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INTERGROUP CONFLICT AND ATTITUDES  
TOWARD THE OPPONENT

An application of the Collins and Hoyt attitude change theory  
to interorganizational conflict

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Purdue University  
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	ROLE	WT	ROLE	WT	ROLE	WT
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Man, as a social animal, spends much of his time in groups. These groups interact with other groups in a variety of relationships. Some of the relationships reflect cooperation, others competition, and still others neither or both. The research reported in this paper deals with small groups in a competitive relationship with one another, and with the differential effects of this competition on attitude formation in members of various subgroups.

Research on intergroup conflict has been primarily concerned with the identification of the causes of conflict and with modes of its resolution (e.g. Deutsch and Krauss, 1960, 1962; Sherif et al, 1961). Relatively little interest has been expressed in the consequences that intergroup conflict has for the group members themselves. These consequences may take a variety of forms. The present research focuses specifically on the attitudinal consequences of participation in conflict. Streufert and Sandler (1971) have shown that the attitudes of decision making groups toward their opponents tend to be rather negative, reflecting the "mirror image" perceptions proposed by Bronfenbrenner (1961) and White (1966). It is not, however, known how this negativity toward one's opponents is initially generated. Some relevant information may be provided by reference to studies on the formation and change of attitudes as a function of behavior or commitment to behavior.

For instance, a number of studies in the area of dissonance theory have demonstrated that, following the performance of a given behavior, an individual may alter his attitudes to achieve consistency with the behavior he has performed (e.g. Brehm and Cohen, 1962). Kiesler (1971), in a somewhat similar vein, has demonstrated the importance of commitment to behavior as a determinant of the amount and direction of change in task relevant attitudes. Weick (1966) offers evidence that acceptance of an assigned task often involves a kind of attitude change toward the task, which serves to make cognitions consistent with anticipated behavioral requirements. These studies suggest that attitudes may change consequent to performance or commitment to performance of a given task. If we translate this latter proposition into the area of intergroup conflict, it suggests that members of groups who can engage (and have engaged) in competitive actions directed toward an opposing group, should hold more negative, i.e., task relevant, attitudes toward their opponents than members of groups who are unable to engage (and have not directly engaged) in competitive actions.

Collins and Hoyt (1971) have recently offered a theory of attitude change which appears relevant to our proposition. These authors suggest that an act must be performed (often

obtained via a forced compliance manipulation where the subject believes he can refuse the action, but usually does not) in the presence of perceived choice and aversive consequences before attitudes are modified. The decision making groups of Streufert and Sandler (1971), for example, engaged in aggressive decision making toward their opponents. The attitudinal negativity of these groups' views of their opponents may consequently be a reflection of the "attitude change" (here in a negative direction) that, according to Collin's theory, might have been expected. Streufert and Sandler's subjects did have a choice, they expected aversive consequences for their opponents, and they made aggressive decisions.

In many settings, e.g. in organizations, group tasks are subdivided among several hierarchical or lateral subgroups. Only some of these subgroups might be involved in actual "competitive" or "aggressive" activities. If the theory of Collins, and the derivations of other data (above) hold, then one may expect differential degrees of negative attitudes toward an opponent among divergent (cooperating) subgroups, potentially resulting in the communication and coordination problems found in organizations (cf. Walton, Dutton, and Cafferty, 1969). While decision making groups which actually engage in competitive acts would be highly negative toward opponents, one might expect

that other groups, e.g. those involved in the gathering of information, to show much less negativity. The present research design specifically tests this hypothesis.

