity theory (Tajfel & Turner, 1979), responses to intergroup threat may serve to reaffirm the self. The theory proposes that social group memberships form a basis for self-esteem, and thus people will strive to achieve or maintain a positive social identity. Although other strategies may be employed to achieve positive distinctiveness, positive social identity is based largely on favorable comparisons between the ingroup and relevant outgroups. Motivation to achieve positive distinctiveness should be particularly strong when group members' self-esteem is temporarily lowered due to a social identity threat. As articulated by Abrams and Hogg's (1988) self-esteem hypothesis, successful intergroup discrimination should elevate social identity and self-esteem, and lowered self-esteem should motivate intergroup discrimination.

Although evidence for the two predictions of the self-esteem hypothesis has been inconsistent, findings have often supported the prediction that intergroup discrimination elevates self-esteem (Rubin & Hewstone, 1998). This effect has been demonstrated most clearly in studies in which participants experienced a threat to their social identity. In a study conducted by Branscombe and Wann (1994), social identity threat was manipulated by exposing American participants to a short film in which an American fighter won or lost a boxing match against a Russian fighter. Participants who were identified with the American ingroup derogated Russians significantly more when the American lost the fight, than when he won. Furthermore, greater derogation of Russians was associated with higher subsequent collective self-esteem in the threat condition, but not in the no-threat condition. Smurda, Wittig, and Gokalp (2006) recently replicated and extended these findings by employing implicit measures of ingroup bias and collective self-esteem. Participants first read an article stating that their university had lost status and a rival university had gained status, or that their university had gained status and a rival university had lost status. They then generated reasons for the events described in the article; these attributions were later coded for evidence of ingroup favoritism and outgroup derogation. Finally, participants' implicit collective self-esteem was measured via an Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) that assessed evaluative associations with the ingroup. Consistent with the findings of Branscombe and Wann (1994), ingroup favoritism and outgroup derogation were higher among participants who received the status threat. In addition, greater ingroup bias following threat was associated with increases in implicit collective self-esteem. Together, these studies suggest that engaging in outgroup derogation after group threat can serve to restore self-esteem at the collective level.

While research has shown that threat leads to outgroup prejudice, less attention has been paid to the effects of collective threat on the cognitive component of intergroup bias. Consequently, it is unclear whether people also engage in greater stereotyping of the outgroup under conditions of threat. Suggestive evidence for this possibility comes from research on the role of self-motives in eliciting stereotyping. Fein, Spencer, and colleagues have examined the self-enhancement functions of stereotyping and prejudice for perceivers following a threat to their self-image. In one study (Fein & Spencer, 1997, Study 2), participants who received negative feedback on a bogus intelligence test later rated a homosexual male target as less likeable and as possessing more stereotypic traits than those who did not receive threatening feedback. In another study, Fein and Spencer (1997, Study 3) measured state self-esteem immediately after participants had been given bogus feedback and again after they had evaluated an outgroup target (a Jewish woman). Replicating the results of the previous study, participants in the self-image threat condition derogated the outgroup target more than those who received positive feedback. Moreover, although participants who had been given negative feedback reported lower self-esteem immediately following the feedback compared to those who had received positive feedback, this reduction in self-esteem was reversed after engaging in derogation of the outgroup target. These findings suggest that self-image threat can cause people to explicitly stereotype and derogate an outgroup member as a means of restoring their self-esteem. Spencer, Fein, Wolfe, Fong, and Dunn (1998) have also demonstrated that self-esteem threat can lead to greater implicit stereotyping.

