The effects of realistic threat and group identification on social dominance orientation ☆

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Abstract

Based on social identity and intergroup threat theories, we argue that social dominance orientation (SDO) can increase as a result of realistic threat, or perceived obstacles to the ingroup's position and general welfare. However, this effect should be strongest among highly-identified group members, who are particularly concerned with protecting their ingroup against threat. Study 1 found that among non-Asian Americans, racial group identification moderated the relationship between perceptions of realistic threat from Asian Americans and SDO. Study 2 replicated Study 1 using an experimental, rather than correlational, design. Using different social groups, Study 3 showed that non-science college majors who identified strongly with their field of study exhibited higher SDO after being made to feel threatened by science majors. The results from these studies have implications for research on the meaning and antecedents of SDO.
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Keywords: Realistic threat; Group identification; Social dominance; Social identity

Endorsement of social inequality is often thought to be a stable individual differences variable. According to social dominance theory (SDT), all modern non-hunter-gatherer societies are organized in terms of group-based hierarchies, which are justified by beliefs about how power and resources should be distributed among groups (Sidanius & Pratto, 1999). SDT posits that an individual's tendency to embrace such hierarchies, referred to as social dominance orientation (SDO), should remain relatively invariant across situations (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 1999). For example, men tend to have higher SDO than women, and members of high-status groups tend to have higher SDO than members of low-status groups (Sidanius & Pratto, 1999).

SDO is typically treated as an independent variable in social psychological research. It has been found to predict political and economic conservatism, patriotism, nationalism, and preferences for meritocracy, among other ideologies (e.g., Pratto et al., 1994; Sidanius & Pratto, 1999). It is also related to support for hierarchy-enhancing social policies, such as capital punishment, and opposition to hierarchy-attenuating social policies, such as affirmative action (Pratto et al., 1994; Quist & Resendez, 2003; Sidanius & Pratto, 1999). Fewer studies, however, have considered whether SDO can vary across situations.

Situational influences on SDO

Some existing research relevant to the malleable nature of SDO has demonstrated that SDO can increase in response to high-status identity primes. A recent study, for example, showed that when high- and low-status Taiwanese

ethnic groups were primed with their ethnicity, the former had higher SDO than the latter. In a control condition in which ethnic identity was not primed, however, these differences did not appear (Huang & Liu, 2005). Other research has indicated that SDO is sensitive to changes in relative group status. For instance, in an experiment by Schmitt, Branscombe, and Kappen (2003, Experiment 3), university students exhibited higher SDO after being told that their school had more (as opposed to fewer) resources than other universities (see also Guimond, Dambrun, Michinov, & Duarte, 2003).

In addition to simply illustrating that SDO can be manipulated, the aforementioned studies shed light on the precise meaning of the construct. Critics of SDT (e.g., Schmitt et al., 2003) argue that it is unclear whether SDO involves a desire for group-based dominance in general, or for specific forms of hierarchy that privilege one's ingroup. The results from their experiments point to the latter, as they demonstrate that people tend to exhibit high SDO when inequality benefits their group and low SDO when it does not. Specifically, they suggest that differences in SDO can depend on factors such as the salience of one's high- or low-status group membership (Huang & Liu, 2005) and perceptions of the ingroup's status relative to a particular outgroup (Schmitt et al., 2003). In the present research, one of the factors we examine is the perception of realistic threat.

Realistic threat and SDO

Research on the relationship between status and SDO has furthered our understanding of whom is most likely to advocate group-based dominance and inequality. However, the process by which hierarchy-enhancing ideologies are formed—specifically, whether they stem from the perceived stability of the ingroup's position as well as from the ingroup's position *per se*—has yet to be fully explored. If perceived stability of position does affect SDO, this would suggest that SDO is not only a product of the ingroup's status, but also a product of dynamic beliefs about how the ingroup fits into the existing social structure (see Schmitt et al., 2003). One construct relevant to such beliefs is realistic threat. Originally, realistic threat was conceptualized as a struggle for power and resources (Bobo, 1988; LeVine & Campbell, 1972; Sherif, 1966). Recent definitions, however, have emphasized the roles of both actual threat and perceived threat in the development of intergroup attitudes. In addition to concerns about the scarcity of material resources, realistic threat is now thought to involve a more general concern for the ingroup's position and well-being (Stephan et al., 2002; Stephan & Stephan, 2000; Stephan, Ybarra, & Bachman, 1999; Stephan, Ybarra, Martinez, Schwarzwald, & Tur-kaspa, 1998). Importantly, both high- and low-status group members can perceive one another as sources of realistic threat (Stephan et al., 2002).

