

Interindividual-intergroup discontinuity as a joint function of acting as a group and interacting with a group

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Abstract

An experiment assessed the prisoner's dilemma game (PDG) choices of a set of three persons who interacted with another supposed set of three persons. There were four conditions: (1) group-on-group (both three-person sets constrained by a majority vote), (2) group-on-one (only own three-person set constrained by a majority vote), (3) one-on-group (only other three-person set constrained by a majority vote), (4) one-on-one (neither three-person set constrained by a majority vote). The four conditions were compared with three orthogonal contrasts. Consistent with the assumption that interindividual interactions are less competitive than interactions involving groups, the first contrast indicated that there were fewer competitive choices in the one-on-one condition than in the other three conditions pooled. Consistent with the assumption that competitiveness can flow either from acting as a group or interacting with a group, the second contrast found no significant difference between the group-on-one and one-on-group conditions. Finally, consistent with the assumption that the interindividual-intergroup discontinuity effect is a joint function of acting as a group and interacting with a group, the third contrast revealed that there were more competitive choices in the group-on-group condition than in the one-on-group and group-on-one conditions pooled. Copyright © 2006 John Wiley & Sons, Ltd.

'Force and fraud,' wrote Thomas Hobbes (1983; 1651), 'are in war the two cardinal virtues.' This simple statement captures elegantly one of the enduring issues in psychological science: Why is it that well-adjusted and otherwise civilized individuals often become in the context of intergroup relations hostile and deceitful? Research on interindividual-intergroup discontinuity has attempted to identify antecedents of intergroup conflict by examining, mostly in the context of the prisoner's dilemma game (PDG), why intergroup relations are often more competitive than interindividual relations (for a review, see Wildschut, Pinter, Vevea, Insko, & Schopler, 2003). Most of this research has focused on a comparison between intergroup (or group-on-group) and interindividual (or one-on-one) interactions. There is an important and unresolved question, however, whether the robust finding of greater competitiveness in group-on-group as compared to one-on-one interactions (i.e., the discontinuity effect) is due to the effect of acting as a group, the effect of interacting with a group, or both. It is this

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	X	Y
X	100, 100	25, 125
Y	125, 25	50, 50

Figure 1. Prisoner's dilemma game (PDG) matrix. Numbers represent US pennies

question that we seek to address in the present research. The examination of this question provides a suitable context for theory testing and development because, of the four existing explanations for the discontinuity effect, three emphasize the importance of acting as a group whereas the fourth emphasizes the importance of interacting with a group.

To provide a context for conceptualizing the four explanations of the discontinuity effect, consider the PDG matrix in Figure 1. Why might someone select the competitive Y choice in this situation? One possible reason is the self-interest, or greed, associated with receiving the highest possible outcome (125 in Figure 1). Another possible reason is the fear of receiving the lowest possible outcome (25 in Figure 1). Note that greed is based on the expectation that the opponent will select the cooperative X choice and, therefore, is vulnerable. Fear, on the other hand, is based on the expectation that the opponent will select the competitive Y choice and, therefore, poses a threat.

Three existing explanations for the discontinuity effect imply that acting as a group increases competitiveness, and that such increased competitiveness is mediated by increased greed. (1) The *identifiability* explanation suggests that acting as a group provides a shield of anonymity allowing group members to avoid personal responsibility for a competitive choice (Schopler et al., 1995). (2) The *in-group-favoring-norm* explanation proposes that acting as a group implies normative pressure to benefit the in-group (Insko, Kirchner, Pinter, Efav, & Wildschut, 2005). The in-group-favoring norm stands in contrast to the norms of fairness and reciprocity that play an important role in interindividual relations. (3) The *social support* explanation holds that acting as a group can provide actual or anticipated social support for being self-interested (Wildschut, Insko, & Gaertner, 2002). Individuals, on the other hand, have no such support.

A fourth existing explanation, on the other hand, implies that interacting with a group increases competitiveness, and that such increased competitiveness is mediated by increased distrust (or decreased trust). (4) This *fear* explanation proposes that the actual or anticipated interaction with a group instantiates learned beliefs and expectations that other groups are competitive and deceitful (Pemberton, Insko, & Schopler, 1996).

