Individual–collective primacy and ingroup favoritism: enhancement and protection effects

Ya-Ru Chen, a,* Joel Brockner, b and Xiao-Ping Chen c

a Department of Management and International Business, Stern School of Business, New York University, 44 West 4th St., Room 7-63, New York, NY 10012, USA

b Department of Management, Graduate School of Business, Columbia University, USA

c Department of Management and Organization, University of Washington, USA

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Abstract

Individual–collective primacy refers to the extent to which people emphasize their individual interests (individual-primacy) vs. the interests of their ingroup (collective-primacy). This study examined the interactive effects of individual–collective primacy, ingroup performance, and outgroup performance on ingroup favoritism. Participants from two cultures completed a measure of their individual vs. collective-primacy orientation. Performance feedback (favorable or unfavorable) for themselves, their ingroup, and the outgroup were manipulated orthogonally. As predicted, greater collective-primacy led to more ingroup favoritism when the ingroup performed better or worse than the outgroup. However, when the ingroup and outgroup both performed well or both performed poorly, the relationship between collective-primacy and ingroup favoritism was not significant. Implications for analyses of ingroup favoritism and cross-cultural differences are discussed. © 2002 Elsevier Science (USA). All rights reserved.

The study of intergroup relations has a long and rich history in social psychology (Brewer, 1979; Mackie & Smith, 1998). Scholars have examined factors affecting a variety of intergroup behaviors and perceptions, such as intergroup conflict (Sherif, 1961), resource allocations between groups (Azzi, 1992), ingroup members’ tendencies to view other groups stereotypically (Hamilton & Sherman, 1996), and perceptions of group variability and homogeneity (Ellemers, Spears, & Doosje, 1999). Although they draw on different theoretical traditions, students of intergroup behavior are united in their quest to discover when and why different groups relate well or poorly to one another (Taylor & Moghaddam, 1994).

A key finding in the intergroup relations literature is ingroup favoritism—the tendency for group members to make more positive evaluations of their ingroup relative to outgroups. Interestingly, ingroup favoritism is so powerful that it can occur even when group membership is determined on an arbitrary basis, or when group members are not known to one another (Brewer, 1979; Mullen, Brown, & Smith, 1992; Tajfel & Turner, 1986).

Ingroup favoritism has been conceptualized as an antecedent, a consequence, or an indicator of intergroup behaviors and perceptions (Brewer & Brown, 1998). Given the centrality of ingroup favoritism in the intergroup relations literature, it is important to delineate when and why it occurs. This study is designed to do so.

Theoretical overview

One well-established explanation of ingroup favoritism is social identity theory, which suggests that by showing ingroup favoritism, people can achieve a positive self-image (Mackie & Goethals, 1987; Tajfel & Turner, 1986). Consistent with this possibility, studies have shown that ingroup favoritism is not likely to occur under conditions that make it difficult for people to boost their self-evaluations. For example, in the face of evaluatively threatening information about the ingroup (e.g., negative feedback about the group’s performance), people exhibit less ingroup favoritism than in the absence of such information (Crocker & Luhtanen, 1990; Ellemers et al., 1999; Seta & Seta, 1996).

* Corresponding author.

E-mail address: ychen8@stern.nyu.edu (Y.-R. Chen).
Furthermore, the extent to which ingroup favoritism weakens in response to evaluatively threatening information about the ingroup can vary from one person to another. When people attach greater significance to their group, they tend to be protective of the group, and thus more resistant to evaluatively threatening information about it. People may assign significance to group membership as a function of both situational and dispositional factors. For example, if group members are united in their belief that a group’s goals are important or worthwhile, then they are likely to assign significance to the ingroup (Mackie & Goethals, 1987). And if members agree that the well-being of their group is threatened by another group (a common enemy), then they are also likely to assign significance to the group (Brewer, 1979; Janis, 1982). Furthermore, through perceived similarity, common fate, and shared positive experiences with other group members, people can develop strong group identification and thereby attach greater significance to their group membership (Doosje, Ellemers, & Spears, 1995; Ellemers et al., 1999; Spears, Doosje, & Ellemers, 1997). Yet another determinant of the significance that people assign to their groups is the extent to which they construe themselves interdependently (Crocker & Luhtanen, 1990; Markus & Kitayama, 1991). People with more interdependent self-construals define themselves largely in terms of the groups to which they belong. It therefore stands to reason that people with more interdependent self-construals would assign greater significance to their groups (Chen, 2001; Triandis, 1995).