Perceived threat often triggers attempts to preserve or improve the welfare of the ingroup (Stephan & Stephan, 2000; Tajfel & Turner, 1986). According to social identity theorists (e.g., Branscombe, Ellemers, Spears, & Doosje, 1999; Ellemers, Spears, & Doosje, 2002; Tajfel & Turner, 1986), people are especially likely to strive for a positive group identity—for instance, by favoring their own group and behaving competitively toward other groups—when their group's status is unstable. Similarly, research on intergroup attitudes has shown that realistic threat predicts prejudice toward outgroups such as immigrants (Esses, Dovidio, Jackson, & Armstrong, 2001; Stephan et al., 1998, 1999) and "model minorities" (e.g., Asian Americans; see Maddux, Polifroni, & Galinsky, 2006).

One way in which group members may cognitively ready themselves to protect their ingroup's status and well-being is by exhibiting high SDO in response to threat. If, as Schmitt et al. (2003) argue, SDO measures attitudes toward specific types of social inequality, then high SDO could reflect a motivation for the ingroup to acquire or maintain more power and resources than a relevant outgroup. Supporting this notion, SDO has been found to correlate positively with ingroup favoritism (Jost & Thompson, 2000). This relationship is most reliable among high-status group members, for whom social inequality is consistent with their interests (Schmitt et al., 2003; Wilson & Liu, 2003). However, it may also be present among low-status group members who do not perceive their group as disadvantaged (Schmitt et al., 2003), are not explicitly reminded of their group membership (Huang & Liu, 2005), or are reclassified as members of a superordinate category (e.g., "American"; see Blanz, Mummendey, Mielke, & Klinke, 1998). Thus, it is possible that for members of both high-status and low-status groups, high SDO could represent a means of preserving the ingroup's interests and identity under threatening circumstances.

Group identification

Though groups are a fundamental part of life due to the many needs they fulfill (e.g., enhancement of self-esteem, reduction of uncertainty; see Brewer & Brown, 1998), some people place more importance on their group memberships than do others. Group identification, a concept derived from social identity theory, refers to the extent to which one's membership in a particular group is incorporated into one's self-definition (Tajfel & Turner, 1986). Research has suggested that group identification moderates the relationship between perceived threat and protection of the ingroup's well-being. For instance, when the status of the ingroup is thought to be in jeopardy, highly-identified group members show commitment to the ingroup, see the ingroup as distinct from outgroups, and derogate outgroups to a greater degree than do their less-identified counterparts (Branscombe et al., 1999; Branscombe & Wann, 1994; Ellemers et al., 2002; Tajfel & Turner, 1986). Consistent with these findings, intergroup threat researchers have shown that threat and group identification interact to predict outgroup prejudice. In a representative study by

Stephan and Stephan (2000), American participants were more likely to hold negative attitudes toward Rwandan immigrants when they perceived high levels of realistic threat than when they perceived low levels of realistic threat. However, this was especially true among the highly-identified Americans in the sample, who were more sensitive to potential threats from outgroups (Stephan & Stephan, 2000).

The present research

We have proposed that SDO is one possible consequence of realistic threat because endorsement of group-based inequality often reflects the ingroup's interests. Given that other responses to realistic threat, such as outgroup derogation and prejudice, are most evident among highly-identified group members (Branscombe & Wann, 1994; Stephan & Stephan, 2000), we should also find that the predicted relationship between threat and SDO is moderated by strength of group identification.

More specifically, in the following three studies we hypothesized that the effect of realistic threat on SDO would be stronger for highly-identified group members than for less-identified group members. Highly-identified group members should be concerned with protecting the position and resources of their ingroup against threat from outgroups. A threat to the ingroup's status should thus instigate responses aimed at creating or maintaining group inequality (i.e., higher SDO). For less-identified group members, who are not as concerned with how the position of their group compares to that of outgroups, a threat to the ingroup should not trigger responses aimed at establishing inequality between groups. Therefore, we expected the relationship between perceived threat and SDO to be less pronounced among less-identified group members.

In our studies, we used two target outgroups that were highly relevant to the participant population (i.e., Stanford University students): Asian Americans and science and engineering majors. Asian Americans are the largest minority group on the Stanford campus, comprising 25% of undergraduates (Stanford University, 2006b). Likewise, science and engineering majors exert a strong presence at Stanford, as 37.4% of degrees conferred during the 2004–2005 academic year were science-related (Stanford University, 2006a).

In Study 1, we measured European Americans' perceptions of realistic threat from Asian Americans, their racial group identification, and their SDO. In Study 2, we manipulated realistic threat from Asian Americans and investigated whether racial identification moderated the impact of this threat on non-Asian Americans' SDO. Study 3, using a non-ethnic basis for group identity, served as a conceptual replication of Study 2. In this experiment, we assessed the effects of realistic threat from science majors and identification with one's field of study on the SDO of non-science college majors.

