EFFECTS OF A FEMALE APPOINTED LEADER'S DEGREE OF INTERACTION AND ORIENTATION BEHAVIOR ON A TASK ORIENTED GROUP'S DECISION EFFECTIVENESS, MEMBER SATISFACTION, AND TIME TO SOLUTION

BY

ROBERT D. PAGE, JR.
B. A., University of Central Florida, 1980

THESIS

Submitted in partial fulfillment of the requirements for the Master of Arts Degree in Communication in the Graduate Studies Program of the College of Arts and Sciences University of Central Florida Orlando, Florida

Fall Term
1983
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>iv</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Background Research</td>
<td>2</td>
</tr>
<tr>
<td>Justification</td>
<td>11</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>12</td>
</tr>
<tr>
<td>METHODOLOGY</td>
<td>14</td>
</tr>
<tr>
<td>Subjects</td>
<td>14</td>
</tr>
<tr>
<td>RESULTS</td>
<td>18</td>
</tr>
<tr>
<td>DISCUSSION</td>
<td>26</td>
</tr>
<tr>
<td>Implications for Future Research</td>
<td>31</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>33</td>
</tr>
<tr>
<td>APPENDIX</td>
<td></td>
</tr>
<tr>
<td>A LOST AT SEA WORKSHEET</td>
<td>34</td>
</tr>
<tr>
<td>B QUESTIONNAIRE</td>
<td>37</td>
</tr>
<tr>
<td>C HIGH AND LOW ORIENTATION STATEMENTS</td>
<td>40</td>
</tr>
<tr>
<td>REFERENCES CITED</td>
<td>43</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>46</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Anova for Times</td>
</tr>
<tr>
<td>2</td>
<td>Anova for Scores</td>
</tr>
<tr>
<td>3</td>
<td>Group Mean Ranks for Satisfaction</td>
</tr>
<tr>
<td>4</td>
<td>Group Mean Ranks for Satisfaction</td>
</tr>
<tr>
<td>5</td>
<td>Group Mean Ranks for Satisfaction</td>
</tr>
<tr>
<td>6</td>
<td>Group Mean Ranks for Satisfaction</td>
</tr>
</tbody>
</table>
INTRODUCTION

Today's society has learned to depend on the small group for its decision making processes. The use of small groups stretches to all parts of life, from social organizations to government. Much research has been done in the area of small groups, but it is also a young area of study, where the surface has just been scratched.

Previous research has defined important aspects of the small group, such as the leader (Downs, 1977, Frost, 1983, & Jurma, 1979). Much of the research on leadership has been committed to defining the leader, and only recently have the functions of a leader been tied to other group variables (Hill, 1976, Knutson, 1975, & Stang, 1973). The leader has become an outstanding feature of small group study, and according to Hill, "a number of scholars in the field of small group communication have identified the assumption underlying leadership research: a group may function more effectively if it has a leader who is functioning properly" (p. 248). Many scholars have pointed to other factors, such as the interaction process between the other members themselves (Kerr, 1981, King, 1983, Laughlin, 1983, & Obert, 1983). But one must consider, especially in the area of business, where there are a constant and ever-changing number of groups, and they are tackling a multitude of problems, that in the interest of time and money, a
company cannot afford to train every group member how to interact properly. Some group members may know how to interact with others, while some may not. So it becomes apparent that a properly trained leader, in many cases, must guide the group through the proper interaction process, while at the same time, seeking to find solutions to the problem the group was formed to solve. It is important that in these situations, that the group leaders learn how to guide groups in an effective manner.

The basic premise of this paper is to ask: What aspects make up a properly performing leader? This paper will look at the effect of one leadership aspect, orientation behavior. It will try to determine what effect a leader's orientation behavior, and/or amount of interaction, will have on a small group's decision effectiveness, member satisfaction, and time to solution.