When people assign greater importance to an ingroup, they should be less likely to reduce ingroup favoritism in response to information that is evaluatively threatening to the group. Put differently, people who assign greater importance to a group have more to lose psychologically by reducing ingroup favoritism in response to evaluatively threatening information. Consequently, they should be more protective of their group in the face of such information, relative to their counterparts who assign less importance to membership in a group.

Results consistent with this claim have been obtained in several studies (e.g., Doosje et al., 1995; Ellemers et al., 1999), including a recent study by Chen, Brockner, and Katz (1998). Participants in that study completed a measure of individual–collective primacy, which refers to how much people put the interests of a group ahead of their personal interests when forced to choose between the two. Although people ideally strive to bring their individual goals into alignment with those of their group (Mackie & Goethals, 1987), individual and group goals conflict with one another under certain conditions. One way to determine the importance people assign to a group is by observing their priorities in the face of conflict between their personal goals and those of the group. People with a stronger collective-primacy (than individual-primacy) orientation assign greater significance to their ingroup relationships. All of the participants in the Chen et al. (1998) study worked on a task and then received evaluative (positive or negative) feedback about both their individual performance and the performance of their group (independent of their individual performance). The condition that was most evaluatively threatening to their group was the one in which the group performed poorly while the individual performed well. Indeed, it was precisely (and only) in that condition that greater collective-primacy led to greater ingroup favoritism. The present study was designed both to conceptually replicate and extend these findings.

**Conceptual replication**

Evaluatively threatening information about ingroups can manifest itself in a number of ways. Just as negative group performance feedback is particularly evaluatively threatening when the individual has performed well, so too can negative group performance feedback be especially evaluatively threatening when an outgroup has performed well. Participants in the Chen et al. (1998) study did not receive evaluative feedback about the performance of any outgroups. However, in many situations people receive feedback about the performance of their own group and the performance of an outgroup. Accordingly, ingroup performance feedback (positive or negative) and outgroup performance feedback (positive or negative) were manipulated orthogonally in the present study. We expected the intergroup comparison that was most evaluatively threatening to a group (when the ingroup performed poorly, while the outgroup performed well) to strengthen the relationship between collective-primacy and ingroup favoritism.

**Extension**

We suggested earlier that a collective-primacy orientation produces ingroup favoritism in response to information that is threatening to a group, because people with a stronger collective-primacy orientation have more to lose psychologically by not protecting their group. If this reasoning is correct, then collective-primacy also should be positively related to ingroup favoritism in response to information that enhances their group, because people with a stronger collective-primacy orientation have more to gain by engaging in ingroup favoritism. By manipulating ingroup performance feedback and outgroup performance feedback orthogonally, we also created an intergroup comparison condition that enhanced participants’ groups, namely when their ingroup performed well, while the outgroup performed poorly.

Across all participants, ingroup favoritism should thus be greater when the ingroup performs better rather than worse than the outgroup. More importantly, collective-primacy should increase ingroup favoritism in
the “enhancement” condition, where evaluative information about the ingroup is more positive than that for the outgroup. After all, showing support for the ingroup involves not only remaining committed to the ingroup in the face of evaluatively threatening circumstances, but also rejoicing with the group in response to evaluatively enhancing information (Crocker & Luhtanen, 1990; Ellemers et al., 1999).

The present study

Participants varying in their individual–collective primacy orientation completed a task for which they received evaluative feedback about their individual performance, the performance of their ingroup, and the performance of the outgroup. The primary prediction was a triple interaction among individual–collective primacy, ingroup performance, and outgroup performance. Collective-primacy was expected to be more positively related to ingroup favoritism under intergroup comparison conditions that were either: (a) evaluatively threatening to the ingroup (the ingroup was outperformed by the outgroup), or (b) evaluatively enhancing to the ingroup (the ingroup outperformed the outgroup). In contrast, when the ingroup and the outgroup both performed poorly or both performed well, we expected a much weaker relationship between collective-primacy and ingroup favoritism.

As mentioned earlier, individual performance feedback also was varied. Participants could thus compare the ingroup’s performance to: (a) their own personal performance, as in the study by Chen et al. (1998), and (b) the performance of the outgroup. Seta and Seta (1996) referred to the former as an intragroup comparison and the latter as an intergroup comparison. An important issue for our research was whether Chen et al.’s (1998) triple interaction among individual–collective primacy, individual feedback, and ingroup feedback would emerge when participants could make both an intragroup comparison and an intergroup comparison.

Method

Participants

Participants were drawn from two cultures, the United States (N = 203) and the People’s Republic of China (N = 396). The United States (US) sample consisted of students from Indiana University who were given extra course credit for their participation. Participants from the People’s Republic of China (PRC) were students from Peking University who received a small monetary payment. Participants were run in groups of 6–10 people. By drawing participants from these two cultures, we anticipated a high degree of variation on the dimension of individual–collective primacy. In a previous study conducted among student groups from these two cultures, PRC participants were found to have a stronger collective-primacy orientation than participants from the US (Chen et al., 1998). As we will show later, the same cultural difference in individual–collective primacy was found in this study, but the gap was much less smaller than in the earlier study.