Study 1

Method

Participants

Forty-nine Stanford University students and staff members (19 men, 30 women), all European American, participated in this study. The study took approximately 15 min, and participants were compensated $5.

Materials and procedure

Upon arrival to the laboratory, each participant was seated at a semi-private work station. All study materials were presented on the computer. To minimize the use of self-presentational strategies, the instructions explicitly stated that the researchers were only interested in social trends and averages, rather than individual opinions. Moreover, participants were reassured that their responses would remain completely anonymous. The order of presentation of the measures described below (with the exception of the social desirability scale) was randomized across participants, as was the order of the individual items within each measure.

Realistic threat measure

This 12-item measure was originally developed by Stephan and colleagues (Stephan et al., 1998; Ybarra & Stephan, 1994) to assess perceived threat from outgroups and was later modified to assess specific threats from African Americans (e.g., Stephan et al., 2002). Maddux et al. (2006) have since reworded the items so that they pertain to Asian Americans. Examples include "Asian Americans make it harder for non-Asian Americans to get good jobs," and "Asian Americans make it harder for non-Asian Americans to have a good quality of life." Participants indicated their level of agreement on a seven-point scale (1 = strongly disagree, 7 = strongly agree). Their responses were averaged to form a realistic threat index ($\alpha = .91$), with higher scores indicating higher levels of perceived threat.

Racial identification measure

Racial identification was assessed using Sellers and colleagues' eight-item measure of racial identity centrality (Sellers, Rowley, Chavous, Shelton, & Smith, 1997). This measure was originally specific to African American identification, but we modified the items to make them applicable to all racial groups (e.g., "My race is an important reflection of who I am"). Participants' responses, again made on a seven-point scale, were averaged to form a racial identification index ($\alpha = .87$). Higher scores indicated higher levels of identification.

SDO scale

To measure SDO, we used the 16-item scale developed by Pratto et al. (1994). Example items include "Some groups of people are just more worthy than others," and "It would be good if all groups could be equal" (reverse-coded).

Participants responded on a seven-point scale, and their scores were averaged to form an SDO index ($\alpha = .92$).

Social desirability scale

All participants completed this scale at the end of the study. Created by Crowne and Marlowe (1964), it consists of eight yes–no questions that measure the general tendency to present oneself in a favorable manner (e.g., "Are you always courteous, even to people who are disagreeable?"). Participants' responses to these items were added together to form a social desirability composite ($\alpha = .56$).[1] Because it is important to consider individual differences in social desirability when studying sensitive topics, such as intergroup attitudes (see Jost & Thompson, 2000), participants' scores on this measure were included as a covariate in all three of our studies.

Results and discussion

The results of this study were analyzed using multiple regression (Aiken & West, 1991). The realistic threat, racial identification, and social desirability variables were mean-centered to aid in interpretation. In the first block of the analysis, SDO was regressed onto realistic threat, racial identification, and social desirability. In the second block of the analysis, SDO was regressed onto realistic threat, racial identification, social desirability, and the realistic threat × racial identification interaction term.

Preliminary inspection of the data revealed the presence of one outlier, who was poorly predicted by the regression analysis (studentized deleted residual = 3.05, $p < .004$, see McClelland, 2000; Cook's $d = .806$, see Fox, 1991, p. 34). Therefore, we conducted our analyses both with and without the outlier. When the outlier was included, the realistic threat × racial identification interaction did not emerge ($\beta = .178$), $t(44) = 1.30$, $p = .20$. When the outlier was excluded, however, this interaction attained significance ($\beta = .267$), $t(43) = 2.16$, $p < .04$ (see Fig. 1). Simple slopes analyses indicated that among highly racially-identified participants (i.e., those who scored 1 SD above the sample mean), perceived threat was positively correlated with SDO ($\beta = .813$), $t(43) = 4.79$, $p < .001$. However, among less racially-identified participants (i.e., those who scored 1 SD below the sample mean), perceived threat was uncorrelated with SDO ($\beta = .291$), $t(43) = 1.60$, $p > .11$. No other simple slopes were significant.