Background Research

The leader has been one of the most studied aspects of small group research. Despite this, there has been no single definition that researchers agree on. Most seem to offer very general types of definitions. For this study, the definition offered by Mabry and Barnes (1980) will serve as a general guideline:

The behavioral acts of directing others toward group goals is a function of leadership and a sense of responsibility that can be shared by multiple group members. "Leader" is generally a label attached to a role, while "leadership" is a function of or act of influencing. Leaders do not always need to perform many leadership functions, and leadership may be spread among all members of a group. However, it is the task of those people accepting the label of leader to see
that necessary leadership functions are fulfilled by someone. (p. 74)

A number of studies have looked at leadership through the perceptions of group members (Bradley, 1978, Downs, 1977, Frost, 1983, & Schriesheim, 1983). Shultz (1983) found that groups perceive the leader as being the one with the best control of communicative functions. This means that the leader should demonstrate positive attributes for assisting the group outcome, as well as being argumentative, challenging an issue. Mabry and Barnes feel that "any attempt to influence is regarded as a kind of leadership behavior" (p. 89). Tyler and Caine (1981) found that "procedural concerns are more important determinants of leadership evaluations in natural settings than are concerns about outcome level or fairness" (p. 647).

Shaw formulated nine hypotheses about leadership:

**H₁** Persons who actively participate in the group are more likely to attain a position of leadership than those who participate less in the group's activities.

**H₂** Possession of task related abilities and skills enhances attainment of a position of leadership.

**H₃** Emergent leaders tend to behave in a more authoritative manner than elected or appointed leaders.

**H₄** The source of the leader's authority influences both the leader's behavior and the reactions of other group members.

**H₅** Effective leaders are characterized by task-related abilities, sociability, and motivation to be a leader.

**H₆** Democratic leadership results in greater member satisfaction than autocratic leadership.
H7 Leaders tend to behave in a more authoritarian manner in stressful than in nonstressful situations.

H8 The degree to which the leader is endorsed by group members depends upon the success of the group in achieving its goals.

H9 A task-oriented leader is more effective when the group-task situation is either very favorable or very unfavorable for the leader, whereas a relationship-oriented leader is more effective when the group-task situation is only moderately favorable or unfavorable for the leader. (Shaw, 1981)

Shaw's hypotheses are based on the assumption that effective leadership is greatly influenced by the situation and the task. A leader who is effective in one situation may be ineffective when confronted by a different task or situation. In the present study, for example, leadership will be influenced by the fact that it is a qualitative solution, with female leaders and undergraduate group members.

Orientation, according to Gouran, is "an attempt on the part of its maker to facilitate achievement of a group's goal by using facts, making helpful suggestions, or trying to resolve conflict" (Gouran, 1969, p. 389). Gouran studied the impact of discussion statements to group consensus in problem solving discussions. He asked five graduate students to rate 600 statements on clarity, opinionatedness, interest, amount of information, provocativeness, orientation, and objectivity. These statements were randomly selected from six recorded discussions by freshman college students. The six groups discussed three questions, with two groups each discussing the same question. One of each pair showed consensus while the other did not. When all of the variables were examined,
Gouran (1969) found that orientation was generally related to consensus. Based on Gouran's research, Kline (1970) defined the elements of high orientation statement. He found that statements showing high orientation were, "less stereotyped than statements giving low orientation, were longer, and that one mark of an orientation statement was its metadiscussional properties. These properties were defined as orientation towards others rather than orientation towards self, and by use of such verb markers as agree or adopt, which focus on the discussion itself" (Kline, 1970, p. 284). Kline's research helped to define what constitutes an oriented statement. It did not, however, test those statements in group situations, but offered characteristics of orientation behavior for future research. Both Knutson (1975) and Kline (1970) tested the effect of orientation on group consensus. Knutson used two confederates and trained them to use both high and low orientation behavior in group discussions of policy. Knutson (1975) found that high orientation behavior produced a higher amount of consensus in a group. Kline selected 48 students that were rated by classmates on orientation behavior from previous discussions. Four groups of high orientation members and four groups of low orientation members were formed. Each individual was rated on his position on a question of policy, and the groups discussed the question. Groups containing the members that had been rated higher in orientation behavior came closer to reaching consensus than those groups with members rated low in orientation behavior (Kline, 1970).
Kowitz and Knutson (1980) wrote a book about small group behavior, and in reviewing the literature, refined the definition of orientation that was given earlier by Gouran. They defined orientation as:

Messages designed to facilitate the achievement of a group's goal. These messages really do not have an informational or interpersonal component, but they are very useful nonetheless. Orientation statements allow a group to examine its progress along the procedures it has developed. In a way, orientation statements serve as a road map of the group's discussions. (p. 347)

This definition serves as a guideline for orientation behavior in this study.