Chen et al. (1998) found that it was not participants’ culture per se, but rather their level of individual–collective primacy that interacted with feedback manipulations to influence their levels of ingroup favoritism. Thus, participants in this study were distinguished primarily on the basis of their individual–collective primacy (a psychological variable), although the influence of culture (a demographic factor) was examined too.

Procedure

Upon their arrival for a study called “Assessing Intimate Relationships,” participants were told that the study would unfold in several stages. In the first stage, participants would be assigned to one of two groups (Group A or Group B). They were told that these assignments would be based on attitudinal similarity. Participants then completed an initial attitude survey, consisting of 10 statements. These statements were drawn from some of the items used to measure the self-reliance and sociability components of individualism and collectivism (e.g., “My happiness very much depends upon the happiness of those around me”, and “I like my privacy”). Seven-point rating scales followed each question; the end points of the scales were “strongly disagree” (1) and “strongly agree” (7). Questions related to the individual–collective primacy aspect of individualism and collectivism were excluded from this survey.

While waiting for the experimenter to score their responses to the survey (presumably so that group assignments could be made), participants completed a longer self-perception questionnaire. This questionnaire contained numerous measures of individualism and collectivism that have appeared in the literature (Singelis, 1994; Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis et al., 1986). All of the 56 items on this survey were rated on seven-point scales, with endpoints labeled “strongly disagree” (1) and “strongly agree” (7).

Measure of individual–collective primacy

Individualism and collectivism is a multi-faceted construct (Singelis et al., 1995; Triandis & Gelfand, 1998; Triandis, McCusker, & Hui, 1990), including but not limited to individual–collective primacy. Our measure of individual–collective primacy (see Chen et al.,
1998) consisted of eight items that seemed to best fit the definition of that concept (the extent to which the individual is willing to sacrifice his or her individual interests for the benefit of the group, when forced to choose between the two). Sample items included, “I usually sacrifice my self-interests for the benefit of the group I am in,” “I will stay in a group if they need me, even when I am not happy with the group,” and “If the group is slowing me down, it is better to leave it and work alone” (reverse scored). Higher scores reflected a stronger collective-primacy orientation. Coefficient za for the measure was .63, slightly lower than the .70 observed by Chen et al. (1998).

After completing the self-perception questionnaire, participants were told that their responses to the initial attitude survey had been scored and the group assignments made. Participants were then shown the average “responses” of their fellow group members. In reality, these responses were prepared by the experimenter in such a way that fellow group members seemed very similar to, but not identical with, the participants. This procedure was modeled after one developed by Byrne (1971) to induce perceptions of attitudinal similarity. To reinforce feelings of group membership, we seated people who were assigned to the same group near to each other, but separated them from those who were assigned to the other group.

At this point, participants were told that they would be moving on to the next stage of the experiment, which involved the Social-Cognitive Aptitude Test (SCAT). To increase the perceived importance of the SCAT, participants were told that it measures “intellectual and interpersonal competencies and is believed to be a reliable indicator of an individual’s ability to process and integrate information and to make deductive inferences.” The test consisted of brief vignettes about 10 couples who were romantically involved with each other. These vignettes were reportedly drawn from actual studies conducted by clinical psychologists. Participants were told to read the vignettes and make a prediction about whether each couple would still be romantically involved with each other one year later. Participants were given 1 min to read each of the 10 vignettes and make a prediction. Participants worked on their own, without interacting with others.

Following the SCAT, performance feedback about the accuracy of the participants’ predictions was manipulated. All participants received a piece of paper that included their personal identification number, the group to which they were assigned (Group A or Group B), and the feedback they were randomly assigned to receive. The paper also included guidelines on how to interpret the performance feedback. For example, out of a 10-point maximum, scores in the 0–2 range were described as “well below average,” whereas scores in the 8–10 range were described as “above average.”

**Feedback manipulations**

**Individual performance feedback.** One third of the participants were randomly assigned to the individual success condition. Their score was eight. Scores in the 8–10 range were “above average” and suggested that the person was “superior in social and intellectual abilities, mature, and able to respond to personal and cognitive challenges.” A second group of participants received individual failure feedback, with a score of three. Scores in the 3–4 range were described as “below average” and suggested that the person was “somewhat lacking in social sensitivity, intellectually immature, and had difficulty in processing and responding to social and cognitive information.” A third group was assigned to the no individual feedback condition. They were not informed about how well they had performed.