While it appears that collective threat increases outgroup derogation and self-esteem threat elicits stereotyping, it is unclear whether collective self-esteem threat also affects stereotyping. The goal of the current research was to investigate the generalizability of threat-induced stereotyping effects by examining whether collective threat increases implicit stereotyping. The measure of stereotyping used in the present studies was the stereotypic explanatory bias measure (Sekaquaptewa, Espinoza, Thompson, Vargas, & von Hippel, 2003; von Hippel, Sekaquaptewa, & Vargas, 1997). This measure does not rely on explicit endorsement of stereotypes about outgroups, but rather assesses the degree to which information processing is biased by stereotypes. People tend to engage in more thoughtful processing of unexpected events (Clary & Tesser, 1983; Hastie, 1984). Such processing is typically attributional in nature, as perceivers try to resolve the inconsistency between the expected and actual events. For example, if an individual is expected to be unintelligent, it would be surprising to learn that the person received an extremely high score on an academic test, and the typical response would be to generate an explanation for the event. To the extent that such expectancies about outgroup members are based on stereotypes of the group, perceivers may respond with increased attributional processing of stereotype-inconsistent behaviors as well (von Hippel *et al.*, 1997). This tendency to engage in attributional processing in response to stereotype-inconsistency has been labeled stereotypic explanatory bias (SEB; Sekaquaptewa *et al.*, 2003).

A number of studies have demonstrated that people show SEB regarding stereotyped groups. For example, people are more likely to spontaneously explain African-Americans performing Black stereotype-inconsistent behaviors (e.g., "got a job at Microsoft") than

African-Americans performing Black stereotype-consistent behaviors (e.g., “easily made the team”) (Sekaquaptewa *et al.*, 2003, Experiment 1). Similarly, male-stereotypic behaviors engender more explanations when performed by women than when performed by men (Sekaquaptewa & Espinoza, 2004).

In addition to providing evidence for the existence of SEB, previous research has shown that it predicts responses to outgroups. The SEB correlates with a linguistically based implicit measure of prejudice (von Hippel *et al.*, Experiment 3), but not with an explicit measure of prejudice (Sekaquaptewa *et al.*, 2003). Moreover, the SEB predicts subtle discriminatory behaviors in interactions with outgroup members. In the Sekaquaptewa *et al.* (2003) study, White male participants were randomly assigned to interview a Black female, White female, or White male. Participants selected the interview questions from a list that contained mildly Black-stereotypic and non-stereotypic items. Results indicated that the higher participants’ SEB scores were the more stereotypic questions they asked of the Black female interviewee. In contrast, SEB did not predict question choice in the same-race interactions. Thus, it seems that the SEB measure can tap individual differences in the tendency to engage in stereotypic information processing, and that this tendency predicts behavioral outcomes.

Although there is mounting evidence for the predictive validity of the SEB, it is not known whether it can be influenced by collective threat. The fact that it does increase with other manipulations known to increase stereotyping (e.g., mortality salience, Schimmel *et al.*, 1999, and positive mood, Chartrand, van Baaren, & Bargh, 2006) provides suggestive evidence that SEB should also increase with collective threat, but this remains an open question. In two studies we tested this possibility that collective threat would increase SEB. In Study 1, we manipulated threat using subtle response scales and examined its effects on stereotyping of the threatening outgroup. Threat was manipulated more explicitly in Study 2, which also included an investigation of whether the predicted increase in implicit stereotyping under threat would be associated with higher collective self-esteem.

## STUDY 1

In Study 1, threat was manipulated by varying the response scales on a multiple-choice questionnaire regarding Asians. This manipulation was based on Wittenbrink and Henly (1996), who exposed Whites to response scales that implied a positive or negative view of African-Americans. For example, in response to the question, *Out of 100 black males between the age of 16 and 24, how many do you think have spent time in prison?*, the response alternatives ranged from *less than 30 to 45 or more* in the negative condition and from *less than 1 to 10 or more* in the positive condition. Wittenbrink and Henly found that this manipulation increased prejudice scores and guilt judgments of an African-American target among people who were already high in prejudice. Low-prejudice individuals were not influenced by the manipulation.

According to Wittenbrink and Henly (1996), low-prejudiced Whites might assume that the information conveyed by the negative scales reflect the beliefs of dissimilar others and is therefore irrelevant to their own beliefs. An alternative possibility is that because all of the dependent variables were explicit measures, they were not subtle

enough to detect influences on low-prejudice participants. The current study employed a similar response scale manipulation to examine whether portraying the outgroup as a threat influences implicit stereotyping.