Comparisons of decision making groups with lateral subgroups that are not involved in the competitive or aggressive decision making process, does, however, result in a potential confound. Even though environment and information flow to both kinds of groups may be held constant, instructions to the two kinds of subgroups are necessarily different. The very fact that decision making groups can make decisions, and other lateral subgroups are not able to make decisions might produce differences in behavior which are due to instructional variables rather than due to the decision making activity per se. To test for the Collins theory, control for instructions is required. One way to achieve this control is to introduce group size as an additional variable. If all decision making groups are specifically instructed to make decisions, and if all information handling groups are specifically instructed to handle information (i.e. not to make decisions), but if half the information handling groups are de facto permitted to engage in decision making, then the design would be adequate. This can be achieved by placing half the information handling subgroups together with the decision making subgroups (so that the information handlers can in effect make



decisions, have access to decision making materials, etc.), and by separating the other half of the information handling subgroups from their decision making lateral subgroups. Such a manipulation results in a 2 x 2 design (task allocation by group size). Divergent predictions would be made for group size effects, for instruction effects, and for the effects predicted via the Collins and Hoyt theory. If differences obtained in the data collected with such a design were due to instructions (different for decision makers (DM) than for information handlers (IH), no matter whether separated (2+2) or working together (4), then one would expect that a measure of attitudinal negativity toward the opponents would show that

$$DM_{2+2} = DM_4 \neq IH_{2+2} = IH_4.$$

If any obtained differences were due to group size, one would expect that

$$DM_4 = IH_4 \neq DM_{2+2} = IH_{2+2}.$$

If the theory of Collins holds, then the decision makers should in general be more negative than the information handlers.

However, information handlers who are placed with the decision makers into a four man group and consequently are able to participate in the decision making activity should show more negative attitudes towards their opponents than information handlers who cannot share in the decision making activity

(i.e. those who are placed in a pure two-man information handling group). Further, the negativity of information handlers who can share in the decision making activity (in spite of their instructions) should be as great (or nearly as great) as the negativity found in decision making groups. Finally, if they were no group size effect, then decision makers should be equally negative toward their opponents, no matter whether they work in two man groups (separated from the information handlers) or in four man groups (together with the information handlers). In other words, derivation from Collins and Hoyt theory and the finding of Streufert and Sandler would predict that negativity would differ as follows:

$$IH_{2+2} < IH_4 \leq DM_4 = DM_{2+2}^*.$$

In other words, the applicability of the Collins theory to intergroup conflict settings would be supported if groups in the  $IH_{2+2}$  condition show less negativity than groups placed in the other three conditions.

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\* Further, one might expect that the degree to which information handlers engage in decision making activity should covary with the degree to which scores for  $IH_4$  and  $DM_4$  are similar. This proposition is not tested in this paper.

## Method

One hundred thirty-six undergraduate volunteers from a large midwestern university participated in the Tactical and Negotiations Game (TNG), a complex decision-making environment developed by Streufert and others (Streufert, Castore, & Kliger, 1967; Streufert, Clardy, Driver, Karlins, Schroder, & Suedfeld, 1965; Streufert, Kliger, Castore, & Driver, 1967). In the TNG subjects are given responsibility to make decisions about military, economic, intelligence, and diplomatic affairs in a experimental simulated small-scale international conflict with some Vietnam characteristics. Thirty-four four-man teams were formed. The teams spent two hours reading a manual about the game. The purpose of the manual is twofold: (1) to expose subjects to the complexities of the conflict with which they later have to deal, and (2) to provide two hours of constant pre-experimental exposure for all subjects in an attempt to somewhat equalize pre-experimental experiences.

After the reading period, subjects in each team were told that they would be assigned in two-man subgroups to one of two different tasks. One subgroup was to function as a decision making group, the other subgroup was to function as an information handling group. For seventeen of the four-man teams this was the only task manipulation employed. These teams remained operative

as four-man teams, even though their assignments to subgroups varied. Typically these teams paid relatively little attention to their assignments, and team members jointly filled information handling and decision making functions. For the other seventeen teams an additional task manipulation was employed. The subgroups were separated from each other. Each of the two-man subgroups were placed in identical rooms. The rooms in which information handling subgroups were placed, however, did not contain the "forms" necessary for decision making. Communication between the subgroups was via telephone. They were permitted to make as many calls as they wished. Calls were allowed in both directions: information acquisition groups were able to call their decision-making group and vice versa.