In addition to the two-way interaction, we found a main effect of realistic threat on SDO ($\beta = .572$), $t(44) = 4.31$, $p < .001$. Though we were primarily interested in the interactive effects of realistic threat and group identification on SDO, the correlational nature of our data set renders it difficult to dispute the alternative explanation that participants high in SDO may be more likely to per-

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[1] In each of the present studies, the reliability of the social desirability composite was rather low, most likely because Cronbach's alpha is sensitive to the number of scale points used (Lissitz & Green, 1975).
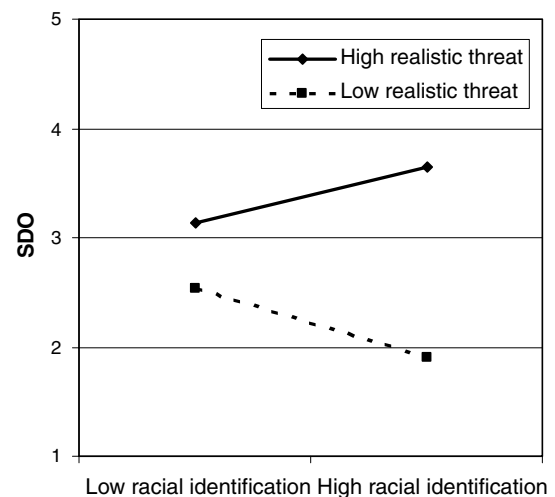

Fig. 1. SDO scores as a function of realistic threat and racial identification (plotted at 1 SD above and below the mean), Study 1.

ceive realistic threat from an outgroup. To establish the causality of our obtained relationship between realistic threat, group identification, and SDO, and to see whether the main effect of threat would replicate in an experimental setting, we manipulated realistic threat in Studies 2 and 3.

Study 2

Method

Participants

Fifty-two Stanford University students and staff members (25 men, 27 women), all of whom were non-Asian American, completed this questionnaire as part of an hour-long mass testing session, for which they received $20. Twenty-nine were European American, six were African American, eleven were Latino, and six were multiracial. Participants were randomly assigned to one of two conditions: realistic threat ($n = 27$) or control ($n = 25$). One participant in the realistic threat condition was omitted from the analysis because his SDO score was more than three standard deviations above the mean, leaving 51 participants in the final sample.

Materials and procedure

Threat manipulation. First, all participants completed a five-item "opinion survey." In this survey, they indicated – on a scale from 1 (strongly disagree) to 7 (strongly agree) – the extent to which they endorsed certain statements about Asian Americans. The items on the survey (to be described presently) served as our manipulation of threat; we were not concerned with participants' specific responses to the survey items.

Participants in the realistic threat condition responded to five items taken from the Negative Attitudes Toward Asians scale (e.g., "Asian Americans are gradually taking over the United States"; Ho & Jackson, 2001). This scale

has been found to correlate positively with perceptions of realistic threat from Asian Americans (Maddux et al., 2006). Participants in the control condition responded to five items that, as indicated by pretests, represented the negative stereotype of Asian Americans but were unrelated to realistic threat (e.g., "Asian Americans are bad drivers"). This is an important distinction because it helps to show that participants are responding to realistic threat in particular, and not just responding to any negative information about the outgroup. As a manipulation check, participants were asked to indicate, again on a scale from 1 (not at all) to 7 (very much), whether they thought the items suggested that Asian Americans pose a threat to other American racial/ethnic groups.

SDO scale. Next, participants filled out the 16-item SDO scale ($\alpha = .91$). Because we did not want the participants to think that the threat manipulation and the SDO scale were related, we told participants that we were pretesting the SDO scale for use in future studies.

Social desirability scale. At the end of the study, participants answered the same social desirability questions as in Study 1 ($\alpha = .62$).

Racial identification measure. Participants completed the Sellers et al. (1997) racial identity centrality measure at a separate point in the mass testing session ($\alpha = .91$).

Results and discussion

Manipulation check

The manipulation check was successful. Participants in the realistic threat condition ($n = 26$, $M = 3.26$, $SD = 2.25$) judged the statements about Asian Americans to connote a greater degree of threat than did those in the control (negative stereotype) condition ($n = 25$, $M = 1.92$, $SD = 1.15$), $t(48) = 2.67$, $p = .01$.

Realistic threat, racial identification, and SDO

We collapsed the results from this study across ethnicities because the threat manipulation pertained to Asian Americans *vis a vis* "other American racial/ethnic groups." In other words, it reminded participants of their status as non Asian American, not of their specific racial/ethnic background (e.g., Latino, European American).[2] As in Study 1, the data were analyzed using multiple regression. The condition variable was dummy-coded such that 0 = control and 1 = realistic threat. Racial identification and social desirability were centered and treated as continuous predictors. Then SDO was regressed onto condition, racial identification, social desir-

ability, and the condition × racial identification interaction. Thus, this study followed a condition (realistic threat vs. control) × racial identification (centered continuous variable) between-participants design, controlling for social desirability.