## METHOD

*Participants* were 39 White-Australian volunteers (27 females and 12 males). They were approached on the University of New South Wales campus and asked to participate in a study being conducted by a psychology student for a research project, and were told that participation was entirely voluntary. Those who consented were randomly assigned to the threat or no-threat condition.

*Materials.* Two versions of a 10-item multiple-choice questionnaire were developed to manipulate threat. The questions in the two versions were identical and consisted of four items related to Asians and six fillers (concerning other minority groups such as Indigenous Australians). The range of values on the response scales differed between the two versions. The response scale in the threat condition implied that Asians constituted a threat to Whites, whereas in the no-threat condition the scale implied that Asians were not a threat to Whites. For example, one of the questions was, *What percentage of Asian international students over-stay their student visa?* The options in the no-threat condition ranged from *less than 5% to 20% or more*, whereas they ranged from *less than 25% to 50% or more* in the threat condition. The other target questions were *What percentage of motor vehicle accidents in New South Wales are caused by Asian drivers?*, *What percentage of Asian males aged 15-21 are members of gangs?*, and *According to a recent survey, what percentage of Asians in Australia refuse to speak English?*. The questionnaire was presented as a test of the participant's knowledge of different ethnic groups on campus.

SEB was assessed by presenting participants with a series of 12 sentence beginnings. Four sentence beginnings described stereotypically Asian behaviors (e.g., *drew up a study timetable*), four described stereotypically White-Australian behaviors (e.g., *easily made the first fifteen rugby team*), and four described neutral behaviors that are unrelated to the stereotype of Asians and White-Australians (e.g., *ate dinner*). The behaviors described in these sentence beginnings did not overlap with the items used in the threat manipulation. Half of the behaviors were paired with Asian names (e.g., Choi, Yoon) and half were paired with White names (e.g., Jason, Adam). Two versions of the SEB measure were developed, with name-behavior pairings counterbalanced across versions. For example, in the first version *drew up a study timetable* was paired with the name Yoon, but in the second version the same behavior was paired with Adam. Thus, participants were presented with four stereotype-consistent sentence beginnings, four stereotype-inconsistent sentence beginnings, and four neutral sentence beginnings. Participants were asked to continue the sentence beginnings by adding words to the end of the sentence fragment in any manner that created a grammatically correct sentence.

Names of individuals from minority groups are encountered infrequently by Whites, and may produce increased attributional processing simply because they are

novel or surprising (Pyszczynski & Greenberg, 1981). Therefore, a cover story was developed so that seeing Asian names in the SEB task would be less surprising to respondents. Specifically, participants were told that the sentence beginnings were written by students from diverse backgrounds as part of an ongoing study of student life that was being conducted in conjunction with various clubs on campus. To support this cover story, prior to completing the SEB task participants wrote two sentences about their friends and were asked whether they would give permission for their sentences to be used in future research.

*Procedure.* Participants completed the questionnaire that constituted the threat manipulation, followed by the SEB. After completing the SEB, participants were debriefed and thanked.

## RESULTS

Two independent raters blind to name-behavior pairings coded each SEB response as providing an explanation for the behavior in the sentence stem, or as continuing the sentence without providing an explanation. The two ratings were then averaged ( $r = .94$ ). An overall SEB score was derived by subtracting the average number of explanations provided for stereotype-congruent events (Asians engaging in stereotypically Asian behaviors and Whites engaging in stereotypically White behaviors) from the average number of explanations provided for stereotype-incongruent events (Asians engaging in stereotypically White behaviors and Whites engaging in stereotypically Asians behaviors). Higher positive scores indicate greater stereotypic processing.

An independent samples t-test revealed that SEB scores were higher in the threat condition ( $M = .15$ ) than in the no-threat condition ( $M = -.03$ ),  $t(37) = 2.13$ ,  $p < .05$ .

