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IMPACT OF GROUP PROCESS TECHNIQUES ON GROUP COHESIVENESS

by

Jeri Lee Meola

A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Master of Arts
Department of Psychology

Western Michigan University
Kalamazoo, Michigan
April 1990

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IMPACT OF GROUP PROCESS TECHNIQUES ON GROUP COHESIVENESS

Jeri Lee Meola, M.A.

Western Michigan University, 1990

Thirty-three students at Western Michigan University, Kalamazoo participated in the study and were divided into seven groups. The results of the Gross Cohesiveness Scale (Gross, 1957) showed two of the seven groups scored within the accepted range of cohesiveness. No significant differences in cohesiveness were found between the groups. Data were also collected on a 3 Factor Cohesiveness Questionnaire. The factors of compatibility and leadership related to group cohesiveness for groups exposed to group process techniques, but no factors related to group cohesiveness for groups who were not exposed to group process techniques. It is suggested that component analysis research can be done by using separate group process techniques and measuring each technique's direct impact on group cohesiveness.

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Thanks, Mom and Dad for always believing in me. I also would like to thank the friends who were there even if things seemed like an endless pursuit. It would be nice if everyone had friends like Judy, Don, Vince and Bettie who were always there to pave the way with unlimited smiles.

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Jeri Lee Meola

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INTRODUCTION

People's desire to be members of a highly valued group has been a growing source of interest to researchers in academic and clinical disciplines (Beeber & Schmidt, 1986). Many individuals spend a large portion of their time within small groups. The "small group experience" is incorporated into the daily experiences of the family, school, work and play. It is within small groups that individuals have experienced some of their greatest satisfactions and some of their sharpest conflicts and frustrations. For the time spent in groups to be of benefit for members, they must learn to interact effectively with each other to enhance the functioning of the group.

Group Cohesiveness

To function as a group member and be able to survive, as well as for the group to survive, Shaw (1981) states there must be some degree of cohesiveness present in every group. The closeness and acceptance associated with a cohesive group are viewed as positive qualities that are necessary to generate satisfaction with group life. These positive qualities are also thought to be necessary if a group is to achieve desirable outcomes.

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The determinants associated with creating a group's positive qualities that result in increased satisfaction with the group have yet to be fully determined, though much research in group cohesiveness has been conducted.

With 30 years of small group research devoted primarily to group cohesiveness, an exact definition of cohesiveness, and its causes remain unclear. This lack of a uniform definition and measures for cohesiveness can be expected to produce conflicting results. Various definitions found in the literature for group cohesiveness are:

1. The total field of forces which act on members to remain in the group (Festinger, 1950).

2. The resultant of all those forces acting upon group members to remain in or to leave the group (Shaw, 1981).

3. Member attraction to the group (Evans & Jarvis, 1980).

4. How solidified the group is at the conclusion of an interaction period and how attractive the group remains (Burgoon, Heston & McCroskey, 1974).

5. The sum of the negative and positive forces of attraction of group members to each other (McGrath, 1978).

6. The resistance of the group to disruptive forces (Gross, 1957).

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7. Cartwright and Zander's (1953) three different descriptions: (a) attraction to the group (b) morale, and (c) coordination of efforts of group members.

Some differences in the definitions can be attributed to the research methods used in determining group cohesiveness and definition of cohesiveness used when the research was conducted. Overall, the term group cohesiveness has been used to measure both antecedent and consequent variables. Because of different definitions and measurements of cohesiveness within small group research, a variety of conditions has been found to affect the cohesiveness of members within groups.

Variables Affecting Cohesiveness

Traditionally, the cohesiveness of a group was inferred from the strength of the positive attitudes among members (Lott & Lott, 1965). These positive attitudes serve as a variable affecting cohesiveness as they are developed and maintained through the ability of the group to satisfy its members' needs. In a group where each member was viewed as a primary contributor to the group's goal, there was a stronger relationship between positive attitudes and group member cohesiveness.

Applbaum, Bodaken, Sereno, and Anatol (1974) identified member satisfaction as a key variable affecting group cohesiveness. As cohesiveness within the group in-

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creased, member satisfaction and attraction to one another increased.

Positive feedback in groups has been shown to have more credibility than negative feedback, and this positive feedback also leads to higher group cohesiveness (Jacobs, 1977).

Bugen (1977), D'Augelli, (1973) and Yalom and Rand (1966) have found that composition of the group according to interpersonal skills and likability by other group members also had an effect on group cohesiveness. Yalom (1970) also noted that leadership style exhibited within the group is linked with cohesiveness.

Stokes, Fuercher, and Childs (1983) investigated cohesiveness with immediacy and amount of intimacy disclosed among members within psychotherapy groups. They found the amount of risk-taking members exhibited about intimate topics within their psychotherapy group to be a variable affecting the group's cohesiveness. Group members who engaged in increased risk-taking by disclosing more about intimate topics were perceived as having a less cohesive group. Risk-taking behaviors such as self-disclosure, interpersonal feedback and group confrontation (Bednar, Melnick & Kaul, 1974) were also found to affect cohesiveness when they lead to unpredictable or uncertain consequences, resulting in group member's loss of self-esteem or increased member vulnerability.

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On the other hand, risk-taking can be a positive factor as a group grows older and its properties become more defined. As more group experiences are shared, this may lead to higher cohesiveness. Researchers have found a close relationship between risk-taking and group cohesiveness (Bednar, et al. 1974; Yalom, 1970). Evensen and Bednar (1978) compared high and low risk-taking behaviors in groups under structured conditions, and found high-risk groups were more likely to be involved in self-disclosure activities that resulted in higher group cohesiveness. Kirshner, Dies, and Brown (1978) indicated that when the amount of self-disclosure among members increased throughout an 8-hour experimental group, group cohesiveness increased. The cohesive groups were more likely to permit risk-taking to occur in the form of intimate self-disclosure and expressions of conflict than were less cohesive groups.

Stokes, et al. (1983) explored three variables that may be related to group cohesiveness: (1) attraction to individual members of the group, (2) instrumental value of the group, and (3) risk-taking behaviors that occur in the group. A multiple correlation of .75 was found among these three cohesiveness variables. It can be concluded that in a cohesive group, members are more likely be attracted to one another based on the degree to which they believe the group meets their individual needs and

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goals. With newly developed groups, the amount of structure required to facilitate cohesiveness and development of the group has been found to be a variable affecting group cohesiveness. Crews and Melnick (1976) suggested that structure has relevance to the group process and outcome in three areas: interpersonal interaction, member anxiety, and cohesiveness development. Using three levels of structured learning exercises (initial, delayed and no levels) a correlation was found between cohesiveness and member interaction. This research suggested that individuals who viewed their interaction positively viewed the group positively. The study suggests initial structure can be used as a variable to increase the occurrence of selected behaviors of members and reduce member anxiety within early group sessions.

Bednar and Battersby (1976) studied personal growth groups during their primary stages of development. They manipulated three different types of messages the group received: (1) goal clarity, (2) behavioral instructions, and (3) persuasive explanation. They attempted to determine if structure and ambiguity were variables affecting the cohesiveness of the group. They found when groups received messages that included specific behavioral instructions, higher levels of group cohesiveness occurred. Group members also experienced a more favorable attitude toward their group experiences and increased

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work-oriented interpersonal communications.

