

EFFECTS OF SELF AND GROUP ORIENTATION ON TASK
COMPLETION IN TWO EXPERIMENTAL CLIMATES

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CHAPTER I

INTRODUCTION

Human beings are not likely to go through life without some association with a group. The likelihood of group involvement for each person functioning in society gives impetus to a detailed and extensive study of factors which influence the productivity of groups as they move toward a goal. Each individual involved in some kind of group work can benefit from the study of how groups function. Reflection on this point gives meaning to the study of groups as part of society because the outcome of these studies can apply and be beneficial to all units that function as a group.

It cannot be ignored, however, that groups are made up of individuals and these individuals affect the efficiency and ultimately the destiny of the group. Therefore, an understanding of the functioning of the individual's motive orientation at work in the group setting will give direction to attempts to understand the process involved in moving the group toward its goal.

The variables--self orientation, interaction orientation, and task orientation--have been studied in a variety of ways. Task oriented individuals and self oriented

individuals have shown equal affinity for group work.¹ How then, can group work be satisfying to all who are involved? This study has identified factors in the working climate that will support the motive base of both self oriented subjects and task oriented subjects. Others have studied motive orientation in groups that were not working toward the completion of a specific task with no effort to adjust the working climate except homogeneous and heterogeneous groupings. The importance of determining an individual's particular orientation has been identified.² No attempt has been made, however, to structure climates requiring individuals to function outside their particular motive base. This study has identified behavior that may be expected as individuals function in a group climate conducive to their particular motive base and in a climate in direct opposition to their motive base.

¹Bernard M. Bass et. al., "Self, Interaction and Task Orientation Inventory Scores Associated with Overt Behavior and Personal Factors", Educational and Psychological Measurement 23 (1963): 101.

²See Bernard M. Bass and George Duntzman, "Behavior in Groups as a Function of Self, Interaction and Task Orientation", Journal of Abnormal and Social Psychology 66 (1963): 419; John P. Campbell, "Individual vs Group Problem Solving in an Industrial Sample", Journal of Applied Psychology 52 (1968): 205; Nicholas T. Foureinzos, Max L. Hutt and Herold Guetzkow, "Measurement of Self Oriented Needs in Discussion Groups:", Journal of Abnormal and Social Psychology 45 (1950): 682.

The present investigation examined the orientation of the individual subjects--self oriented or group oriented--and the affect of this orientation on their behavior in group task completion situations. Each of the two situations was designed to produce a particular working climate--one in which the subjects particular orientation would facilitate task completion and one that attempted to require behavior that was in opposition to the subject's orientation.

Statement of the Problem

The study was conducted to compare the performance efficiency and personal satisfaction with work on a task completion problem. Ability of the experimental climates to influence behavior was also studied. Subjects were classified as self oriented or group oriented and asked to perform under working conditions conducive to and in opposition to their particular orientation on two task completion problems.

Definitions and/or Explanations of Terms

For the purpose of clarification, the following definitions and/or explanations were established for use in this study:

A. Self Orientation: Self orientation reflects the degree to which a person expects direct rewards without

consideration for the value of her contribution, in relation to the group effort, as long as the group is moving toward the goal.¹ This orientation is most apparent when the person believes that the group's actions will cause her goal to be reached.²

B. Group Orientation: Group orientation reflects the individual's degree of concern with completing the task, with the primary motive being concern for the group goal.³

C. Work Climate: The work climate is created by instructions for task completion outlining the boundaries within which the task must be completed.

D. Observers: Observers were graduate students at the Texas Woman's University. Each of the observers had completed six semester hours of course work in Group Dynamics and a five hour training session conducted by the experimenter in preparation for the study.

E. Expected Behaviors: Expected behaviors are those characteristics identified through a search of the

¹Bernard M. Bass, The Orientation Inventory: Manual (research edition) (Palo Alto: Consulting Psychologist Press, Inc., 1962): 3.

²Dorwin Cartwright and Alvin Zander, Group Dynamics: Research and Theory, 3rd ed. (New York: Harper and Row, 1968): 403.

³Bernard M. Bass, The Orientation Inventory: Manual (research edition): 3.

literature which are characteristic behaviors of self oriented and group oriented individuals.

F. Graduate Students: Individuals enrolled for graduate level study at the Texas Woman's University.

Statement of the Purpose

The amount of information available relating to behaviors characteristic of self oriented and group oriented individuals is extensive. The purpose of this study was to use identified characteristics to construct work climates conducive to and in opposition to the individual's orientation and on the basis of the findings from data collected concerning an individual's performance in each work climate, conclusions were drawn about the nature of the individual's orientation as it was affected by the climate in which she functioned.

The investigator sought to support the following hypotheses:

1. Subjects working in a climate conducive to their personal orientation will display more behaviors common to their specific orientation than subjects working in a climate that is in opposition to their personal orientation
2. Subjects' orientation will be a significant factor in determining the effect on behavior of the two experimental climates

3. Groups composed of self oriented (SO) individuals working in SO climates will complete the task in less time than groups composed of SO individuals working in a group oriented climate (GO).
4. Groups composed of GO individuals working in GO climate will complete the task in less time than groups composed of GO individuals working in a SO climate.
5. Subjects working in a climate conducive to their personal orientation will express greater satisfaction with the group experience than subjects working in a climate that is in opposition to their personal orientation.

Delimitations of the Study

This study was subject to the following delimitations:

1. Limited to the extent to which each subject revealed accurate information concerning her orientation during the classification procedure
2. Limited to the degree of validity and reliability of the three phases of the classification procedure
3. Limited to the ability of the observers to identify behaviors characteristic of each orientation

4. Limited to the degree to which each set of instructions for task completion was able to precipitate the intended work climate
5. Limited to the degree to which the subjects were able to look upon the completion of the Lego Model as a personal or group goal
6. Limited to the ability of the subjects to understand and answer the post-task interview questions

CHAPTER II

REVIEW OF RELATED LITERATURE

The study conducted here is not identical to any study reviewed. However, it is an extension of research conducted by B. M. Bass et al., to identify behaviors common to self oriented, interaction oriented, and task oriented individuals. It is also similar to other studies that impose testing conditions in an attempt to elicit particular behaviors, attitudes, et cetera. Another area of importance and directly related to the outcome of this study, although not specific to it, is analysis of findings concerning behaviors associated with achievement motive. A review of information concerning previous findings in this area are also considered here.

Behaviors Associated with Task, Self and Interaction Orientation

The Orientation Inventory was constructed for the purpose of acquiring information concerning an individual's motive base for participation in group work. It has been used to analyze behavioral characteristics related to self orientation, task orientation, and interaction orientation

and to analyze group process as a function of the various orientations.

Foureizos et al.,¹ have pointed out the value of identifying self oriented needs in the individual. Working with groups involved in discussion conference groups, Foureizos and his associates determined that an individual's self oriented needs reflect a negative correlation with satisfaction with the decisions of the group. Foureizos also reveals data to support the hypothesis that conference outcomes may be predicted by analyzing self oriented needs.

The study that most closely parallels the present study was conducted to compare the effects of various types of feedback for achievement motivated subjects and affiliation motivated subjects working on a task.² The subjects performed under feedback conditions conducive to their motive base (achievement or affiliation) and in opposition to it. Climates were created by varying the instructions for task completion. Results of this study showed significant interaction between performance scores and type of

¹N. T. Fouriezon, M. L. Hutt and H. Guetzkow, "Measurement of Self Oriented Needs in Discussion Groups," Journal of Abnormal and Social Psychology 6 (1950): 682-690.

²E. G. French, "Effects of Motivation and Feedback on Task Performance," in Motives in Fantasy and Action (Princeton: D. Van Nostrand, Company, Inc., 1958): 400-408.

feedback with subjects high in affiliation motive doing less well when feedback was achievement oriented in nature.

Conditions were also varied to effect the subject's perception of the task as an individual or group task. Difference was recorded only as it related to affiliation oriented subjects. Perception of the task was only of consequence to affiliation motivated subjects.

Bass et al.,¹ have identified characteristics common to individuals classified as self oriented, interaction oriented or task oriented. College students and fourth grade students were given the opportunity to complete a task or not to complete the same task with no unpleasant ramifications resulting from either choice. Task oriented individuals were more likely to be completers.

The same college students (N = 68) were asked to complete a "Scrambled Words" task and were allowed to choose to work alone or with others. Interaction oriented subjects chose to work with others significantly more often than the other orientations. The number of interaction oriented subjects choosing to work with others was significant at .05 level when compared to the number of interaction oriented subjects who chose to work alone.

¹Bernard Bass et. al., "Self, Interaction, and Task Orientation Inventory Scores Associated with Overt Behavior and Personal factors," Educational and Psychological Measurement 23 (1963): 101-116.

