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# Personal Control, Entitativity, and Evolution

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In 1958, Campbell coined the term *entitativity* to refer to the perception of any aggregate of objects as a unit, or as an entity. As we and many other social psychologists use the term, it refers to the perception of an aggregate of individuals as a social group. Horwitz and Rabbie (1982) credited Lewin (1948) with an earlier interest in the perception of entitativity in this more social-psychological sense. Lewin attempted to "raise the consciousness" of Jewish adolescents by arguing that the most important determinant of who belongs to what groups is not the degree of similarity among the individuals, but rather "interdependence of fate" (p. 184). According to Horwitz and Rabbie, Lewin had been influenced by his experiences in Europe, where some people were treated as Jewish even though they had not previously considered themselves to be Jewish.

It is apparent that neither Lewin nor Campbell believed that demographic categories per se were sufficient for the creation of entitativity. We agree with this view. However, Tajfel (1978) clearly believed that mere categorization was sufficient to induce "genuine awareness of membership in separate and distinct groups" (p. 35). Tajfel's evidence has been critically evaluated elsewhere (Insko & Schopler, 1987).

### A DISCONTINUITY APPROACH TO ENTITATIVITY

Relations between groups are more competitive, or less cooperative, than relations between individuals, in the context of moderately noncorrespon-

dent outcomes. We termed this phenomenon *interindividual-intergroup discontinuity* (Insko & Schopler, chap. 4, this volume). In this definition, we use the term *group* to mean nothing more than a set of individuals. Our basic assumption is that, if discontinuity exists, a set of individuals is, in fact, a psychologically real group; that is, when a set of three individuals competes with another set of three individuals to a greater degree than single individuals compete with single individuals, the two sets of three individuals are, in fact, groups.<sup>1</sup> Note that this approach uses behavior (i.e., discontinuity) to provide a *marker* for the existence of a particular type of cognition (i.e., entitativity).

### ENTITATIVITY AS PARTIAL LOSS OF PERSONAL CONTROL

Three experiments have followed the discontinuity-implies-entitativity line of reasoning (Insko et al., 1987, 1988, 1994). These experiments both illustrate the complexity of the problem and suggest that entitativity flows from loss of personal control.

The Insko et al. (1987) experiment was conducted in a seven-room suite, in which three rooms opened onto either side of a long central room. This suite of rooms had previously been used to demonstrate that, when each of the three participants located in the separate rooms on one side of the suite repeatedly "played" the prisoner's dilemma game (PDG) one-on-one with the three participants located in the separate rooms on the other side of the suite, the interaction was far more cooperative than when the three participants on one side of the suite were moved to a single room and required to reach consensus regarding how they should interact with the set of similarly arranged participants on the other side of the suite. A major intent of the Insko et al. experiment was to create an intermediate condition between the extremes of one-on-one and three-on-three interactions. In this outcome interdependence condition, the three participants located in separate rooms on each side of the suite were informed that they would be

<sup>1</sup>Although we believe that using the occurrence of discontinuity as evidence for entitativity is reasonable, it is worth noting that our research has focused on the prisoner's dilemma game (PDG), in which (a) the cooperative choice involves a confound of maximizing equal outcomes and maximizing the joint sum of outcomes, and (b) the competitive choice involves a confound of maximizing own outcomes and maximizing the relative difference between own and other outcomes. The use of other matrices (e.g., Multiple Alternative Matrices [MAMs]; Bornstein et al., 1983) might reveal a different pattern of differences between intergroup and interindividual relations. (For further discussion of this issue, see Insko & Schopler, 1987.)

sharing equally their earnings with the two other participants on the same side of the suite.

However, the results indicate that there was no significant difference between the individuals condition and the outcome interdependence condition over the 10 trials. With 10 trials and two choices per trial, there were 20 possible cooperative choices. In the individuals condition, males made 19.09 and females made 18.27 cooperative choices, whereas in the outcome interdependence condition, males made 18.72 and females made 18.27 cooperative choices. The similar high rates of cooperation were, however, significantly different from two different groups conditions: a "group-rep" condition, in which the groups communicated with each other through representatives (8.78 for males and 10.00 for females), and a "group-all" condition, in which groups communicated with each other by all members of one group meeting with all members of the other group (11.64 for males and 13.90 for females). In all conditions, the communication occurred during each of the 10 trials. The group-all condition produced significantly more cooperation than the group-rep condition. But the important point is that both conditions differed from the individuals and outcome interdependence conditions, which, as indicated, did not differ from each other.