Cohesiveness in Task-Oriented Groups

Within task-oriented groups, it might be possible to determine the cohesiveness of the group by identifying which variables are related and responsible for one group being more effective than another. Hackman and Oldham (1980) have defined three criteria that may be used to define the effectiveness of work groups: (1) the productive output of the work group meets or exceeds organizational standards of quantity and quality, (2) the group experience serves more to satisfy than frustrate the personal needs of the group members, and (3) the social process used in carrying out the work remains or enhances the capability of the members to work together on subsequent team tasks.

Taylor, Doria and Tyler (1983) found groups can maintain their cohesiveness in the threat of failure when completing a task, but this same cohesiveness can deteriorate regardless of whether the group outcome is successful. What affects the cohesiveness in these groups is the value members place on developing interpersonal relationships about performing successfully on a task when experiencing repeated failures. The cohesiveness of the group remained high when members chose to establish relationships rather than continuing to try to succeed

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after repeated failures. Because interpersonal relationships were more important to group members than the completion of the task, these group members placed blame on themselves for their failure on the task, and not their group members. Thus, cohesiveness can be present in a group that meets only one or two of Hackman and Oldham's (1980) criteria.

This link between task performance and interpersonal relations as a variable affecting the cohesiveness of the group is associated with the attributions group members make for success or failure of the group. When a group experiences success or failure upon completing a task, members can attribute the results to either themselves, their group members or an external cause. Thus, when the outcome of the group has all members receiving the same reward, responsibility for the group's outcome and cohesiveness will most likely be attributed to the group. In contrast, when the cohesiveness and outcome of the group is dependent on the contributions of individual members, responsibility for the success or failure of the group is not placed on the group, but on individual members.

Webb (1980) found that when the goal of achieving a desired output lacks a clear definition of an effective process, the goal of the group changes. The group is not as concerned with the completion of the task, but places a stronger emphasis on understanding how to complete the

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task. This places different demands upon the group members. Groups with more skilled members are likely to influence the less skilled in the method of obtaining a solution to the task assignment, which may affect the goal of individual members and the group's cohesiveness.

Schaechter, Ellertson, McBride, and Gregory (1951) were interested in the effect of group cohesiveness on task production. They found under high production pressures the amount of production increased significantly in both the high and low cohesive groups. Under conditions of low pressure for production, the high cohesive groups were less productive than those groups low in cohesiveness. Thus, task productivity was affected more by the amount of pressure for completion than by group cohesiveness. They concluded the more cohesive the group the more member attraction, which resulted in a greater power of the group to influence its members and ultimately affect the productivity of the group.

However, conflicting results have been reported. Shaw and Tremble (1971) found when group members are attracted to their group they will work harder to achieve the goals of the group. A consequence of this is higher productivity when they are in cohesive groups.

Lieberman (1970) demonstrated that social reinforcement can be used to increase group cohesiveness in therapy groups. Two matched pair therapy groups were

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involved in research for nine months comparing the process and outcomes. Groups in which members received social reinforcement showed significantly more cohesiveness and earlier symptomatic improvement than groups receiving a group-centered approach. Yalom (1970) also demonstrated that group cohesiveness was a critical factor in psychotherapy groups. The cohesive groups brought about positive therapeutic changes and successful therapy outcomes.

Although the consequences of cohesiveness have been well established, its determinants remain less clear. The purpose of the present study was to engage students in a variety of group process techniques to determine their total effect on the group's cohesiveness. Therefore, the present research addresses the following:

1. Will exposing the groups to a variety of group process techniques affect their cohesiveness?

2. Will the same cohesiveness factors be important for groups who have had exposure to group process techniques when compared with groups who have had no exposure to group process techniques?

3. Will how well a person likes a group be correlated with scores on measures of individual performance?

4. Will cohesive group members perform differently than non-cohesive group members on measures of individual performance?

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METHOD

Subjects

Thirty-three students enrolled in a psychology class at Western Michigan University, Kalamazoo participated in the study. There were 22 males and 11 females. Of the 33, five were doctoral students, 18 were MA students, and 10 were undergraduates.

The students were assigned to 7 groups by the course instructor. Group assignments were based upon students' educational background and professional experience. Students also completed an Individual Profile Form. The experimenter used this form (Appendix A) to identify each group's member profile to ensure that composition was homogeneous within groups and different between groups. There were 5 students in each of Groups 1-5, and 4 students in each of Groups 6 and 7. The groups' classifications from the individual profile form are listed in Appendix B.

Group 1 was comprised of 4 doctoral students and 1 graduate student who was a senior executive. Much of the prior success and advancement of each group member could be attributed to high ability and personal motivation and the ability to function independently. In such a group

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of "leaders" we might expect competitiveness, strong attachment to one's own ideas and ways of function, and struggles for leadership.

Group 2 was comprised of 4 graduate students and 1 undergraduate who was pursuing a graduate degree in the same area as the other group members. Within this group of "like" students we might expect synthesis of ideas because of a subject matter expertise, but low collaboration in determining that question(s) were of most importance. Members lacked "real world" experience in group problem-solving. In contrast to group 1, the struggle would not be for leadership but for power over who had the most knowledge in the question area.

Group 3 was comprised of 1 doctoral student, 2 graduate students and 2 undergraduates. We might expect this group's functioning to be centered on a single leader who has some expertise in the functioning of a group so a "leadership" position was adapted. This decreases the motivation of the other group members if they came into conflict with the leader. A high willingness to compromise would occur among members with an emphasis on "quantity vs. quality" as a predominant theme.

Group 4 was comprised of 1 graduate student and 4 undergraduate students. We might expect this group to lack motivation to work well together if it had the

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characteristics of a "leaderless group." For many students it was their only experience at a graduate level course. With one upper level student as a member, the group would have a complex task coming to decisions when members lacked key skills on conflict resolution and decision-making. For the undergraduates in an upper level psychology class, we might expect the content of the class to be overwhelming to understand, making it difficult to work with one another. This would result in additional member frustration and anxiety. Interpersonal relations may have suffered when disagreements occurred on the appropriate procedure to get the task completed.

Group 5 was comprised of 4 graduate students and an undergraduate who had completed other graduate level courses. We might expect this group to have problems understanding one another due to the diversity of backgrounds. Members may have been content working independently of one another and not simultaneously coming together for any decisions. With all upper level students the group may have had task-orientated behaviors that applied pressures to other members who did not complete assignments in a timely manner.

Group 6 was comprised of 2 graduate students and 2 undergraduate students who were all pursuing a degree within the psychology area. Expectations for this group may have been consistent among members and problems may

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have occurred when a member didn't meet the group's expectations. This group has members of "like" characteristics in their interests that may have made it difficult when setting goals to meet the individual needs of the members.

Group 7 was comprised of 1 doctoral student and 3 graduate students who were all pursuing a degree within the psychology area. Much of the advancement of each group member could be attributed to ability and personal motivation to function both dependently and independently. In such a group of "leaders" and "nonleaders" we might expect some competitiveness, some cooperation, varying degrees of member frustration and a strong attachment to one's own ideas and ways of function.