When volunteering tendencies were considered, Bass found that task oriented subjects are more likely to volunteer than self or interaction oriented subjects. The significance of this finding was the conclusion that those who volunteer for psychological experiments that offer no extrinsic reward were a biased sample favoring task oriented individuals. Bass and Dunteman¹ also have addressed the subject of volunteering tendencies among the various orientations and have reported the same conclusions. Self oriented subjects were most likely to volunteer when immediate and direct extrinsic rewards were offered.² Results obtained when extrinsic reward was offered were not significant.

The results of Bass and Dunteman's study also indicated that age and sex are likely to be determinants of motives. Girls and women were more interaction oriented than boys and men, who tended to be more task oriented. Task orientation increases with age and education and interaction orientation is reduced.

¹Bernard Bass and George Dunteman, "Behavior in Groups as a Function of Self, Interaction and Task Orientation," Journal of Abnormal and Social Psychology 66 (1963): 419-428.

²Bass et al., "Self, Interaction and Task Orientation Inventory Scores Associated with Overt Behavior and Personal Factors," 108.

Conclusions from the study mentioned above were applied to sensitivity training groups.¹ Some subjects were management level executives, some were secretaries. Members were placed in groups without regard for their particular orientation. Subjects were then evaluated by peers on seven characteristics using a nine point rating scale.

Significant correlation of task oriented scores of management level executives correlated significantly with: (1) provides helpful objective feedback and (2) easy to understand. For task oriented secretaries significance was reported for: (1) removal from the group would be a loss, (2) continues to push point even after being blocked repeatedly, (3) annoys others, (4) dominates and imposes her will on others, and (5) makes assumptions and blocks the group.

Interaction data were virtually the reverse of task oriented evaluation. Managers who were high in interaction were ranked low by peers on behaviors generally thought to be representative of a successful supervisor. Secretaries and supervisors who were high on interaction were not judged helpful to the group. Self oriented secretaries' and

¹Bass and Dunteman, "Behavior in Groups": 422.

managers' orientation scores yielded a significant but negative correlation to peer evaluation of ability to make others feel at ease.

Homogeneous groups with regard to orientation also were examined. Subjects were removed from the heterogeneous groups and placed with group members whose orientation was the same as their own. Interaction oriented members showed more favor for the new grouping, self oriented and task oriented members preferred the new groupings but reaction was not as strong in these two groups.

Bass¹ has provided an extensive review of characteristics common to individuals of each orientation. Correlation analysis of scores on the Orientation Inventory to other self report measures and social behavior were examined by Bass. Of importance here are the stated effects of orientation on behavior and interaction within groups. Observation of groups working on a task showed that only self oriented subjects spent time getting to know the other groups members and trying to determine the reason they had been assembled. In groups where a deviant was placed by the experimenter only task oriented subjects entertained the deviant's views. This finding parallels task oriented subjects' tendencies to resist conformity.

¹Bernard Bass, "Social Behavior and the Orientation Inventory: A Review," Psychological Bulletin 68 (1967): 260-292.

In order to evaluate quality of performance among dyads paired for variations in orientation, no combination resulted in greater or lesser efficiency or satisfaction. Bass reporting the work of others reports the same results when groups were composed of three members each.

The extensive review (that has been briefly summarized here) relates many other variables concerning behaviors and attitudes of self, task, and interaction oriented individuals. The information included here was chosen because of its relationship to the present study.

Effects of Imposed Testing Conditions

The success of the present study dealt, to a great extent, on the effect of the imposed testing conditions on subjects. Selected studies using imposed climates for creation of testing conditions are reviewed here.

Goldman¹ has identified three conditions that generally exist when groups work on a task. The groups will: (1) receive recognition or reward for work; (2) one person will be designated as the leader; (3) the leader may be the only member who will receive a reward.

Four treatments were used: (1) no leader, motivated (NL-M); (2) no leader, no motivation (NL-NM); (3) leader,

¹Morton Goldman, Merlyn E. Bolen and Randall B. Martin, "Some Conditions Under Which Groups Operate and how this Affects their Performance," The Journal of Social Psychology 54 (1961): 47-56.

motivated (L-M); and (4) leader, no motivation (L-NM).

Six groups were used in each treatment and groups were composed of from three to five subjects. Instructions were varied for each treatment to create the proper climate.

The task was a modified game of "Twenty Questions." Groups were judged most efficient that took less time to ascertain the answer and used the fewest number of questions. Testing conditions imposed here were degree of leadership and degrees of motivation.

Results of this study indicated that performance and enjoyment were enhanced when all subjects were working for equal reward and the leader was not singled out individually for additional reward.

Alvin Zander¹ has identified two motivation factors that are likely to influence the group oriented individual. The first is concentration on favorable outcomes of group success. The second is awareness of unfavorable outcomes or "desire to avoid group failure." Awareness of which of these two influences the group is working under can provide information concerning the group's level of aspiration. High school boys were put into groups and subject to a treatment condition designed to build "strong groups" and

¹Alvin Zander, "Group Aspirations", in Group Dynamics: Research and Theory ed. D. Cartwright and A. Zander (New York: Harper and Row, 1968): 418.

and "weak groups." Strong groups were allowed to choose a name for their group while sitting together at a table, and were told that school records indicated that they would work well together. Weak groups were given a number. Members were separated by a screen and told that school records indicated that they would not work well together. Groups were allowed to choose the degree of difficulty of the task on which they would work. Consequences of the experimentally created groups are reported but it is the process of creating the experimental condition which is of concern to the present study.

Effects of a climate designed to foster competition or cooperation was reported by Lerner, et al.¹ Two experimental groups and one control group were used. In the experimental conditions subjects were asked to fill out a Personal Items questionnaire and a Ways to Live questionnaire. The competitive condition was created by telling subjects that the object of the task would be to trick or trap the other subject, causing him to make errors. A reward was promised for the subject who trapped the other the greatest number of times. The cooperative condition was created by telling subjects that the object of the

¹Melvin J. Lerner, Ronald C. Dellehay and William C. Sherer, "Similarity and Attraction in Social Context," Journal of Personality and Social Psychology 5 (1967): 481-486.

task was to collect points by helping each other. Subjects were also lead to believe that the experimenter was interested in the effect of familiarity with the other subject on the outcome of task completion. One group was given no information about one another. In the other condition each subject was allowed to hear a brief interview with the other subject. In the control condition subjects were told nothing about what was expected with regard to interaction.

Subjects were allowed to hear one of two tape recordings of interviews they believed to be the voice of the subject with whom they would be working. Response on one tape gave little information about the respondent. The other interview made the interviewer seem very dull.

Subjects were then asked to complete the PI and WL scales concerning the person on the tape, to respond to three social distance measures and to respond to fifteen bi-polar adjective groups concerning measure of attraction.

Anticipated cooperation did not increase perceived similarity or attraction but a desire to decrease social distance was significant. Anticipated competition led to decrease in similarity but not in attractiveness or social distance.

Lewin, Lippitt, and White¹ conducted an investigation to determine the effects of authoritarian, democratic and laissez-faire procedures on voluntary, organized club situations. Different "social climates" also were imposed on each group. Results of this study are fascinating and far reaching in their relationship to predicting behavior in various situations. We shall be concerned here, however, only with methodology employed to create the various climates in which the subjects were observed.

Subjects were ten year old boys. Group placement was done on the basis of teacher ratings, sociometric techniques and school records to equate groups on intellect, socio-economic status, physical ability, patterns of interpersonal relationships, and personality characteristics.

By changing group leaders every six weeks groups were exposed to each form of leadership. Democratic leaders allowed subjects to vote on preferences for group goals. Authoritarian leaders directed each activity with no regard for group input. Laissez faire leaders gave little direction to the group. In addition to these "forms of leadership" climates, each group under each leadership form was exposed to three other social climates. In one of these

¹Kurt Lewin, Ronald Lippitt and Ralph K. White, "Patterns of Aggressive Behavior in Experimentally Created Social Climates," The Journal of Social Psychology S.P.S.S.I. Bulletin 10 (1939): 271-299.

situations the leader would leave the room eliminating the "social pressure" of leader presence. Spontaneous work habits were analyzed when the leader did not appear on time for the group meetings. Another situation was created when an outsider would enter the clubroom and begin to criticize the group's work.

The mixture of these different situations formed the basis for the creation of different work climates. Data were collected by means of several paper pencil tests (to analyze individual dynamics within situations) and judgments of trained observers (to analyze individual and group dynamics). Creation of the various climates yielded an abundance of data on which exciting conclusions were based.

Conditions for task completion were imposed by Reddy¹ by the nature of individuals assigned to each group. The task used was a Lego man assembly task. Planning and assembly times were noted for each group of business administration students, middle managers, school principals, and teachers. Group members were allowed to leave the group one at a time to look at a model, and upon completion of the replication the work was checked by the experimenter. Analysis of data collected showed business administration

¹W. Brendan Reddy, "Diagnosing Team Problem-Solving Effectiveness: A Comparison of Four Populations," Small Group Behavior 6 (May, 1975): 174-186.

students and middle management executives took the most time in planning and were significantly more effective in problem solving.