**Ingroup performance feedback.** Participants received feedback about the performance of their ingroup on the SCAT. They were told that this feedback was based on the average performance of their fellow group members, excluding their own performance. At random, half of the participants were assigned to the ingroup success condition, in which the group’s score was eight. The remaining participants were assigned to the ingroup failure condition, in which the group’s score was three.

**Outgroup performance feedback.** Participants also received feedback about the outgroup’s performance on the SCAT. The outgroup’s feedback was based on the average performance of everyone in the outgroup. At random, half of the participants were assigned to the outgroup success condition, in which the group’s score was eight. The remaining participants were assigned to the outgroup success condition, in which the group’s score was three.

To reduce skepticism among participants about receiving the same level of feedback for themselves, the ingroup, and/or the outgroup, the experimenter mentioned that the scores of the ingroup and outgroup were not necessarily exact, but rather rounded off to the nearest whole number. In fact, participants generally reported few suspicions about the study when queried about them on the final questionnaire. Moreover, when participants did guess what the study was about, none of the guesses was even remotely related to our triple interaction hypothesis. Participants were also not very confident about their guesses. After being asked to respond to an open-ended question regarding their beliefs about the purposes of the study, the participants rated on a seven-point scale how confident they were about the accuracy of those beliefs. The scale’s endpoints were “not at all certain” (1) and “very certain” (7). The average rating was only 1.48, suggesting that participants had little confidence in the accuracy of their beliefs about the purposes of the study.
After receiving their feedback, participants completed a questionnaire that included our measure of ingroup favoritism, some manipulation checks, and several other measures.

**Ingroup favoritism**

In a counterbalanced order, participants rated the ingroup (as a single entity) and the outgroup (as a single entity) on the same 16 trait adjective dimensions that have been used in previous research (e.g., Brockner & Chen, 1996; Crocker & Luhtanen, 1990; Seta & Seta, 1996). Half of the items were negative (boring, rude, stupid, self-centered, insensitive, apathetic, uninformed, and incompetent) and half were positive (motivated, ambitious, creative, friendly, sincere, trustworthy, considerate, and intelligent). Responses to each trait adjective could range from “extremely uncharacteristic” (1) to “extremely characteristic” (7). When rating their ingroup, participants were explicitly told to exclude themselves from the judgment. For each group rating, the sum of the judgments on the negative traits was subtracted from the sum of the judgments on the positive traits. Thus, scores for each group could range from –48 to +48, with higher scores reflecting more positive evaluations. Coefficient as for the ratings of the ingroup and the outgroup were .83 and .84, respectively. To compute ingroup favoritism, we subtracted participants’ evaluations of the outgroup from their evaluations of the ingroup. Thus, the ratings of ingroup favoritism could range from –96 to +96, with higher scores reflecting greater ingroup favoritism.

**Manipulation checks**

The manipulation checks for individual performance feedback, ingroup performance feedback, and outgroup performance feedback (respectively) were: (a) “How well did you think you performed on the SCAT test?,” (b) “How well did you think your group performed on the SCAT test?,” and (c) “How well did you think the other group performed on the SCAT test?” Responses to all three questions could range from “not at all well” (1) to “extremely well” (7).

**Other measures**

To evaluate the extent to which participants viewed their fellow group members as an ingroup, they were asked, “How attached do you feel to the people in your group?” They also were asked, “How attached do you feel to the people in the other group?” Responses to both questions could range from “not at all” (1) to “very much” (7).

After completing the questionnaire, participants were told that the study was over. They were then thanked, debriefed, and given course credit or payment for their participation.

All of the materials in the PRC sample were administered in Chinese, using the back-translation procedure (Brislin, 1980). Thus, these materials were first translated from English to Chinese by a Chinese university graduate student who was fluent in English. The materials were then translated back into English by an American graduate student who was fluent in Chinese. The new versions were then compared to the originals. Any discrepancies were adjusted until the two English versions converged.

**Results**

**Manipulation checks**

Hierarchical multiple regressions (individual–collective primacy × individual feedback × ingroup feedback × outgroup feedback) were conducted on participants’ perceptions of their individual performance, their ingroup’s performance, and their outgroup’s performance. Main effects were entered on the first step, followed by two-way interactions on the second step, three-way interactions on the third step, and the four-way interaction on the final step. Each manipulation check item showed a very large effect of the corresponding manipulation. Thus, participants perceived their performance to be much better in the individual success condition (M = 5.56) than in the individual failure condition (M = 2.86), with perceptions in the no individual feedback condition (M = 4.46) falling in between these two extremes, F(2,570) = 273.98, p < .001. Participants also perceived the performance of their ingroup as much better in the ingroup success (M = 5.41) than in the ingroup failure (M = 3.37) condition, F(1,575) = 459.38, p < .001. Finally, participants perceived the outgroup’s performance as better in the outgroup success (M = 5.25) than in the outgroup failure (M = 3.64) condition, F(1,568) = 345.80, p < .001. In short, each of the performance feedback manipulations was successful.