Five studies have examined, either directly or indirectly, whether interindividual-intergroup discontinuity flows from the effect of acting as a group (actor effect), the effect of interacting with a group (opponent effect), or both. Unfortunately, these studies have reached contradictory conclusions. Two studies (Pemberton et al., 1996 Studies 3 and 4) suggest the importance of both acting as a group and interacting with a group; one study (Hoyle, Pinkley, & Insko, 1989 Study 2) suggests the importance of interacting with a group only; and two other studies (Morgan & Tindale, 2002; Winquist & Larson, 2004) suggest the importance of acting as a group only.

Of these five studies, the latter two examined most directly the discontinuity effect. Both were PDG experiments with a similar three-condition design. In a group-on-group condition, interaction was between two 3-person groups. In a one-on-one condition interaction was between two individuals. Critically, in a mixed condition, interaction was between a three-person group and an individual. Both experiments revealed a significant actor effect. Participants competed more when they were part of a group than when they acted as individuals. The opponent effect, however, was non-significant in the Morgan and Tindale (2002) study and marginal in the Winquist and Larson (2004) study.¹ Taken at face value, these findings indicate that participants did not compete significantly more with groups than with individuals in either study. This led Morgan and Tindale to assert that ‘the presence of an out-group is not the definitive aspect of the [discontinuity] effect’ (p. 61), to which Winquist and Larson added that ‘being in a group may be the more potent factor’ (p. 679).

Why did these two studies not detect significant opponent effects when previous research has revealed abundant evidence for wariness toward and distrust of out-groups (for a review, see Insko & Schopler, 1998)? Possible reasons relate to procedural aspects of these studies. In the Morgan and Tindale (2002) study, the tendency to distrust other groups more than other individuals may have been weakened by the fact that the single PDG choice followed directly from, and related to points earned in, a prior bargaining task. In this bargaining task, participants were told to ‘earn as many points as possible for themselves’ (Morgan & Tindale, 2002, p. 51). In such a context it is, of course, expected that individual opponents will be self-interested. In the Winquist and Larson (2004) study, payoffs were points rather than money. When points are at stake, the PDG acquires a zero-sum or ‘winner-take-all’ character. That is, points can be of value, but only if the situation is viewed from a purely relativistic perspective—outside of the relationship points have no absolute value (Kelley & Thibaut, 1978). This should render less relevant the opponent’s trustworthiness than it would be with monetary payoffs because ‘victory’ can be achieved only by competing. Stated somewhat differently, whereas with monetary payoffs mutual cooperation (100 in Figure 1) is by far preferable to mutual competition (50 in Figure 1), from a purely relativistic perspective both scenarios represent a ‘tie.’

In the present experiment we sought to create a more suitable context for examining the relative contributions to the discontinuity effect of acting as a group and interacting with a group.

METHOD

Participants

Participants were 145 female undergraduates enrolled in introductory psychology classes at the University of North Carolina at Chapel Hill who completed the experiment for partial course credit.

Design and Analysis

Participants were assigned randomly to one of four conditions. In the *one-on-one* condition, participants were part of a three-person set that was anticipated to follow an individual decision rule,

¹Morgan and Tindale (2002) reported a marginal ($p = 0.07$) opponent effect but warned that ‘The p values associated with these analyses should be interpreted with caution due to the inherent dependencies between decision makers and opponents.’ (p. 55). It is for this reason that we qualify their finding as non-significant. Winquist and Larson (2004) reported three tests of the opponent effect; one that ignored the dependence between decision makers and opponents, and two that adjusted for this dependence in different ways. The test that did not adjust for dependence found a significant opponent effect, but neither of the more appropriate tests that adjusted for dependence did. The first of the more appropriate tests examined just the first PDG trial and found a non-significant opponent effect. The second of these tests examined all trials using data from only half of each interacting pair (selected randomly) and found a marginal opponent effect ($p < 0.08$). It is for this reason that we qualify the Winquist and Larson finding as marginal.

and interacted (allegedly) with a participant in another three-person set that was also anticipated to follow an individual decision rule (but did not actually exist). The individual decision rule entailed that each person in the three-person set would be entirely free to make a personal PDG choice. In the *group-on-group* condition, participants were part of a three-person set that was anticipated to follow a group decision rule, and interacted with a participant in another three-person set that was also anticipated to follow a group decision rule. The group decision rule entailed that although each participant in the three-person set would initially make a personal PDG choice, the experimenter subsequently determined by a vote count a binding group decision. Finally, there were two mixed conditions. In the *group-on-one* condition, participants were part of a three-person set that was anticipated to follow a group decision rule, and interacted with a participant in another three-person set that was anticipated to follow an individual decision rule. In the *one-on-group* condition, participants were part of a three-person set that was anticipated to follow an individual decision rule, and interacted with a participant in another three-person set that was anticipated to follow a group decision rule.