The Insko et al. (1988) experiment examined the issue further by creating even more intermediate conditions. The first condition was the outcome interdependence condition of the Insko et al. (1987) experiment. The second condition was a contact condition, in which the three participants on each side of the suite were moved to the same room. In all other respects, however, everything was the same as the outcome interdependence condition (i.e., the participants on the same side of the suite shared earnings, could not talk to each other, and interacted one-on-one with a participant on the other side of the suite). The third condition was a discussion condition. This condition was the same as the contact condition, except that the three participants in the same room on one side of the suite could talk to each other. The fourth condition was a consensus condition. In this condition, the three participants on each side of the suite were required to reach consensus regarding their PDG choices. However, they still met one-on-one with their opposite number on the other side of the suite. The final condition was the group-all condition of the Insko et al. (1987) experiment. This condition differs from the consensus condition only in that the three participants on each side collectively, rather than singly, meet with the three participants on the other side of the suite. In terms of the number of cooperative choices over the 10 trials, the means were as follows: 17.00 in the outcome interdependence condition, 17.47 in the contact condition, 16.59 in the discussion condition, 10.67 in the consensus condition, and 9.94 in the group-all condition. The outcome interdependence, contact, and discussion conditions did not differ from each other,

nor did the group-all and consensus conditions differ from each other. However, the latter two "groups" conditions did differ from the former three "individuals" conditions. The consensus and group-all conditions produced the least cooperation.

Insko et al. (1988) interpreted these results as indicating that a consensus rule was necessary for the production of between-group competitiveness, and thus entitativity. This interpretation, however, was rather naive because of the failure to think beyond the immediate experimental situation to other situations, in which it is obvious that between-group competitiveness can occur in the absence of a within-group consensus requirement. The Insko et al. (1994) experiment clearly made this point. This experiment involved two different  $n$ -person versions of the PDG. Six participants were again located in separate rooms, three on either side of the experimental suite. In the individuals condition, each participant on one side of the suite used an intercom to talk to one participant on the other side of the suite. In the groups condition, the three participants on a given side of the suite first used the intercom to talk within group, then to talk between groups to participants on the other side of the suite, and finally to talk within group for a second time. In the groups condition, each participant was given a promissory note worth \$2.10, and was asked to make a decision as to whether to "invest" that note. In the context of the  $n$ -person games, "invest" is a euphemism for compete. The rules of the two games, the details of which need not concern us here, generally indicated that the group that invested more notes would earn more money than the other group, but that the groups would jointly earn the most money if no one invested. The important point is that the procedural rules of the games dictated that each group member lost a degree of control to his or her group. In the individuals condition, such control was not lost because each individual controlled (all) three notes.

The results indicate, consistently with a discontinuity perspective, that the groups invested more notes than did the individuals. A further unexpected result, however, related to a manipulation of the presence or absence of a consensus requirement within the groups condition. Half of the participants in the groups condition operated under a consensus rule and half did not, and the presence or absence of this rule had no significant effect on the obtained results. Such results make it clear that discontinuity and entitativity can occur in the absence of a consensus rule.

Insko et al. (1994) interpreted these results as indicating that not outcome interdependence, not a consensus rule, but procedural interdependence is necessary for entitativity. Thibaut and Walker (1975) used the term *procedure* in their discussion of procedural justice to mean a set of rules that can differ in the extent to which the person gives up control. For

example, they described the inquisitorial system as a procedure through which "nearly all of the control in the hearing process is allocated to the decision maker," and the adversarial system as a procedure "in which most of the control of the process is exercised by the parties through their attorneys" (p. 27). With the  $n$ -person PDGs, the rules of the game, the procedure, dictated that each group member was partially controlled by the decisions of the fellow group members. Thus, procedural interdependence is a set of rules or circumstances that involves a partial loss of personal control.

But why then did the consensus rule produce intergroup competitiveness in the Insko et al. (1988) experiment? The answer is that, with the simpler PDG, a loss of personal control was confounded with the presence of the consensus rule. Evidence consistent with this interpretation comes from the reported results for assessments taken on the postexperimental questionnaire (see Table 5.1). Questions that asked for ratings of the extent to which own side was perceived as a group and the extent to which other side was perceived as a group tracked the matrix choice results only partially because these ratings were higher in the discussion condition than in the interdependence and contact conditions, and the matrix choices were equally cooperative in these conditions (see the first three rows of Table 5.1). However, a rating of self-control of earnings tracked the matrix choice results exactly (see Row 4 of Table 5.1). There was significantly less rated control in the consensus and group-all conditions than in the interdependence, contact, and discussion conditions. Based on these results, we propose that entitativity involves a partial loss of personal control.

