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The Effects of self-image threat on the judgment of out-group targets

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(IN PRESS, Swiss Journal of Psychology)

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Abstract

The authors argue that individuals may restore their self-esteem by derogating a member of an out-group, but only if they identify with the in-group and hold negative attitudes towards the out-group. In two experiments, the self-image of participants was either enhanced or threatened. Afterwards, participants evaluated an out-group target. The results provided broad support for the assumption that intergroup attitudes and in-group identification moderate the impact of self-image threat on the judgment of an out-group member. Self-image threat led to a more negative evaluation only in participants with negative out-group attitudes. It resulted in a more positive evaluation when participants held positive out-group attitudes and identified less with the in-group.

The Effects of self-image threat on the judgment of out-group targets

When people face information that implies a negative evaluation of their self, they often employ subtle strategies designed to protect the self against grievous damage (Tesser, 1986; 2000). One question that has been discussed is whether the application of prejudice can be considered such a strategy aimed at bolstering the evaluation of the self when it is threatened (Kunda & Sinclair, 1999; Sinclair & Kunda, 1999). Indeed, there is some evidence that individuals who are low in self-esteem tend to make negative evaluations of others (Ehrlich, 1973; Wills, 1981, 1991) and that they especially do so when these other people are out-group members (Fein & Spencer, 1997; Spencer, Fein, Wolfe, & Dunn, 1998). For example, Stephan and Rosenfield (1978) found in a field study that elementary school children with low self-esteem were more likely to report negative racial attitudes than elementary school children with high self-esteem. Also, several studies have shown that a situationally induced threat to the self-concept leads to derogation of out-group members or discrimination against out-groups. For example, Fein and Spencer (1997) provided participants with either positive or negative feedback on a performance test and then asked them to evaluate a member of a stereotyped out-group. They found that participants were more likely to evaluate the member of the stereotyped out-group negatively if they had received prior negative feedback as opposed to positive feedback. Furthermore, Spencer et al. (1998) demonstrated that threat to the self-concept is linked to an automatic activation of stereotypes.

Besides this evidence that self-image threat can exacerbate prejudiced responses, other studies pointed out that self-image threat may also have quite variable consequences (e.g., Brockner & Chen, 1996; Crocker, Thompson, McGraw, & Ingerman, 1987; Petersen & Blank, 2003; Seta & Seta, 1992). For example,

Crocker et al. (1987) found differences in responses to negative performance feedback between participants with high and those with low trait self-esteem. Only participants with high trait self-esteem derogated an out-group more when they received negative feedback, while those with low trait self-esteem did not. In a recent review of the literature, Aberson, Healy, and Romero (2000) concluded that low self-esteem is not necessarily connected with a stronger tendency to evaluate the out-group more negatively compared with the in-group. Also Rubin and Hewstone (1998) found no convincing evidence in a meta-analysis of previous research that low self-esteem provokes out-group discrimination more than high self-esteem does. However, despite the fact that some of the previous studies are flawed by a serious confounding of the threat manipulation and the evaluation of the out-group members (for a discussion of this argument see Petersen & Blank, 2003), studies that avoided this confounding also identified variable responses in the face self-image threat. For example, Petersen and Blank (2003) manipulated the state self-esteem of members of artificial three-person groups and found, in line with their expectations, that members of low state self-esteem groups exhibited greater out-group discrimination than members of high state self-esteem groups. But they also observed a great variability in discrimination in the low self-esteem groups. Hence, they suppose that low self-esteem may lead to out-group discrimination but that it may also evoke quite different responses.

In our studies, we were particularly interested in the effects of self-image threat on the evaluation of single out-group members. Our main goal was to provide further evidence for the assumption that a negative evaluation of out-group members is not an inevitable consequence of self-image threat. We argue that threat to an individual's self-image leads to greater derogation of out-group targets especially

when the individual holds negative attitudes towards the respective out-group and when she or he identifies with the in-group. In contrast, we doubt that individuals with positive out-group attitudes and reduced identification with the in-group evaluate an out-group target more negatively as a consequence of self-image threat. We put forward that the derogation of out-group targets may be a tool for bolstering self-esteem only for individuals with negative out-group attitudes and at least a moderate identification with the in-group, but not for those with positive out-group attitudes and a reduced identification with the in-group. In our view, two major theories, self-affirmation theory (Steele, 1988; Steele, Spencer, & Lynch, 1993) and social-identity theory (Tajfel & Turner, 1979; 1986; Turner, 1982), help to understand why people vary in their out-group related responses when they experience self-image threat.

Self-affirmation theory (Steele et al., 1993) posits that people who experience a threat to one aspect of their self may affirm another unrelated aspect of the self to strengthen a feeling of overall self-integrity. For example, Tesser and Cornell (1991) reported a study in which participants obviously coped with threat from an unfavorable social comparison by the affirmation of their values. As Fein and Spencer (1997) pointed out, the application of prejudice is a possible tool to bolster the self in this way. In their studies, they observed not only that individuals evaluated a member of a stereotyped group more negatively when they had received threatening feedback on a prior task than when had received positive feedback, but also that the derogation of the target was related to an increase in self-esteem. However, self-affirmation theory would also propose that prejudiced responses are not a tool to affirm the self for people with positive or tolerant out-group attitudes. If we take into account the prediction of self-affirmation theory that self-image distress may be reduced by expressing attitudes, prejudiced responses should be an effective

means of bolstering the self to the degree they are congruent with the individual's attitudes. But for individuals with positive out-group attitudes, the discrimination of an out-group target should be inconsistent with their attitudes and, therefore, for these people discrimination should be a further source for threat rather than self-affirmation. Consequently, we hypothesized that self-image threat leads to an increased derogation of out-group members for individuals with negative out-group attitudes, but not for those with positive out-group attitudes.

Another aspect that may contribute to prejudiced behavior and judgments in the face of self-image threat is the social identity of individuals. Social identity theory suggests that besides personal identity, social identity is an important part of the self and that membership in an in-group, which is perceived as distinct in a positive way from a relevant out-group, may be a source of positive self-esteem (Tajfel & Turner, 1979; 1986; Turner, 1982). Even though the authors of social identity theory have not stated directly, it is often discussed whether this also implies that threat to self-esteem leads to discrimination or derogation of out-group members (e.g., Hogg & Abrahms, 1990; Rubin & Hewston, 1998). However, as we have already mentioned, there are mixed results as to whether individuals who experience a threat to the self-esteem exhibit greater intergroup discrimination or greater derogation of out-group members (Aberson et al., 2000; Rubin & Hewstone, 1998) and that people might show variable responses in the face of self-image threat (Peterson & Blank, 2003).