Experimentally controlled task completion climates may also be imposed by unequal distribution of task-relevant information and experimenter intervention providing information concerning strategies relevant to task completion and no experimenter intervention. Hackman et al.,¹ subjected 144 individuals in four member groups to a project assembly task. On the basis of observed behaviors and a post-task questionnaire conclusions were drawn concerning the effects of the imposed climates.

Findings of Research Concerning Achievement Motives

McClelland et al.,² were concerned with the formulation of an acceptable method for measuring achievement motives. Some factors concerned with achievement motive as it relates to the present study are: (1) its affect on performance and (2) behavior connected with social acceptability. Research was conducted to analyse the factors using the Thematic Aperception Test. McClelland et al

¹J. Richard Hackman, Kenneth R. Brousseau and Janet A. Weiss, "The Interaction of Task Design and Group Performance Strategies in Determining Group Effectiveness," Organizational Behavior and Human Performance 16 (1976): 350-365.

²David McClelland et al., The Achievement Motive (New York: Appleton-Century-Crofts Inc., 1953).

reported subjects that vary in level of achievement motive complete more tasks as the climate becomes more achievement oriented and subjects with high need for achievement produced even more rapidly than others.

Relationship of need for achievement and learning also was reported. Anagram word scrambles task was used. No significant difference was found among scores for subjects with high need for achievement and subjects with low need for achievement. However, further study, holding intelligence measures constant reversed these findings.

Research presented in McClelland et al's book, The Achievement Motive, is rather vague concerning the relationship between need for achievement scores and grades obtained by college students, as well as the relationship between need for achievement and Stand Achievement Test scores. However, Heckhausen¹ reported that when studies are limited to subjects with upper levels of intelligence the relationship of intelligence to need for achievement becomes more positive. More concrete conclusions have been presented concerning educational accomplishment and need for achievement scores (intelligence scores are not considered). Subjects with high need for achievement displayed more success in school related endeavors.

¹Heinz Heckhausen, The Anatomy of Achievement Motivation (New York: Academic Press, 1967).

Mehrabian¹ constructed a scale designed to measure tendency to achieve in male and female subjects. Although rationale for segregating sexes on this variable is not given, the study is included in this review because it treats female subjects separately. Only the female scale construct and results will be considered here. The major objective of this scale is to "distinguish high achievers, who have a stronger motive to achieve than to avoid failure from low achievers, who have a stronger motive to avoid failure than to achieve."²

The female scale consists of thirty-four statements. Each response is based on a seven-point scale. The response variance ranges from -3 (very strong disagreement) to +3 (very strong agreement). The female achievement scale has been used by others and the results are reported by Mehrabian. Low achieving females are reported to do significantly less well on task completion and improve significantly when responsibility for task completion is shifted to the group as opposed to the individual.

¹Albert Mehrabian, "Male and Female Scales of Tendency to Achieve," Educational and Psychological Measurement 28 (1968): 493-502.

²Ibid., p. 501.

Other findings specific to female subject's achievement motive are presented by Weiner and Kukla.¹ Subjects were asked to provide feedback for imaginary students in the form of gold and/or red stars according to: (1) exam scores, (2) ability, and (3) effort expended by the student. Findings revealed that the female subjects were more likely to reward ability than effort (motivation).

¹Bernard Weiner and Andy Kukla, "An Attributional Analysis of Achievement Motivation," Journal of Personality and Social Psychology 15 (1970): 1-20.

CHAPTER III

PROCEDURES FOR THE CONDUCT OF THE STUDY

The procedures followed in the development of this study are described in this chapter under the following headings: Selection of Subjects, Classification of Subjects into Test Groups, Validation of Tasks to be Used, Collection of Data, and Treatment of Data.

Selection of Subjects

Data were collected from twelve female graduate students at the Texas Woman's University. It was essential to this study that educational status be equated within the four test groups.

Scores recorded on the Orientation Inventory for female subjects have been shown to favor the interaction motive, and scores recorded for male subjects tend to favor the task oriented motive.¹ As a result of these

¹Bernard M. Bass, et al., "Self, Interaction and Task Orientation Inventory Scores Associated with Overt Behavior and Personal Factors", Educational and Psychological Measurement 23 (1963) 1:101.

general sex associated tendencies, a sample drawn from both sexes would tend to yield an all male task oriented group and a heterogeneous self oriented group. This information prompted the use of a one-sex sample. Females were selected because of the lack of research reported using female subjects.

Educational status has often been considered a measure of achievement motivation.¹ Heterogeneity among subjects in relation to educational status (graduate status) was believed to be helpful in equating groups on achievement motivation.

Cartwright and Zander² have cautioned that if the subject's age is likely to influence other variables, conclusions drawn from laboratory experiments may only be applied to younger groups. As a result of this observation, graduate students were selected as subjects in order that the findings would appropriately allow for generalizations to the general population encompassed by the ages represented in the sample, as well as college and high school age population.

¹Bernard Weiner and Andy Kukla, "An Attributional Analysis of Achievement Motivation", Journal of Personality and Social Psychology, 15 (1970) 1:1-20.

²Dorwin Cartwright and Alvin Zander, ed., Group Dynamics: Research and Theory (New York: Harper and Row, 1968): 36.

Subjects used in the study were recruited through a printed hand out distributed to each female graduate student registering at the Texas Woman's University Denton campus on June 6, 1978. Subjects were also recruited through announcements in various graduate classes at the Texas Woman's University during the first summer session of 1978.

The total number of subjects for this study ($N = 12$) was considered appropriate because of the desire to keep the groups within the definition of small group work (3-5 members). Studies of group size have indicated that the larger the group the more difficulties in communication and less satisfaction with work done.¹ It was the intent of this study to provide a climate that was conducive to work, therefore, the size of the groups was set to maintain the small group atmosphere and provide an adequate number of participants for meaningful interaction.

Classification of Subjects into Groups

Proper classification of subjects into self oriented or group oriented test groups was perhaps the most crucial element involved in obtaining valid results. The

¹B. P. Indik, "Organization Size and Member Participation: Some Empirical Tests of Alternative Explanations", Human Relations 18 (1965): 339-350.

Classification procedure involved the use of a standard paper-pencil test as well as personal interviews and observation of behavior on a word jumble task.

The most noteworthy obstacle encountered in the search for the proper classification instrument was precipitated by the semantic differences within the discussion of self oriented motives and group oriented motives. A search was undertaken to find an instrument that most closely measured the characteristic motives described by Cartwright and Zander as "person oriented" and "group oriented".

Individuals who display a "person oriented" motive maintain a lasting interest in the group whether or not the person is directly involved in the group. This motive is sustained if the individual believes that actions of the group will provide satisfaction for the individual. On the other hand, individuals who display "group oriented" motives obtain satisfaction through accomplishment of group goals and other outcomes of group work that are favorable to the group as a whole even though the reward may not be a personal one.¹

Other criteria established for the test were: (1) acceptable reliability, validity, and objectivity for

¹Dorwin Cartwright and Alvin Zander, eds. Group Dynamics: Research and Theory (New York: Harper and Row, 1968): 403.

adult populations; (2) short enough to be administered and scored in thirty minutes or less; (3) scores resulting from the test clearly distinguish, for classification purposes, between the two groups needed for the study.

Two major sources of psychological tests were examined along with references available in professional journals and texts used as the basis for courses in psychological testing. The two major sources of test information consulted were Tests in Print¹ and Measures for Psychological Assessment². Categories consulted were "achievement motive", "others orientation", and "personal orientation". A review of each test listed was undertaken. At this stage of the search, the semantic differences became very apparent. For example, at first exposure it might appear that Rotter's Internal-External Locus of Control Scale³ would be a possible candidate for use in this study. However, a comparison of

¹Oscar K. Buros, ed. Tests in Print (New Jersey: The Gryphon Press, 1974).

²Ki-Taek Chun, Sidney Cobb and John R. French, Jr., eds. Measurement of Psychological Assessment: A Guide to 3000 Original Sources and Their Application (Ann Arbor, Michigan: Institute for Social Research, 1976).

³J. B. Rotter, "Generalized Expectancies for Internal versus External Locus of Control of Reinforcement", Psychological Monographs, 1966, 80, no 1.

the definition of the information gained from this test to the criterion definitions caused this test and modifications of it to be rejected.

Two other tests were considered with equal care as that given to Rotter's test. The tests were "The Miskinins Self-Goal-Other Discrepancy Scales"¹ and "The Carlson Adjective Checklist"². The information available from both of these tests was closely related to the criterion definitions. The approach taken by both, however, indicated that scores could be reported and used as a function of self-concept. The emphasis placed on this variable caused these two measures to be rejected as inappropriate for the goal of this study.