TABLE 5.1  
Number of Cooperative Choices, and Rated Extent to Which Participants on Own Side of the Suite Acted as if They Were a Group, Participants on Other Side of the Suite Acted as if They Were a Group, and There Was Self-Control of Earnings in the Interdependence, Contact, Discussion, Consensus, and Group-All Conditions

Variable	Interdependence	Contact	Discussion	Consensus	Group-All
Cooperative choices	17.00	17.47	16.59	10.67	9.94
Own side as group	3.23	3.38	6.46	8.38	8.39
Other side as group	3.66	3.69	5.08	6.12	6.47
Self-control of earnings	5.95	6.15	6.29	5.32	5.35

Note. Number of cooperative choices has a possible range from 0 to 20; all ratings were on a 9-point scale, in which high numbers indicate a greater effect. (From "Individual-Group Discontinuity: The Role of a Consensus Rule" by C. A. Insko, R. H. Hoyle, R. L. Pinkley, G. Hong, R. Slim, G. Dalton, Y. Lin, P. P. Ruffin, G. J. Dardis, P. R. Bernthal, and J. Schopler, 1988, *Journal of Experimental Social Psychology*, 24, pp. 505-519.) Copyright 1988 by Academic Press. Reprinted by permission.

## A POSSIBLE EVOLUTIONARY BASIS FOR DIFFERENTIAL DISTRUST OF GROUPS AND INDIVIDUALS

One explanation of interindividual-intergroup discontinuity is the perception of greater distrust of other groups than of other individuals (Insko & Schopler, chap. 4, this volume). Although it may appear as "something of a stretch," we believe that a plausible evolutionary argument can be made for such differential distrust, and that this argument is consistent with an interpretation of entitativity as a partial loss of personal control. The first step in our speculation is accepting the arguments of many scholars (Baumeister & Leary, 1995; Caporael & Brewer, 1991; Leakey, 1978; Stevens & Fiske, 1996) that there is survival value in being social, or that there is survival value in trusting and cooperating with other individuals.

### Biological Selection at the Individual Level

Sedikides and Skowronski (1997) argued that "the evolution from *Homo habilis* to *Homo erectus* was partly a consequence of the challenges that the ancestral savanna niche posed to the latter species" (p. 20). They cited Fox's (1980) assertion that the movement from an arboreal background to the savanna put *Homo erectus* in competition with other species possessing greater stature, speed, strength, and ferocity. They quoted with approval Fox's statement that "ultimate success can only lie in the very helplessness of the original creature" (p. 175), and then stated "That *Homo erectus* was physically ill equipped to be a hunter is a cornerstone of our evolutionary argument" (p. 20). Sedikides and Skowronski maintained that, because isolated individuals were unlikely to survive, there was selection for those individuals who were socially oriented. The advantage of within-group cooperation included increased efficiency in hunting, sharing of the surplus food that resulted from the successful hunting of big game, improved vigilance in the detection of and warning about predators, and improved defense against predators through "predator mobbing."

We find such an argument plausible. On the savanna, there was indeed survival value in being social, in trusting other individuals, in cooperating with other individuals. However, from a discontinuity perspective, the problem is to explain why the survival value of being social did not generalize from between-individual and within-group relations to between-group relations. One might assume that many of the reasons for cooperative relations between individuals, or within a group, would also apply to relations between groups. It could be argued that cooperation between

groups would improve defense against predators, improve vigilance in the detection of and warning of predators, facilitate the sharing of food, and increase the efficiency of hunting.

Why might the argument regarding the survival value of being social have only limited application to relations between groups? One reason is that the advantage of cooperation between groups in achieving increased efficiency in hunting and allowing for the sharing of available food would less obviously apply when there is an insufficiency of food, or at least an insufficiency of food in a given locale. With a sufficiency of game and edible vegetation, a more optimal division of labor made possible by between-group cooperation would indeed increase outcomes. With an insufficiency of food, however, there would more likely be noncorrespondent outcomes (Kelley & Thibaut, 1978), in which it would not be possible for both groups to obtain sufficient food.