The differences between the four conditions were subtle, and related solely to the anticipated decision rules that were to be followed by participants in the own and other three-person set. Existing research indicates, however, that decision rules like the one manipulated in the present experiment, by which participants' personal decisions are combined into a binding group decision, do give rise to greater competitiveness in group-on-group relative to one-on-one interactions. In the past, we have referred to the state of affairs created by such decision rules as 'procedural interdependence' (Insko et al., 1987, 1988; Wildschut, Lodewijckx, & Insko, 2001). An important advantage of manipulating solely the anticipated own- and other-set decision rules is that this creates the opportunity to calibrate carefully the effects of acting as a group and interacting with a group, and thus render meaningful a comparison of their relative contributions to the discontinuity effect.

Planned Contrasts

We partitioned the four-level independent variable into three planned, orthogonal contrasts. These contrasts were selected to address three specific questions that were at the heart of our investigation. The first contrast compared the one-on-one condition to the three conditions involving groups (one-on-one versus other contrast). This contrast provides a test of the general idea that interactions involving groups are more competitive than one-on-one interactions. The second contrast compared the group-on-one to the one-on-group condition (group-on-one versus one-on-group contrast). This contrast tests whether the actor and opponent effects differ.² Finally, the third contrast compared the combined group-on-one and one-on-group conditions with the group-on-group condition (mixed versus group-on-group contrast). This contrast tests whether the actor and opponent effects are additive.

There is legitimate question why we did not opt for a 2×2 factorial analysis, with one factor relating to the own-set decision rule, and a second factor relating to the other-set decision rule. The planned contrasts address most questions a 2×2 factorial analysis would address. What we sacrifice by

²There is a simple algebraic proof for this interpretation of the second contrast. If the four cells in a 2×2 design are labeled from left to right and top to bottom a (one-on-one), b (group-on-one), c (one-on-group), and d (group-on-group), the relative difference between column and row main effects is:

$$\begin{aligned} & \left[\left(\frac{a+c}{2} \right) - \left(\frac{b+d}{2} \right) \right] - \left[\left(\frac{a+b}{2} \right) - \left(\frac{c+d}{2} \right) \right] \\ &= a/2 + c/2 - b/2 - d/2 - a/2 - b/2 + c/2 + d/2 \\ &= c/2 + c/2 - b/2 - b/2 \\ &= c - b \end{aligned}$$

adopting the contrasts is a test of the interaction effect, that is, a test of whether the actor and opponent effects are contingent upon each other. There is, however, no indication in previous research that such might be the case. What we gain is a test of whether the actor effect is more, or less, important than the opponent effect. Given the contradictory findings of previous research, we considered this to be an important question. On balance, then, the planned contrasts addressed more directly our research questions than a 2×2 factorial analysis.

Procedure

Participants were seated separately in three small rooms in a suite of rooms. After signing a consent form, participants were told that they were members of a three-person set and would be interacting with another three-person set of women located in an adjacent suite. In reality no other set was present and the experimenter controlled supposed communication from the other set. Postexperimental interviews revealed no obvious indications of suspicion regarding the true existence of the other three-person set. It was explained that participants would earn money during the course of the study based on their own decisions in combination with the decisions of the persons in the other set. Specifically, the decision of Person 1 in one 3-person set would be combined with the decision of Person 1 in the other set, and so on. At this point, participants were informed about the specific decision rules (individual versus group) that were to be followed within the two 3-person sets. For instance, participants in the group-on-one condition learned that their own final decision would be determined by a majority vote and that the other-set participants would follow an individual decision rule.

Next, participants received standard instructions regarding the PDG, took a test assessing their understanding of the matrix, and had their answers individually examined by the experimenter. Participants were then told that they would each have the opportunity to communicate with their counterpart in the other suite by exchanging notes, and that it had been randomly determined that the other-set participants would write the first notes. The experimenter then left the room and, after some delay, returned to give each participant a note supposedly written by a person in the other suite. Because prior experience indicates that participants almost always state an intention to cooperate, the notes, which were identical for each participant, simply stated: 'I propose to choose *X*.' The experimenter then collected notes from each of the three participants and left to deliver these notes to the supposed other-set participants.