Fouriezol, Hutt, and Guetzhaw discussed a measure of self-oriented needs.³ However, the introduction of the term "needs" and the subsequent analysis of the given definition of self-oriented needs caused this source for measurement to be rejected.

¹D. Miskinins, (Doctoral dissertation, University of Colorado) (Ann Arbor, Michigan: University Microfilms, 1967).

²Rae Carlson and Nissin Levey, "Brief Method for Assessing Social Personal Characteristics", Psychological Reports 23 (1968): 911-914.

³N. T. Fouriezol, M. L. Hutt and H. Guetzhaw, "Measurement of Self-Oriented Needs in Discussion Groups", Journal of Abnormal and Social Psychology, 45 (1950): 682-690.

The Edwards Personal Preference Schedule¹ also yields data that could aid in this classification process. This instrument, however, is time consuming to take and to score.

After an analysis of previously mentioned tests, the Orientation Inventory² was selected for use in this study. Definitions of self orientation and task orientation given as variables measured by this test coordinated best with the definitions of person and group oriented individuals provided by Cartwright and Zander.³

The Orientation Inventory was published in 1962 by Bernard M. Bass. It tests attitudes and opinions by examining responses to twenty-seven statements. The respondent is asked to mark the most and least preferred alternatives relating to each statement. It was developed for use with college and industry populations. The Orientation Inventory is on four pages and takes approximately twenty minutes to complete.

¹Allen L. Edwards, Edwards Personal Preference Schedule (New York: Psychological Corporation, 1953).

²Bernard M. Bass, Orientation Inventory (Palo Alto, California: Consulting Psychologist Press, 1962).

³Dorwin Cartwright and Alvin Zander, eds., loc. cit.

The scores from the Orientation Inventory permit classification according to self orientation, interaction orientation, and task orientation. This study was concerned with only the self orientation scale and the task orientation scale. Test-retest reliability for the self orientation scale is .73 and for the task orientation scale is .75. The measure of reliability seems adequate for purposes of classification.¹

Again semantics seems to be a problem. Although the definitions of the various orientations are acceptably similar, Cartwright and Zander² and Bass³ do not agree on a term to apply to each definition. For the purposes of this study, Bass's self oriented individual was considered in the same respect as Cartwright's and Zander's person oriented individual and will be identified in this study as a self oriented individual. Also for the purpose of this study, Bass's task oriented individual will be considered

¹Dale G. Lake, Mathew B. Miles and Ralph B. Earle, Jr. eds., Measuring Human Behavior (New York: Teacher's College Press, Columbia University, 1973): 217.

²Cartwright and Zander, loc cit.

³Bernard M. Bass, "Social Behavior and the Orientation Inventory: A Review", Psychological Bulletin 68 (1967) 4:262.

in the same respect as Cartwright and Zander's group oriented individuals, and will be labeled as group oriented individuals.

The Orientation inventory met all criteria established for acceptability of a test to be used to classify subjects into groups of self and group orientation.

The Orientation Inventory was administered to all graduate students who expressed interest in participation in this study. Those subjects scoring in the upper 25 percent of the self oriented or task oriented scales and below the mean on the other two scales were retained to go through the remainder of the classification procedure.

Subjects achieving the proper profile on the Orientation Inventory were asked to complete a task which involved solving a word jumble puzzle. This task was chosen because for purposes of classification by observers, overt behavior must be evident. Each person's contribution to the problem-solving effort must be readily visible and audible as the group works on the task.

The major objective for choosing a task to be used for classification was the selection of a task that would manifest the behaviors expected of the various orientations in order for observers to make a judgment. Jumbled word

solving seemed to allow for adequate overt behavioral expression and a sufficient amount of time in interaction for the observers to make their judgments.

Upon completion of the Orientation Inventory, potential subjects were placed in groups of three participants. Each group of three was asked to complete word jumbles until the observers had determined a category for each subject--self oriented or group oriented.

The observers were three graduate students who had successfully completed six semester hours of training in group dynamics at the Texas Woman's University. The experimenter selected the observers and verbally solicited their assistance with this study.

In the classification process the reports of the observers concerning the self or group orientation of potential subjects as they worked on a given task were combined with information obtained through the administration of the Orientation Inventory and an interview with the investigator to determine the group into which the subjects were placed. In order to eliminate any bias on the part of the experimenter, the observation phase of the classification procedure was kept completely separate from the experimenter after the orientation of the observers was completed. The experimenter scored the Orientation

Inventory and then collected the recommendations from the panel of observers.

Observers completed a rating sheet on each subject. Each of the three observers placed the subject into one of the two behavior groups. It was essential that the three observers arrive at a unanimous decision or consensus decision and this decision was required to be in agreement with the Orientation Inventory before their recommendation was combined with the other classification forms. Subjects were judged ineligible to participate in this study if the observer's ratings were not in agreement with the results of the Orientation Inventory.

The classification interview was undertaken to determine if subjects identify themselves as self oriented or group oriented by their response to questions that reflect expected behaviors of each orientation.

Questions used in classification were:

1. When working on a project do you perceive that people looking at the finished product will make a judgment about you? (no--group oriented; yes--self oriented).
2. What is one goal you have for yourself? (difficult, long-term--group oriented; immediate reward--self oriented).

3. What kind of reward for a job well done is most satisfying to you? (immediate rewards--self oriented; willingness to wait for reward--group oriented).
4. Do you prefer to spend your leisure time participating in a hobby or catching up on your rest? (hobby--group oriented; rest--self oriented).
5. Do you belong to any organizations? What are they? (no--self oriented; yes--group oriented).
6. When you start to work on a project does it ever occur to you that you might not have the mental or physical capabilities to finish it? (yes--self oriented; no--group oriented).
7. Given a choice, do you usually prefer to work by yourself or with others? (alone--self oriented; with others--group oriented).
8. When you are involved in completing an assignment that requires you to work in a group, do you prefer to be evaluated on the basis of your own contributions or on the quality of the finished product? (own contributions--self oriented; finished product--group oriented).

Validation of Tasks to be Used

Two separate pilot studies were undertaken to determine the feasibility of this study.

The subjects used in both studies were female and all had completed the bachelor degree and, as was the case with subjects used in the actual study, some had completed the master's degree.

The objectives of the first pilot study were (1) to determine the effectiveness of the directions used for completion of each task; (2) to obtain spontaneous feedback and suggestions from the participants concerning procedures used by the experimenter; (3) to ascertain if expected overt behaviors were manifested in the group as they worked toward task completion. Subjects were not classified and therefore completed only the model assembly task.

As a result of the first pilot study the directions for creation of the self climate were changed radically to include a specific contribution by each member. Many valuable suggestions were provided the experimenter concerning the process by which directions were given as well as procedures to be used to create the respective climates.

The second pilot study was designed with the following objectives in mind: (1) to determine the validity of

using the word jumble as a classification task; (2) to test the new self climate directions and (3) to train observers and provide them with experience in determining categories of overt behaviors.

Observers were provided with descriptions of expected behaviors and sample classification and data collection sheets. The three observers and the experimenter discussed the expected behaviors prior to observers being exposed to pilot subjects.

The subjects involved in this pilot were given the Orientation Inventory before participating in the word jumble classification procedure. The Orientation Inventory was scored while the subjects participated in the solving of the word jumble. After the four groups of three subjects each solved word jumbles the observers and the experimenter discussed the findings of the observers until each had an understanding of the basis for the other's decision to classify individual subjects into self or group orientation categories. Results of this pilot project indicated that word jumbles did solicit an adequate number of expected behaviors to allow observers to make a judgment.

The same subjects who participated in the word jumble task were then regrouped into groups of four and asked to complete the two Lego models in each of the two climates.

These pilot subjects were able to follow the revised self climate instructions in a manner that met the objectives of this study more effectively than subjects involved in the first pilot study. Observers tallied behaviors for each group and compared observations, in order that a common understanding of each behavior could be reached.

Collection of Data

Twelve subjects who survived the three classification tests were selected for participation in this study. Subjects were placed in groups on the basis of the classification procedure and compatible schedules allowing meeting times to be determined for the data collection phase of the present study.

Each of four groups was exposed to two task-completion problems, one in each of two climates.

Both tasks were object assembly tasks and had only one possible solution. The tasks involved replication of models built with Lego¹ building blocks. One task was the Lego Barge, and the other was the Lego Dunne Buggy.

One group of self oriented subjects (SO₁) and one group of group oriented subjects (GO₁) completed the Lego Dunne Buggy in the first experimental climate. The other two groups (SO₂ and GO₂) completed the Lego Barge first, to allow for possible effects relating to the order in which the tasks were completed.