We assume that identification is one variable which, alongside the out-group attitude, may help to explain a part of the variance observed in responses to threat. For example, Gagnon and Bourhis (1996) found in an experiment with minimal groups that the more participants identified with their in-group, the more they discriminated. Also, they reported that discrimination contributed to the self-esteem

(social identity) of participants to the degree participants identified with the in-group. Indeed, it seems unlikely that discrimination may bolster the identity of an individual if she or he does not identify with the in-group. Thus, identification should be a necessary condition for discrimination to make a contribution to positive social identity. Based on this reasoning, we assume, with regards to the evaluation of stereotyped out-group members, that the impact of self-image threat on discrimination is moderated not only by the attitude toward the out-group, but also by the attitude towards the in-group. In particular, we hypothesize that individuals are more likely to derogate an out-group member to bolster their self-esteem when they identify with their in-group and hold positive attitudes towards the in-group. Since the in-group is not an important part of the self of people with a negative attitude towards the in-group, the comparison between in-group and out-group should be irrelevant for their self-esteem and they should not discriminate.

To sum up, the present research attempts to provide further support for the importance of intergroup attitudes by investigating whether *individual differences* in intergroup attitudes (Experiment 1) and identification with the in-group (Experiment 2) moderate the impact of self-image threat on the judgment of an out-group target. In particular, we assumed that what matters is not only the group membership of a target, but also individual intergroup attitudes and the social identification of the person making the judgment. We hypothesized that self-image threat should lead to a derogation of an out-group target when the judging individual holds negative out-group attitudes and positive in-group attitudes or high in-group identification.

Experiment 1

To test the hypotheses regarding the moderation of self-image threat effects, we recruited participants to take part in two ostensibly unrelated studies. The first

study included the manipulation of self-image threat, while participants in the second study judged an in-group or an out-group target. The intergroup attitudes were measured as well. In line with our theorizing above, we assumed that the self-image threat manipulation was more likely to have a negative impact on the judgment of the out-group target when individuals hold a negative attitude towards the out-group and a positive attitude towards the in-group. To control for effects of the self-image threat manipulation unrelated to the targets' group membership, we included a condition in which participants had to judge an in-group target. No moderating effects of the intergroup attitudes should occur in this condition.

Method

Procedure and Participants. Participants were 91 students from the University of Münster who received course credit and a chocolate bar in exchange for participation. They were informed that they would take part in two unrelated studies. The first study supposedly sought to validate a test measuring a new construct called "integrative abilities." This test included the manipulation of self-image threat. Participants were randomly assigned to the self-image threat or the self-image enhancement condition. After participants had finished the task, they left the first lab and walked to a second room on another floor to take part in what they believed was the second experiment. This ostensibly unrelated experiment was said to be a study on person perception. Upon arriving at the second lab, participants were first asked to read a newspaper article about a young criminal and to answer a few questions about the target. After participants had read the article, they were asked to answer some questions about the young man. The group membership of the target was varied, so that one version described a Turkish and the other one a German target. Finally, participants worked on different attitude measures before being debriefed.

Six participants were excluded from the statistical analyses. Two indicated a citizenship other than German. Four did not follow the instructions that were given on the computer screen in the second part of the experiment (e.g., one participant worked on the IAT - during which response latencies were measured - using one hand only instead of two).

Manipulation of self-image threat. Participants received a test that supposedly measured their "integrative abilities." In fact, the test consisted of tasks taken from various intelligence tests that varied in difficulty. To manipulate self-image threat, half of the participants received a version with easy tasks, while the other half received a version with difficult tasks. A pretest had shown that participants who had worked on the easy test felt self-assured and assessed themselves as having outstanding "integrative abilities," whereas those who had worked on the difficult test experienced a threat to their self-image and assessed themselves as having poor "integrative abilities" in comparison to other students.

Evaluation task and manipulation of target's ethnicity. A newspaper article about a 16 year-old offender was presented to the participants (cf. Florack, Scarabis, & Bless, 2001). The article was allegedly taken from the newspaper "Berliner Zeitung" and, on the whole, drew a negative picture of the offender. As a member of a street gang, he had threatened students and committed several property offences. In court he was uncooperative and showed no remorse for his crimes. Participants were requested to carefully read the article and subsequently write down the thoughts that had occurred to them while doing so. Finally, they answered several questions pertaining to the young criminal. All participants read the same newspaper article. However, to suggest that the juvenile delinquent was either of German or Turkish origin, we varied his first name. Half of the participants read an article about

a young man called Stefan (typical German name), the other half read the same article about a young man named Ismet (typical Turkish name). The surname of the target was not mentioned in the newspaper article, as is usual in Germany for defendants who are minors.

Manipulation checks. Participants answered four questions concerning their test performance ("What do you think: How good was your performance in comparison to other students?"; 1 = *very bad*; 9 = *very good*; "How angry were you at not finding the correct solution for a task?"; 1 = *not at all*; 9 = *very much*; "How satisfied were you with your performance?"; 1 = *very unsatisfied*; 9 = *very satisfied*; "How easy was it for you to answer the tasks?"; 1 = *not at all easy*; 9 = *very easy*) and two questions that were related to their present mood ("How do you feel at this moment?" a) 1 = *bad*; 9 = *good*; b) 1 = *cheerless*; 9 = *happy*). The last two questions were combined into a single scale for participants' mood (Cronbach's alpha = .85). High values on this scale indicate a positive mood.

Target judgment. Participants indicated on a 9-point scale (1 = *not at all*; 9 = *very much*) the degree to which several attributes applied to the young criminal (pleasant, affable, criminal, friendly, threatening, spoiled, aggressive, likeable). To build a single scale for the target evaluation, we averaged the answers on the single items (Cronbach's alpha = .81). High values indicate a positive evaluation of the target. To assess whether participants attributed the behavior of the target to internal or external factors, they were asked to indicate their agreement with the following statements (1 = *do not agree*; 9 = *agree*): "I think that Ismet (Stefan) himself is to a large degree responsible for his situation"; "I think that Ismet (Stefan) would not have been a criminal in a different social setting"; "I think that the verdict on Ismet (Stefan) should be 'not guilty'"; "I believe that the friends of Ismet (Stefan) bear the greatest

degree of guilt"; "I believe that Ismet (Stefan) has chosen his path deliberately and has to accept responsibility for his deeds." Taking the item poles into consideration, we averaged the assessment of the target across the five items (Cronbach's alpha = .74). High values on the attribution scale indicate that the behavior of the target was attributed to external factors. Because the target evaluation and the attribution scale were correlated r(85) = .44, the items of both scales were also averaged to built a single scale for the target judgment (Cronbach's alpha = .83). The combined scale was used for the statistical analyses, unless otherwise noted.