The findings supported our hypothesis. There were no main effects of condition or racial identification on SDO ($ps > .19$). Thus, the main effect of realistic threat on SDO from Study 1 did not replicate. Consistent with our previous results, however, there was a significant condition × racial identification interaction ($\beta = .435$, $t(46) = 2.19$, $p = .03$ (see Fig. 2). Decomposition of the interaction revealed that among highly racially-identified participants, SDO was higher in the realistic threat condition than in the control condition ($\beta = .399$), $t(46) = 1.89$, $p = .03$ (one-tailed). But among less racially-identified participants, SDO in the realistic threat condition was no higher than SDO in the control condition ($\beta = -.314$), $t(46) = -1.39$, $p > .17$. Furthermore, racial identification and SDO were positively correlated in the realistic threat condition ($\beta = .527$), $t(46) = 2.54$, $p < .02$, and uncorrelated in the control condition ($\beta = -.116$), $t(46) < 1$, *ns.*

Taken together, the findings from Studies 1 and 2 provide evidence that manipulations of realistic threat from Asian Americans, as well as individual differences in perceiving such threat, increase the SDO of non-Asian Americans who identify strongly with their race. We argue that this is because highly-identified group members are particularly motivated to act in the best interests of their ingroup under conditions of threat, and high SDO is one means of protecting the ingroup's position and welfare. However, given that individuals have many different social identities, each of which is associated with a distinct set of characteristics (see Deaux, Reid, Mizrahi, & Ethier, 1995), a stronger test of our hypothesis would extend the findings of Studies 1 and 2 beyond race to another social category membership. That is, it would show that our effects arise from general aspects of threat and group
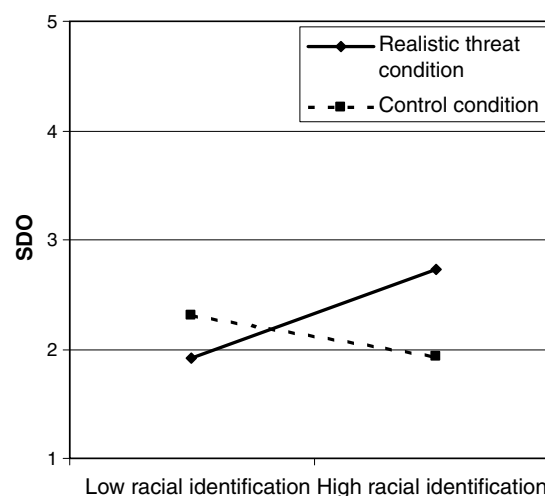
Fig. 2. SDO scores as a function of condition and racial identification (plotted at 1 SD above and below the mean), Study 2.

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[2] Consistent with this decision, a condition × racial identification × participant race (European American vs. non European American) regression analysis did not result in a three-way interaction ($\beta = -.230$), $t(42) = -.654$, $p > .51$. The only significant effect to emerge was the predicted two-way condition × racial identification interaction ($\beta = .543$), $t(42) = 2.64$, $p = .01$.

identification, rather than from unique features of interracial relations.

In an attempt to do so, Study 3 capitalized on the dichotomy between Stanford undergraduate "techies" (science and engineering majors) and "fuzzies" (humanities and social science majors). Techies and fuzzies are well-established social identities that have come to be associated with distinct stereotypes among Stanford students. For instance, techies are considered "neurotic nerds," whereas fuzzies – though viewed as socially competent – are thought to "go through school without learning anything substantive" (Selby, 2005). In this study, we assessed fuzzies' SDO in response to a manipulation of threat from techies and examined the moderating role, if any, of group (i.e., academic major) identification.

Study 3

Method

Participants

Forty-seven Stanford undergraduates (14 men, 33 women; 16 European American, 8 Asian American, 6 African American, 5 Latino, 1 Native American, 11 multiracial), who self-identified as "fuzzies," were recruited from various parts of the campus to fill out a survey packet. The packet took approximately five minutes to complete, and participants received a small candy bar as compensation. Each participant was randomly assigned to either the realistic threat condition ($n = 23$) or the control condition ($n = 24$).

Materials and procedure

The procedure for this experiment was similar to that of Study 2. With the exception of the social desirability measure, which consisted of yes–no items, all measures were administered using seven-point scales (1 = strongly disagree, 7 = strongly agree).

Threat manipulation. Participants filled out a five-item survey on "fuzzies' perceptions of techies," which served as the threat manipulation. In the realistic threat condition, participants responded to statements such as, "Generally, companies prefer to hire techies over fuzzies when given the choice." In the control condition, participants responded to statements that were non-threatening but reflected common stereotypes of techies (e.g., "Generally, techies are physically unattractive"). Next, participants in both conditions completed the same manipulation check as in Study 2.