Subjects believed that they were playing the TNG against another four-man team. In reality, information received by each team was pre-programmed. All information received by a team was submitted to the team's information handling subgroup via a mail slot. This subgroup was then responsible for forwarding the information to the team's decision-making subgroup. This was accomplished via the telephone in the Subgroups Apart condition. Teams made written decisions which were transmitted to the experimenter via a mail slot. Subjects believed that the outcome of the events in the TNG game were greatly influenced by their decisions. (Subjects attributed more than 80% of the causality

for the programmed events to decisions of their own and the opposing teams, rather than to random events, characteristics of the environment, or arbitrary decisions of the experimenters.)

The experimental simulation was conducted in seven 30-minute "playing periods", with short intermissions after each period. During the playing periods, the teams received written messages from the experimenters. These messages contained programmed information dealing with the outcomes of the team's decisions, with various supposed moves by their fictitious opponents. All teams received the same number of messages over the course of the game, but the order in which the programmed messages were submitted was randomized across teams.

#### Measurement of Dependent Variables

During the intermission following each playing period, the subjects individually filled out a report form consisting of several questions and scales. Among these was a series of ten semantic differential scales on which the subjects were asked to rate their opponents. In the series, there were three evaluative scales which have been found to be highly inter-correlated in previous research (Streufert, 1965, 1966). When averaged, these scales provide an index of favorable evaluation or liking. The scales used were 'good-bad', 'bright-dark', and 'nice-awful'.

## Results

Data from the last six playing periods in the TNG (warm-up period excluded) were summed. To check on the applicability of the Collins and Hoyt theory to group conflict, the prediction that  $IH_2+2 < IH_4 \leq DM_4 = DM_2+2$  was tested. ANCOVA main effects, interaction, and error term for the Group Size X Task design were obtained to permit planned comparisons among the four levels contained in the design.

### Check for Confounding Effects.

A main effect for task would have indicated that an instruction confound was present in the data. This main effect did not reach significance ( $F = 2.63$ ,  $df 1/132$ , NS). If the Collins theory is applicable, then a main effect for Group Size could be expected, and comparisons should reveal that the difference occurs only for the IH groups and not the DM groups. The main effect for Group Size was indeed significant ( $F = 4.03$ ,  $df 1/132$ ,  $p < .05$ ). This difference was reflected only in the IH group comparison (planned comparison  $F = 4.37$ ,  $df 1/132$ ,  $p < .05$ ). Potential confounds could consequently be excluded from consideration.

### Test for Experimental Predictions.

Post hoc comparisons based on the ANOVA error term for the group size by task interaction indicated that the IH2+2 group differed from the combined evaluative ratings of the opposing team in the three other conditions ( $F = 6.99$ ,  $df 1/132$ ,  $p < .01$ ). Single planned comparisons among the sequential elements of the predictions indicated that IH2+2 groups produced less attitudinal negativity than IH4 groups ( $F = 4.37$ ,  $df 1/132$ ,  $p < .05$ ), and that there were no significant differences among the three other groups. The potential difference allowed in the theoretical prediction for comparison of IH4 with DM4 or DM 2+2 ( $F = .23$ ;  $F = .07$ , both NS) was not obtained. The data are presented in graphic form in Figure I.