Other significant, but considerably smaller, effects were observed on the manipulation check measure of ingroup performance (the main effect of individual feedback, the interaction between ingroup performance feedback and outgroup performance feedback, and the interaction between individual–collective primacy and outgroup performance feedback), and the manipulation check measure of individual performance (the interaction between individual feedback and ingroup feedback). However, these findings did not qualify our results regarding ingroup favoritism. That is, the key results (the predicted triple interaction among individual–collective primacy, ingroup feedback, and outgroup
feedback) did not change when the manipulation check items were entered as control variables.

*Were fellow group members viewed as an ingroup?*

Three analyses were done to evaluate whether participants viewed their fellow members as an ingroup. First, we examined the extent to which participants felt attached to “the people in your own group” as well as “the people in the other group.” As we intended, participants felt significantly more attached to people in their own group ($M = 3.75$) than to people in the other group ($M = 3.02; t = 8.82, p < .001$).

Second, if participants viewed their fellow members as an ingroup, then those with a stronger collective-primacy orientation should have been more attached to their fellow group members. This hypothesis is based on the premise that a collective-primacy orientation is a tendency to develop strong relationships with ingroup members, not necessarily with groups in general (Triandis, 1995). To evaluate this issue, we computed the correlation between individual–collective primacy and ingroup attachment scores. A significant relationship emerged, $r = .31$, $p < .001$, showing that greater collective-primacy was associated with more attachment to the ingroup.

Third, if participants viewed their fellow group members as an ingroup, then the relationship between collective-primacy and attachment to the ingroup ($r = .31$) should be greater than the relationship between collective-primacy and attachment to the outgroup ($r = .17$, $p < .01$). In fact, the former correlation was significantly greater than the latter, $z = 2.60$, $p < .01$. Thus, although greater collective-primacy was associated with more attachment to both the ingroup and the outgroup, the relationship with ingroup attachment was significantly stronger.

Taken together, these findings suggest that we were successful in leading participants to view their fellow group members as an ingroup. And to the extent that fellow group members were not viewed in that way, the test of our primary hypothesis was conservative.

*Cultural differences in individual–collective primacy*

As predicted, the PRC participants ($M = 4.68, SD = .78$) had a stronger collective-primacy orientation than did their US counterparts ($MS = 4.37, SD = .71$), $t(597) = 4.90, p < .001$. Yet this cultural difference was considerably smaller than we found in our earlier study. Specifically, Chen et al. (1998) found mean scores of 4.67 and 3.84 on the same measure in the PRC and US, respectively. Thus, although the PRC samples in this study and the one by Chen et al. were virtually identical in their level of individual–collective-primacy, the US sample had a stronger collective-primacy orientation in this study than in the earlier study, $t = 5.61, p < .001$.

This difference between the US samples in the two studies is noteworthy for two reasons. First, it is consistent with Vandello and Cohen’s (1999) recent finding of systematic variation in individualism–collectivism within the US. In fact, the difference between the US samples in this study and the previous study is similar in nature to the between-state difference observed by Vandello and Cohen. Our US sample consisted of students from Indiana University, whereas the US sample in the earlier study came from Columbia University (in New York). In their state-wide rankings of individualism and collectivism, Vandello and Cohen found Indiana to be more collectivistic than New York.

Second, Chen et al. (1998) found a cultural difference in ingroup favoritism, which was attributable to the psychological dimension of individual–collective primacy. As we will show shortly, however, there were no significant (main or interactive) effects of culture on ingroup favoritism in this study. The smaller cultural difference in individual–collective primacy in this study may help to explain why culture had no effects on ingroup favoritism. In fact, the between-culture difference in this study was actually smaller than the within-culture difference between the US samples in the earlier study vs. this one.

*Hypothesis test*

A hierarchical multiple regression was conducted on the measure of ingroup favoritism. Independent variables included the three performance feedback manipulations, individual–collective primacy, and culture. In the first step we entered all five variables as main effects. In the second step we added all two-way interaction effects, while in the third step we added all three-way interaction effects. In the fourth step we entered just one four-way interaction effect of theoretical interest: individual–collective primacy × ingroup performance × outgroup performance × culture. This interaction enabled us to see whether the predicted triple interaction among individual–collective primacy, ingroup performance, and outgroup performance differed between the US and the PRC.