¹Patented, Samsonite Corporation, 609 S. W. 14th Street, Loveland, Colorado, 80537.

Directions and criteria for evaluation for the completion of each task were modified in an attempt to create the two experimental climates--conducive to and in opposition to the subject's individual motive orientation.

The exact number, sizes, and colors of blocks necessary for the completion of the task were made available to the group, as well as five extra pieces not needed for completion of the model. At the beginning of the problem-solving period, directions were given stating that each subject would be allowed to view a model of the task for fifteen seconds. Only one person from the group at a time was allowed to approach the table containing the model. After each member of the group had fifteen seconds to examine the model, building of the replication began.

During the course of the problem-solving period each group member returned to the table containing the model three times for a period of ten seconds each. Again only one member of the group at a time was allowed to approach the table.

Group GO_2 required five extra visits per subject in the SO climate. Group SO_2 required three extra visits to the model per subject in the SO climate. Group GO_1 required one extra visit in the SO climate and five extra visits in the GO climate. Group SO_1 completed the tasks with fewer visits to the model than were permitted.

It was the intent of this procedure to force the necessity for interdependence and interaction upon the members of the group in order to make the solving of the problem a true group experience.

The same panel of observers were used in the data collection phase of this study. Observers were asked to determine if the subjects in each group displayed behaviors common to their classification. Subjects were misinformed about the purpose of the observers in such a way as to enhance the creation of the desired climate. (A copy of the instructions may be found in the Appendix).

Certain behaviors have been identified as characteristic of self oriented and of group oriented individuals. Observers familiarized themselves with these behaviors for two purposes. During the data collection phase of this study, observers used their knowledge concerning expected behaviors for each subject to determine if subjects continue to function in their specific orientation when the climate is adjusted to conflict or coincide with their particular orientation.

A list of expected behaviors was gathered from three sources.¹ These behaviors are listed below. Following each

¹Bernard M. Bass, "Social Behavior and the Orientation Inventory: A Review", Psychological Bulletin, 68 (1967) 4: 260-292; Bernard M. Bass et. al., "Self, Interaction and Task Orientation Inventory Scores Associated with Overt Behaviors and Personal Factors", Educational and Psychological Measurement, 23 (1963): 101-116 (Items

behavior it may be noted in what phase of the study the behavior was scrutinized. (O--classification and data collection; I--classification through interview; unmarked behaviors were judged inappropriate for use in this study). Observers were asked to observe subjects in each experimental climate and tally the number of observed behaviors pertinent to this study in each experimental climate.

Group Oriented

1. task is focus of attention (O)
2. set difficult long-term goals (I)
3. persistent (O)
4. like to have feeling of job well done (I)
5. works at a hobby (I)
6. prefers leader who gets things done
7. more likely to complete an assignment (O)
8. more likely to experience conflict in the group (O)
9. more directed toward future performance
10. motivated by failure (O)
11. more responsive to inner demands but appreciative of feedback that may improve performance (O)

13-18--GO and 11-13--SO); Bernard M. Bass and George Dunteman, "Behavior in Groups as a Function of Self, Interaction and Task Orientation", Journal of Abnormal and Social Psychology, 66 (1963) 5: 420-428. (Items 19-24--GO and 14-18--SO).

12. more likely to persist if contributions seem to be incorrect (0)
13. more likely to volunteer (0)
14. seemingly more aloof (0)
15. resourceful (0)
16. sober yet excitable (0)
17. not fearing failure (I)
18. mature, calm (0)
19. is likely to complete a task following interruptions (0)
20. examines all facets of group activities in order to reach goal (0)
21. works hard to insure the productivity of the group(0)
22. more likely to display boredom as task is considered irrelevant (0)
23. may talk less and listen more to disagreement (0)
24. most attracted to group at completion of task (I)

Self Oriented

1. personal concern is focus of attention (0)
2. competitive (0)
3. more concerned with own needs (0)
4. needs to be recognized for effort, personal praise (0)
5. more subject to extrinsic rewards (0)

6. less likely to belong to organizations (I)
7. more attentive to cues about past performance
8. reinforced by immediate feedback (O)
9. more influenced by external cues
10. withdraws if suggestions caused failure (O)
11. fears failure (I)
12. tense and anxious (O)
13. most likely to exhibit adversity to working with others (I)
14. turns-on those who agree but turns-off those who disagree (O)
15. shifts opinion less (O)
16. may be more defensive if ego is threatened (O)
17. talks little (O)
18. likely to express the least amount of satisfaction with group work at the completion of the task (I)

Procedures common to the focused interview were used as a means of data collection. Criteria of effective focused interview have been described as (1) range--allowing the respondent the maximum freedom to respond; (2) specificity--requiring the interviewee to respond with specific information relating to the stimulus situation; (3) depth--enabling the interviewee to verbalize the extent of her involvement in the stimulus situation, cognitively,

affectively, and evaluatively; (4) personal context--allowing the interviewee to express prior experiences that caused the formulation of the response.¹

Formulation of appropriate questions were guided by the above criteria as well as objectives specific to this study. The objectives of the interview conducted after each experimental climate as experienced by the subjects were (1) to determine the degree of comfort or satisfaction experienced through the contributions of other group members; (2) to determine the degree of comfort or satisfaction with personal performance; (3) to identify characteristics of each climate that were perceived to be most disturbing to effective problem solving and most conducive to effective problem solving within the various climates according to individual orientation.

The following questions were asked of each subject at the conclusion of task completion in each experimental climate:

1. What is one thing you feel that you contributed to the completion of this task?
2. If you were asked to rank your performance on the task where would you rank among the other group members?

¹Robert K. Merton, Marjorin Fiske, and Patricia L. Kendall, The Focused Interview: A Manual of Problems and Procedures (Glencoe, Illinois: The Free Press, 1956): 12.

3. Analyze the contributions of other group members.

What is your evaluation of the contributions made by member A? (repeat question--member B; member C?)

4. Identify one thing the group could have done better to facilitate the completion of the task

5. Name one thing you liked about the method of evaluation used for the task

6. What change in the method of evaluation would have helped you work better?

7. What change in the instructions would have helped you work better?

In order to compare the two experimental climates each subject was asked the following questions after both task completion experiences:

1. Which task did you enjoy working on most?

2. Can you identify one thing that made it satisfying to you?

3. What was one thing about the task that was unpleasant to you?

4. On the other task, what one thing was disturbing to you?

5. Can you identify a point of satisfaction on this task?

6. If I asked you to perform another task using the same instructions as one of the two you have just completed, which set of instructions would you choose?
7. Rate each task on a scale of 1 to 7. A score of one would equate the task with an activity that is extremely unpleasant. A score of 7 would equate the task with an activity that is enjoyable to you.

Treatment of Data

Statistical treatment of data involved the use of four statistical techniques--2-way ANOVA, t-test, chi-square, and the Wilcoxon Matched-pairs Signed-ranks Test.

The t-test and chi square were applied to scores reflecting the number of observed behaviors in each climate. This statistical procedure supplied information related to hypothesis number one.

The wilcoxon Matched-pairs Signed-ranks Test was applied to the ratings given each task by each group member. This resulted in a preference ranking for each climate and provided information concerning hypothesis four.

Data collected by timing each group from the beginning of the task to its completion was analyzed by using the Two-way ANOVA.

CHAPTER IV

In Chapter IV the results of the Classification Procedure are reported as well as the statistical analysis of the information gained in the Data Collection phase of the study.

Results of Classification Procedure

Seventy-three female graduate students at the Texas Woman's University expressed interest in participating in the study. Each of these individuals was asked to complete the Orientation Inventory. According to previous studies using the Orientation Inventory, classification into orientation groups was achieved by scoring above the 75th percentile on one of the two scales of interest in this study (task or self) and below the mean on the other two scales (task or self and interaction) measured by the inventory.¹

¹Scores necessary for consideration as a subject:
Self Oriented: Group Oriented:
 < 23 on SO scale < 38 on GO scale
 > 26 on IO scale > 20 on SO scale
 > 35 on TO scale > 26 on IO scale

Mean scores reported in: Bernard M. Bass, Manual for the Orientation Inventory (California: Consulting Psychologists Press, 1977): 19.

Table 1 describes the mean and standard deviation on each scale on the Orientation Inventory for individuals tested. Mean scores for those tested were slightly lower than those reported by Bass on the Task and Interaction Scales and slightly higher on the Self score.

TABLE 1
DESCRIPTION OF SCORES ON THE ORIENTATION INVENTORY
OF ALL INDIVIDUALS TESTED
(N = 69)*

	Task Scale	Interaction Scale	Self Scale
Mean	32.97	24.29	23.74
SD	6.72	5.99	6.09
Var.	44.46	35.32	36.60

*Four potential subjects failed to complete the Orientation Inventory

Individuals who failed to score in the extremes of task or self scales as well as subjects scoring extreme scores on the interaction scale were considered ineligible to continue the classification procedure. Potential subjects (those displaying the proper profile on the Orientation Inventory) were then asked to participate in the word jumble task completion project where observers classified their overt behavior as self or group oriented. If the results of this process was consistent with the potential

subjects' scores on the Orientation Inventory, a series of interview questions were administered to determine if the subject identified her own behavior as self or group oriented.