Setting

Groups met for 13 weeks for a 3-hour class session each week. During eight of the 13 weeks, students participated in group process activities. Each 3-hour session was divided into various activities, including a lecture or exercise that provided new material, small group work on assignments, and an applications exercise or guest lecture. When all class activities were completed, groups used the remainder of the session for the assigned task. Each week the groups were required to discuss the assigned readings and generate "quality"

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questions and answers on the concepts and ideas presented. The instructor reviewed the questions each week and awarded the groups quality points based on the level of the question according to a point system. These quality points were part of the group member's final grade. All group members received the same number of quality points for the questions relevant to their group score. The instructor did not provide the groups with a structured methodology on how they should develop the questions.

Each group member was responsible for a weekly time and accomplishment report (Appendix C). This report documented the time each group member used to complete his or her weekly assigned activity. The students also used the form to rate the quality of the work from their reading assignment on a scale from one (low) to three (high). Group members also documented any type of goal achieved (individual, group,. or organizational) for that week on the time and accomplishment report.

The final course grade for each subject was dependent on the quality points received by the group on their weekly questions, and two assignments on which the instructor graded each group member individually. The first individual grade was a paper related to material presented in class. The second individual grade was the student's score on the final exam. For the oral part of the final exam, students met in their groups and were

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asked questions by the instructor on course material. Each student received a grade based upon their question responses and interaction patterns with the other group members. Scores for both assignments were ranked by the instructor for each student's individual performance in relation to the performance of all the students to determine the productivity of each group member.

Participation in the experiment had no effect on course grades. Students were permitted to move to a different group if they were not satisfied with their current placement. No students changed groups throughout the experiment.

Group Process Techniques

This research used a variety of group process techniques to determine their effects on the cohesiveness of the group. The research emphasis was not to isolate single treatment variables and determine which variable had the greatest effect on group cohesiveness, but to expose the groups to a variety of group techniques and determine the effects of all techniques on the cohesiveness of the groups. Each group process technique exposed the groups to a different type of cohesiveness exercise. The group process techniques were exercises in verbal and non-verbal communication, role identification, self-modifying feedback, idea building, concept learning, and

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goal identification.

Each of the seven groups participating in the study had a different composition and could, therefore, be expected to have different problems in completing the exercises and achieving cohesiveness.

All materials used in the group process techniques are located in Appendices A-L and described below. Students were not given limits to complete the group process technique exercises, except for a 2-minute time limit for the concept-listing exercise. Group process techniques and the week administered are shown in Table 1.

Weeks 1-5

Students were not administered any group process techniques. This provided the group members an opportunity to become familiar with each other, change groups if necessary, and understand the class format and assigned weekly task.

Weeks 6 and 10, Group Progress Survey

Students were administered a group progress survey developed by the experimenter. The same survey was administered both weeks. The survey assessed the extent group members were able to meet their individual, group, and organizational goals. The survey also asked group

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Table 1

Group Process Techniques Administration Schedule

GROUP PROCESS TECHNIQUE	WEEK OF ADMINISTRATION								
	6	7	8	9	10	11	12	13	40
Group Progress Survey	X				X				
Group Progress Survey Results		X				X			
Concept Listing Exercise		X	X	X	X	X	X	X	
Concept Listing Results		X	X	X	X	X	X	X	
T/A Graphs			X	X	X	X	X	X	
Goal Statement Exercise			X						
Goal Statement Results				X					
Group Role Identification					X				
Individual Concept Comparisons					X	X	X	X	
5x7 Index Card					X				
Square Building Exercise						X			
Passing Squares						X			
Passing Squares Results							X		
Gross Scale							X		
3 Factor Cohesiveness Questionnaire								X	X

members to assess the extent to which they felt they were getting better at working together. The survey consisted of four questions that were answered by selecting one of

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five choices: (1) great extent, (2) considerable extent, (3) some extent, (4) little extent, or (5) not at all. The experimenter administered the survey when students were assembled in their group to complete their weekly assignment. Students were asked to identify their group number on the survey, but were not required to provide their names. Survey results were given to groups individually by the experimenter the week after it was administered (weeks 7 and 11). Results indicated the percent of occurrence of each answers within their group. A 100% indicated all group members gave that response and 0% indicating none of the group members gave that response.

Weeks 7-13, Individual Concept-Listing Exercise

Students participated in a concept listing exercise administered by the course instructor. The instructor gave the following set of guidelines to the class:

> On a sheet of paper, write your name and your group number. You will have 2 minutes to write the concepts you remember from the assigned readings and lectures. At the end of 1 minute I will ask you to draw a line after the concept you just listed indicating you have 1 minute left to complete the exercise.

The concept lists were collected and tallied by the experimenter immediately after completion of the exercise. Before the end of the class period, the experimenter presented the highest, lowest, and median number of concepts listed for current and previous weeks on the

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chalkboard. In weeks 10-13 students were provided information comparing each groups highest and lowest number of concepts listed.

Week 8, Goal Statement Exercise

The instructor administered a goal statement exercise to Groups 2-7. Group 1 did not participate directly in this exercise. Each member of this group and the experimenter was randomly assigned to a group to record the discussion patterns occurring while the group completed the goal statement exercise.

The experimenter collected the data for each group's interaction patterns upon completion of the exercise. The experimenter summarized the data for each group individually and returned the results the following week to each group (Week 9). Group 5 did not receive a summary of their interaction patterns because insufficient data were collected. After the groups reviewed the data on their interaction patterns, they were asked by the experimenter to complete a four-question survey assessing their performance in the exercise.

Weeks 8-13, Group Comparison Graphs

The experimenter displayed information from an overhead projector on three items comparing between-group performance. The graphs compared: (1) time and accom-

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plishment reports handed in by each group weekly, (2) the average time each group reported on their time and accomplishment report to complete their reading exercises weekly, and (3) the average quality rating each group reported on their time and accomplishment report weekly for the assigned reading exercise on a scale from 1-3, with 1 a high quality rating and 3, a low quality rating.

Week 10, Role Leadership Exercise

The instructor's lecture this week reviewed various roles such as a leader, facilitator, recorder, and follower that group members could perform while in their group. The groups were instructed to assign each member to one of the roles while in groups. Students were asked to write down what they felt was the purpose of the role they selected and share this information with their group members. For the remaining class sessions, students were asked to follow this procedure of role identification and change their role from week to week.

Week 10, Time and Accomplishment Records

The experimenter gave the groups 5" x 7" index cards indicating the time and accomplishment reports completed by each of their group members.

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Week 11, Square-Building and Square-Passing

Students were placed in their groups for the square-building exercise and each group member was given an envelope consisting of 3-5 cardboard pieces. The experimenter instructed the groups that all their cardboard pieces were mixed up, but by offering their pieces to other members of their group each member could complete an identical square of equal size using different pieces. The only rule governing this exercise was the manner by which group members passed the squares. To pass a square from member to member, no talking or pointing was permitted. To complete the exercise all communication between group members was non-verbal.