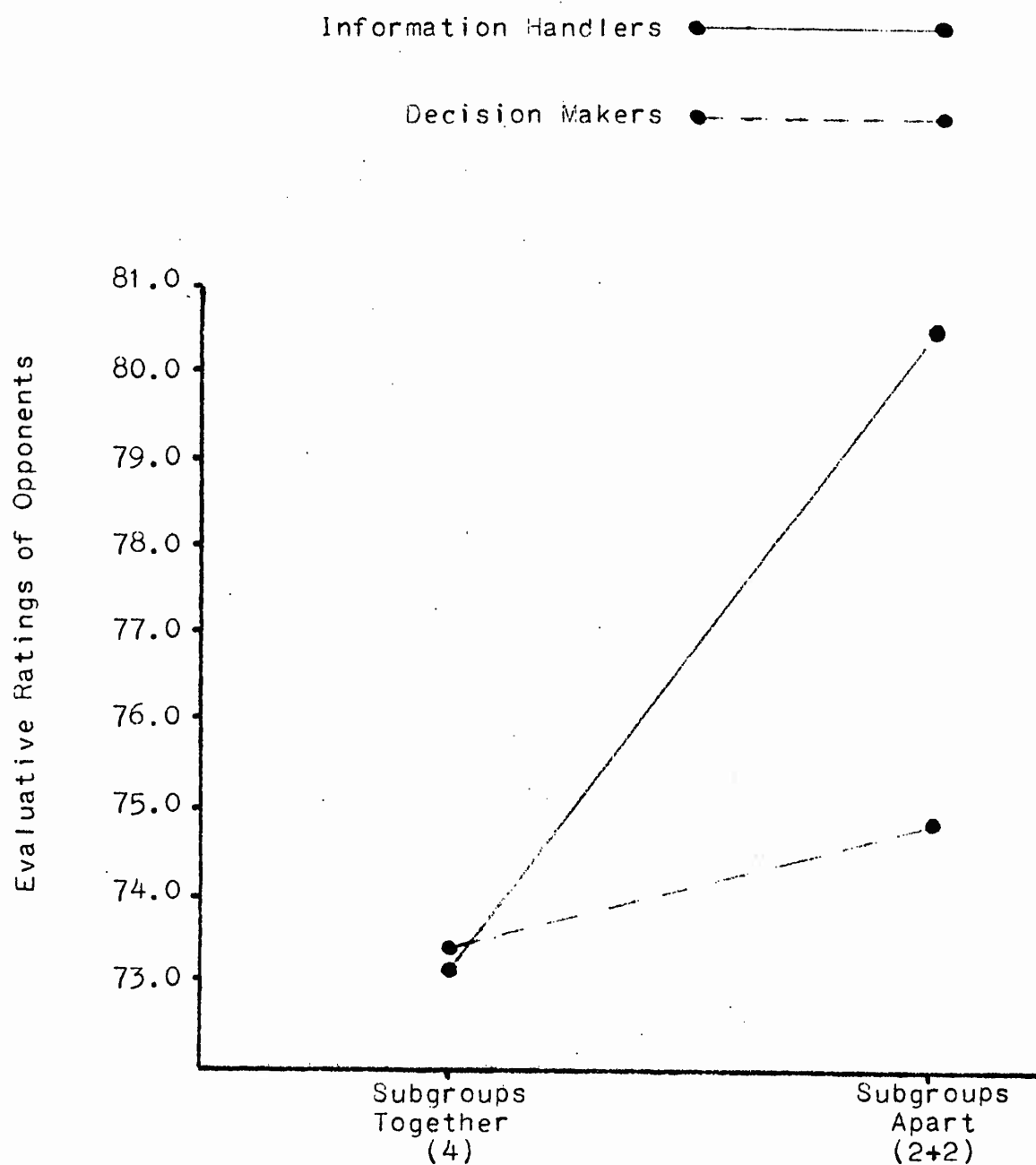


Figure 1. Evaluative ratings of opponents by decision-makers and information handlers in the Together vs Separate Subgroups conditions. (Lower scores indicate greater negativity).



## Discussion

The results obtained in this research indicate that negativity toward an opponent in a competitive decision making task is developed as previously demonstrated by Streufert and Sandler (1971) and as predicted by Bronfenbrenner (1961) and White (1966). The negativity in attitudes toward an opponent is however modified by the activities in which the group engages. The predictions of Collins and Hoyt were supported: greater attitude change\* (here negative attitudes toward opponents) is produced when one makes decisions that have direct aversive consequences for the opponents. Decision makers in this research can be placed into all conceptual categories which Collins and Hoyt propose are necessary for attitude change: (1) the decision makers had a choice whether or not to aggress against their opponents, (2) all groups did engage in aggressive acts, and (3) they viewed their acts to have purposeful negative consequences for their opponents (a necessity in a conflict situation where only one can be the winner, i.e. a zero-sum game). Potential confounds of group size and task relevant instructions were excluded.

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\* In the TNG attitudinal negativity is produced after the participant reads a manual which contains "bias" against the opponent, and after he participates in a series of economic and military "battles" with the opponent. The degree of resulting negativity (attitude change) toward the opponent can however vary.