Several significant effects emerged. First, there were significant main effects for ingroup feedback, $F(1, 577) = 22.83, p < .001$, and for outgroup feedback, $F(1, 577) = 23.61, p < .001$. Ingroup favoritism was greater in the ingroup success condition ($M = 6.07$) than in the ingroup failure condition ($M = 1.44$), and in the outgroup failure condition ($M = 6.08$) than in the outgroup success condition ($M = 1.62$). In addition, a significant two-way interaction was found between individual feedback and ingroup feedback, $F(1, 563) = 3.66, p < .03$. Inspection of means revealed that the tendency for...
ingroup favoritism to be greater in the ingroup success than ingroup failure condition was more pronounced in the individual success condition \( M = 9.31 \) vs. \( M = 0.77 \); \( F(1, 563) = 6.92, p < .01 \) than in the no individual feedback \( M = 5.45 \) vs. \( M = 1.96 \) and individual failure \( M = 3.97 \) vs. \( M = 1.51 \) conditions (both \( F \)'s non-significant).

The only significant three-way interaction was the predicted one among individual–collective primacy, ingroup feedback, and outgroup feedback, \( F(1, 547) = 6.50, p < .02 \). To illustrate this interaction, we computed the correlation between individual–collective primacy and ingroup favoritism within each of the four conditions created by crossing the ingroup feedback and outgroup feedback variables. We expected the positive relationship between collective-primacy and ingroup favoritism to be larger when the ingroup’s performance was worse or better than the outgroup’s, relative to when the ingroup and outgroup both performed well or both performed poorly. In fact, the correlation between collective-primacy orientation and ingroup favoritism was positive and significant in both the ingroup failure/outgroup success \( (r = .17, p < .05) \) and ingroup success/outgroup failure \( (r = .21, p < .02) \) conditions. In contrast, when the ingroup and outgroup both performed well \( (r = -.09) \), or both performed poorly \( (r = -.03) \), the relationship between individual–collective primacy and ingroup favoritism was weaker, and not significant.

To illustrate the triple interaction in a different way, we first categorized participants as having an individual-primacy vs. a collective-primacy orientation on the basis of a median split. We then computed the mean level of ingroup favoritism in each of the eight cells created by the \( 2 \times 2 \times 2 \) crossing of individual–collective primacy, ingroup feedback, and outgroup feedback. These means (see Table 1) revealed that ingroup favoritism was considerably greater in the ingroup success/outgroup failure condition than in the ingroup failure/outgroup success condition. Nevertheless, within both of these conditions, ingroup favoritism was greater among participants with a stronger collective-primacy orientation.

Another noteworthy finding emerged on the final step of the hierarchical regression analysis. The four-way interaction among individual–collective primacy, ingroup feedback, outgroup feedback, and culture was not significant. That is, the triple interaction we just discussed was equally strong in the two cultures.

### Decomposing ingroup favoritism

Ingroup favoritism was a difference score that measured the extent to which participants evaluated their ingroup more favorably than the outgroup. Was the triple interaction among individual–collective primacy, ingroup feedback, and outgroup feedback that we found for those scores attributable to participants’ evaluations of the ingroup, the outgroup, or some combination of the two? To answer that question, we conducted separate hierarchical regressions on evaluations of the ingroup and the outgroup. In the first step we entered the main effects of individual–collective primacy and the three performance manipulations. In the second step we added all two-way interactions, while in the third step we added the triple interaction that tested our hypothesis.

### Ingroup ratings

Ratings of the outgroup served as an additional predictor in this analysis. The triple interaction among individual–collective primacy, ingroup feedback, and outgroup feedback remained significant, \( F(1, 569) = 7.13, p < .01 \). Moreover, correlations between collective-primacy scores and ingroup ratings (partialling out the outgroup ratings) were significant when the ingroup performed worse than the outgroup \( (r = .21, p < .01) \) or better than the outgroup \( (r = .31, p < .001) \). However, the same correlations were non-significant when the ingroup and outgroup both performed well \( (r = .11) \), or both performed poorly \( (r = .03) \).