After being given a moment to read the notes they had received, participants were handed a decision sheet on which they could indicate their choice. Upon collecting the decision sheets, the experimenter gave the participants a postexperimental questionnaire and explained that she would go to the other suite to collect the decisions from the other-set participants. When she returned, the experimenter distributed payoffs on the assumption that the other-set participants had selected *X* and invited participants to the central room to divide their earnings in any way they wished. Finally, participants were debriefed and thanked for their participation.

As in much of our previous research (e.g., Insko et al., 2001; Wildschut et al., 2002), participants interacted in the context of a PDG (see Figure 1) for one trial only.

Dependent Variables

Choice and Reasons for Choice

The main dependent variable was the PDG choice, *X* or *Y*. We focus on the competitive, or noncooperative, *Y* choice. The postexperimental questionnaire included an open-ended assessment of

reasons for the choice. This assessment was preceded by the question: ‘If you chose “X” (“Y”), what was your reason (or reasons) for doing so?’ Two independent judges coded the responses for the presence of statements indicating concern for own outcomes, max own, (e.g., ‘I chose Y because it would give my group more money’); concern for maximizing relative outcomes, max rel, (e.g., ‘I chose Y to get more money than the other group’); concern for fairness or equal outcomes, min dif, (e.g., ‘I chose X so both groups would get an equal amount’); concern for joint outcomes, max joint, (e.g., ‘I chose X because it was beneficial to both groups’); distrust (e.g., ‘The other person probably lied in her proposal’); and trust (e.g., ‘I trusted her to stick to her proposal’). We coded for trust in addition to distrust because we were concerned that, in view of the opponent’s written cooperative proposal, participants would consider the explicit expression of distrust impolite. Indeed, the base-rate for distrust statements was very low ($M = 0.07$).

Spearman–Brown corrected correlations between the judges’ ratings exceeded 0.75. We performed analyses on the average ratings across judges.

Perceived Categorization

To assess the impact of the experimental treatments on participants’ cognitive representation of the interaction, we administered the Gaertner, Mann, Murrell, & Dovidio (1989) measure of perceived categorization. Participants were asked to indicate whether they thought of the six people who participated in the experiment as either ‘one group,’ ‘two groups,’ or ‘separate individuals.’ This assessment is important because it enables us to test whether both acting as a group and interacting with a group have the anticipated effect of shifting perceptions of the interaction from one involving separate individuals to one involving two groups.

RESULTS

Choice Behavior

Mean proportions of competitive choice are presented in Table 1. A significant one-on-one versus other contrast indicated more competitiveness in interactions involving groups than in one-on-one interactions, $\chi^2(1, N = 145) = 8.67, p < 0.01, r = 0.24$. The group-on-one versus one-on-group contrast indicated that the actor and opponent effects did not differ significantly, $\chi^2(1, N = 145) = 0.87, p < 0.36, r = 0.08$. A significant mixed versus group-on-group contrast indicated that the actor and opponent effects on competitiveness were additive, $\chi^2(1, N = 145) = 5.86, p < 0.05, r = 0.20$.

Table 1. Mean proportions for selection of competitive choice and coded reasons for choice as a function of condition

	One-on-One	Group-on-One	One-on-Group	Group-on-Group
Competitive choice	0.31	0.45	0.56	0.74
Max own	0.15	0.29	0.25	0.46
Trust	0.24	0.05	0.10	0.10

Note: Proportions for reasons for choice represent the average score across two independent raters.

These findings provide evidence for the importance of both acting as a group and interacting with a group.³

Reasons for Choice

There were significant contrast effects for two reasons: max own and trust. Relevant means are presented in Table 1. For max own, a significant one-on-one versus other contrast indicated more max own in interactions involving groups than in one-on-one interactions, $F(1, 141) = 4.98$, $p < 0.05$, $r = 0.18$. The group-on-one versus one-on-group contrast indicated that the actor and opponent effects did not differ significantly, $F(1, 141) = 0.16$, $p < 0.69$, $r = -0.03$. A significant mixed versus group-on-group contrast indicated that the actor and opponent effects on max own were additive, $F(1, 141) = 4.77$, $p < 0.05$, $r = 0.18$. The identifiability, in-group-favoring-norm, and social-support explanations propose that acting as a group increases greed. The max own findings provide evidence consistent with these explanations but also suggest that interacting with a group can increase greed.