It is noteworthy that no differences obtained between IH4 groups and both kinds of decision making groups. It appears that the ability to engage in decision making activity with the indicated choice and consequence effects is a rather strong manipulation. Effects of instructions by the experimenters clearly did not diminish the effect of the placement of the IH4 groups into a situation where they were able to contribute to the decision making activity of their group.

The results of this research are quite encouraging. The theoretical predictions from attitude theories have generally had rather limited implications for other areas of social psychology. More seriously, opposing theoretical predictions of various writers have been supported by similar research designs which utilized similar variables at diverse levels (cf. Collins and Hoyt, 1971). Contradictory findings of this kind often suggest that the phenomenon under study is multidimensional rather than unidimensional in nature (cf. Streufert and Fromkin, 1972), and consequently a number of predictors or conditions are necessary to produce an effect reliably. Such multiple predictors are contained in the Collins and Hoyt theory. The successful application of the theory to a complex (itself multidimensional) group conflict setting suggests that the view of Collins and Hoyt may prove rather robust and can be potentially

useful as an initial integrative concept for the use of "attitudes" throughout a wide range of areas in theoretical and applied social psychology.

## References

- Brehm, J. W., & Cohen, A. R. Explorations in cognitive dissonance. New York: Wiley, 1962.
- Bronfenbrenner, U. The mirror image in Soviet-American relations: A social psychologist's report. Journal of Social Issues, 1961, 17, 45-56.
- Collins, B. E., & Hoyt, M. F. Magnitude of inducement, consequences, and responsibility-choice: A theoretical and empirical integration of the forced compliance literature. Unpublished manuscript, University of Wisconsin, 1971.
- Deutsch, M., & Krauss, R. M. The effect of threat on interpersonal bargaining. Journal of Abnormal and Social Psychology, 1960, 61, 181-189.
- Deutsch, M., & Krauss, R. M. Studies of interpersonal bargaining. Journal of Conflict Resolution, 1962, 6, 52-76.
- Kiesler, C. A. The psychology of commitment. New York: Academic Press, 1971.
- Sherif, M., Harvey, O. J., White, B. J., Hood, W. R., & Sherif, C. W. Intergroup conflict and cooperation: The Robbers Cave experiment. Norman, Oklahoma: University Book Exchange, 1961.
- Streifert, S. Communicator importance and interpersonal attitudes toward conforming and deviant group members. Journal of Personality and Social Psychology, 1965, 2, 242-246.
- Streifert, S. Conceptual structure, communicator importance, and interpersonal attitudes toward deviant and conforming group members. Journal of Personality and Social Psychology, 1966, 4, 100-103.
- Streifert, S., Castore, C. H., & Kliger, S. C. A tactical and negotiations game: Rationale, method and analysis. ONR Technical Report, Rutgers University, 1967.
- Streifert, S., Kliger, S. C., Castore, C. H., & Driver, M. J. A tactical and negotiations game for analysis of integration across decision areas. Psychological Reports, 1967, 20, 155-157.

- Streufert, S., Clardy, M. A., Driver, M. J., Karlins, M., Schroder, H. M., & Suedfeld, P. A tactical game for the analysis of complex decision making in individuals and groups. Psychological Reports, 1965, 17, 723-729.
- Streufert, S., & Fromkin, H. L. Complexity and social influence. In J. Tedeschi (Ed.), Social influence processes. Chicago: Aldine Atherton, Inc., 1972.
- Streufert, S., & Sandler, S. I. A laboratory test of the mirror image hypothesis. Journal of Applied Social Psychology, 1971, 1, 378-397.
- Walton, R. E., Dutton, J. M., & Cafferty, T. P. Organizational context and interdepartmental conflict. Administrative Science Quarterly, 1969, 14, 522-542.
- Weick, K. E. Task acceptance dilemmas: A site for research on cognition. In S. Feldman (Ed.), Cognitive consistency. New York: Academic Press 1966.
- White, R. K. Images in the context of international conflict: Soviet perceptions of the U.S. and the USSR. In H. C. Kelman (Ed.), International behavior. New York: Holt, Rinehart, & Winston, 1966