## DISCUSSION

The results of Study 1 support the prediction that threat increases stereotypic processing of the group constituting the threat. White participants who were exposed to information implying that Asians were a threat showed greater SEB compared to participants who were not threatened. It should be noted that the content of the items comprising the manipulation and the items in the SEB measure did not overlap, suggesting that the threat-induced stereotyping effects were not simply due to exposure to specific aspects of the Asian stereotype. In addition, participants in the current study were not pre-selected for being high or low on prejudice. Because prejudice was not assessed in this experiment, it is possible that the overall effect that was found was driven primarily by high-prejudice students. Alternatively, it may be the case that, in contrast to the Wittenbrink and Henly (1996) study, the response scale manipulation influenced implicit stereotyping independently of prior levels of prejudice.

Although these results provide an initial demonstration that threat can elicit greater outgroup stereotyping at the implicit level, they do not address two issues. The first issue relates to the type of threat induced. The items used in the manipulation

included a mixture of individual and group level threats. For instance, believing that many Asian males belong to gangs is likely to engender fear of individual Asians. On the other hand, the threat of large numbers of Asian international students overstaying their visa is likely to be felt at the group level, as this scenario has clear consequences for the White ingroup. The results of this experiment also do not speak to the reasons why threat leads to increased implicit stereotyping. One possible answer is that threatened individuals stereotype and derogate members of outgroups to restore their self-esteem (Branscombe *et al.*, 1994; Spencer *et al.*, 1997). Study 2 was conducted to explore these issues.

## STUDY 2

The aims of Study 2 were to examine whether explicit intergroup threat would elicit greater SEB, and if so, whether there would also be associated increases in collective self-esteem. Participants in Study 2 were randomly assigned to receive a collective threat in the form of information about new admission policies at their university that would decrease the proportion of ingroup members (White-Americans) relative to outgroup members (Asian-Americans) at their university, or to receive no threat. Participants then completed the two dependent measures, the SEB and the Collective Self-Esteem scale (Luhtanen & Crocker, 1992). It was hypothesized that intergroup threat would lead to increased implicit stereotyping. Moreover, following the results of Branscombe *et al.* (1994), enhanced stereotyping in the threat condition was expected to be associated with greater collective self-esteem.

## METHOD

*Participants.* Ninety-nine White-American males from Ohio State University participated in partial fulfillment of their introductory psychology course requirements.

*Materials.* An SEB measure was developed to assess Asian-American stereotyping. Nine sentence stems described behaviors that were pretested to be consistent with Asian-American stereotypes (e.g., involving studying, interests in computers), and nine stems described behaviors that were pretested to be inconsistent with Asian-American stereotypes (e.g., involving football, interests in drugs). Ten filler items were also included, creating a 28-item measure. Each sentence beginning was paired with an Asian or White name. As was the case in Experiment 1, to lessen suspicion about the measure, a preliminary task asked respondents to generate their own SEB-like items using their own first name. The actual SEB was then described as a collection of such items generated from other students at their own university.

The Collective Self-Esteem Scale (CSE; Luhtanen & Crocker, 1992) contained 16 items that represent four dimensions of collective identity: membership, private regard, public regard, and identification. The original scale by Luhtanen and Crocker was modified to ask respondents about their racial group, as opposed to their social group, so that responses would be specific to their perceptions of their White-American

ingroup. The membership dimension measures evaluations of oneself as a member of a group, e.g., *I am a worthy member of my racial group*. The private regard dimension assesses how individuals privately evaluate their social group, e.g., *I often regret that I belong to my racial group*. The public regard dimension measures perceptions of how one's social group is evaluated by others, e.g., *In general, others respect my racial group*. Finally, the identification dimension assesses how much one's membership in the group contributes to the self-concept, e.g., *My racial group is an important reflection of who I am*. Participants responded to the questions on 7-point scales (1= *strongly disagree*, 7= *strongly agree*).

*Procedure.* Participants reported to the lab to complete a study of "Perceptions of Student Life." They were informed that they would complete three questionnaire packets. The first questionnaire packet contained background information for the study, a measure of identification with their university (to bolster the cover story), and the preliminary task in which participants generated their own SEB-type items.