Group 2 did not participate directly in the square-passing exercise. Each member of this group was randomly assigned to a group to monitor the group's interaction pattern assuring no verbal communication occurred.

In the square passing exercise, when students were assembled in their groups to complete their weekly assignment the experimenter gave each member an envelope containing two pieces of paper with his or her name on it. The experimenter instructed the students when the group was discussing the development of their quality questions, if a group member built on his or her idea he or she was to pass a square with his or her name on it to that group member. If he or she ran out of squares to

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pass they were instructed to make up additional pieces of paper to pass.

The group members' envelopes were collected by the experimenter at the conclusion of class. The following week groups were given information on the frequency of group members building upon each other's ideas.

Week 12, Gross Cohesiveness Scale

The experimenter administered the questionnaire to all students while in groups to complete their weekly assignment. The questionnaires were returned at the end of the class. One group finished its assigned task early, preventing the experimenter from having an opportunity to administer the questionnaire. This group completed the questionnaire in week 13. Scale responses were eliminated if a question was not answered, multiple responses were given for a question, or a questionnaire was not completed. Ninety-seven percent of the questionnaires were returned.

Week 13, 3 Factor Cohesiveness Questionnaire

To determine the degree the factors of compatibility, leadership, and commitment were related to cohesiveness, the experimenter administered the 3 Factor questionnaire to the students. The questionnaires were returned at the end of the class. Questionnaire respons-

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es were eliminated if a question was not answered, multiple responses were given for a question, or a questionnaire was not completed. Ninety-seven percent of the questionnaires were returned.

Week 14, Debriefing

The experimenter provided the students with a letter (Appendix L) explaining their involvement in the group process activities.

Week 40, 3 Factor Cohesiveness Questionnaire

The following semester the 3 Factor Cohesiveness Questionnaire was administered to another psychology class in
their final week of classes. These 29 students met weekly in the same groups to discuss their assigned reading, but were not exposed to any type of group process techniques. Four of the students in this class were also in the class that participated in the treatment package of group process techniques. Questionnaire responses were eliminated if a question was not answered, multiple responses were given for a question, or a questionnaire was not completed. The questionnaires were all returned.

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Measures

Gross Cohesiveness Scale

A traditional instrument was used to measure group cohesiveness (Gross, 1957). The Gross Cohesiveness Scale is the most widely used measure of cohesiveness in the literature (Bednar & Battersby, 1976; Crews & Melnick, 1976; Evensen & Bednar, 1978; Kirshner et al., 1978; Lee & Bednar, 1977), and has a reliability of .81 between compatibility and cohesiveness. The dependent variable was a single cohesiveness score obtained by summing responses to a seven item, Likert-type self report scale reflecting a subject's attitude toward group cohesiveness. Each of the seven questions had five different responses. For questions 1,2,3,4,5, and 7, if the student selected "a" or "b," his or her response was in the "accept" range of responses for cohesiveness. For question 6, the student could only select "a" as a response in the "accept" category of cohesiveness.

To score the questionnaire, the 5 choices of responses were given a number value: a=1, b=2, c=3, d=4 and e=5. If a group averaged a mean score equal or less to 13, they were within the "accept" range of group cohesiveness. Individual scores on all 7 questions could range from 7-35.

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3 Factor Cohesiveness Questionnaire

With the variety of definitions of cohesiveness found in the literature, the experimenter developed another questionnaire related to the Gross (1957) instrument in an attempt to find factors associated with cohesiveness. The 3 Factor Cohesiveness Questionnaire centered on the factors of compatibility, leadership, and commitment.

To validate the 3 Factor Cohesiveness Questionnaire, 22 questions in the areas of the compatibility, leadership, and commitment factors were given to individuals in the following departments: Psychology, Sociology, Communication and The Graduate College. These individuals, by virtue of their experience working with groups, qualified as subject matter experts. They were asked by the experimenter to rate each of the 22 questions on a 5-point Likert scale ranging from "very important" to "not important." The experimenter instructed the judges to categorize any of the questions into the appropriate factor if they felt the question was misplaced.

The experimenter instructed the judges to use the following definition of cohesiveness when rating the 22 questions (Shaw, 1981, p. 74):

> Cohesiveness is the resultant of all those forces acting on a group member's decision to remain or leave the group.

Questions in the area of compatibility were defined

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as the group member's perceived fit in terms of suitability. Leadership was defined by the ability of the group member to direct the performance of an activity, and commitment was defined as a member's basic allegiance to the group.

The judges' results were converted into a percentage score using the following formula (Mathews, Whang, & Fawcett, 1980):

$$\frac{n(5) + n(4) + n(3) + n(2) + n(1)}{(X)n^2} = \%$$

where X is the total number of respondents, n is the number of respondents per rating, and n^2 is the highest possible rating. Questions receiving a score of less than 80% were considered not to be critical to group cohesiveness and were eliminated.

Nine questions by virtue of their percentage scores, three for each factor, were included in the questionnaire. Students were to answer the questions by selecting one of five choices: (1) great extent, (2) considerable extent, (3) some extent, (4) little extent, or (5) not at all.

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RESULTS

Gross Cohesiveness Scale

Means and standard deviations by groups for the Gross Cohesiveness Scale (Gross, 1957) are listed in Table 2. For Groups 5 and 6, means were 12.4 and 12.5, with standard deviations of 1.67 and 2.38 respectively, indicating these groups scored within the "accept" range of cohesiveness for the questionnaire (mean less than or equal to 13).

Table 2

Mean and Standard Deviation for the Gross Cohesiveness Scale Scores

GROUP	MEAN	SD
1	14.8	3.70
2	14.0	2.35
3	14.6	3.20
4	16.0	2.94
5	12.4	1.67
6	12.5	2.38
7	18.5	6.25

Mean scores on the questionnaire ranged from a low

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of 12.4 for Group 5, to a high of 18.5 for Group 7. Standard deviations ranged from a low of 1.67 for Group 5, to a high of 6.25 for Group 7.

The answer to research question 1, then, is "no" because 5 of 7 groups did not score within the "accept" range of cohesiveness.

An analysis of variance indicated there were no significant differences among the seven groups on their responses to the questionnaire, $F(6,25) = 1.62$, $p>.05$. The ANOVA summary table is presented in Table 3.

Table 3

Analysis of Variance Summary Table for Gross Cohesiveness Scale Scores

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	6	112.52	18.75	1.62	.1828
Within Groups	25	289.20	11.57		
Total	32	401.72			

3 Factor Cohesiveness Questionnaire

Table 4 represents the results of a Varimax Rotation factor analysis for the students' responses to the 3 Factor Cohesiveness Questionnaire from students who were

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exposed to the group process techniques. The items in the table identify the two factors extracted from the rotation with the corresponding questionnaire questions and percentage of factor loading. The number in parenthesis after the factor heading identifies the amount of variance the factor accounted for in the analysis.