TABLE 2
DESCRIPTION OF SUBJECTS ELIGIBLE FOR
PARTICIPATION IN THE STUDY

Subject	Major	O.I. Scores			Classification of overt behavior (word jumble)	Interview* 8 questions
		T	I	S		
SO ₁	Psych	33	24	24	consensus	6
SO ₂	Phys. Ed.	23	19	39	unanimous	7
SO ₃	Phys. Ed.	33	22	26	consensus	6
SO ₄	Coll. Tch	30	21	30	unanimous	6
SO ₅	Hlth. Ed.	24	26	41	consensus	5
SO ₆	Counsel.	22	24	25	unanimous	5
GO ₁	Spec. Ed.	40	22	19	unanimous	6
GO ₂	Hlth. Ed.	46	20	15	unanimous	4
GO ₃	Hlth. Ed.	43	18	20	consensus	4
GO ₄	Rec. Adm.	38	24	19	consensus	6
GO ₅	Phys. Ed.	43	23	15	unanimous	7
GO ₆	Phys. Ed.	39	25	17	unanimous	7

*Number of answers judged consistent with those expected of individuals of specific orientation.

Table 2 presents a description of the individuals who met all criteria for participation in this study and were therefore retained for the data collection phase of the study.

Subjects' major field were: physical education 4; psychology 1; health education 3; college teaching 1; counseling 1; recreation administration 1; special education 1. Subjects' Orientation Inventory scores were appropriate for classification into one of two experimental groups. The classification of each subject according to the judgment of the trained observers is shown. Results of interview procedures reflect subjects' perception of their own behaviors as self or group oriented. Each subject interviewed responded to the questions with answers which, when classified, were in agreement with Orientation Inventory scores and Observer classification.

Results of Data Collection

Data were collected from twelve female graduate students enrolled in the Texas Woman's University during the summer of 1978. Six of these subjects were classified as self oriented individuals and six were classified as group (task) oriented individuals. Each group of subjects was subjected to one of two task completion projects in each of two experimental climates. Time for task completion was recorded for each group in each climate. Table 3 reports the result of the analysis of variance statistical procedure used to determine if the effects of climate or orientation had an affect on the efficiency of the group. Efficiency

was believed to be reflected by speed of task completion.

TABLE 3
ANALYSIS OF VARIANCE FOR TWO GROUPS IN
TWO EXPERIMENTAL CLIMATES

Source	df	SS	ms	F	P
Total	7	1350.26	-	-	-
Orientation	1	88.38	88.38	.30	ns
Climate	1	28.69	28.69	.10	ns
OxC	1	56.97	56.97	.19	ns
Error	4	1176.26	294.07	-	-

F - 1,4 (.05) = 7.71

Data collected yielded no significant difference between groups (orientations), between climates or among groups in the various climates. As a result of these findings no support is available for the hypothesis stating that groups will perform more efficiently, in terms of speed of task completion, when working in a climate that is conducive to the individual group member's particular orientation.

The t-test was used to analyse data collected concerning the number of expected behaviors exhibited by subjects of each orientation as they worked in their particular orientation.

Table 4 reveals the degree of significance between the difference in mean scores of subjects of various orientations as they worked in the two experimental climates.

TABLE 4

SUMMARY OF THE RESULTS OF t-TEST APPLIED
TO NUMBER OF BEHAVIORS DISPLAYED
BY EACH ORIENTATION GROUP

Group	Same Climate	Opposite Climate	Difference in Means	t*
	X	SD	X	SD
Group	20.50	14.73	16.16	6.94
Self	10.50	5.20	7.30	3.78

*t-value required for significance at .05 level = 2.042

No significant difference was found between numbers of behaviors exhibited by subjects of either orientation as they worked in a climate that was conducive to their particular orientation and in a climate that was in opposition to their orientation.

Table 5 reveals the degree of significance between the difference in mean scores of behaviors displayed in the two experimental climates by subjects of differing orientation.

TABLE 5

SUMMARY OF THE RESULTS OF t-TEST APPLIED
TO NUMBER OF BEHAVIORS DISPLAYED
IN EACH EXPERIMENTAL CLIMATE

Climate	Self		Group		Difference in Means	t*
	X	SD	X	SD		
Same	10.50	5.20	20.50	14.73	10	1.43
Opposite	7.30	3.78	16.17	6.94	8.87	2.51

*t-value required for significance at .05 level - 2.042

No significant difference was found between mean scores of self oriented and group oriented subjects as they worked in climates that were the same as or conducive to their particular orientation. Significant difference was noted between the number of behaviors displayed by self and group oriented subjects as they completed a task in a climate that was in opposition to their particular orientation. The Group Oriented subjects displayed more group behaviors in a self climate than Self Oriented subjects displayed self behaviors in a group climate.

The Wilcoxon Matched-pairs Signed-ranks statistical procedure was used to determine if a significant difference existed between subject's preference rankings for each climate. Each subject was asked to rank each task on a scale of 1 to 7.

A higher score indicated a greater preference for the environment in which the task was completed. Table 6 reveals that the value of T was not significant for self or group oriented groups. The results of these computations fail to support the hypothesis that subjects will express greater pleasure with the task completion performed in a climate that is conducive to the subject's orientation.

TABLE 6
RESULTS OF PREFERENCE RANKINGS APPLIED TO EACH
EXPERIMENTAL CLIMATE BY EACH SUBJECT

	No. of pairs	No. rating own climate higher	Wilcoxon T
Group Oriented	5*	4	8
Self Oriented	6	2	3

*One pair of group oriented responses were equal and therefore not considered
T, .05, 5 = 0
T, .05, 6 = 0

When preference ranking is analyzed without regard for the range of deviation between individual rankings of climates six of the subjects interviewed (50 percent) considered the climate conducive to their orientation the more pleasant working environment. One subject rated both climates equal and five subjects preferred the opposing climate. It is interesting to note that of the five subjects who

perceived the opposing climate to be most enjoyable four were self-oriented individuals displaying a greater affinity for the group oriented climate.

Analysis of other data collected through the post-task interview procedure produced the following information:

Twenty-one of twenty-four answers to the question, "What is one thing you feel you contributed to the completion of the task?", were task oriented in nature.

When asked to rank own performance on a task and the performance of the other two group members, one self and one group oriented group displayed total agreement among individuals. In the other two groups (one self oriented, one group oriented) the individuals were not in agreement concerning individual ranking of performance. Through both experimental climates, ten of the twelve individuals interviewed placed the same person at the top of the rank-order reflecting value of contribution to task completion. Each of the two subjects who changed the ranking order after the first climate were self-oriented and in the same experimental group.

Responses to the request to "Identify one thing that the group could have done better to facilitate the completion of the task." were classified as task related or social-emotional maintenance related. Nineteen responses

were task related, none were social-emotional maintenance related and five responses indicated that the respondent believed that the group could have done nothing better to facilitate task completion.

Twenty-one of twenty-four responses reflected no concern about the method of evaluation being used by the observers.

When asked to relate points of satisfaction with the two tasks, responses were: task completion 10; satisfaction with own contributions 2; satisfaction with working in a group 6; other 6.

When asked to relate points of dissatisfaction with the two tasks responses were: dissatisfied with some aspect of own performance 8; dissatisfaction with the nature of the task 6; dissatisfied with performance of another group member 5; dissatisfied with a condition imposed by the climate 3, and other 2.

The Yates Correction Formula related to the Chi-Square test of independence, was used to analyze the significance of the number of behaviors displayed by subjects in each climate.

Table 7 shows the results of Chi Square concerning the number of subjects who, in the self climate, displayed more self behaviors than the computed mean for their

experimental group, compared to the number of subjects displaying less self behaviors than the computed mean for their group.

TABLE 7

ANALYSIS OF NUMBER OF SUBJECTS DISPLAYING
MORE VS LESS SELF ORIENTED BEHAVIORS
IN THE SELF CLIMATE

	More Self Behaviors Than Mean	Less Self Behaviors Than Mean
Group Oriented Subjects	2	4
Self Oriented Subjects	4	2

computed
 $x^2 = .59$

$P = 3.8, .05$

No significant difference was reflected by the value of x^2 ($x^2 = .59$).

Table 8 reveals the results of the Chi-Square test concerning the number of subjects who in the self climate, displayed more group oriented behaviors than the computed mean for their experimental group, compared to the number of subjects displaying less group oriented behaviors than the mean for their experimental group.