The second questionnaire packet included the group threat manipulation. Participants read an article that was ostensibly from the student newspaper pertaining to admissions at their university. The article stated that standards for admissions were being changed. In the threat condition, participants read that the change involved raising academic standards for admission. As a result of the change in admissions policies, the university predicted a change in student demographics such that the number of Asian-American students would significantly increase and the number of White-American students would significantly decrease. In the no-threat condition, participants read that the change in admissions policies involved a greater emphasis on extracurricular activities. No change in student demographics was mentioned. Participants were randomly assigned to receive one version of this packet or the other. The SEB was included in this packet following the threat manipulation.

The third packet included the CSE scale. After all the packets were completed, participants were debriefed and thanked.

## RESULTS

Two independent judges scored responses to the SEB items as to whether they provided an explanation of the behavior in the sentence stem. Codings were collapsed across judges. An SEB score was then calculated for each participant, with higher scores indicating that stereotype-incongruent events were explained to a greater extent than were stereotype-congruent events.

To assess whether participants engaged in more stereotypic processing of Asians in response to collective threat from that group, SEB scores were analyzed in an independent samples t-test. This analysis revealed that SEB scores were higher in the threat condition ( $M = .20$ ) than in the no-threat condition ( $M = .06$ ),  $t(97) = 3.01$ ,  $p < .01$ .

The CSE scale was scored according to the four subscales (membership, private regard, public regard, identification). Higher scores on each subscale indicated higher CSE on that dimension. Scores on the four subscales were analyzed in four separate t-

tests comparing the threat condition to the no-threat condition. Scores on the membership subscale were higher in the threat ( $M= 6.09$ ) than in the no-threat ( $M= 5.71$ ) condition,  $t(97)= 1.95$ ,  $p< .05$ , indicating that threatened participants felt more positively about their membership in their racial group than non-threatened participants. Similarly, scores on the identification subscale were higher in the threat ( $M= 4.10$ ) than in the no threat ( $M= 3.27$ ) condition,  $t(97)= 2.55$ ,  $p< .01$ , indicating that threatened participants felt more identified with their racial group than non-threatened participants. No significant differences emerged in the analyses of the private and public regard scales,  $t_s < 1$ ,  $ns$ .

To explore relationships between stereotypic processing and collective-self esteem, correlations between SEB scores and scores on the four CSE subscales were computed within each condition. SEB scores were significantly correlated with scores on the membership subscale of the CSE scale in the threat condition,  $r(52)= .32$ ,  $p< .03$ , but not in the control condition,  $r(47)= -.13$ ,  $p= .40$ . Comparison of these correlation coefficients (Preacher, 2002) revealed that they differed significantly from each other,  $z= 2.23$ ,  $p< .03$ . No significant correlations emerged between Asian SEB scores and the other three CSE subscales,  $r_s < .10$ ,  $p_s > .45$ .

## DISCUSSION

The results of Study 2 provide further evidence that threat elicits implicit stereotyping. When White-American participants were led to believe that the number of Asian-Americans at their university would increase and the number of White-Americans would decrease, they responded by engaging in enhanced stereotypic processing of Asians. Thus, an explicit group-level threat resulted in greater implicit stereotyping of the group responsible for the threat. Consistent with previous research (e.g., Branscombe & Wann, 1994), threat also enhanced collective self-esteem after participants had been given an opportunity to stereotype the outgroup. Specifically, participants who were threatened reported feeling more positively as members of their racial group and more identified with their racial group. In addition, SEB was associated with higher collective self-esteem only in the threat condition, suggesting that engaging in stereotypic processing may have served a group-affirming function for individuals who had experienced collective threat.

It is unclear why threat did not influence the public and private regard subscales of the CSE and why these evaluative dimensions were uncorrelated with SEB under threat. A possible answer to this question lies in the specific manipulation employed in this study. Participants in the threat condition read that the number of White-Americans at their university would decrease as a result of higher admissions standards, thus implying that their ingroup would fail to meet those standards. Thus, even if stereotyping the outgroup restored the evaluative aspects of collective self-esteem, it may have seemed inconsistent to participants to report enhanced positive distinctiveness in terms of public and private regard. Future research could avoid the limitations of self-report by employing more subtle measures of collective self-esteem, such as the IAT used by Smurder *et al.* (2006).