An obvious complexity here has to do with just how much available food any individual or group would regard as sufficient. Because of the social support that group members provide each other for being greedy and possessive, it is quite likely that group-judged sufficiency would be considerably more expansive than would individual judged sufficiency. To the extent that this is true, between-group relations should be even more problematic than between-individual relations.

The argument that selection for trust and cooperation between individuals, or within a group, does not apply to relations between groups when there is a judged insufficiency of food is reminiscent of Campbell's (1965) realistic group-conflict theory. Campbell argues that it is competition over "real" resources such as territory or possessions that is responsible for the development of outgroup rejection and distrust. Implicit in Campbell's position is the assumption that the "real" resources do not exist (or are not perceived to exist) in a sufficient amount.

A further matter beyond the sufficiency of available food relates to the problem of optimal group size. Consider a situation in which one group that is hunting in a given territory is confronted with another group that wishes to move into the same territory. Even if cooperation between the groups would facilitate hunting efficiency, there would be an increase in the difficulty of coordinating activities between groups, or activities among twice as many people, as well as a reduction in the effort of individual group members as the number of people increased (Karau & Williams, 1993; Steiner, 1972). Thus, the coordination cost and motivational loss associated with a large number of people may still be further reasons why the survival value of being social applies only to relatively small group sizes.

Finally, the argument that the survival value of being social does not readily generalize from between-individual relations to between-group relations is supported by an even more basic biological fact. This is the fact

that procreation (except in the case of rape), and thus the survival of the species, is dependent on cooperation between individuals. There is a survival value for between-individual relations that is obviously absent for between-group relations. This is a difference that existed even before our ancestors foresook the forest for the savanna.

### Biological Selection at the Group Level

The prior argument that the survival value of being social does not generalize from between-individual to between-group relations assumes implicitly that evolutionary selection operates at the individual level. What about the possibility that evolutionary selection also operates at the group level? This is the kind of possibility that may initially strike many individually oriented psychologists as metaphysically spooky. However, Wilson and Sober (1994) gave an example of how group selection might operate in a completely reasonable manner. They described an archipelago in which the individual islands are populated by rabbits. On one of the islands, a mutant arises that grazes more efficiently, and thus at the individual level is better adapted. However, the proliferation of this new strain leads to overgrazing, and thus the eventual demise of the entire group of rabbits populating this one island. Wilson and Sober noted that what happens parallels the tragedy of the commons (Hardin, 1968) and prisoner's dilemma outcome arrays (Rapoport & Chammah, 1965). Wilson and Sober argued that "fit populations replace unfit populations in the same sense that fit rabbits replace unfit rabbits within populations" (p. 589). Wilson and Sober's position is this: Just as individuals can be "vehicles" for genes, groups can be "vehicles" for individuals. By a "vehicle," they mean any circumstance that produces "shared fate," as is illustrated by the metaphor of a rowing crew in which everyone is "in the same boat" (p. 591).

Except to indicate that Wilson and Sober's complete theory is based on "natural selection that operates on a nested hierarchy of units" (p. 585)—genes, individuals, groups, and metapopulations—further details are left to the interested reader. For present purposes, the most relevant question concerns whether it is reasonable to suppose that group-level selection could have operated so as to produce selection for distrust between groups. We believe that such a question can be answered in the affirmative.

Two extremes of between-group orientation are militaristic hostility on the one hand and pacifistic docility on the other. We suspect that a group that adopted either one of these orientations would be unlikely to survive in the long run.

Consider a group that, because of superior numbers, tactics, or weapons, is able to adopt a successful militaristic, imperialistic orientation toward

other groups. For several reasons we believe that in the long run such a group would eventually meet its "Waterloo." The eventual demise of such a group might occur for any of at least three reasons. The first reason is that the success of the militaristic group would motivate other groups to join forces against the "common enemy." The second reason is that continued military success might eventually lead to overly long lines of communication and resupply—a consideration that obviously applies more to groups with a fixed home territory than to nomadic groups. The third and final reason is that, given the capacity of humans for creativity and invention, particularly in the face of necessity, sooner or later some opposing group would develop even more superior tactics and/or weapons.

Even if a group were successful in conquering its opponents, however, we believe that in the long run such a group would have difficulty maintaining its power, and thus its hostile orientation toward other groups. One reason relates to the interdependence that would eventually develop between the conquering group and the conquered/enslaved groups. To the extent that the dominant group became dependent on the enslaved groups for the necessities of life, the power of the dominant group would not be "usable" (Thibaut & Kelley, 1959), and the tendency to dominate would be undermined. Second, in the long run, absolute power over conquered groups would lead to a lower level of prosperity than will trade between free groups (Insko et al., 1983). Third and finally, the high probability of sexual relations between the conquered and enslaved groups would eventually lead to a genetic drift away from the conquered group's predisposition to dominate other groups.