Table 4

3 Factor Cohesiveness Questionnaire Factor Analysis Scores for Groups Exposed to Group Process Techniques

FACTOR 1	COMPATIBILITY (53%)
Q1 (.61)	To what extent were you able to make suggestions to all of your group members?
Q3 (.69)	To what extent were you accepting of your group member's suggestions?
Q5 (.65)	To what extent were you able to influence your group by initiating topics rather than just passively accepting results?
Q7 (.81)	To what extent did you attend group meetings?
Q9 (.86)	To what extent did you come to your group meetings prepared with all your tasks completed?
FACTOR 2	LEADERSHIP (14%)
Q2 (.88)	To what extent were you attracted to the activities of the group?
Q4 (.89)	To what extent did you generate interest in your group's activities?
Q8 (.71)	To what extent were you able to meet your personal goals?

NOTE: Q6 was excluded from the analysis because it had equivalent loadings for both factors 1 and 2.

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The cohesiveness factors emerging from the student responses were compatibility (Factor 1) and leadership (Factor 2). The reliabilities for the factors were compatibility (.83) and leadership (.85).

Table 5 represents the results of a Varimax Rotation factor analysis for the responses to the 3-factor cohesiveness questionnaire from students who were never exposed to any group process techniques. These students were involved in a class that met weekly in a variety of types of small groups. Each group had different members and a different purpose. The groups had an assigned leader, and the size of the groups varied between 5 and 6 members.

The groups were not restricted to completing their tasks within the class period, and it was often the case the groups would meet outside of class to complete their assignment. The items in the Table identify the 3 factors extracted from the rotation with the corresponding questionnaire questions and percentage of factor loading. The number in parenthesis after the factor heading identifies the amount of variance the factor accounted for in the analysis. From the rotation, no reliable and independent factors emerged from the analysis for students who were not exposed to any group process techniques.

Research question number 2 then is "yes" because groups exposed to group process techniques were found to

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have the factors of compatibility and leadership as

Table 5

3 Factor Cohesiveness Questionnaire Factor Analysis Scores for Groups not Exposed to Group Process Techniques

FACTOR 1 (30%)	
Q2 (.78)	To what extent were you attracted to the activities of your group?
Q3 (.61)	To what extent were you accepting of your group member's suggestions?
Q4 (.87)	To what extent did you generate interest in your group's activities?
FACTOR 2 (17%)	
Q5 (.78)	To what extent were you able to influence your group by initiating topics rather than just passively accepting results?
Q6 (.79)	To what extent were you able to assist your group in analyzing its problems?
Q8 (.49)	To what extent were you able to meet your personal goals?
FACTOR 3 (14%)	
Q7 (.78)	To what extent did you attend group meetings?
Q9 (.76)	To what extent did you come to your group meetings prepared with all your tasks completed?

NOTE: Q1 was excluded from the analysis because it had equivalent loadings for both factors 1 and 2.

important; while the groups with no exposure to group

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process techniques (week 40) were found to have no important factors emerge.

Additional Results

Pearson product-moment correlations were calculated between Question 6, "How well do you like the group you are in?" and student's individual performance scores for the course paper and oral final exam. Results are shown in Table 6.

Table 6

Correlation Between Gross Cohesiveness Scale Question 6 Scores and Individual Performance Scores

	Paper	Final	Q6	Concepts
Paper	--			
Final	.80	--		
Q6	.28	.23	--	
Concepts	-.20	-.24	.23	--

For Question 6 and the paper there was a correlation of $r = .28$, $p>.05$. The oral final was correlated $r = .23$, $p>.05$ with Question 6.

Students' individual performance scores for the course paper and oral final exam, without Question 6, showed a significant correlation of $r = .80$, $p<.05$.

The answer to research question 3 is "yes." It does make a difference how well a person likes his or her

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group and measures of individual performance.

Listing of concepts for the final two weeks of class was correlated with the paper $r = -.20$, $p > .05$, the oral final exam $r = -.24$, $p > .05$ and Question 6 $r = .23$ $p > .05$.

The results from the Gross Cohesiveness Scale were used to determine the correlation between the cohesive and non-cohesive groups for question 6. Pearson product-moment correlations were calculated between Gross questionnaire Question 6, "How well do you like the group you are in?" and the group's individual scores for the course paper and oral final. Tables 7 and 8 identify the correlations for the cohesive and non-cohesive groups.

Cohesive groups revealed a correlation of $r = -.46$, $p > .05$ between their individual performance scores on the course paper and Question 6. A correlation of $r = -.41$, $p > .05$ was revealed between the cohesive groups student's individual performance scores on the oral final exam and Question 6.

For the cohesive groups, student's individual performance scores for the course paper and oral final exam, scores showed a correlation of $r = -.05$, $p > .05$.

Question 6 and concepts listed in the last 2 weeks for cohesive groups were significantly correlated $r = .76$ $p < .05$. The concepts were also significantly correlated with the paper $r = -.52$ $p < .05$.

For the non-cohesive groups, performance scores

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Table 7

Correlation Between Cohesive Groups for Gross Cohesiveness Scale Question 6 Scores and Individual Performance Scores

	Paper	Final	Q6	Concepts
Paper	--			
Final	-.05	--		
Q6	-.46	-.41	--	
Concepts	-.52	-.11	.76	--

Table 8

Correlation Between Non-Cohesive Groups for Gross Cohesiveness Scale Question 6 Scores and Individual Performance Scores

	Paper	Final	Q6	Concepts
Paper	--			
Final	.91	--		
Q6	.23	.22	--	
Concepts	-.26	-.34	.01	--

showed a correlation of $r = .23$, $p > .05$ between Question 6 and the course paper. Individual performance scores of the non-cohesive groups scores on the oral final exam and Question 6 were correlated $r = .22$, $p > .05$.

Student's individual performance scores for the

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paper and oral final exam for the non-cohesive groups were significantly correlated $r = .91$, $p<.05$.

Scores for the concepts listed in the last 2 weeks were statistically significant with the oral final exam $r = -.34$, $p<.05$.

The answer to research question number 4 is "yes," a difference does exist between cohesive and non-cohesive groups on measures of individual performance. Cohesive groups showed a relationship of -.05 on their scores between the paper and oral final; while non-cohesive groups showed a relationship of .91 on the paper and the oral final.

Pearson product-moment correlations were calculated between the Group Progress Survey Question 4, "To what extent do you think this group is getting better at working together?" and the Gross Cohesiveness Scale. Table 9 shows the correlations between questions.

Table 9

Correlation Between Group Progress Survey Question 4 and the Gross Cohesiveness Scale Scores

	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Q4	.20	.68	.26	.83	.28	.29	.29

The scores for Question 4 on the Group Progress Survey indicate a significant correlation with the Gross

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Scale Question 4, r =.83 p<.05. Gross Scale item 4 was: "If most of the members of your group decided to dissolve the group and leave, would you like an opportunity to dissuade them?"

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DISCUSSION

The results of this study suggest that providing groups with a variety of group process techniques affects their cohesiveness. Of the 7 groups, 2 scored within the "accept" range of cohesiveness. No significant results were found between the groups and their scores on the Gross Cohesiveness Scale (Gross, 1957). Some variation did exist between means, suggesting the sensitivity of the instrument and its ability to measure cohesiveness.