## GENERAL DISCUSSION

The results of these experiments provide support for the hypothesis that collective threat increases implicit stereotyping of the outgroup responsible for the threat. In two studies, being threatened by Asians caused White participants to engage in greater stereotypic processing of Asians. This finding emerged when threat was manipulated using subtle response scales (Study 1) and when the threat was made more explicit (Study 2). Additionally, Study 2 provided evidence that to the degree that threatened individuals stereotyped the outgroup, they also reported higher collective self-esteem. Together, these findings suggest that experiencing a threat to one's group leads people to engage in greater outgroup stereotyping, which may serve to restore collective self-esteem.

These findings also add to the growing body of evidence that implicit measures of stereotyping and prejudice are malleable. In recent years research has shown that implicit biases can be reduced via stereotype negation training (Kawakami, Dovidio, Moll, Hermsen, Russin, 2000) and diversity education (Rudman, Ashmore, & Gary, 2001). While it now seems clear that implicit stereotyping and prejudice shift in response to changes in contextual and stimulus features, few studies have focused directly on the role of motivational factors relating to social identity. The present research demonstrates that just as explicit stereotyping and prejudice are exacerbated by intergroup threat, so too is implicit stereotyping. Although past research has shown that intergroup threat enhances outgroup derogation (e.g., Branscombe & Wann, 1994; Smurder *et al.*, 2006) and self-image threat increases stereotyping (Fein & Spencer, 1997; Spencer *et al.*, 1998), the current studies are unique in providing evidence for the influence of collective self-esteem threat on stereotyping at the implicit level. Our research also highlights that the SEB may be used to assess stereotyping of Asians. Given that the SEB has already been successfully employed to assess stereotyping of women (Sekaquaptewa, & Espinoza, 2004; von Hippel *et al.*, 1997) and African-Americans (Sekaquaptewa *et al.*, 2003), it appears that the SEB is a flexible measure that can be applied to many social groups. Thus, the current findings support the validity of using the SEB as an implicit measurement tool.

The current research could be extended in a number of ways. First, it would be interesting to explore behavioral consequences of stereotyping after threat. In the present research, as was the case in most studies that examined the effects of social identity threat, participants were only given an opportunity to stereotype or derogate others. If stereotyping or derogating outgroups following threat serves to restore self-esteem, people should not also need to engage in behavioral discrimination. However, it is also possible that increased stereotype activation among threatened individuals would also lead to increased application of the stereotype to outgroup members. The finding that SEB predicts discriminatory behavior during intergroup interactions (Sekaquaptewa *et al.*, 2003) lends weight to this possibility. To tease apart these predictions, behavioral responses would need to be assessed before and after administration of the SEB measure.

A second avenue for future research is to investigate potential moderators of threat-induced stereotyping effects. Social identity theory proposes that group identification,

status relations, and permeability, legitimacy, and stability of group boundaries all influence the strategies that group members employ to achieve positive distinctiveness (Ellemers, 1993; Tajfel & Turner, 1979). Of these factors, ingroup identification may be a particularly important moderator of ingroup bias under threat. In the studies by Branscombe and Wann (1994) and Smurder *et al.* (2006), the high identifiers showed greater outgroup derogation in response to threat than did the low identifiers. Thus, high identifiers should be particularly prone to threat-induced stereotyping effects.

In conclusion, the current research provides additional evidence that threat leads to increased stereotyping of outgroups. The primary contribution made by this research stems from the finding that collective threats, whether implicit or explicit, lead to increased implicit stereotyping of the threatening group. Furthermore, this increased implicit stereotyping appears to be associated with increased feelings of being a worthwhile member of one's ingroup. These findings add to the growing literature on the important role played by implicit stereotyping in intergroup relations.

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