Intergroup attitudes. Participants were asked to indicate the degree to which five positive attributes (pleasing, enriching, sympathetic, attractive, good) and five negative attributes (negative, dangerous, unpleasant, unwanted, forbidding) applied to Germans or Turks on a 6-point scale (1= *not at all*; 6= *very much*). The self-reported attitudes towards Turks (Cronbach's alpha = .89) and Germans (Cronbach's alpha = .80) were summed up into single scales.

Relative group preference. The preference of the out-group relative to the in-group was measured with an adapted version of the implicit association test (IAT) of Greenwald, McGhee, and Schwarz (1998). The adapted IAT consisted of five steps in which participants, using two response keys, had to assign words presented on a computer screen to certain attribute categories (positive vs. negative) or group categories (Turks vs. Germans). The words representing the attribute categories were adjectives with a positive (e.g., beautiful, joyful) or negative meaning (e.g., angry, sad). The adjectives were selected from a study by Hager, Mecklenbräuker, Möller, and Westermann (1985). They were equal in length and of unambiguous valence. The words representing the group categories were German first names

(e.g., Rudi, Dieter) and Turkish first names (e.g., Özal, Muhammat). Altogether, there were 72 words (18 for each category).

In the most critical steps[1], adjectives and first names were presented at random and participants had to map the presented items onto the response keys. In one step, the in-group was combined with positive words (right response key) and the out-group with negative words (left response key). In another step, the in-group was combined with negative words (left response key) and the out-group with positive words (right response key). To prepare the data for analyses that require a normal distribution, we followed the procedures of Greenwald et al. (1998). Responses faster than 300 ms were regarded as guesses and responses slower than 3000 ms as controlled responses and were therefore eliminated. Furthermore, the first two trials from each step were dropped because of typically delayed responses at the beginning of a new step (cf. Greenwald et al., 1998). Finally, a difference score was computed on the basis of the log-transformed and averaged latencies of the different response combinations. The mean latency for the in-group negative / out-group positive combination was subtracted from the mean latency for the in-group positive / out-group negative combinations. Higher values indicate a preference for the out-group relative to the in-group.

Results

Manipulation checks. The checks on the manipulation showed that the easy version of the test was much easier for participants (M = 6.67, SD = 1.46) than the difficult version (M = 3.29, SD = 1.20), $t(83) = 11.70$, $p < .001$. Furthermore, participants who received difficult tasks believed they had done badly and worse than other students (difficult tasks: M = 3.50, SD = 1.25; easy tasks: M = 5.99, SD = 1.54), $t(83) = 8.17$, $p < .001$. They were also less satisfied (difficult tasks: M = 3.38, SD =

1.45; easy tasks: *M* = 6.49, *SD* = 1.64), *t*(83) = 9.26, *p* < .001, and more annoyed with their performance (difficult tasks: *M* = 5.93, *SD* = 2.07; easy tasks: *M* = 4.98, *SD* = 2.34), *t*(83) = 1.99, *p* < .06. The mood was affected by the manipulation of self-image threat, as well. Participants were happier (*M* = 7.05, *SD* = 1.20) when they had worked on the easy tasks than when the had worked on the difficult tasks (*M* = 4.91, *SD* = 1.42), *t*(83) = 7.52, *p* < .001.

Preliminary analyses. Implicitly measured group preferences and self-reported attitudes towards Turks were significantly correlated, *r*(85) = .24, *p* < .05. However, the correlation was only moderate and, thus, it seems adequate to consider the two variables as conceptually different. Implicitly measured group preferences and self-reported attitudes towards Germans were not correlated, *r*(85) = -.04, *ns*. Self-reported attitudes and implicitly measured group preferences did not differ between the self-image threat and self-image enhancement conditions, *t*s(83) < 1, *ns*.

The impact of self-image threat on the judgment of the out-group target. To test the hypothesis that individual differences in intergroup attitudes moderate the impact of self-image threat, we computed multiple regression analyses with the implicit and explicit attitude measures, the self-image threat manipulation, and the interactions between the attitude measures and the self-image threat manipulation as independent variables. The regression analyses were computed separately for the prediction of the judgment of the out-group and the in-group target. Following the procedure of Drapper and Smith (1981), the interactions were all orthogonalized with respect to lower order terms. Thus, the regression coefficients can be directly interpreted as main and interactions effects. An overview of the results of the regression analyses is displayed in Table 1.

As expected, the effect of the self-image threat manipulation on the judgment of the out-group target was moderated by individual differences in attitudes towards the out-group (β = -.33), $t(37) = 2.24$, $p < .05$. In the self-image threat condition the attitude towards the out-group was strongly related to the judgment of the out-group target, $r(22) = .68$, $p < .001$, while there was no such relation in the self-image enhancement condition, $r(23) = .08$, *ns*. Furthermore, the inspection of the interaction plot (Figure 1) supported our specific predictions. Participants with negative out-group attitudes were more likely to derogate the out-group target when they experienced self-image threat compared to when they experienced self-image enhancement. However, in line with our expectations this impact of self-image threat disappeared and was reversed with more positive self-reported attitudes towards the out-group. This interpretation is also supported by a test of differences between the regression lines at specific points of the out-group attitude scale (cf. Aiken & West, 1991). The difference between the regression lines in the described direction is significant one standard deviation below they mean, $t(41) = 1.90$, $p < .05$, one-tailed, and marginally significant one standard deviation above the mean, $t(41) = 1.58$, $p < .07$.

In addition to the moderating effect of the out-group attitude, we also found a unique moderating effect of the attitude towards the in-group (β = .32), $t(37) = 2.22$, $p < .05$. In the self-image threat condition, $r(22) = -.58$, $p < .001$, but not in the self-image enhancement condition, $r(23) = .18$, *ns*, a negative judgment of the out-group target was strongly related to a positive attitude towards the in-group. A further inspection of the interaction plot (Figure 2) and a test of the differences between the regression lines one standard deviation above and below the mean revealed that participants with positive in-group attitudes were more likely to derogate the out-

group target under self-image threat than under self-image enhancement, $t(41) = 2.37$, $p < .05$, one-tailed. In contrast, the opposite effect was found for participants with a reduced preference for the in-group, $t(41) = 1.83$, $p < .05$, one-tailed.

In addition to the reported interaction effects, a main effect of the out-group attitude occurred ($\beta = .33$), $t(37) = 2.33$, $p < .05$. This main effect reflects a positive correlation between the out-group attitude and the target judgment. Participants with a positive attitude towards the out-group were more likely to judge the target positively. The other main effects, ts(37) < 1.30, ps > .20, and the interaction between the implicitly measured group preferences and the self-image threat manipulation were not significant, $t(37) < 1$, *ns*. The interaction effect between the implicitly measured group preferences and the self-image threat manipulation remained non-significant when the self-report attitude measures and the related interaction terms were excluded from the regression equation. However, we further examined the correlations between the implicitly measured group preferences and the subscales of the judgment in the different experimental conditions. For participants in the self-image threat condition, we found a significant correlation for the implicitly measured group preferences with the target evaluation, $r(22) = .48$, $p < .05$, which differed significantly, $z = 1.63$, $p < .05$, one-tailed, from the zero correlation in the self-image enhancement condition, $r(23) = .00$, *ns*. Participants who experienced self-image threat judged the out-group target more negatively when they showed a strong in-group preference on the IAT measure than when they showed a reduced preference for the in-group relative to the out-group. However, the correlation between the implicitly measured group preferences and the attribution of the target's behavior to internal or external factors was not significant in either condition, rs < .33, ps > .12.