For trust, a significant one-on-one versus other contrast indicated fewer expressions of trust in interactions involving groups than in one-on-one interactions, $F(1, 141) = 6.39$, $p < 0.05$, $r = -0.21$. The group-on-one versus one-on-group contrast indicated that the actor and opponent effects did not differ significantly, $F(1, 141) = 0.37$, $p < 0.55$, $r = 0.05$. The mixed versus group-on-group contrast indicated that the actor and opponent effects on trust were not additive, $F(1, 141) = 0.15$, $p < 0.70$, $r = 0.03$. The fear explanation proposes that interacting with a group reduces trust. Results for the first two contrasts are consistent with this explanation but also suggest that acting as a group can reduce trust. A possible explanation for the absence of a significant third contrast is that the mixed conditions reduced trust so thoroughly as to leave little opportunity for additional erosion of trust in the group-on-group condition.

Perceived Categorization

Perceived categorization was assessed by asking participants to indicate whether the six participants (three of whom did not actually exist) were seen as 'one group,' 'two groups,' or 'separate individuals.' Relevant means are presented in Table 2. We partitioned the three-level perceived-categorization variable into two dichotomous variables or logits (Wickens, 1989). The first logit contrasted selection of 'one group' (scored '1') with the selection of 'two groups' and 'separate individuals' (both scored '0'). We predicted no significant effects for the first logit and none were found. The second logit contrasted selection of 'two groups' (scored '1') with the selection of 'separate individuals' (scored '0'). Note that participants who selected 'one group' received no score on the second logit and were therefore not included in the analysis for this logit. Results for the second logit were consistent with expectations. A significant one-on-one versus other contrast indicated that participants were more likely to perceive the six participants as two groups (relative to separate individuals) in interactions involving groups than in one-on-one interactions, $\chi^2(1, N = 121) = 5.75$, $p < 0.05$,

³To confirm the absence of a significant interaction effect, we also conducted a 2 (own-set decision rule) X 2 (other-set decision rule) factorial analysis. This analysis revealed significant main effects for own-set decision rule (i.e., an actor effect), $\chi^2(1, N = 145) = 4.29$, $p < 0.05$, $r = 0.17$, and for other-set decision rule (i.e., an opponent effect), $\chi^2(1, N = 145) = 11.27$, $p < 0.01$, $r = 0.28$. The interaction effect was non-significant and descriptively small, $\chi^2(1, N = 145) = 0.10$, $p < 0.75$, $r = 0.03$. To confirm that the responses of participants within the same experimental session were independent, we used SAS PROC MIXED to calculate an intraclass correlation. This tells us what portion of total variance in competitiveness occurs between sessions. The estimated intraclass correlation was 0.

Table 2. Cognitive representations: mean proportions for selection of 'one group,' 'two groups,' and 'separate individuals' options as a function of condition

	One-on-One	Group-on-One	One-on-Group	Group-on-Group
One group	0.19	0.08	0.17	0.23
Two groups	0.33	0.55	0.47	0.63
Separate individuals	0.47	0.37	0.36	0.14

$r = 0.22$. The group-on-one versus one-on-group contrast indicated that the actor and opponent effects did not differ significantly, $\chi^2(1, N = 121) = 0.07, p < 0.79, r = -0.02$. A significant mixed versus group-on-group contrast indicated that the actor and opponent effects on the perception of two groups (relative to separate individuals) were additive, $\chi^2(1, N = 121) = 4.24, p < 0.05, r = 0.19$. These findings indicate that both acting as a group and interacting with a group had the desired effect of shifting perceptions of the interaction from one involving separate individuals to one involving two groups.