SDO scale. Immediately after the threat manipulation, participants completed the SDO scale from Studies 1 and 2 ($\alpha = .90$). Again, the instructions stated that the researchers were pretesting the items for future use.

Social desirability scale. On the final page of the questionnaire, participants filled out the eight-item social desirability measure ($\alpha = .64$), in addition to a demographic survey.

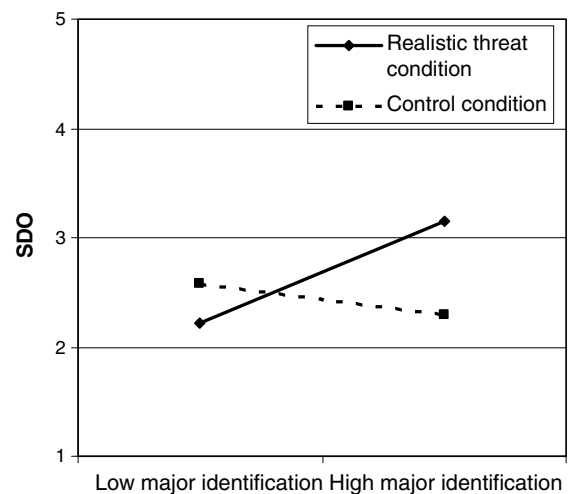*Major identification measure.* Participants also completed the Sellers et al. (1997) identity centrality scale, with

Fig. 3. SDO scores as a function of condition and major identification (plotted at 1 SD above and below the mean), Study 3.

the word "race" replaced by "academic major" (e.g., "In general, my academic major is an important part of my self-image"). Half of the participants received the scale prior to the threat manipulation, whereas the other half filled it out before the SDO scale but prior to the demographic questionnaire. The scale demonstrated good reliability ($\alpha = .79$).

Results and discussion

Manipulation check

Participants in the realistic threat condition ($n = 23$, $M = 3.74$, $SD = 1.68$) perceived the statements about techies as more threatening than did control participants ($n = 24$, $M = 2.08$, $SD = 1.10$), $t(45) = 4.01$, $p < .001$. This finding validates our threat manipulation.

Realistic threat, major identification, and SDO

The data from this experiment were analyzed using multiple regression, controlling for social desirability, as described in the previous two studies. Paralleling the results of Study 2, there were no main effects of realistic threat or major identification on SDO ($ps > .20$), again suggesting that the main effect of threat from Study 1 may have emerged by chance. However, the hypothesized condition (realistic threat vs. control) × major identification (centered continuous variable) interaction was significant ($\beta = .444$), $t(42) = 2.26$, $p = .03$ (see Fig. 3). Simple slopes analyses indicated that among highly-identified fuzzies, SDO in the realistic threat condition exceeded SDO in the control condition ($\beta = .449$), $t(42) = 2.26$, $p = .03$. Less-identified fuzzies demonstrated no difference in SDO across conditions ($\beta = -.191$), $t(42) = -.956$, $p > .34$. Also, group (major) identification and SDO were positively correlated in the realistic threat condition ($\beta = .485$), $t(42) = 2.44$, $p < .02$, but not in the control condition ($\beta = -.148$), $t(42) < 1$, *ns*. The findings of this study, then, corroborate our predictions and

show that the interactive effects of realistic threat and group identification on SDO are generalizable to multiple social categories (i.e., academic field of study as well as race).

General discussion

The above studies demonstrate that for highly-identified group members, realistic threat can heighten SDO, analogous to the effects of threat on outgroup derogation and prejudice (Branscombe & Wann, 1994; Stephan & Stephan, 2000). In Study 1, European Americans who perceived high levels of realistic threat from Asian Americans exhibited higher SDO than those who did not, but only if they identified with their racial group. In Study 2, a manipulation of threat from Asian Americans increased SDO among non-Asian Americans who were highly racially-identified, but not among those who were less racially-identified. In Study 3, Stanford "fuzzies" who identified with their academic major demonstrated higher SDO when realistically threatened by "techies" than when not threatened.

Whereas previous research has focused on the notion that actual or perceived membership in a high-status group heightens SDO (Guimond et al., 2003; Schmitt et al., 2003; Sidanius & Pratto, 1999), especially when one's group membership is made salient (Huang & Liu, 2005), we showed that SDO can also increase as a consequence of threats to the ingroup's status. Our studies complement prior work on the relationship between status and SDO. Consistent with the perspective of social identity researchers (e.g., Schmitt et al., 2003), we suggest that SDO involves attitudes toward specific intergroup inequalities and has multiple situational antecedents. At least two situations have been found to increase SDO: high group status, and now realistic threats to the ingroup. Further, the effects of both of these situations are moderated by strength of group identification (see also Wilson & Liu, 2003), indicating that only those who are motivated to preserve their group's position and well-being will exhibit high SDO in response to high-status or threat.