The impact of self-image threat on the judgment of the in-group target. In another condition, participants judged an in-group target after they were exposed to the self-image threat or enhancement manipulation. This condition was conducted to control for effects of the manipulation, such as mood congruency or frustration – aggression effects unrelated to the target's group membership. The intergroup context was not salient for the participants in this condition. Therefore, we expected no effects of the intergroup attitudes and no moderating effects of these attitudes as regards the impact of the self-image threat manipulation. In line with our expectations, no effects of the attitude measures and the interactions between these measures and the self-image threat manipulation were observed (see Table 1 for detailed results). The only significant effect of the self-image threat manipulation pertained to the judgment of the in-group target ($\beta = -.42$), $t(32) = 2.60$, $p < .05$. Participants who received the easy test version were more likely to evaluate the target negatively than were participants who received the difficult test version.

Since the beta value of the interaction between the self-image threat manipulation and the attitude towards the in-group was moderately high, even if not significant, ($\beta = .37$), $t(32) = 1.62$, $p < .12$, we examined the correlation of the in-group attitude with the target judgment for participants who experienced self-image threat and those who experienced self-image enhancement. We found an unexpected tendency. In the self-image threat condition, the judgment of the in-group target was negatively correlated with the attitude towards the in-group, $r(20) = -.42$, $p < .07$, while there was no significant correlation in the self-image enhancement condition, $r(20) = .15$, *ns*.

Additional analyses. We computed two additional regression equations to test the moderating effects of the targets' group membership on the reported interaction

effects between the self-image threat manipulation and the out-group attitude and between the self-image threat manipulation and the in-group attitude. In the first regression equation, we included the self-image threat manipulation, the target's group membership of the target, the out-group attitude, the two-way interactions between the out-group attitude and the target's group membership, and between the out-group attitude and the self-image threat manipulation, and the three-way interaction between the self-image threat manipulation, the target's group membership, and the out-group attitude. This equation yielded a marginally significant three-way interaction, (β = .16), $t(78) = 1.59$, $p < .12$, resulting from an interaction between self-image threat and the out-group attitude that is significant for the judgment of the out-group target, but not for the judgment of the in-group target. We described these interactions detailed above (Table 1). The interaction between the self-image threat manipulation and the out-group attitude was also significant in this regression equation, (β = -.22), $t(78) = 2.13$, $p < .05$. Furthermore, we obtained a main effect of the out-group attitude, (β = .21), $t(78) = 2.11$, $p < .05$, which was qualified by an interaction between the out-group attitude and the target's group membership, (β = -.28), $t(78) = 2.78$, $p < .01$. As we reported above (Table 1), the out-group attitude was positively related to the judgment of the out-group target, but it was unrelated to the judgment of the in-group target. A significant main effect of the group membership of the target, (β = -.22), $t(78) = 2.15$, $p < .05$, indicated that participants evaluated the out-group target more positively than the in-group target. The main effect of the self-image threat manipulation was not significant, $t(78) = 1.31$, *ns*.

In a further multiple regression equation we considered the self-image threat manipulation, the target's group membership, the attitude towards the in-group, the

two-way interactions between the in-group attitude and the target's group membership, and between the in-group attitude and the self-image threat manipulation, and the three-way interaction between the self-image threat manipulation, the target's group membership, and the in-group attitude. In the two target specific analyses, we already found hints for a similar pattern of the interaction between the self-image threat manipulation and the in-group attitude as regards the effects on the judgment of the in-group target as well as on the judgment of the out-group target. Congruently, the combined regression analysis revealed a significant interaction effect between these two variables, (β = .30), $t(78) = 2.85$, $p < .01$. The three-way interaction between the in-group attitude, the self-image threat manipulation, and the target's group membership was not significant, (β = -.07), $t(78) < 1$, *ns*. More precisely, we found that participants with a positive in-group attitude, but not those with a negative in-group attitude derogated the target when they experienced self-image threat independently from the targets' group membership. Furthermore, the regression analyses revealed a marginally significant main effect of the in-group attitude, (β = -.18), $t(78) = 1.69$, $p < .10$. Participants with a positive in-group attitude were more likely to derogate the target than participants with a less positive in-group attitude. All other main and interaction effects were not significant in this regression equation, $ts(78) < 1.25$, *ns*.

Discussion

Previous studies of Fein and Spencer (1997) have already shown that individuals who experience threat to their self-image do not discriminate against targets without consideration of their group membership. Rather, Fein and Spencer demonstrated that targets of a stereotyped group are more likely to be the victim of discrimination as a consequence of self-image threat than targets of a non-

stereotyped group. Our results supplement this research by showing that individual differences in attitudes towards the target's group also moderate the impact of self-image threat. Only participants with a negative out-group attitude were more likely to judge an out-group member in a negative fashion when they experienced low competence in a previous task than when they experienced high competence. The more positive the out-group attitudes were, the more the effect of self-image threat decreased. Thus, the results demonstrate for the specific intergroup context we examined in Experiment 1 that individuals derogate an out-group member only if they hold negative attitudes towards the out-group. The results of Experiment 1 also provide evidence for the notion that the in-group attitude plays a crucial role as regards the target evaluation under self-image threat. In line with the idea that individuals with high in-group identification can benefit more from the devaluation of out-group targets, participants who experienced self-image threat were more likely to evaluate the target negatively the more highly they valued their in-group.

Furthermore, we found that participants evaluated a target with an in-group name more positively when they experienced self-image threat compared to participants who experienced self-image enhancement. This result is completely incompatible with a simple priming explanation assuming that self-image threat like other kinds of frustration or bad mood makes negative information more accessible and, as a consequence, leads to more negative interpretations of a situation and to more negative judgments.