The opposite of the tendency to orient with hostility to another group is the tendency to adopt a pacifistic orientation toward opposing groups. We also think that this orientation will not lead to long-term survival at the group level: opposing groups would dominate. However, between the extremes of militarism and pacifism there is a middle ground that involves a wariness toward and distrust of other groups. Groups that adopt this orientation are the most likely to survive. If this is true, there is indeed a biological predisposition toward distrust of groups other than one's own.

### IMPLICATION FOR ENTITATIVITY

We have argued that the Wilson and Sober (1994) position has an implication for group-level selection of a biological predisposition to distrust other groups. There is, however, a further implication regarding the perception of entitativity, or the perception of separate individuals as a group. In the present context, the important point is that Wilson and

Sober's position regarding group-level selection seems more compatible with Lewin's than Tajfel's position: that is, it appears that Wilson and Sober's emphasis on "shared fate" or "being in the same boat" is more like Lewin's emphasis on "interdependence of fate" than Tajfel's emphasis on categorization.<sup>2</sup> This issue becomes important if it is indeed the case that biological evolution has created a cognitive predisposition toward the perception of entitativity—a predisposition that corresponds to the circumstance resulting in group-level selection.

An obvious problem is that Wilson and Sober argued for group-level selection without being very precise about what they meant by the term *group*. The metaphor of "being in the same boat" is just that—a metaphor. Reasoning backward, one might suppose that a group is some kind of arrangement among organisms, such that breeding within the unit is permitted but that breeding among units is discouraged.

Therefore, Wilson and Sober's position could be interpreted as assuming that a group is an arrangement that restricts freedom or limits personal control. We, of course, have proposed that entitativity also involves a loss of freedom or control. It is no accident that the two conceptions of groups relate to partial loss of personal control. In fact, given the tendency toward efficient evolutionary adaptation, it would be remarkable if perceived entitativity were based on one kind of group and group selection were based on an entirely different kind of group.

We have argued that groups restrict the personal control of individual members. But how far can these restrictions go? Obviously, they can vary from extreme to low. Extreme loss of personal control is likely to lead to either helplessness (Seligman, 1975) or corrective action toward restoring control (e.g., being hypervigilant toward group leaders, disputing the authority of group leaders, or deserting the group; Fiske, Morling, & Steven, 1996). However, low levels of personal control loss may not be sufficient for entitativity to occur. Thus, our argument is that moderate or partial levels of control are most likely to form the basis for entitativity and are most likely to have formed the basis for group selection.

The present chapter concludes with a clarification. Herein, entitativity was discussed from the perspective of the actor, or the person who is a member of a group. However, Hamilton, Sherman, and Lickel (chap. 3, this volume) discussed entitativity, as did Campbell (1958), from the perspective of an external observer. We believe that the two approaches are complementary. We argued that members of high entitativity groups have given up a degree of personal freedom and control. Hamilton et al. argued that high entitativity groups are groups that observers perceive as well

organized and highly structured. Hence, it is likely that highly organized and structured groups are groups in which the members have relatively limited freedom and control.

However, there is one potential inconsistency between the two approaches. We argued that, from the group members' perspective, entitativity will not necessarily be present if personal loss of control is excessive. To illustrate this point, group members (e.g., members of an authoritarian political party or organization) may become disgruntled and cease progressively to identify with the group (i.e., may perceive the ingroup as lower in entitativity) as the group tightens up its rules, adds new and even more stringent rules, and increases its control over its members. However, according to the Hamilton et al. argument, a strong and rigid organizational structure would result in excessive control of a group over its members, which, in turn, would lead an external observer to infer that the group is high in entitativity. Thus, in reference to the prior example, the implication of the Hamilton et al. argument is that the more a group rigidifies its structure, the higher in entitativity the group will be perceived by external observers. These are testable hypotheses that we hope future research considers seriously.

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<sup>2</sup>There is, of course, no dispute regarding whether categorization is necessary for perceived entitativity; the dispute regards whether categorization is sufficient.

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### III

## Processes Affecting Intergroup Cognition and Intergroup Behavior: Perceptual and Judgmental Processes