TABLE 8

ANALYSIS OF NUMBER OF SUBJECTS DISPLAYING
MORE VS LESS GROUP BEHAVIORS
IN THE SELF CLIMATE

	More Group Behaviors Than Mean	Less Group Behaviors Than Mean	
Group Oriented Subjects	2	4	computed $x^2 = .33$
Self Oriented Subjects	3	3	

$P = 3.8, .05$

No significant difference was reflected by the value of x^2 ($x^2 = .33$).

Tables 9 and 10 reveal the same data as described above concerning behavior of subjects in the group oriented climate.

TABLE 9

ANALYSIS OF NUMBER OF SUBJECTS DISPLAYING
MORE VS LESS GROUP ORIENTED BEHAVIORS IN
THE GROUP CLIMATE

	More Group Behaviors Than Mean	Less Group Behaviors Than Mean	
Group Oriented Subjects	3	3	computed $x^2 = .33$
Self Oriented Subjects	3	3	

$P = 3.8, .05$

TABLE 10

ANALYSIS OF NUMBER OF SUBJECTS DISPLAYING
MORE VS LESS SELF ORIENTED BEHAVIORS
IN THE GROUP CLIMATE

	More Self Behaviors Than Mean	Less Self Behaviors Than Mean
Group Oriented Subjects	1	6
Self Oriented Subjects	3	3

computed
 $x^2 = 3.5$

$P = 3.8, .05$

These computed x^2 values show no significant difference between groups with regard to the number of subjects, classified according to orientation, who displayed more self or group oriented behaviors in the group climate.

Chi-Square was once again used to analyze the number of subjects, of each orientation, displaying more of one type of behavior (self or group) in the two experimental climates.

Table 11 reveals the results of a Chi Square analysis of the number of subjects, in each orientation, classified according to greatest number of self or group behaviors in the self climate.

TABLE 11

ANALYSIS OF NUMBER OF SUBJECTS DISPLAYING
MORE BEHAVIORS OF ONE KIND
IN THE SELF CLIMATE

	More Self Behaviors Than Group Behaviors	More Group Behaviors Than Self Behaviors
Self Oriented Subjects	• 3	3
		computed $x^2 = .08$
Group Oriented Subjects	1	4

$P = 3.8, .05$

No significant difference was obtained through the computation of x^2 ($x^2 = .08$).

Results of the Chi Square analysis of the number of subjects, in each orientation, classified according to greatest number of self or group behaviors in the group climate are displayed in Table 12.

TABLE 12

ANALYSIS OF NUMBER OF SUBJECTS DISPLAYING
MORE BEHAVIORS OF ONE KIND
IN THE GROUP CLIMATE

	More Group Behaviors Than Self Behaviors	More Self Behaviors Than Group Behaviors
Self Oriented Subjects	5	1
		computed $x^2 = .60$
Group Oriented Subjects	5	1

$P = 3.8, .05$

No significant difference was obtained through the
computation of x^2 ($x^2 = .60$).

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATION

Summary of the Study

Studies dealing with individuals working in groups provide the base of support for knowledge that is of value to all units that function as a group. The present investigation dealt with the nature of an individual's orientation (self or group) and the effect of that orientation on efficiency in task completion of work and enjoyment of that work while functioning in a climate that is conducive to the individual's orientation and in an experimental climate that is in opposition to the individual's orientation. The purpose of the present study was to examine behaviors (self or group oriented) elicited by the imposed experimental climates.

Subjects involved in the present study were twelve female graduate students enrolled at the Texas Woman's University during the first summer session, 1978. Of the seventy-three volunteers who participated in the first phase of the classification procedures, these twelve subjects met the qualification for participation. Subjects were classified as self oriented or group oriented on the basis

of scores on the Orientation Inventory, observation of overt behavior displayed while completing a word jumble task and an interview.

Classification procedure yielded six self oriented subjects and six group oriented subjects. Each orientation group was then divided into two homogeneous groups representing the subject's orientation. Each group of three subjects was asked to participate in two task completion assignments under the influence of each of two experimental climates. The tasks were replication of Lego models of a barge and a dunne buggy. One climate was designed to be conducive to the groups' particular orientation and the other climate was designed to be in opposition to the group's particular orientation.

Data were collected from each group by: (1) recording time from beginning of each task to the completion of that task, (2) recording frequency of specific behaviors by trained observers, and (3) a post-task interview procedure.

The data were treated statistically with four statistical techniques. The t-test was applied to the number of behaviors exhibited by each subject in each climate. Chi-square was applied to compare the number of individuals in each group who displayed more of a particular type of behavior than the mean for their group and to compare the number of individuals who displayed more of one type of behavior than another in

the various climates. The two-way analysis of variance was used to treat times recorded for task completion by each group in each climate. The Wilcoxon Matched-pairs Signed-ranks test was applied to rankings given each task by each group member.

Findings of the Study

The statistical treatment of the data revealed the following findings with respect to the hypotheses:

1. Subjects working in a climate conducive to their personal orientation will display more behaviors common to their specific orientation than the same subjects working in a climate that is in opposition to their personal orientation. Fail to support. (Table 4)
2. Subjects' orientation will be a significant factor in determining the effect on behavior of the two experimental climates. Support. (Table 5)
3. Groups composed of self oriented (SO) individuals working in SO climates will complete the task in less time than groups composed of SO individuals working in a group oriented (GO) climate. Fail to support. (Table 3)

4. Groups composed of GO individuals working in GO climate will complete the task in less time than groups composed of GO individuals working in a SO climate. Fail to support. (Table 3)
5. Subjects working in a climate conducive to their personal orientation will express greater satisfaction with the group experience than subjects working in a climate that is in opposition to their personal orientation. Fail to support. (Table 6)

Conclusions

As a result of this study it may be concluded that:

1. Neither self nor group oriented individuals displayed a significantly greater number of behaviors specific to the individual's orientation in a climate that was conducive to the individual's orientation than the number of behaviors specific to the individual's orientation displayed in a climate that was in opposition to the individual's orientation.
2. Behavior of group oriented subjects was less affected by the imposed experimental climate that was in opposition to their orientation than self oriented subjects.

3. The relationship between orientation and an experimental climate conducive to the individual's orientation is not a factor in fostering group efficiency on a task completion project involving assembling an object.
4. The relationship between orientation and an experimental climate conducive to the individual's orientation is not a factor in fostering greater satisfaction with the group experience.

Implications

One significant factor appeared relating to t-test applied to number of behaviors common to their orientation displayed by subjects in a climate opposite to that of their orientation. (Table 5). Group subjects were found to display significantly more group oriented behaviors in the self climate than the number of self oriented behaviors displayed by self oriented subjects in the group climate. It is possible that group oriented subjects are less affected by conditions imposed by the experimental climate. Characteristic behaviors of group oriented individuals would allow us to expect their performance to be based on solid group performance. We also know that deviance from expected behavior is not likely to occur when the majority of individuals in the group support a certain behavior mode. Therefore,

it can be theorized, on the basis of this lone significant statistic, that the characteristic group oriented supportive behaviors common to group oriented individuals, (i.e. work hard to insure the productivity of the group, talks less and listens more to disagreement, not fear failure) gave license to each member of the group to maintain their orientation (reflected in their behavior) even in the face of an experimental climate being imposed that was in opposition to the orientation of the group. Self oriented behaviors, on the other hand, imply an independence of the individual. The support of the group may be available to the self oriented person but because of the nature of their characteristic behaviors, (i.e. personal concern is focus of attention, competitive, faces failure, most likely to exhibit adversity to working with others, talks little) support is not as easily conveyed to the individuals. Therefore, support is not readily felt for maintaining the common behavior mode of a self oriented person. This could explain the greater change in behavior evidenced by self oriented individuals in the opposite climate.

The fact that other significant differences between groups in various climates were anticipated but not found has lead the investigator to explore some possible reasons for this outcome. No classification procedure is perfect; however, it is believed that the one used here was adequate.

Therefore, creation of experimental climates seems to require analysis. One unexpected result surfaced as subjects participated in the post-task interviews. Subjects were asked to comment on the method of evaluation being used by the observers (different in each climate) to rate their performance. Subjects were given a chance to talk about the evaluation twenty-four times. Twenty-one responses reflected little or no concern about the evaluation procedure or about the fact that subjects were even being observed. The evaluation procedure was explained to the subjects before each experimental climate was experienced and was considered by the experimenter to be an important part of adequately creating the climate. The subjects, however, were not affected by the evaluation procedure in a way that was anticipated. This occurrence may have weakened the exclusive nature of each climate.

One explanation for the insensibility of the subjects to the evaluation procedure may be found by considering G. W. Allport's theory of Functional Autonomy of Motives. The theory, briefly stated, suggests that motives may change after an individual repeats an activity several times. The original motive is replaced by a liking for the activity.¹

¹Calvin S. Hall and Gardner Lindsey, Theories of Personality (New York: John Wiley and Sons, (1970) p. 269-272.