However, another finding prevents us from interpreting the more positive evaluation of the in-group target in the face of self-image threat as a consequence of a biased favoritism of in-group members. Our data did not reveal that the positive evaluation of the in-group target went up with more positive in-group attitudes. In

contrast, we found some hints that people with positive in-group attitudes are more likely to evaluate the in-group target more negatively. This on the first view surprising result is more reasonable if we take into account that the in-group target as well as the out-group target was accused of deviant behavior. Research on deviant behavior in intergroup settings demonstrated that in-group members who deviate from an in-group norm are under certain circumstances evaluated more negatively than out-group members who performed the same behavior (Abrams, Marques, Bown, & Henson, 2000). Indeed, deviant in-group exemplars undermine the validity of in-group norms and may be a threat to the identity of in-group members who identify strongly with the in-group. For those in-group members, the derogation of deviant in-group members may have the function of in-group protection. Furthermore, it seems likely that the judgment of a young criminal is related to basic values and that people with more liberal attitudes prefer less punishment for marginalized people and minorities and stronger integration into society than people with more conservative values. Taken into account that a strong identification with the ethnic in-group is probably related to conservative values, the approval of the punishment of a young criminal might be an affirmation of the own values and the self for people with positive attitudes towards the in-group regardless of whether a deviant target is an in-group or an out-group member. In contrast, the approval of a tolerant treatment of minorities may be a self-affirmation for people who hold more liberal values.

A limitation of Experiment 1 is that only the self-reported intergroup attitudes moderated the impact of self-image threat. It would have strengthened the validity of our results if we had also found a moderating effect of the implicitly measured group preferences on the effects of self-image threat. In fact, we did not obtain such an effect as regards the combined scale of the out-group target judgment. Our analyses

reveal the expected differences in correlations only as regards one subscale of the judgment. As we will describe in detail below, Experiment 2 provides us with more promising evidence that implicitly-measured group preferences can moderate the impact of self-image threat, as well. However, it is important to stress that we did not predict different effects of the implicitly measured relative group preferences and the self-reported measures.

Experiment 2

Our interpretation of the results of Experiment 1 is based on the view that a negative evaluation of an out-group target may have different consequences for the self-esteem of the judging individual, depending on which attitude the individual holds towards the out-group and the in-group. In particular, we suppose that individuals who derive their self-esteem to a great extent from their membership in the in-group and who hold negative attitudes towards the out-group may bolster their social identity and their self-esteem through the social comparison with a negatively evaluated out-group target. We further assume that individuals who do not feel attached to their in-group cannot profit from a devaluation of an out-group member in that way. However, in Experiment 1 we examined the attitude towards the in-group but did not measure the identification with the in-group directly. Therefore, one objective of Experiment 2 was to replicate the findings of Experiment 1 with a direct measure of in-group identification which we applied in addition to an implicit measure of group preferences.

To test our hypotheses, we used a procedure similar to that in Experiment 1. We first manipulated perceived competence in a task through task difficulty. In an ostensibly unrelated study, German participants then had to judge a Polish target. Finally, participants worked on the IAT and filled out a questionnaire that included

items to assess the in-group identification. We predicted that participants with greater in-group identification and in-group preference would be more likely to evaluate the out-group target negatively than participants with a reduced in-group preference. This correlation should be stronger in the self-image threat condition.

Method

Participants and Procedure. The participants were 32 women and 20 men who were recruited through an ad in a regional event magazine. They received 8 Euros in exchange for their participation. As in Experiment 1, all participants were informed that they would take part in two different studies. The first of these ostensibly unrelated studies was intended to either threaten or enhance their self-esteem. We used the same task as in Experiment 1. Next, they left the first lab and went to a second lab on another floor to take part in what they thought was a study about person perception. Participants were seated in front of a computer screen. First, they listened to the recording of a female speaker who read a newspaper article about a young Polish criminal. Then, they judged the target on different items. With the exception of the target's ethnicity, the article and the questions about the target were the same as in Experiment 1. Afterwards, participants worked on the IAT and completed a questionnaire aimed at measuring their in-group identification. Finally, the experimenter debriefed the participants.

Manipulation check. Our manipulation check was similar to that in Experiment 1, but included in addition two questions from the Heatherton and Polivy (1991; cf. Schütz, 1996) state self-esteem scale. The scale consisted of the following items: "What do you think: How good was your performance in comparison to other students?"; 1 = *very bad*; 9 = *very good*; "How satisfied were you with your performance?"; 1 = *very unsatisfied*; 9 = *very satisfied*; "How easy was it for you to

answer the tasks?"; 1 = *not at all easy*; 9 = *very easy*; "I feel confident about my abilities"; 1 = *not at all true*; 9 = *extremely true*; "I feel confident that I understand things"; 1 = *not at all true*; 9 = *extremely true*; "How do you generally evaluate your integrative abilities?"; 1 = *very bad*; 9 = *very good*. The items were averaged into a single scale with high values indicating greater task related self-esteem (Cronbach's alpha = .88).

Relative group preference. We again used the IAT to measure the relative group preference. It was almost identical to the IAT used in Experiment 1, with the only difference that the category label Turks was replaced with the category label Poles, and the Turkish first names were replaced with Polish first names (e.g., Zbigniew, Krzysztof). The computation of the scale value was identical to Experiment 1. High values indicate a relative preference for Poles; low values indicate a relative preference for Germans.

Identification. Participants answered four items on a 9 point bi-polar scale with *not at all* and *very much* as endpoints ("I identify with Germans"; "I regard myself as German"; "I am glad to be German"; "I feel closely connected to other Germans"). The items were averaged into a single scale (Cronbach's alpha = .85). High values indicate that participants felt attached to their in-group.

Target judgment. Participants judged the target on the same items as in Experiment 1. All items of the target judgment were averaged into a single scale (Cronbach's alpha = .75).

Results

Preliminary analyses and manipulation check. Participants indicated a lower task related self-esteem when they worked on the difficult tasks (M = 4.43, SD = 1.19) as compared to when they worked on the easy tasks (M = 6.55, SD = .94),

$t(50) = 7.13$, $p < .001$. The self-image manipulation did not affect the implicitly measured group preferences, $t(50) < 1$, *ns*. However, we obtained an effect of the self-image manipulation on the in-group identification, $t(50) = 1.95$, $p < .06$. Participants who experienced low task competence reported a stronger identification with the in-group ($M = 6.20$, $SD = 1.24$) than did participants who experienced high competence ($M = 5.37$, $SD = 1.81$). Furthermore, implicitly measured group preferences were significantly correlated with in-group identification, $r(52) = -.34$, $p < .05$. Participants with more positive associations with the in-group and less positive associations with the out-group reported stronger in-group identification.

Self-image threat and target judgment. To examine whether the impact of self-image threat depends on the preference of the in-group over the out-group and the identification with the in-group, we computed three regression analyses with the target judgment as dependent measure (see Table 2 for an overview). In the first equation, we analyzed the effects of implicitly measured group preferences, the self-image manipulation, and the interaction of the two variables. In the second equation, we considered the effects of identification, the self-image manipulation, and the interaction of the two variables. In the third equation, we included all of these terms. For all regression analyses, we orthogonalized the variables with respect to lower order terms. Thus, all effects could be directly interpreted from the regression results.