Orientation research has generally been concerned with the facilitation of group consensus. But if a group reaches consensus, it does not necessarily mean that it has reached a high quality solution. Much of the previous research has failed to touch on this point. This study will attempt to see, since all groups have to reach consensus, if orientation behavior has any effect on group solutions.

Interaction of a group member can be defined as the amount of talkativeness that he/she displays. Interaction rate has been measured in terms of time and length of statement (Stang, 1973). Rieken (1958) conducted a study to determine the effect of talkativeness on ability to influence a group's decision. Groups of four members each were formed and participated in two group discussions. From these discussions, Rieken determined the most and least talkative members. A third discussion was initiated,
with the correct solution to the problem given to the talkative member in half of the discussion groups, and to the least talkative members were more influential in getting their solution accepted by the group than the least talkative group members. Stang (1973) conducted a study to determine what effect interaction rate would have on ratings of leadership and liking. The difference in this study was that interaction was determined by the length of the statements. Nine undergraduate women were assigned to read a script, with each script containing three parts: a high interaction speaker (long statements), a medium interaction speaker (medium statements), and a low interaction speaker (short statements). Three readers were permanently assigned to a script, and the readers were rotated so that each would read every part. Stang found that listeners liked the medium interaction speaker as having more leadership ability in general. Knutson and Hollridge (1975) set out on their study to determine the effect of orientation behavior as a function of leadership on consensus. The PROANA 5 commuter analysis technique was used to find which subjects interacted the most with other subjects. These subjects were placed in groups, a group discussion was held, and the group members rated each other. The high interactive members were perceived as displaying more orientation behavior and identified as group leaders. But the results failed to support the hypotheses that orientation behavior would promote consensus. This result can be explained by the fact that the investigators assumed
that the high interaction subjects would exhibit high orientation behavior. This may not have been the case. Although group members perceived the high interaction subjects as exhibiting more orientation behavior, this study did not measure the quality of that behavior, or that the behavior ever existed. This study raised the interesting point that a high rate of interaction may be confused as exhibiting orientation behavior, while not actually doing so.

The problem with research on interaction has been that there is no standard measure of interaction. The research cited gave talkativeness and length of statement as examples. For this study, interaction rate will be determined by the number of statements made in the discussion situation.

The appointed leader's orientation behavior, and the appointed leader's amount of interaction will be the independent variables in this study. These two variables can be differentiated in the following manner: Orientation affects the quality of the discussion, and interaction affects the quantity of the discussion. During the actual discussions, two sets of statements were used. One set was high orientation statements, and the other was low orientation statements. This controlled the orientation variable. These two sets of statements were used in two conditions. One condition consisted of saying 10 statements or less. The other consisted of saying 20 to 30 statements. This controlled the interaction variable.
The dependent variables in this study are: the quality of the group decision, the amount of time it takes to reach a solution, and member satisfaction. The first two variables deal with group results. Member satisfaction is a measure of an individual's perception of the group experience.

Of the three dependent variables, member satisfaction has received the most attention. Henslin and Durphy (1964) reviewed previous studies that were concerned with member satisfaction. They isolated three dimensions. The first, status consensus, is concerned with the group reaching consensus about the status of all members of the group. Second, the group must perceive that they are making progress toward group goals. Third, the group members must feel that they are free to participate in group activities and discussions. Another study by Downs and Pickett (1977) used a woman's organization from a midwestern city. The women were divided into groups, and presented with a task. At four different times during the experiment, each subject was given a satisfaction questionnaire. The questionnaire covered six dimensions: 1) the leader, 2) involvement in decision making, 3) work structure, 4) the way work was done, 5) relationships with coworkers, and 6) the other group member's contributions to the work effort. They found that member satisfaction is contingent upon the type of group, and leadership style.

The studies above, as well as others, have not formed any causal relationship between either orientation behavior or interaction, and member satisfaction.
Some may raise the question of whether satisfaction is important at all, since it seems that it is more of an "after the fact" type of effect, in that the group discussion is over, and the solution has been reached. But one must look beyond the experimental setting and to applied situations. If, during the discussion, a member, or members of the group are dissatisfied, their contributions may be less, or of lower quality. If the group is on-going, or if the situation is one where groups are used frequently, members may be reluctant to participate in subsequent groups, or they may go into those groups with negative attitudes. The ability to produce satisfaction among group members then, can be of paramount importance to the group process.