Convergent validity was found in the results between the 3-factor questionnaire administered to the groups exposed to group process techniques and the Gross Cohesiveness Scale. Both questionnaires identified a relationship between compatibility and cohesiveness. In addition, the 3 Factor Cohesiveness Questionnaire also identified a relationship between leadership and cohesiveness. The only factor that was not significantly related to cohesiveness was commitment. This finding suggests that further definitions of cohesiveness should be focused on leadership. The results of this research may have been different if the groups were not leaderless.

For the psychology group exposed to group process techniques, their results on the 3 Factor Cohesiveness

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Questionnaire revealed a consistent and homogeneous perception of the questionnaire items. Two independent factors clearly emerged suggesting the process of being exposed to group process techniques may have been important to both cohesiveness and quality. In opposition, the groups not exposed to group process techniques had a scattered pattern of results suggesting much variability in responses. These groups may have been more oriented toward task completion and not as interested in process and quality.

Overall, for all students a relationship existed between performance on the oral final and paper. One might think the cohesive groups should be attracted to members and result in higher productivity, and it would be the members of these groups who contributed the most to the relationships between scores on the oral final and paper. Instead the results suggest that the cohesive groups had a relationship between how well they liked their groups and how many concepts they listed, and the non-cohesive groups had a relationship between the oral final and paper. Students who liked their groups did better on exercises in which one could see the group compared to others, and measures of individual performance were not important. In non-cohesive groups we found the opposite effect as members were more likely to "look out for themselves" and perform higher on individu-

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al measures.

For both the cohesive and non-cohesive groups a strong relationship did not exist between how well they liked their group and their performance on the oral exam and paper. This may be because when the individuals were in their groups, they had the skill and knowledge to complete the assigned task, but for some reason they were not attracted to their members and did not participate in the group process activity. The student completed the individual task without any problems in spite of his or her group behavior patterns. Despite the group cohesiveness and the attraction one feels for its members, the group process may bring about changes in individual behavior. These behavior changes are not likely to affect how they performed on an individual task outside the group.

The results from the group progress survey show that the second time the students were asked to determine the extent they felt they were better at working together may relate to whether a person would want the same members to be in the individuals group again. If the group was meeting goals, it may have increased the likelihood one would want to be with the same members again. A relationship was also shown between how well members worked together and how well they felt that were included in the activities of the group.

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The research did not control for the individual personal characteristics students brought to their groups. These include their life history, style of interaction, self-image, self-esteem, or anxiety level. Despite the group process techniques administered, subjects may still have lacked effective skills which would enable them to work in a group cohesively.

Festinger (1950) states that the forces to stay in the group are dependent upon the attractiveness of either the prestige of the group, members of the group, or the activities of the group. Students had no control over any of these variables as they were not given the opportunity to select their members, and they were assigned a weekly task. Though no one changed group membership during the study, students may have felt compelled to stay in the same assigned group. It may be possible if the students were given the opportunity to select their group members, the study results would have shown a higher incidence of group cohesiveness. Further research would benefit from discovering whether students found something attractive that kept them from switching groups, or whether they were afraid to switch membership. Further research would also benefit from determining whether group cohesiveness varies when students can select their group members.

The research may have resulted in only 2 out of the

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7 groups scoring cohesively because of the questionnaire used to measure cohesiveness. Cartwright (1968) states cohesiveness is uniformly recognized as a group phenomenon, yet its measurement generally involves measuring the levels of attraction of individual group members and averaging them. This technique assumes that the whole is no greater than the sum of its parts. It is possible that some questions had more effect on the groups' cohesiveness than others but the instrument did not permit these questions to be singled out. Thus, the Gross Scale scoring method does not take into account both variability in attraction among group members and the differential influence of group members, since it only yielded a single cohesiveness score.

The results indicate that measuring cohesiveness as the average of individual members within a group is not a sensitive measure. If one member was not satisfied with the group the measure does reflect the variability of that person's responses. Some members may have experienced negative consequences for their participation and had a poor relationship with the group. The remaining group members may have worked cohesively but the results do not indicate this due to a single mean score determining the cohesiveness of the group. A more appropriate measure of cohesion may be better explained by a scaling measure showing the amount of cohesiveness the group possessed

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and not measuring cohesiveness as a dichotomous variable. Cartwright (1968) points out that because there is lack of agreement upon a nominal definition for cohesiveness, this has led to a variety of cohesiveness measurement techniques. When researchers use different measurement procedures, this also makes it extremely difficult to compare study results in any meaningful way and make suggestions for further research.

The students received indirect feedback from the experimenter. Jacobs (1977) found that focused positive feedback has a greater effect on cohesiveness than anonymously delivered feedback. The experimenter provided the group with feedback for every group activity they participated in. Group members also received self-modifying feedback. Despite groups receiving feedback on their participation in the group process activities, the form of delivery was of an anonymous nature and not aimed specifically at the groups. This "feedback" essentially could have been of little benefit to the cohesiveness of the groups.

The effects of the group composition on participation were mediated by behavioral norms which both encouraged and discouraged group members from asking questions helping each other learn how to do the task. Webb (1985) found what that four factors are important to work groups when completing a task: (1) members are encour-

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aged to work together, (2) no division of labor occurs between members when completing the task, (3) members feel free to ask each other for help, and, (4) members give help to other members within the group whenever needed. In this experiment, students may have not looked for help among group members. The primary focus of the group was to develop quality questions. The group's cohesiveness was then affected when it did not have the properties of a work group when members were more concerned with completing the task and receiving points than aiming to make sure everyone contributed to the group's effort.

Students may have felt they were not benefitting from the group process techniques because of the time of administration during the class period. Group members may have felt preoccupied by time limits knowing they had to complete an assigned task by the end of the class to receive a course grade. The features of the tasks were designed to simulate time pressures which normally exist for task-oriented groups. What became important to the group members was not the content of the techniques, but the time of administration which may have prevented them from receiving the full value of the exercise.

Bednar et al. (1976), Evensen et al. (1978) and Kirshner et al. (1978) found that subjects who involved themselves with risk-taking between group members had

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higher cohesiveness. In opposition, Lee et al. (1977) found the opposite to be true. This research did not measure risk-taking but concluded some groups were cohesive while others were not. Thus, it is difficult to conclude the effect of risk-taking in this experiment, and further research would benefit from determining how risk-taking affected cohesiveness.

Few of the groups set individual or group goals. The group then never worked toward an outcome but at the pace of the individuals. Because members did not know what they or other members expected to achieve as a result of their group experience, it is possible some members felt the group was not meeting their needs but these members did not feel comfortable telling other members. Some members may have been reluctant to work together because they lacked motivation. Thus, the groups never realized the relationship between meeting their goals and how this could benefit member relationships and cohesiveness.

When groups are unable to coordinate all their efforts as a whole a loss of motivation may occur. Kerr and Brunn (1983) found that when it is difficult to determine who is responsible for contributing efforts to the task, the likelihood of the group having "free rider" effects increases. Because individual contribution to the task was not measured, the group's success in com-

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pleting the task could have occurred due to the contribution of a few group members. This may relate to the low relationship between the cohesiveness groups on the oral final and paper, even though they liked the group and were able to list concepts. Groups may not have been as highly motivated to work together when all members worked under the same reward structure.