In the first regression analysis, we observed a significant interaction between the implicitly measured group preferences and the self-image manipulation ($\beta = -.31$), $t(48) = 2.32$, $p < .05$, as well as a marginally significant main effect of the self-image manipulation ($\beta = -.24$), $t(48) = 1.81$, $p < .10$. To interpret the interaction further, we inspected the plot of the regressions (Figure 3) and tested the differences between the regression lines for the implicitly measured group preferences one standard

deviation above and below the mean (cf. Aiken & West, 1991). When participants had a clear preference for the in-group over the out-group, the typical effect of self-image threat occurred: participants were more likely to judge the out-group member negatively when they experienced self-image threat than when they experienced self-image enhancement, $t(48) = 2.92$, $p < .01$. We did not observe this effect for participants with a lower in-group preference, $t(48) < 1$, *ns*. If at all, these participants were more likely to judge the out-group member gently in the self-image threat condition than in the self-image enhancement condition.

In the second regression equation, we examined the moderating effect of the self-reported in-group identification. Again, we found, beside a main effect of the self-image manipulation, ($\beta = -.27$), $t(48) = 1.92$, $p < .06$, a significant effect of the interaction between in-group identification and the self-image threat manipulation ($\beta = .28$), $t(48) = 2.10$, $p < .05$. We analyzed the interaction effect further with a test of the difference between the regression lines one standard deviation above and below the mean. The graphical plots are depicted in Figure 4. Even if participants were overall more likely to evaluate the target positively when they experienced self-image threat, $t(48) = 2,84$, $p < .01$, this tendency was reduced or even absent for participants with strong in-group identification, $t(48) < 1$, *ns*.

In the third equation, we included – simultaneously - the implicitly measured group preference, identification, the self-image threat manipulation, the interaction between group preference and self-image threat manipulation, and the interaction between identification and self-image threat manipulation. We found that the two interaction coefficients were now only marginally significant, *t*s$(46) > 1.46$, $p < .15$. Thus, it seems that the two single interaction effects are at least partly related to the same underlying process.

Discussion

Experiment 2 provides additional evidence for the assumption that individuals who experience a threat to their self-image do not invariably derogate out-group targets. In fact, we observed that participants who felt less attached to their in-group evaluated the out-group target more positively when they experienced self-image threat compared to when they experienced self-image enhancement. Only participants who showed a strong preference for the in-group over the out-group on the implicit measure were more likely to judge the out-group target negatively in the self-image threat condition as compared to the self-image enhancement condition. Thus, we successfully replicated the finding of Experiment 1 that the impact of self-image threat on the judgment of an out-group target depends on the attitudes towards the in-group. It is important to note that this replication was successful for a target with a different group membership than in Experiment 1. Thus, the results are not limited to the special case of Turks in Germany that was examined in Experiment 1.

The main effect of the self-image threat manipulation which reveals that, without consideration of the moderator variables, self-image threat led to a positive evaluation of the target might be a consequence of positive attitudes toward the Polish out-group and liberal values which are predominant in the sample. Indeed, we know from other research, as well, that students are likely to hold tolerant and egalitarian values. Consequently, the positive evaluation of an out-group target in the face of self-image threat can be seen as a result of the expression of attitudes and values to affirm the self.

General Discussion

Previous research found heterogeneous results regarding the impact of self-image threat on intergroup discrimination. Whereas some research reported convincing evidence that individuals might judge out-group members in a prejudiced way especially when their self-image was threatened, research in the social identity domain draws a less clear picture. Indeed, some studies obtained no relationship between self-esteem and intergroup discrimination, whereas other studies found that individuals with a positive self-esteem were more likely to discriminate. Pointing to the moderating role of intergroup attitudes and in-group identification, the present research attempted to clarify the impact of self-image threat on the discrimination of out-group targets. At first glance our results seem to be a mirror image of previous research. Without consideration of moderators, there was no clear main effect of self-image threat on the evaluation of the out-group target. If anything, there was a tendency for a more positive evaluation of the out-group target in the self-image threat condition compared to the self-image enhancement condition. But the consideration of intergroup attitudes and in-group identification made the picture clearer. Participants were more likely to derogate the out-group target as a consequence of self-image threat when they held negative attitudes towards the out-group. However, a more positive evaluation after the experience of self-image threat occurred for participants who felt less identified with their in-group and who did not show a strong preference of the in-group over the out-group.

From the perspective of social identity theory, the finding that in-group identification and group preference moderate the relationship between self-image threat and discrimination of an out-group target is reasonable. If we assume that individuals discriminate with the goal of affirming the self, this might not work for individuals with low in-group identification and a diminished in-group preference. For

these individuals, the in-group is not an important part of the self. When the in-group appears to be more positive compared with negative out-group exemplars, this positive evaluation should not affect the self-esteem of low identified individuals. Furthermore, if we take into consideration that the expression of one's attitudes has also a self-affirmative function, only for individuals with negative out-group attitudes the negative judgment of an out-group target should bolster the self-image. In contrast, for individuals with positive out-group attitudes the derogation of an out-group target is inconsistent with their attitudes and should cause additional distress. Indeed, our data suggests that individuals with positive out-group attitudes and low in-group identification evaluate out-group targets more positively in the face of self-image threat.

The validity of the present research is strengthened by the fact that, in Experiment 2, we obtained moderating effects of the implicit measure of group preferences as well as of the self-report measure of in-group identification. Thus, the problems that are related to each measure are less relevant. Since the implicit measure moderates the impact of self-image threat, it seems unlikely that only effects of social desirability are at work. Because the self-report measures moderate the impact of self-image threat as well, it seems unlikely that the findings could be reduced to measurement problems of the implicit association test. Rather, we would like to stress that, despite some recent criticism (e.g., Brendl, Markman & Messner, 2001; Fiedler, Messner & Bluemke, 2003; Karpinski & Hilton, 2001; Mierke & Klauer, 2001; Rothermund & Wentura, 2001; in press), we regarded the implicit association test as especially useful for the present experiments (cf. Piontkowski, Blanz, Rohmann, Schmermund & Florack, 2001). Comments that the implicit association test measures not individual differences, but only knowledge of socially shared

evaluations (Karpinski & Hilton, 2001; Fazio & Olson, 2003), do not seem entirely convincing in light of our experimental result and other research that found remarkable correlations between IAT-scores and social behavior (e.g., McConnell & Leibold, 2001; Maison, Greenwald, & Bruin, 2001; Nosek, 2002; Poehlman, Uhlmann, Greenwald, & Banaji, 2004).