High member satisfaction may not necessarily mean that a group outcome will be of a high quality. Hoffman (1979), in his valence studies, found in one situation, that although the solution was not a high quality one, that the group members were satisfied with the group experience. So, in some cases, member satisfaction and group outcome may be totally different, or unrelated entities.

Applbaum (1974) named a number of factors that would lend to group satisfaction, such as the membership itself, cohesion, and effective group performance. This may seem contradictory to Hoffman's findings, but that is not necessarily the case. While in the discussion, members may perceive that they are performing effectively, while in fact they are not. This is a possible explanation of the differences in the two findings.
This study will be measuring perceived satisfaction with effectiveness, since the questionnaire will be filled out before the group knows any results. This may provide interesting findings in relation to the above studies.

Time to solution can be important, because many situations call for decisions to be made in a certain time frame, and for those decisions to be effective. This study will try to determine if orientation behavior or interaction have any effect on decision times.

Decision quality in this study will be defined as the group's ability to come closest to the right solution. In many cases, the research has been sketchy in this area because of the great amount of subjectivity in determining an effective solution, especially in areas where there is "no right answer." For this experiment, there is a right answer that can be quantitatively measured. But one should recognize that this limits the results to this type of situation, where the group is confined to certain types of answers.

Justification

Research in small groups has provided insights into aspects such as consensus, conflicts, leadership, and other areas. Communication research in the past has spent a lot of time on defining and understanding variables. Recently the field has started to shift toward applying those variables and testing them
with and against each other. Two good examples are this study's independent variables: orientation behavior and interaction rate. This study is one attempt to test their effects, if any, in any given situation, in the hope that we might increase the understanding of their capabilities and characteristics. This is important in furthering the process of effectively using communication skills in real life applications.

**Hypotheses**

This study investigated the impact of the leader's frequency of interaction and quality of orientation behavior on group member's satisfaction, decision quality, and time to solution. The specific hypotheses tested were as follows:

1. The high interaction, high orientation (HIHO) leader groups will reach a solution the quickest of all four of the groups.

2. The HIHO leader groups will contribute the greatest amount of member satisfaction.

3. The HIHO leader groups will produce the highest quality solutions.

The HIHO leader will spend a lot of time guiding the group toward its goals; that is the sole function of the leader in this capacity, and she will be actively involved in doing that. This type of behavior should produce the results mentioned above.

4. The low interaction, low orientation (LILO) leader groups will take the longest of the four groups to reach solution.

5. The LILO leader groups will have the lowest amount of member satisfaction.
6. The LIL0 leader groups will produce the lowest quality solutions.

The LIL0 leader is in effect, a non-participant. This leader is not involved with the group's proceedings, and what is said, has no value as far as guiding the groups. Therefore, the above mentioned results should occur.

7. The low interaction, high orientation (LIHO) leader groups will have lower member satisfaction than the high interaction, low orientation (HIL0) leader groups.

Although the leader in the LIHO groups is as virtually non-participative as the LIL0 leader, what little input that is given is an attempt to guide the group, and has more leadership value. But the LIHO leader group's member satisfaction should be lower than the HIL0 leader group's. This is because although the leader is not offering the group guidance in the HIL0 situation, she is perceived as having more involvement with the group, and having more leadership ability.
Subjects

One hundred and twenty undergraduate students at the University of Central Florida served as subjects for this study. Approximately half of the student volunteers came from the Fundamentals of Oral Communication classes required of all undergraduate students. The remaining students were drawn from an upper division Visual Communication course, required of Journalism majors, and also a popular university-wide elective. This selection procedure created a sample representative of the general undergraduate student population; lower division and upper division, major and non-major students.

The subjects volunteered for the experiment and were told to report to a room at various times during the day and night over two different one-week periods. Two confederates participated in 20 groups each. They were placed in each group with three subjects. There were 10 groups per condition. The confederates were trained in two types of statements. Each learned a set of high orientation, and a set of low orientation statements, which were developed from the definition of orientation mentioned earlier by Kowitz and Knutson. Both sets of statements were used in two interaction situations. In the low interaction situation, the
confederate said between one and ten statements. In the high interaction situation, the confederate would say between 20 and 30 statements. Each discussion was recorded in order to insure that the confederates were using the right statements, and the right number of statements. Both confederates were female students enrolled in upper-level communication courses at UCF.