The lack of clear structure on how to complete the weekly assigned task may have affected cohesiveness. Crews (1976) found that providing an initial structure to the groups enhanced their ability to work together. With no specific rules on how to complete their task, the groups' confusion on the best method to proceed may have led to less task efficiency, with more criticism of the group, and greater rejection of their group members.

When group members are unaware of the feelings of the others in the group, it is likely that decisions will be accepted that are unsatisfactory for other members. When the members are given an opportunity to express their satisfaction (or lack of it) directly, unfavorable decisions can be avoided. If group members were not attracted to one another, they may have been afraid to express their concerns which may have affected the group's cohesiveness.

On the positive side, cohesiveness may lead to more investment in the group, more commitment to working

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through issues, and a sense of security among members when they view the group similarly. This will increase the likelihood of the group developing positive outcomes while meeting its organizational and individual goals. On the negative, if the group is too cohesive it will decrease its chances of confronting issues in an effort not to alienate any of the members. The primary purpose of small groups within a classroom setting is usually to complete an assigned task. The conventional type of learning is to learn as an individual and not cooperative learning. According to Doyle (1983) when groups do form for the purpose of completing a task they focus their attention on three aspects: (1) products they are to formulate, (2) the operations that are be used to generate the product, and (3) the resources available for use while generating the product. The students were provided with group process techniques focusing on the second aspect. The groups who were not cohesive may have put their primary focus on aspect one, or only the product explaining why they did not become cohesive.

Further investigation is required of the results of the high loading factors of the 3 Factor Cohesiveness Questionnaire. This Questionnaire was developed to assist in the inquiry of how cohesiveness should be defined. It was found that when groups have different tasks, different purposes, and different meeting times

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this resulted in the emergence of two factors related to cohesiveness for groups exposed to group process techniques in one class and no factors for another class not exposed to group process techniques.

Further research would benefit from separating the group process techniques into individual items. Azrin (1977) states: "The criticism is frequently made of such package programs that one cannot identify which variable(s) is effective" (p.142). When separating the techniques' individual items, the effective method would be to measure the cohesiveness of the group following each activity and determine which techniques are critical to cohesiveness. It seems little will be gained by limiting the research to partial applications of group process techniques to reach conceptual clarity.

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Appendix A

Individual Member Profile

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Individual Member Profile

GROUP_____

NAME _____

SS#_____

EDUCATIONAL STATUS:
PH.D
GRADUATE
UNDERGRADUATE STUDENT

MAJOR:

OTHER GRADUATE PSYCHOLOGY COURSES TAKEN:

BRIEFLY DESCRIBE CURRENT EMPLOYMENT:

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Appendix B

Group Compositions

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Group Compositions

GROUP	NUMBER OF MEMBERS	DEGREE STATUS	CURRICULUM
1	5	4 PH.D 1 GRAD	VARIETY OF PSYCHOLOGY
2	5	4 GRAD 1 UNDERGRAD	I/O PSYCH HUMAN SERVICES
3	5	1 PH.D 2 GRAD 2 UNDERGRAD	CLINICAL PSYCH PTC, I/O PSYCH PSYCHOLOGY
4	5	1 GRAD 4 UNDERGRAD	VARIETY
5	5	4 GRAD 1 UNDERGRAD	PSYCHOLOGY MIXTURE
6	4	2 GRAD 2 UNDERGRAD	ALL PSYCHOLOGY
7	4	1 PH.D 3 GRAD	ALL PSYCHOLOGY

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APPENDIX C

Individual Weekly Goals/Time and Accomplishment Report

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Individual Weekly Goals/Time and Accomplishment Reports

Name_____

Group_____

Date_____ (Beginning of Week)

			Goals for the Week
Acc?	Time	Quality	Goal
Y N	_____	1 2 3	Reading
Y N	_____	1 2 3	Concept Listing
Y N	_____	1 2 3	Questions
Y N	_____	1 2 3	Answer Outlines
Y N	_____	1 2 3	Systems Application
Y N	_____	1 2 3	Learning Skills
Y N	_____	1 2 3	Annotated Bibliography
Y N	_____	1 2 3	_____
Y N	_____	1 2 3	_____

Comments:

Evaluation (Extent of Accomplishment, Quality of Performance)

Power of Concepts/Principles

Thought for the Week

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APPENDIX D

Instruction A--Goal Statement Exercise

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Instruction A--Goal Statement Exercise

Your task is to generate a goal statement for the Psychology Department, Western Michigan University, using the levels of vantage format.

Materials:

Each group member should obtain one blank goal statement form. One group member should obtain a second form upon which he or she will record the group consensus answers to the questions and the group consensus goal statement.

Procedure:

1. Read the first question and discuss it until the group reaches agreement as to the answer. Record the answer.

2. Read the second question and discuss it. When agreement is reached, record the answer.

3. Read, discuss, agree, and record the answer to the remaining questions.

4. Use the set of answers as the basis for generating the goal statement. Discuss how it should be worded. Record the statement agreed upon by the group.

5. On the bottom of the blank goal statement form each person has, each person should rate her or his satisfaction with the way the group worked together and with the quality of the group product. Use a scale of 1 to 10 where 1 is very unsatisfied and 10 is very satisfied. Just write the word "Process" and a numeral from 1 to 10, then the word "Product" and a numeral from 1 to 10.

6. Sign your names to the form containing the group's product and turn it in, along with the individual forms containing the ratings of Process and Product.

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Appendix E

Instruction B--Goal Statement Exercise

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Instruction B--Goal Statement Exercise

Your task is to generate a goal statement for the Psychology Department, Western Michigan University, using the levels of vantage format.

Materials:
Each group member should obtain one blank goal statement form. One group member should obtain a second form upon which he or she will record the group consensus answers to the questions and the group consensus goal statement.

Procedure:

1. Each person should read the first question and then write what he or she believes might be a good answer to it.
   Then, each person should read her/his answer aloud to the group. The group should discuss the answers and reach agreement as to a good answer. Record the answer.

2. Each person should read the second question, write an answer, and read it to the group. Discuss the answers. When agreement is reached, record the answer.

3. Repeat the process for the remaining questions.

4. Use the set of answers as the basis for generating the goal statement. Each person should write a draft of the goal statement, then the group should discuss and modify until they reach agreement. Record the statement agreed upon by the group.

5. On the bottom of the blank goal statement form each person has, each person should rate her or his satisfaction with the way the group worked together and with the quality of the group product. Use a scale of 1 to 10 where 1 is very unsatisfied and 10 is very satisfied. Just write the word "Process" and a numeral from 1 to 10, then the word "Product" and a numeral from 1 to 10.

6. Sign your names to the form containing the group's product and turn it in, along with the individual forms containing the ratings of Process and Product.

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Appendix F

Goal Statement Exercise Observer Instruction Sheet

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Goal Statement Exercise Observer Instruction Sheet

You will use an Interaction Analysis technique to collect data about a group's discussion.