Another point that has to be discussed is the differentiation between effects of mood and self-esteem. The checks on the experimental manipulation showed that participants who received difficult tasks on the performance test not only rated themselves as less competent, but were also less happy than participants who received easy tasks. However, for a variety of reasons an explanation of the present results that refers exclusively to mood processes is insufficient. Even if there is evidence that negative experiences make negative information more accessible in memory (Bower, 1981; 1991), and that this may affect the expression of stereotypes (Esses & Zanna, 1995), without a reference to self-enhancement processes it is difficult to explain why participants should have used accessible negative knowledge structures for the judgment of the out-group target, but not for the judgment of the in-group target. If mood priming had been at work exclusively, participants who experienced low competence should have relied on their negative affective reaction also in their judgment of the in-group target, and, furthermore, the effects on the target judgment should be independent from intergroup attitudes and in-group identification. Moreover, it seems to be critical for a mood priming explanation or an informational impact of the decreased mood (Schwarz, 1990; Schwarz & Clore, 1988) that, for participants with low in-group identification, self-image threat was more likely to increase positive judgments than to trigger the derogation of the out-group target.

We should also note that a certain line of mood research implies assumptions that contradict the hypotheses we formulated based on self-esteem research. For example, Bodenhausen, Kramer, and Süsser (1994) suggested that people in a positive mood are more likely than people in a bad mood to apply superficial styles of thinking and to base their judgments on heuristics and stereotypes, because positive mood indicates that everything is fine and that applied heuristics are efficient. Following this line of research, one might assume that the experience of low competence leads people to generate self-doubts that trigger a deliberative style of thinking and that people are more likely to rely on their attitudes when they experience self-image enhancement. In fact, we found the opposite results.

We assume that specific mood manipulations that are less related to the self elicit different processes than self-image manipulations. Forgas (1995) offers a model - the affect infusion model (AIM) - that differentiates between such processes. He mentions four processing strategies that affect the impact of mood: (a) direct access of a stored judgment, (b) motivated processing in the service of mood repair or a preexisting goal, (c) heuristic processing, and (d) systematic processing. According to the AIM, the processing style is determined by numerous personal and contextual factors. For example, Forgas and Fiedler (1986) suggested that in a condition of bad mood, people might rely on a motivated processing strategy designed to improve their aversive affective state. They hypothesized that out-group discrimination may be the consequence of such a strategy when the in-group is of high relevance. Using a mood manipulation procedure that provided participants with false feedback on an accuracy task (Experiment 2), they found, in line with their expectations, a stronger intergroup discrimination after negative feedback compared to positive feedback when the group was of high relevance for participants, but not when it was of low

relevance. Thus, as regards the motivated processing in the service of mood repair, the AIM makes assumptions that are congruent with those of social identity theory. Altogether, we think that for the case we investigated in the present study, it is not necessary to differentiate between effects of negative mood and self-image threat, because in this special case the models make congruent predictions.

In our experiments, we measured intergroup attitudes and identification and did not manipulate these variables This procedure implies specific limitations that have to be noticed. As we mentioned already, the identification and the attitudes may be related to other variables like values or conservatism that may drive the observed effects. For example, the effect that people with a reduced in-group identification judged an out-group target under self-image threat more positively than people with a higher identification may be a consequence of more liberal values of people with low identification in the special context of our study. The causal influence of the attitudes on the relation between the self-image threat manipulation and the judgment can only be proven in a study with an experimental manipulation of intergroup attitudes and identification. Indeed, such a manipulation is difficult to establish for real groups, but could be implemented for groups in a laboratory with a false feedback technique (cf. Doosje, Ellemers, & Spears, 1995).

In sum, the present research shows that the impact of self-image threat on the judgment of out-group members depends on individual differences in intergroup attitudes and in-group identification. The negative evaluation of an out-group target is not inevitable. Rather, we demonstrated that individuals show different responses in coping with self-image threat. The positive evaluation of a target may be one such response when this is congruent with basic values and attitudes. A very interesting question is whether the different strategies to cope with distress resulting from a

threatened self-image concern different parts of the self. Since the affirmation of the self by the expression of one's attitudes is supposed to be an individualistic strategy, this should have effects on the individual part of the self-esteem. In contrast, the bolstering of the self by comparisons that regard the group membership should affect the collective part of the self. Thus, while both strategies are supposed to bolster the self, the strategies should involve different parts of the self. The field might benefit when future research attends to these differential self-affirmative functions of the evaluation of out-group members.

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We thank Natalie Neurath and Anita Schuster for data collection.

The research reported in this article was supported by a research grant from the Deutsche Forschungsgemeinschaft to the first and second author (FL 365/1-1).

Footnotes

[1]Because we were not interested in the implicit in-group favoritism effect itself, but in its amplitude, we decided to do the study without a variation of the order of the five steps within the IAT. We chose the order that usually yielded the strongest in-group favoritism effect (Greenwald et al., 1998). All participants first responded in a prejudice-consistent and, after that, in a prejudice-inconsistent manner.

Table 1:

Standardized Regression Coefficients for the Prediction of the Target Judgment (Experiment 1)

	Judgment			
	Out-group Target		In-group Target	
	ß	*t*	ß	*t*
Implicit Group Preferences (X_1)	.12	.84	.01	.04
Self-report Attitudes:				
In-group (X_2)	-.19	1.30	-.11	.48
Out-group (X_3)	.33*	2.34	-.02	.11
Self-image Threat (X_4)	.07	.51	-.42*	2.60
$X_1 \bullet X_4$	.03	.19	-.01	.06
$X_2 \bullet X_4$	.33*	2.22	.37	1.62
$X_3 \bullet X_4$	-.33*	2.24	-.16	.76

Note: *$p < .05$

Table 2:

Standardized Regression Coefficients for the Prediction of the Target Judgment (Experiment 2)

	Variables in the Regression Equation					
	Group Preferences, Self-image manipulation		Identification, Self-image manipulation		Identification, Group Preferences, Self-image Manipulation	
	ß	*t*	ß	*t*	ß	*t*
Implicit Group Preferences (X_1)	-.03	.19			-.11	.78
Identification (X_2)			-.10	.72	-.15	1.03
Self-image Threat (X_3)	-.24$^+$	1.81	-.27$^+$	1.92	-.28*	2.06
$X_1 \bullet X_3$	-.31*	2.32			-.24$^+$	1.66
$X_2 \bullet X_3$			.28*	2.10	.21	1.46