Since the sex composition was not controlled in this experiment, a variety of sex compositions resulted. Some groups were all female, with others containing three males and one female, two females and two males, or three females and one male.

The confederates would arrive at the room about the same time as the subjects, and the experimenter divided the subjects plus the confederates into two separate groups. One group stayed in the room, while the other was taken to another room a short distance down the hall. When the groups were seated, the experimenter would take each person's name, and give the group instructions for the problem. The problem used was the "Lost at Sea" exercise (Pfeiffer, 1969).

The task was a fifteen item ranking scale, in conjunction with a situation. This situation was a burning, sinking ship, and the survivors are the group members. They were in a rubber raft with the fifteen items. The group was to rank-order each item in terms of its importance to their survival. The group was asked not to make individual rankings, but rather reach consensus on each ranking. This provided for necessary group interaction. They were given no time limit on their discussion.
The experimenter let the group read the instructions to the problem and left the room. The confederate's name was written on four slips of paper and brought back to the group. A group member would then pick the name from the bag, and the confederate would be appointed the leader. The confederates would know which participation condition they were in by a code on the top right-hand side of the instruction sheet, and previous consultation. The experimenter had instructed the group earlier that the instruction sheet would go to the group leader. The group was told that the tape recorder was there so that the experimenter could study the group process. The experimenter also informed the group that a short questionnaire would follow the discussion. The discussions ran generally between 10 and 25 minutes. At the end of the discussion, the instruction sheet with the group's ranking was collected, and the questionnaires distributed to each member. After the questionnaires were completed, the subjects left at their leisure, and the experimenter thanked them for their participation.

Group scores were determined by finding the sum of the difference between the actual rankings and the group's rankings. The lower the scores, the more effective the group's solutions. Time was determined by the tape count from the beginning of the group's discussion until the end. The questionnaire consisted of 22 questions to determine member satisfaction. Each question was a 7 point scale with 1 being "strongly agree" and 7 being "strongly disagree." The questions were worded so that a score of 1 on all
of the questions would express a high amount of satisfaction, and a 7 on all of the questions would express dissatisfaction, and a 7 on all of the questions would express dissatisfaction on the part of the individual. The questionnaire was taken from a study by Jurma (1979) on decision effectiveness.
RESULTS

To test the group's decision quality and time differences, the scores were compared by analysis of variance (ANOVA).

Because of the scope of the questionnaire, the Kruskal-Wallis 1-way ANOVA was used to determine which questions produced significant results. Significance between groups was then determined by using a multiple comparison for the Kruskal-Wallis ANOVA.

The first hypothesis was not supported by the results. There was no appreciable difference in the amount of time it took to reach solution between any of the four groups.

The second hypothesis was not supported by the results. The scores showed that the HIHO leader did not produce significantly higher satisfaction among the members. The mean ranks did, however, show a trend in that direction.

The third hypothesis was not supported by the results. The HIHO leader did not help to produce a higher quality solution.

The fourth hypothesis was not supported by the results. There was no difference in the time it took for the four groups to reach solution.

The fifth hypothesis was partially supported by the results. There was little difference in member satisfaction in the majority
of the satisfaction questionnaire. But there was significant
difference in the leader satisfaction section. Satisfaction with
the leader was rated significantly lower for the LILO leader
group members.

The sixth hypothesis was not supported by the results.
There was no significant difference in the quality of the group
solutions.

The seventh hypothesis was not supported by the results.
There was no difference in the amount of member satisfaction
for the LIHO and HILO groups.

Table 1
Anova for Times

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>35664.8</td>
<td>39</td>
<td>...</td>
</tr>
<tr>
<td><strong>Between</strong></td>
<td>2422.1</td>
<td>3</td>
<td>807.4</td>
</tr>
<tr>
<td><strong>Groups</strong></td>
<td></td>
<td></td>
<td>923.4</td>
</tr>
<tr>
<td><strong>Within</strong></td>
<td>33242.7</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td><strong>Groups</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The questionnaire on member satisfaction basically contained four sections. Questions 1 though 5 analyzed the individual's satisfaction with the other group members. Questions 6 through 11 analyzed the individual's satisfaction with his/her own performance. Questions 12 through 18 analyzed the individual's satisfaction with the group leader. Finally, questions 19 through 22 dealt with the individual's satisfaction with the group product.