Mediation Analysis

Analysis of competitiveness revealed a significant one-on-one versus other contrast and a significant mixed versus group-on-group contrast. The former effect was tracked by both max own and trust, and the latter was tracked by max own only. An appropriate next step, therefore, is to conduct mediation analyses. Max own and trust were entered simultaneously as covariates in a logistic regression analysis of competitiveness, which also included the three contrasts as independent variables. The analysis revealed a significant positive association between max own and competitiveness, $\chi^2(1, N = 145) = 42.21, p < 0.001, r = 0.54$, and a significant negative association between trust and competitiveness, $\chi^2(1, N = 145) = 5.25, p < 0.05, r = -0.19$. The one-on-one versus other contrast, $\chi^2(1, N = 145) = 2.66, p < 0.11, r = 0.14$, and the mixed versus group-on-group contrast, $\chi^2(1, N = 145) = 2.43, p < 0.12, r = 0.13$, were no longer significant. For the former contrast, there were significant indirect effects on competitiveness through max own, $z' = 1.69, p < 0.01$, and trust, $z' = 2.10, p < 0.01$. For the latter contrast, there was a significant indirect effect on competitiveness through max own, $z' = 2.08, p < 0.01$.⁴ These findings suggest, first, that the greater competitiveness in interactions involving groups as compared to one-on-one interactions was mediated by increased concern for own outcomes and by reduced trust. Second, they suggest that increased concern for own outcomes also accounted for the finding that the actor and opponent effects on competitiveness were additive.

DISCUSSION

The obtained results agree with the results of the two diary studies of Pemberton et al. (1996), but are partially inconsistent with the results of a study by Hoyle et al. (1989) (which found a significant

⁴The significance of indirect effects was tested by calculating a z -prime statistic. The critical value ($p < 0.05$) for this statistic is 0.97 (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002).

effect for interacting with a group only), and the studies by Morgan and Tindale (2002) and Winquist and Larson (2004) (which found a significant effect for acting as a group only). All together there are five positive findings and one failure for an effect of acting as a group and four positive findings and two failures for an effect of interacting with a group. We interpret this evidence as supporting the conclusion that the overall discontinuity effect is a joint function of acting as a group and interacting with a group.

Consistent with existing explanations for the discontinuity effect, the present study found that the tendency for interactions involving groups to be more competitive than one-on-one interactions was mediated by increased greed and reduced trust. What we did not find was evidence that acting as a group was a more important antecedent of greed than was interacting with a group, or that interacting with a group was a more important antecedent of reduced trust than was acting as a group. This suggests two important avenues for future research. First, why might interacting with a group might increase greed, and, second, why might acting as a group might reduce trust?

One possible reason why interacting with a group might increase greed relates to defensive rationalization; that is, the presence of real or imagined out-group threat provides a rationale for greed. Insko et al. (1993) cited anecdotal evidence that former diplomats from the Soviet Union rationalized Soviet domination of Eastern Europe by emphasizing Russia's traditional concern for the integrity of its western border. The historian Anthony Beevor (2002) quotes Stalin as making a similar argument at the Yalta Conference to justify the incorporation of Poland in the Soviet sphere-of-influence:

It is also a matter of security, because Poland presents the gravest strategic problem for the Soviet Union. Throughout history, Poland has served as a corridor for enemies coming to attack Russia (p. 81).

A second possible answer relates to the anonymity of persons in another group. Perhaps the majority-vote manipulation influenced perceived anonymity of the others and thus facilitated the self-interested treatment of these more anonymous others. The idea is similar to the observations that distant warfare is easier than warfare that is up-close and personal. This suggests still another mechanism for producing the discontinuity effect—a hypothesized anonymity, or whites-of-their-eyes, mechanism. The basic idea is that, due to learned or evolved tendencies, people resist being self-interested when interacting with relatively less anonymous individuals but allow such self-interestedness when interacting with relatively more anonymous groups (Axelrod, 1984; Ridley, 1996).

The second question relates to why acting as a group might reduce trust. One possibility is that reduced trust may be a simple result of projection. Group members may assume that since they are self-interested, their opponent probably will be also. Winquist and Larson (2004) suggest a similar in-group-based source of distrust. Whatever the correct explanation, our findings clearly indicate that reduced trust is not, as we had previously assumed, the simple result of an out-group schema.

From a descriptive perspective, the present results indicate that the discontinuity effect is a joint function of acting as a group and interacting with a group. From a theoretical perspective, the present results suggest that greed-related competitiveness may not be solely due to within-group processes but may be facilitated by the presence of an out-group, and distrust-related competitiveness may not be solely due to a perceived out-group but may be facilitated by within-group processes.

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