The precise nature of the relationship between group status, realistic threat, and SDO should be investigated in future studies. For example, under what circumstances is high SDO consistent versus inconsistent with the interests of low-status group members? As the results of Study 2 suggest, it is possible that high SDO reflects the interests of low-status group members who are not explicitly reminded of their low status, or who are induced to see themselves as belonging to a different social category (e.g., non-Asian American, rather than African American or Latino). Other possibilities should be examined too, as they may provide insight into when members of low-status groups will respond to realistic threat with high SDO (as do members of high-status groups), and when they will respond with low SDO.

It would also be fruitful to look at the conditions under which threat and group identification might interact to decrease SDO, independent of group status. According to social dominance theorists, members of groups with hierarchy-attenuating norms and values (e.g., public defenders) generally have lower SDO than members of groups with hierarchy-enhancing norms and values (e.g., police officers; see Sidanius, Liu, Shaw, & Pratto, 1994). Given that norm-behavior consistency is most pronounced among those who identify strongly with their ingroup (Terry & Hogg, 1996) and who are threatened by an outgroup (Jetten, Postmes, & McAuliffe, 2002), perhaps threatening situations would actually lower the SDO of highly-identified, hierarchy-attenuating group members. This would suggest that SDO can serve multiple purposes. Specifically, it may function as a means of asserting the ingroup's values, as well as a means of protecting the ingroup's position and well-being.

Another potentially interesting avenue for future research involves examining the broader consequences of the relationship between threat, group identification, and SDO. Previous studies have shown that SDO is positively correlated with outgroup prejudice (Guimond et al., 2003; Sidanius & Pratto, 1999), and that realistic threat and group identification interact to increase outgroup prejudice (Stephan & Stephan, 2000). In light of the present finding that realistic threat and group identification also interact to increase SDO, it may be that SDO mediates the relationship between realistic threat, group identification, and outgroup prejudice. This model should be tested empirically.

In sum, the present studies extend beyond the notion that SDO is situationally variable. Using concepts from social identity and intergroup threat theories as a framework, the findings provide compelling evidence that SDO can stem not only from high status, but also from perceived instability of the ingroup's position and welfare. More generally, they serve as a useful starting point for studying the causal, interactive roles of realistic threat and group identification in the formation of ideological beliefs. Support for group-based dominance and inequality, rather than simply being a product of group membership and perceived group status, is contingent on a dynamic process in which the importance of group membership and threats to the status of the ingroup matter.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.

Blanz, M., Mummendey, A., Mielke, R., & Klinke, A. (1998). Responding to negative social identity: a taxonomy of identity management strategies. *European Journal of Social Psychology, 28*, 697–730.

Bobo, L. (1988). Group conflict, prejudice, and the paradox of contemporary racial attitudes. In P. Katz & D. Taylor (Eds.), *Eliminating racism: Profiles in controversy* (pp. 85–114). New York: Plenum.

Branscombe, N. R., Ellemers, N., Spears, R., & Doosje, B. (1999). The context and content of social identity threats. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social identity: Context, commitment, content* (pp. 33–58). Oxford: Blackwell.

Branscombe, N. R., & Wann, D. L. (1994). Collective self-esteem consequences of outgroup derogation when a valued social identity is on trial. *European Journal of Social Psychology, 24*, 641–657.

Brewer, M. B., & Brown, R. J. (1998). Intergroup relations. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (Fourth ed., pp. 554–594). New York: McGraw-Hill.

Crowne, D. P., & Marlowe, D. (1964). *The approval motive*. New York: Wiley.

Deaux, K., Reid, A., Mizrahi, K., & Ethier, K. A. (1995). Parameters of social identity. *Journal of Personality and Social Psychology, 68*, 280–291.

Ellemers, N., Spears, R., & Doosje, B. (2002). Self and social identity. *Annual Review of Psychology, 53*, 161–186.

Esses, V. M., Dovidio, J. F., Jackson, L. M., & Armstrong, T. L. (2001). The immigration dilemma: the role of perceived group competition, ethnic prejudice, and national identity. *Journal of Social Issues, 57*, 389–412.

Fox, J. (1991). *Regression diagnostics*. Newbury Park, CA: Sage Publications.

Guimond, S., Dambrun, M., Michinov, N., & Duarte, S. (2003). Does social dominance generate prejudice? Integrating individual and contextual determinants of intergroup cognitions. *Journal of Personality and Social Psychology, 84*, 697–721.

Ho, C., & Jackson, J. W. (2001). Attitudes toward Asian Americans: theory and measurement. *Journal of Applied Social Psychology, 31*, 1553–1581.