### Outgroup ratings

Ratings of the ingroup served as an additional predictor in this analysis. The triple interaction among individual–collective primacy, ingroup feedback, and outgroup feedback approached, but did not attain, significance, \( F(1, 569) = 3.18, p > .05 \). Correlations between collective-primacy and outgroup ratings (partialling out the ingroup ratings) were only significant in one condition—when both the ingroup and outgroup performed well \( (r = .20, p < .02) \). Given the unexpected

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<thead>
<tr>
<th>Ingroup performance</th>
<th>Outgroup performance</th>
<th>Individual–collective primacy</th>
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<tr>
<td></td>
<td>More collective</td>
<td>More individual</td>
</tr>
<tr>
<td>Success</td>
<td>Success</td>
<td>3.81 (10.38)</td>
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<tr>
<td></td>
<td>Failure</td>
<td>11.77 (13.90)</td>
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<td>Success</td>
<td>2.51 (14.06)</td>
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<tr>
<td></td>
<td>Failure</td>
<td>1.78 (9.23)</td>
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*Note: Scores could range from -96 to +96 with higher scores reflecting greater ingroup favoritism. Standard deviations are in parentheses.*
nature of this finding, future research is needed to explain it.

In summary, separate analyses of the ingroup ratings and outgroup ratings suggest that the significant three-way interaction among individual–collective primacy, ingroup performance, and outgroup performance in our analysis of ingroup favoritism was primarily attributable to participants’ ratings of the ingroup rather than the outgroup.

Discussion

Ingroup favoritism is an important and robust finding in the intergroup relations literature. Our findings contribute to an understanding of both when and why it occurs. Although it seems obvious that people with a stronger collective-primacy orientation should exhibit greater ingroup favoritism, our findings go one step further by illustrating the conditions under which collective-primacy is more strongly related to ingroup favoritism. Conceptually replicating previous research (Chen et al., 1998), we found that collective-primacy leads to greater ingroup favoritism in the face of evaluatively threatening information about the ingroup. However, the nature of the evaluatively threatening information differed in this study vs. our previous one. Whereas Chen et al. (1998) found that collective-primacy was positively related to ingroup favoritism in the face of an unfavorable intragroup comparison (when the ingroup was outperformed by the individual), our findings here showed that collective-primacy was positively related to ingroup favoritism in response to an unfavorable intergroup comparison (when the ingroup was outperformed by the outgroup). In fact, the present findings suggest that when an unfavorable intragroup comparison and an unfavorable intergroup comparison both are present, it is only the latter that strengthens the positive relationship between collective-primacy and ingroup favoritism. The triple interaction among individual–collective primacy, individual performance, and ingroup performance found in our earlier study failed to emerge in this study.

Extending previous research, we also found that collective-primacy leads to greater ingroup favoritism under conditions that are evaluatively enhancing to the ingroup. That is, when the ingroup performed better than the outgroup, collective-primacy was positively related to ingroup favoritism. Collective-primacy was unrelated to ingroup favoritism, however, when the ingroup and outgroup both performed well or both performed poorly.

By identifying when ingroup favoritism is more likely to occur, our findings also clarified the nature of the underlying process that gave rise to such favoritism. On one hand, ingroup favoritism was a function of evaluative feedback about both the ingroup and the outgroup. The better the ingroup performed, or the worse the outgroup performed, the greater the ingroup favoritism. On the other hand, ingroup favoritism was more than just a simple reflection of ingroup performance and outgroup performance. The three-way interaction among individual-primacy, ingroup performance, and outgroup performance suggested that a motivated process (the desire for a positive social identity) accounts for ingroup favoritism. When people assign greater importance to their ingroup, they are more likely to engage in both protection (when the ingroup is outperformed by the outgroup) and enhancement (when the ingroup outperforms the outgroup) of the ingroup. Although the importance people assigned to their ingroup was operationalized as an individual difference variable in this study, we would expect similar results if the degree of importance people assigned to their ingroups was elicited by situational factors (Ellemers et al., 1999).

Implications for theory and research on cross-cultural differences

Social and organizational psychologists have shown great interest in cross-cultural differences in people’s beliefs and behaviors (e.g., Erez & Earley, 1993; Hofstede, 1980; Markus & Kitayama, 1991; Triandis, 1989, 1995). In many studies, people from two or more cultures are believed to differ systematically from one another on certain psychological dimensions, which are assumed to produce in turn a difference between cultures on the dependent variables under investigation. In many of these studies, however, researchers fail to measure the relevant psychological difference(s) between cultures. This is problematic, because it leaves the true nature of cultural differences unclear.

We expected to find a large difference between the US and PRC samples in individual–collective primacy. Although this cultural difference was significant and in the expected direction, it was weaker than the one observed by Chen et al. (1998). In fact, when we originally conceived this study, we expected to find a triple interaction among culture, ingroup feedback, and outgroup feedback on ingroup favoritism, with the PRC participants showing more ingroup favoritism than the US sample when the ingroup performed worse or better than the outgroup, relative to when both groups performed well or both groups performed poorly. This prediction was based on the assumption that there would be a large cultural difference in individual–collective primacy orientation. However, that difference was weaker here than in our earlier research (Chen et al., 1998). In fact, when we examined the triple interaction among culture, ingroup feedback, and outgroup feedback (where individual–collective-primacy was not included as a predic-
tor variable), we found it to be non-significant albeit in the expected direction.