In this study, when a group scored a lower mean rank, this indicated a better score. In the satisfaction questionnaire, for instance, a "1" very satisfied and a "7" was very dissatisfied. So a lower mean rank would indicate greater satisfaction. For time and score, the same rule applied. Lower times were better, as were lower scores a better indication of solution quality than higher scores.

### Table 2

**Anova for Scores**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Variance Estimate</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>7242.8</td>
<td>39</td>
<td>...</td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>93.1</td>
<td>3</td>
<td>31.1</td>
<td>0.15</td>
</tr>
<tr>
<td>Within Groups</td>
<td>7149.7</td>
<td>36</td>
<td>198.6</td>
<td></td>
</tr>
</tbody>
</table>
In questions 1 through 5, questions 4 and 5 had significant differences between groups. Question 4 was: Our group thoroughly analyzed the question presented us. In this situation, the LILO group had the lowest mean rank. LILO was significantly better than the LIHO condition. LIHO had the highest mean rank. Both the HIHO and the HILO conditions received significantly better ratings than the LIHO condition, but there were no other significant differences between the groups. Question 5 was: The other group members did a good job on this discussion. The lowest mean rank was in the HIHO condition, and the highest mean rank was in the LIHO condition. The HILO and the HIHO groups showed significantly better rankings than the LIHO condition. All other relationships were non-significant.

Table 3

<table>
<thead>
<tr>
<th>Question</th>
<th>LILO</th>
<th>LIHO</th>
<th>HILO</th>
<th>HIHO</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>55.95</td>
<td>63.84</td>
<td>56.53</td>
<td>58.07</td>
<td>0.804</td>
</tr>
<tr>
<td>2</td>
<td>55.98</td>
<td>68.91</td>
<td>53.68</td>
<td>55.94</td>
<td>0.305</td>
</tr>
<tr>
<td>3</td>
<td>50.65</td>
<td>59.61</td>
<td>61.13</td>
<td>63.44</td>
<td>0.477</td>
</tr>
<tr>
<td>4</td>
<td>47.98</td>
<td>77.25</td>
<td>53.37</td>
<td>56.83</td>
<td>0.006</td>
</tr>
<tr>
<td>5</td>
<td>61.27</td>
<td>71.84</td>
<td>50.70</td>
<td>50.15</td>
<td>0.048</td>
</tr>
</tbody>
</table>
In question 6 through 11 there were no significant relationships between any of the conditions in any of the questions.

Table 4
Group Mean Ranks for-Satisfaction

<table>
<thead>
<tr>
<th>Question</th>
<th>LILO</th>
<th>LIHO</th>
<th>HILO</th>
<th>HIHO</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>55.05</td>
<td>69.63</td>
<td>56.82</td>
<td>52.80</td>
<td>0.236</td>
</tr>
<tr>
<td>7</td>
<td>55.06</td>
<td>71.41</td>
<td>50.85</td>
<td>57.56</td>
<td>0.110</td>
</tr>
<tr>
<td>8</td>
<td>57.29</td>
<td>62.09</td>
<td>61.68</td>
<td>52.63</td>
<td>0.694</td>
</tr>
<tr>
<td>9</td>
<td>58.00</td>
<td>62.57</td>
<td>58.53</td>
<td>54.31</td>
<td>0.863</td>
</tr>
<tr>
<td>10</td>
<td>50.65</td>
<td>71.93</td>
<td>57.68</td>
<td>54.50</td>
<td>0.088</td>
</tr>
<tr>
<td>11</td>
<td>51.81</td>
<td>64.13</td>
<td>61.97</td>
<td>56.50</td>
<td>0.489</td>
</tr>
</tbody>
</table>

In questions 12 through 18 all questions showed significance. Question 12 was: Our assigned leader took an active part in the discussion. The LILO condition had the highest mean rank, and the HIHO groups had the lowest. LILO was ranked significantly lower than all three of the other groups. All other relationships were non-significant. Question 13 was: The assigned leader was functional in the setting and pursuit of group goals. The LILO condition produced the highest mean rank, and the HIHO condition produced the lowest. All three groups were ranked significantly better than the LILO condition. All other relationships were
non-significant. Question 14 was: The leader provided task relevant information. The LILO condition produced the highest mean rank and the HIHO condition produced the lowest. The HIL0 and HIHO groups were ranked significantly better than the LILO condition. All other relationships were non-significant.