Procedure:

1. Assign a numeral (1,2,3,4,5) to each person in the group, perhaps by "moving" clockwise around the group.
2. When the discussion starts record the sequence in which people speak. Do so by writing the numeral for each speaker. Move down the page, as shown in the example below:

```
Column 1
3
2
4
3
5                          (The line drawn at 5 min would
3                          mark the time and place the
2                          group reached consensus on the
2                          answer to the first question)
2
3
5
4
2
3  (5 min)
-----
1
2
etc
```

When you reach the bottom of a page, just start a second column (and a third, etc. as needed). Later, you'll make an interaction matrix from the data:

		Next Speaker				
		1	2	3	4	5
Speaker	1	1				
	2		11		1	
	3			1		11
	4	111				
	5				1	

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Appendix G

Goal Statement Exercise Comments

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Goal Statement Exercise Comments

GROUP_____

1. When you made a comment in your group, who was the next person most likely to follow you?

2. What group member were you most likely to offer a comment after they had spoken?

3. What type of discussion patterns (good and bad) were occurring within your group?

4. Of what value was this exercise to your group?

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Appendix H

Group Progress Survey

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Group Progress Survey

GROUP DATE

KEY
1=Great Extent
2=Considerable Extent
3=Some Extent
4=Very Little Extent
5=Not At All

1. To what extent is your group able to meet organizational goals?

   A. In relation to quality

   1 2 3 4 5

   B. In relation to quantity

   1 2 3 4 5

C. In relation to cost

   1 2 3 4 5

2. To what extent as a group member are you able to meet your individual goals?

   1 2 3 4 5

3. To what extent is this group able to meet its goals?

   1 2 3 4 5

4. To what extent is this group getting better at working together?

   1 2 3 4 5

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Appendix I

Group Progress Survey Results

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Group Progress Survey Results

GROUP_____ Date_____

KEY

1=Great Extent
2=Considerable Extent
3=Some Extent
4=Very Little Extent
5=Not At All

1. To what extent is your group able to meet organizational goals?

   A. In relation to quality

1=____ 2=____ 3=____ 4=____ 5=____

   B. In relation to quantity

1=____ 2=____ 3=____ 4=____ 5=____

   C. In relation to cost

1=____ 2=____ 3=____ 4=____ 5=____

2. To what extent as a group member are you able to meet your individual goals?

1=____ 2=____ 3=____ 4=____ 5=____

3. To what extent is this group able to meet its goals?

1=____ 2=____ 3=____ 4=____ 5=____

4. To what extent is this group getting better at working together?

1=____ 2=____ 3=____ 4=____ 5=____

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APPENDIX J

Gross Cohesiveness Scale

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Gross Cohesiveness Scale

NAME_____ GROUP_____

Directions: Please select the letter for each of the following questions which best describes your group relationship.

"Accept responses in BOLD"

1. How many of your group members fit what you feel to be the idea of a good member?

   a. All of them.
   b. Most of them.
   c. Some of them.
   d. Few of them.
   e. None of them.

2. To what degree do you feel that you are included by the group in the group's activities?

   a. I am included in all the group's activities.
   b. I am included in almost all the group's activities.
   c. I am included in some of the activities, but not in some others.
   d. I don't feel that the group includes me in very many of its activities.
   e. I don't feel that the group includes me in any of its activities.

3. How attractive do you find the activities in which you participate as a member of your group?

   a. Like all of them very much.
   b. Like almost all of them.
   c. Like some of them, but not others.
   d. Like very few of them.
   e. Like none of them.

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4. If most of the members of your group decided to dissolve the group by leaving, would you like an opportunity to dissuade them?

   a. Would like very much to persuade them to stay?
   b. Would like to persuade them to stay?
   c. Would make no difference to me if they stayed or left.
   d. Would not like to try to persuade them to stay.
   e. Would definitely not like to try to persuade them to stay.

5. If you were asked to participate in another project like this one, would you like to be with the same people who are in your present group?

   a. Would want very much to be with the same peopl-e.
   b. Would rather be with the same people than with most others.
   c. Makes no difference to me.
   d. Would rather be with another group more than present group.

6. How well do you like the group you are in?

   a. Like it very much.
   b. Like it pretty much.
   c. It's all right.
   d. Don't like it too much.
   e. Dislike it very much.

7. How often do you think your group should meet?

   a. Much more often than at present.
   b. More often than at present.
   c. No more often than present.
   d. Less often than at present.
   e. Much less often than at present.

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Appendix K

3 Factor Cohesiveness Questionnaire

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3 Factor Cohesiveness Questionnaire

NAME_____

GROUP_____

KEY
1=Great Extent
2=Considerable Extent
3=Some Extent
4=Very Little Extent
5=Not At All

1. To what extent were you able to make suggestions to all of your group members?

   1 2 3 4 5

2. To what extent were you attracted to the activities of your group?

   1 2 3 4 5

3. To what extent were you accepting of your group member's suggestions?

   1 2 3 4 5

4. To what extent did you generate interest in your group's activities?

   1 2 3 4 5

5. To what extent were you able to influence your group by initiating topics rather than just passively accepting results?

   1 2 3 4 5

6. To what extent were you able to assist your group in analyzing its problems?

   1 2 3 4 5

7. To what extent did you attend group meetings?

   1 2 3 4 5

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8. To what extent were you able to meet your personal goals?

1 2 3 4 5

9. To what extent did you come to your group meetings prepared with all your tasks completed?

1 2 3 4 5

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APPENDIX L

What's Going On?

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What's Going On?

Within your groups this semester you have participated in a variety of group process activities. These activities resulted in a lot of data and information. You may have found yourself asking, "Why are we doing all this other stuff when we already have a weekly task to complete?" The purpose of this letter is to thank-you for taking the time to participate in the activities as the data and information will be used in a project to evaluate your group's cohesiveness.

Completing the group activities may have provided your groups with the necessary skills and knowledge needed so that your group could engineer worthy competent performance. As a participant in the activities, you then had then tools necessary to learn from your group members how to coordinate activities so that you may have been able to work together in a cooperative manner. You participated in activities such as goal setting, identification of group roles, using graphs as a source of group information, and various other exercises designed to enhance your groups interaction process.

WHY LIST CONCEPTS ?

Attached you will find a final graph of the number of concepts your group listed across seven sessions. When reflecting on your group tasks, it was mastered concepts that were used when developing and answering questions. Without the use of the concepts when completing your assigned tasks it may have been difficult to generate quality products. Thus, listing the concepts needed to develop quality products provided your group with a means by which you could perform at an optimal level. Mastering the concepts also served as a repertoire builder; hopefully, you will also find the concepts useful in other environments.

The concepts served a vital function as a primary input to the system. The group activities were part of the system's process which provided feedback. The output of the two gave the groups an opportunity to share effectively information so that they could be competent system performers.

Thanks for all your assistance.

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Appendix M

Human Subjects Institutional Review Board Approval Form

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WMU

Western Michigan University
Kalamazoo, Michigan 49008-3899

Human Subjects
Institutional Review Board

TO: Jeri Meola
Dale Brethower

FROM: Ellen Page-Robin, Chair EP-R

RE: Research Protocol

DATE: December 2, 1986

This letter will serve as confirmation that your research protocol, "Enhancing Group Cohesiveness in Small Groups Through Various Interaction Techniques," has been approved as exempt by the HSIRB.
If you have any questions, please contact me at 383-4917.

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