The possibility that behavior was affected by the subject's autonomy of motive is reinforced by a consideration of the nature of the task. The task was an enjoyable, problem solving task, similar in many ways to games and puzzles available to and enjoyed by many individuals. If this task was perceived by the subjects as similar to these games and puzzles they may have approached the task in the same manner that they would approach a game or puzzle--simply because they enjoy the challenge.

Results of the preference rankings for each climate indicated that no significant difference existed between a subject's expressed preference for one climate as opposed to the other climate. Overall the group climate was most popular. This surprising statistic cannot be explained on the basis of feelings of accomplishment after finishing the task quickly. Six of the subjects gave the higher ranking to the climate in which the task was completed in the shortest amount of time. Six of the subjects gave the higher ranking to the climate in which the task was completed in the greatest amount of time. Efficiency of task completion did not, therefore, seem to be a determinant related to preference for a particular climate. Many more factors relating to the group interaction that took place in each test condition would have to be analyzed before a satisfactory explanation can be expressed.

No significant difference was found when times for task completion by each group in each climate were subjected to an analysis of variance. Therefore, it can be concluded that the imposition of a working climate did not affect efficiency, positively or negatively, for any group tested. The implication of this finding is perhaps, the most far reaching. If the efficiency of a group is not improved by efforts to adjust a working climate to the subject's particular orientation, managers, coaches, teachers, and others in a position to influence working climate need not be concerned with ramifications of self or group oriented motives. Much more research is called for, however, before this implication can be verified.

Some interesting observations were made as subject's post-task interview answers were analyzed. When asked to identify one thing the individual subject contributed to the completion of the task twenty-one of twenty-four answers were related directly to task completion. Only two answers reflected any concern with social-emotional maintenance of the group ("A little levity"; "Deciding who was good at what"). One subject believed that she had not contributed enough to the task to answer. When asked to identify one thing the group could have done better to facilitate task completion, nineteen of twenty-four responses were concerned with task completion. These answers reflect a degree of

concern with task completion that is almost frightening. No particular vested interest was held in this project by any member of any group. Yet the zeal and singleness of mind with which they approached the task was amazing. Further analysis of the motives behind this zeal would be worthwhile.

Recommendations for Future Studies

Analysis of the result of the present study has prompted these recommendations for future investigation:

1. A replication of the present study using subjects who register an extreme score on one scale, disregarding scores on the other two scales
2. A replication of the present study using men or mixed sex groups
3. A replication of the present study with the addition of groups composed of interaction oriented individuals and heterogenous groups with respect to orientation
4. A replication of the present study using a mental task for data collection
5. A replication of the present study using stronger conditions to create the various climates

Recommendations for further study require more than presenting research ideas to future students who wish to undertake a project that deals with subject matter similar to that presented here. Recommendations should also include knowledge gained by the experimenter pertinent to accomplishing the research goal. The following suggestions will hopefully be of value to future graduate students:

1. Choose your committee carefully. The choice of committee members makes a difference in the quality of work produced. A brief explanation of the study will allow a committee member to determine if the topic is of interest to him/her. If it is, that member's presence will be valuable.
2. Choose a director with whom you feel comfortable and whom you trust. Working closely with the director will facilitate reaching the goal. The director should be consulted whenever a question arises.
3. Preparation of the tentative outline is of special importance. The tentative outline should represent a contract between student and committee. It should be strictly adhered to during data collection and the completion of the

final manuscript. Any deviation from the outline without permission from the committee should represent a breach of contract on the part of the student. Any phase of the study that has followed the outline and is criticized in the final stages of manuscript production should be considered a breach of contract on the part of the committee.

4. Detailed documentation is of the utmost importance. Careful citation of sources in notes and on note cards will aid in preparing the final copy.
5. Carry a special note pad with you at all times. Use it to record thoughts that occur concerning the topic when no typewriter or library is around.
6. Expect the best from colleagues, subjects and friends. Academic communities have great respect for research and, in general, for the value of an individual.
7. Prepare the tentative outline and the final manuscript with the intention of defending it with reasonable, well thought out ideas.

A P P E N D I X

DIRECTIONS FOR TASK COMPLETION

Directions for the completion of tasks created the climate in which the tasks were completed. Behaviors and preferences were identified common to each orientation--self and group. Directions for the creation of each climate were formulated on the basis of this information.

A. Instructions for Creation of the Group Oriented Climate

The Lego pieces I will give you are more than enough pieces to complete a replication of the model I have placed behind the divider on the other table. When it is time to begin each of you will have fifteen seconds to go to the other table and take a look at the model. You will go to the table one at a time for fifteen seconds each. You may handle the model but do not put it in sight of your fellow group members. When each of you has completed your turn your group may begin to put the model together. During replication of the model each member of the group may return to the table three times for ten seconds each time. Subsequent looks should be taken in turn, in the same order in which you first viewed the model. You may choose to take these subsequent looks at any time when your group decides more information is needed. The panel of observers will

rate your group on the quality of the interaction among members of your group. Observers will decide on one rating that will apply to every member of the group according to the way in which the group complete the model. In other words, you will all receive the same rating--the rating applied to the group. Talking is encouraged because you could help another group member make a contribution that would enhance the performance of the entire group. The time from the signal to start to the placement of the last piece will be recorded in order that we may compare your group's time to the times of other groups as a measure of your group's efficiency.

B. Instructions for the Creation of the Self Oriented

Climate

The Lego pieces I will give you are more than enough pieces to complete a replication of the model I have placed behind the divider on the other table. When it is time to begin each of you will have fifteen seconds to go to the other table and take a look at the model. You will go to the table one at a time for fifteen seconds each. You may handle the model but do not put it in sight of your fellow group members. After each of you has viewed the model you will be given a card with a description of what your contribution to the model should be. As soon as each member

has their card each individual may begin to put her part together. Each member is directly responsible for her part but the job is not finished until each member has her respective part together and the whole model has been completed by the group.

If you need to review the model you may return to the table three times for ten seconds each time. You may approach the table at any time when there is no one else looking at the model. Even though your individual assignment is specific the model is not complete until each member has put her part in to make the whole. The observers will rate each group member individually on the value of her contributions and accuracy of her work throughout the project. Each member will receive her own rating. Remember, the group is being timed. From the signal to start to the placement of the last piece will be recorded as a measure of this group's efficiency. Helping others in your group is not prohibited. You are directly responsible for your own part of the model as well as the completion of the whole.

TEXAS WOMAN'S UNIVERSITY

CONSENT TO ACT AS A SUBJECT FOR RESEARCH AND INVESTIGATION;
(The following information is to be read to the subjects)

This study is designed to find out how people react to different situations when working in a group.

Each of you will be asked to take a short inventory. These scores will tell us about how you prefer to work in groups. In order to continue in the study your score will have to fall in a particular range. If your scores fall in this range you will be asked to do some actual group work. Observers will find out more about how you prefer to work in groups. If the observers are able to put your work in the task together with your inventory scores then you will be asked to answer some questions designed to find out more about how you prefer to work in groups. This whole procedure should not take more than one hour, and some subjects will be eliminated after each step.

Hopefully, at the end of the procedure described above we will have the sixteen subjects we need. These sixteen subjects will be asked to spend another hour on another day working in assigned groups to complete two models. After the models are complete it is hoped that subjects will be able to provide us with information concerning their experiences by answering some questions.

Are there any questions?

(TO BE SIGNED BY EACH PARTICIPANT)

I hereby consent to take part in the procedures outlined above by Elizabeth Hall.

I understand that the procedures or investigations described involve no anticipated physical discomfort. All information is completely confidential. No interview questions are designed to be of a personal nature and have to do only with characteristics of the individual working in a group. An offer to answer all of my questions regarding the study has been made. If alternative procedures are more advantageous to me they have been explained. I understand that I may terminate my participation in the study at any time.

Subject's Signature

TEXAS WOMAN'S UNIVERSITY

Human Research Committee

Name of Investigator: Elizabeth Hall Center: Denton
Address: 3100 Abbey Rd. Date: 6-5-78
Carrollton, TX 75006

Dear Ms. Hall:

Your study entitled The Effects of Self and Group Orientation on Two Work
Climates
has been reviewed by a committee of the Human Research Review Committee
and it appears to meet our requirements in regard to protection of the
individual's rights.

Please be reminded that both the University and the Department
of Health, Education and Welfare regulations require that written
consents must be obtained from all human subjects in your studies.
These forms must be kept on file by you.

Furthermore, should your project change, another review by
the Committee is required, according to DHEW regulations.

Sincerely,

C. K. Rozier

Chairman, Human Research
Review Committee
at Denton.

cc: Graduate Office

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