In summary, these findings illustrate why it is important for cross-cultural researchers to measure the psychological factors hypothesized to account for the effects of culture. Had we not measured individual–collective primacy here, we would have been left with a murky set of findings. The triple interaction among culture, ingroup feedback, and outgroup feedback was not significant, and we would have had no way of knowing why it was not significant. For example, we might have concluded that the conceptual basis underlying our predictions was incorrect. In fact, that was not the case. Rather, culture simply was not as good a proxy for individual–collective primacy as we expected.

Limitations/suggestions for future research

In calling attention to some unresolved issues in this study, we are also suggesting some areas for future research. First, the fact that the relationship between collective-primacy orientation and ingroup favoritism was not significant when the ingroup and outgroup performed similarly warrants attention. We predicted that this relationship would be stronger when the ingroup performed worse or better than the outgroup, relative to when both groups performed poorly or both groups performed well. Although this prediction was confirmed, we did not necessarily expect the relationship between collective-primacy and ingroup favoritism to be non-significant when the ingroup and outgroup both performed poorly or both performed well. Perhaps the conditions in which the ingroup performed worse or better than the outgroup did more than provide evaluatively threatening or evaluatively enhancing information about the ingroup. When the ingroup performed differently than the outgroup, the distinction between the two groups may have become more salient. Heightened salience of the ingroup–outgroup distinction may have combined with the propensities of the tendencies for high collective-primacy persons to distinguish between ingroups and outgroups (Triandis, 1995), and to be loyal to their ingroups, thereby strengthening the positive relationship between collective-primacy and ingroup favoritism. Future research should examine whether other methods of making the distinction between the ingroup and the outgroup salient (besides performance feedback) also strengthen the relationship between collective-primacy and ingroup favoritism in the face of evaluative information (threatening or enhancing) about the ingroup.

Second, collective-primacy refers to attitudes that people have towards ingroups, which often consist of significant others (e.g., family, friends, and close colleagues). This raises the issue of how much groups created under laboratory conditions can capture the essence of these ingroups. The evidence suggested that we were somewhat successful at inducing participants to view their fellow group members as an ingroup. However, the average level of ingroup attachment was only moderate. At least some of the participants thus did not view their fellow group members as much of an ingroup.

To explore this issue, we re-examined the relationship between individual–collective primacy and ingroup favoritism among participants in the two conditions where significant relationships emerged: the ingroup failure/outgroup success condition (which was the most evaluatively threatening to the ingroup), and the ingroup success/outgroup failure condition (which was the most evaulatively enhancing to the ingroup). A hierarchical regression analysis was conducted in which the independent variables were: individual–collective primacy and the extent to which participants felt attached to their ingroup. Main effects were entered on the first step, and the interaction between the two was entered on the second step. The latter effect proved to be significant, $F(1,279) = 4.65$, $p < .03$. To illustrate the nature of the interaction, we classified participants as more or less attached to their ingroup (on the basis of a median split), and then computed subgroup correlations between collective-primacy and ingroup favoritism. For participants who felt more attached to their ingroups, the correlation was positive and significant, $r = .24$, $p < .01$. This was true both in the ingroup failure/outgroup success condition ($r = .22$, $p < .05$) and in the ingroup success/outgroup failure condition ($r = .30$, $p < .01$). However, for participants who felt less attached to their ingroups, there was no relationship between collective-primacy and ingroup favoritism, both across the two conditions ($r = -.06$), and within the ingroup failure/outgroup success condition ($r = .04$) and within the ingroup success/outgroup failure condition ($r = -.18$).

In short, although we were successful in general at leading participants to view their fellow group members as an ingroup, we were not entirely successful. Participants who did not view fellow group members as an ingroup did not show the predicted relationship between collective-primacy and ingroup favoritism, even in the conditions where the two variables were expected to be the most highly related. This may help to explain why the three-way interaction among individual–collective primacy, ingroup performance, and outgroup performance was not stronger, even though it was significant. Future research should evaluate the relationship between collective-primacy and ingroup favoritism in settings where people are more likely to view fellow group members as an ingroup, such as in naturalistic groups (Levine & Moreland, 1998) or even laboratory groups with more face-to-face interaction, a shared history, and so on. Our findings here, showing that collective-primacy is related to both ingroup protection and ingroup
enhancement, are likely to be even stronger where such groups are studied.

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