Huang, L. L., & Liu, J. H. (2005). Personality and social structural implications of the situational priming of social dominance orientation. *Personality and Individual Differences, 38*, 267–276.

Jetten, J., Postmes, T., & McAuliffe, B. J. (2002). "We're all individuals": group norms of identification and collectivism, levels of identification and identity threat. *European Journal of Social Psychology, 32*, 189–207.

Jost, J. T., & Thompson, E. P. (2000). Group-based dominance and opposition to equality as independent predictors of self-esteem, ethnocentrism, and social policy attitudes among African Americans and European Americans. *Journal of Experimental Social Psychology, 36*, 209–232.

LeVine, R. A., & Campbell, D. T. (1972). *Ethnocentrism: Theories of conflict, ethnic attitudes, and group behavior*. New York: Wiley.

Lissitz, R. W., & Green, S. B. (1975). Effect of the number of scale points on reliability: A Monte Carlo approach. *Journal of Applied Psychology, 60*, 10–13.

Maddux, W.W., Polifroni, M., & Galinsky, A.D. (2006). When being good is good. . . and bad: Realistic threat explains negativity resulting from the model minority stereotype. Manuscript submitted for publication.

McClelland, G. H. (2000). Nasty data: Unruly, ill-mannered observations can ruin your analysis. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology*. New York: WIley.

Pratto, F., Sidanius, J., Stallworth, L., & Malle, B. (1994). Social dominance orientation: a personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology, 67*, 741–763.

Quist, R. M., & Resendez, M. G. (2003). Social dominance threat: examining social dominance theory's explanation of prejudice as legitimizing myths. *Basic and Applied Social Psychology, 24*, 287–293.

Schmitt, M. T., Branscombe, N. R., & Kappen, D. (2003). Attitudes toward group-based inequality: social dominance or social identity? *British Journal of Social Psychology, 42*, 161–186.

Selby, B. (2005, March 9). 'Fuchies' grow in numbers. The Stanford Daily (p. 2).

Sellers, R. M., Rowley, S., Chavous, T. M., Shelton, J. N., & Smith, M. A. (1997). A multidimensional inventory of Black identity: construct validity and reliability. *Journal of Personality and Social Psychology, 73*, 805–815.

Sherif, M. (1966). *Group conflict and cooperation*. London: Routledge Kegan Paul.

Sidanius, J., Liu, J. H., Shaw, J. S., & Pratto, F. (1994). Social dominance orientation, hierarchy attenuators, and hierarchy enhancers: social dominance theory and the criminal justice system. *Journal of Applied Social Psychology, 24*, 338–366.

Sidanius, J., & Pratto, F. (1999). *Social dominance: an intergroup theory of social hierarchy and oppression*. Cambridge, England: Cambridge University Press.

Stanford University: Common Data Set 2005–2006 (2006a, 24 July). Degrees conferred. http://www.stanford.edu/home/statistics/#enrollment.

Stanford University: Common Data Set 2005–2006 (2006b, 24 July). Enrollment by racial/ethnic category. http://www.stanford.edu/home/statistics/#enrollment.

Stephan, W. G., Boniecki, K. A., Ybarra, O., Bettencourt, A., Ervin, K. S., Jackson, L. A., et al. (2002). The role of threats in the racial attitudes of Blacks and Whites. *Personality and Social Psychology Bulletin, 28*, 1242–1254.

Stephan, W. G., & Stephan, C. W. (2000). An integrated threat theory of prejudice. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 23–46). Hillsdale, NJ: Lawrence Erlbaum.

Stephan, W. G., Ybarra, O., & Bachman, G. (1999). Prejudice toward immigrants: an integrated threat theory. *Journal of Applied Social Psychology, 29*, 2221–2237.

Stephan, W., Ybarra, O., Martinez, C., Schwarzwald, J., & Tur-kaspa, M. (1998). Prejudice toward immigrants to Spain and Israel: an integrated threat theory of analysis. *Journal of Cross-Cultural Psychology, 29*, 559–576.

Tajfel, H. C., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago: Nelson-Hall.

Terry, D. J., & Hogg, M. A. (1996). Group norms and the attitude-behavior relationship: a role for group identification. *Personality and Social Psychology Bulletin, 22*, 776–793.

Wilson, M. S., & Liu, J. H. (2003). Social dominance orientation and gender: the moderating role of gender identity. *British Journal of Social Psychology, 42*, 187–198.

Ybarra, O. J., & Stephan, W. G. (1994). Perceived threat as a predictor of stereotypes and prejudice: Americans' reactions to Mexican immigrants. *Boletin de Psicologia, 42*, 39–54.