Note: *$p < .05$; $^+p < .10$

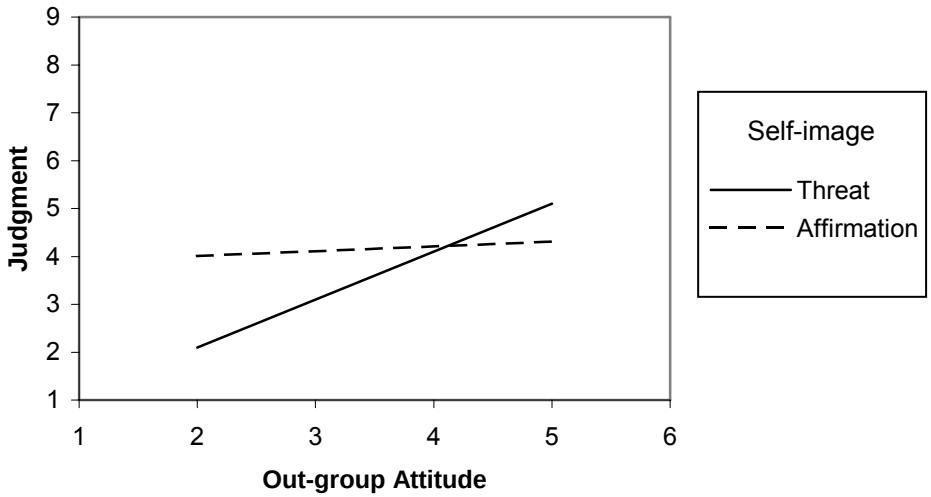
Figure Captions

Figure 1. Regression lines predicting the judgment of the out-group target as a function of self-image threat and out-group attitude (Experiment 1). High values indicate a positive target judgment and a positive attitude.

Figure 2. Regression lines predicting the judgment of the out-group target as a function of self-image threat and in-group attitude (Experiment 1). High values indicate a positive target judgment and a positive attitude.

Figure 3. Regression lines predicting the judgment of the out-group target as a function of self-image threat and implicitly measured group preferences (Experiment 2). High values indicate a positive target judgment and a preference for the out-group.

Figure 4. Regression lines predicting the judgment of the out-group target as a function of self-image threat and in-group identification (Experiment 2). High values indicate a positive target judgment and a high in-group identification.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2
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Judgment
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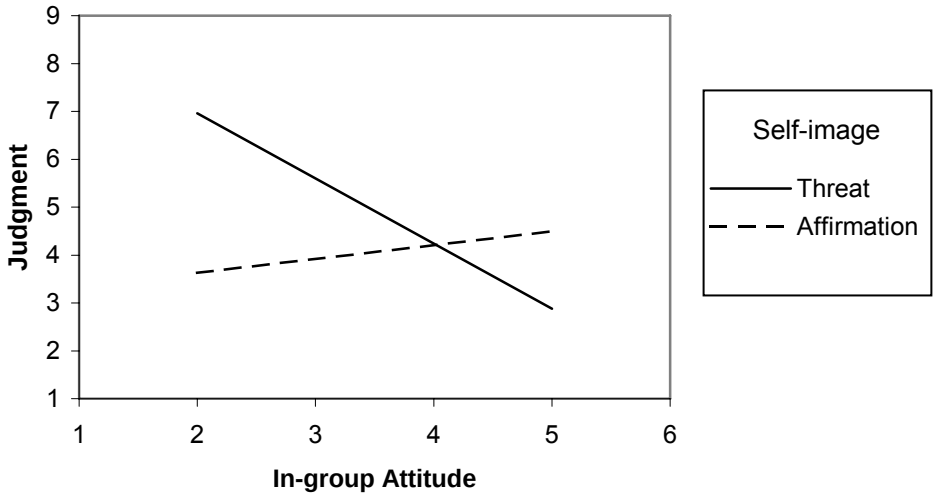
6
Out-group Attitude
Self-image
Threat
Affirmation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Judgment
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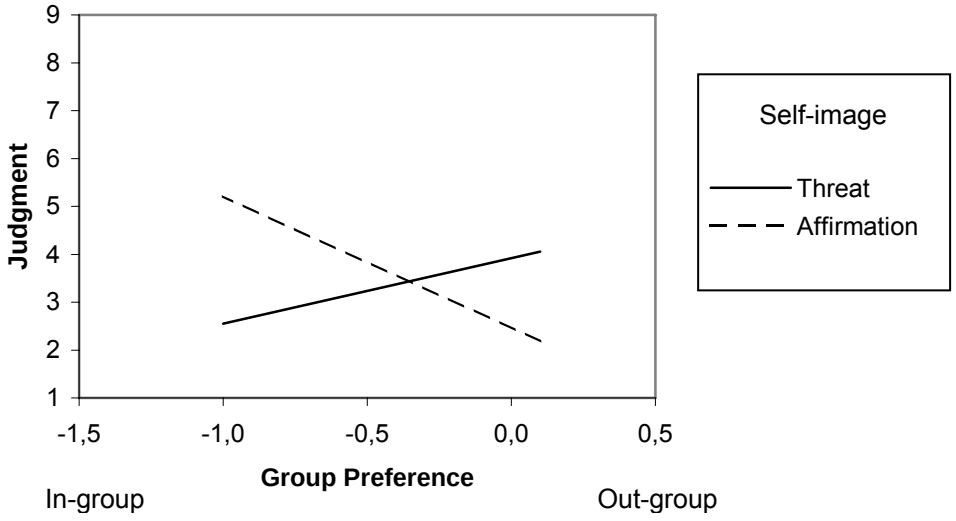
In-group Attitude
Self-image
Threat
Affirmation


9
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Judgment
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-1,0
-0,5
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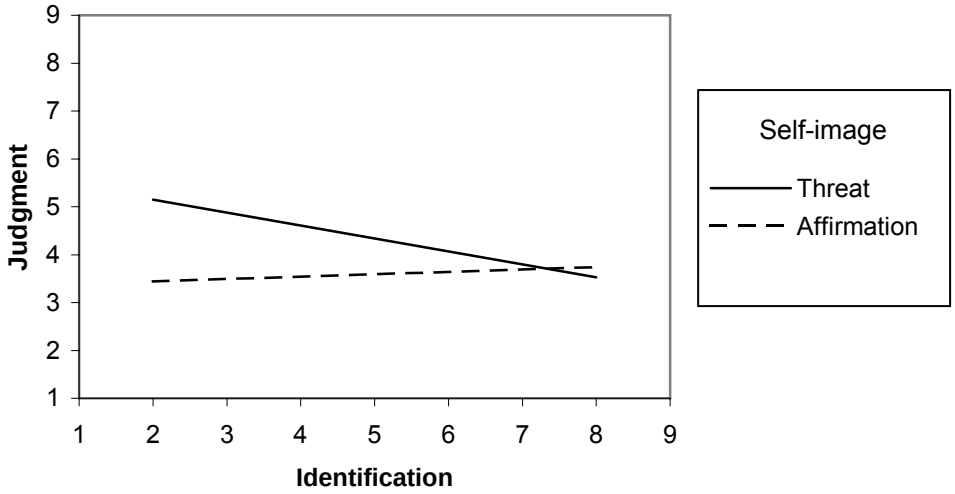
0,5
Group Preference
In-group
Out-group
Self-image
Threat
Affirmation


9
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Judgment
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8
9
Identification
Self-image
Threat
Affirmation