Question 15 was: The assigned leader turned out to be the actual leader of the group. The LILO condition produced the highest mean rank, and the HIHO condition produced the lowest. All three sets of conditions were ranked significantly better than the LILO condition. All other relationships were non-significant. Question 16 was: The leader emphasized goal accomplishment. The LILO condition produced the highest mean rank, and the HIHO condition produced the lowest. All three conditions received significantly better ratings than the LILO condition. All other relationships were non-significant. Question 17 was: The leader encouraged participation by the group members. The LILO condition received the highest mean rank, and the HIHO received the lowest. All three conditions were ranked significantly better than the LILO groups. All other relationships were non-significant.
Table 5

Group Mean Ranks for Satisfaction

<table>
<thead>
<tr>
<th>Question</th>
<th>LILO</th>
<th>LIHO</th>
<th>HILO</th>
<th>HIHO</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>81.63</td>
<td>58.11</td>
<td>48.33</td>
<td>43.65</td>
<td>0.000</td>
</tr>
<tr>
<td>13</td>
<td>78.76</td>
<td>58.14</td>
<td>51.43</td>
<td>43.46</td>
<td>0.000</td>
</tr>
<tr>
<td>14</td>
<td>77.71</td>
<td>59.18</td>
<td>48.40</td>
<td>46.96</td>
<td>0.001</td>
</tr>
<tr>
<td>15</td>
<td>78.74</td>
<td>56.43</td>
<td>54.90</td>
<td>41.41</td>
<td>0.000</td>
</tr>
<tr>
<td>16</td>
<td>82.31</td>
<td>53.73</td>
<td>52.90</td>
<td>42.33</td>
<td>0.000</td>
</tr>
<tr>
<td>17</td>
<td>76.76</td>
<td>50.93</td>
<td>58.40</td>
<td>45.50</td>
<td>0.002</td>
</tr>
<tr>
<td>18</td>
<td>78.06</td>
<td>57.20</td>
<td>49.70</td>
<td>47.17</td>
<td>0.001</td>
</tr>
</tbody>
</table>

In questions 19 through 22, only question 21 showed any significant relationships. Question 21 was: Information relevant to the issue was adequately analyzed. The highest mean rank was received by the LIHO groups, and the lowest mean rank was received by the HIHO condition. The LILO and HIHO conditions were ranked significantly better than the LIHO condition. All other relationships were non-significant.
<table>
<thead>
<tr>
<th>Question</th>
<th>LILO</th>
<th>LIHO</th>
<th>HILO</th>
<th>HIHO</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>57.58</td>
<td>65.59</td>
<td>55.40</td>
<td>55.65</td>
<td>0.633</td>
</tr>
<tr>
<td>20</td>
<td>57.65</td>
<td>67.45</td>
<td>55.42</td>
<td>53.63</td>
<td>0.420</td>
</tr>
<tr>
<td>21</td>
<td>54.50</td>
<td>73.89</td>
<td>57.48</td>
<td>48.26</td>
<td>0.032</td>
</tr>
<tr>
<td>22</td>
<td>63.24</td>
<td>62.73</td>
<td>56.50</td>
<td>50.89</td>
<td>0.467</td>
</tr>
</tbody>
</table>
DISCUSSION

Seven hypotheses were addressed by this study:

H₁ The HIHO leader groups will reach a solution the quickest of all four of the groups.

H₂ The HIHO leader groups will produce the highest quality solutions.

H₃ The HIHO leader groups will produce the highest quality solutions.

H₄ The LILO leader groups will take the longest of the four groups to reach solution.

H₅ The LILO leader groups will have the lowest amount of member satisfaction.

H₆ The LILO leader groups will produce the lowest quality solutions.

H₇ The LIHO leader groups will have lower member satisfaction than the HILO leader groups.

The hypotheses dealing with time and solution quality were not supported by the results. This could be due to leadership style having no effect on the product or solution time. But other factors may be involved. The major factor is the nature of the discussion itself. The "Lost at Sea" exercise is one way to qualify a group decision and bring about mandatory consensus. But in review of the discussions, a great deal of what transpired was very limited in terms of the problem. One noticeable effect was the projection of ideas by a group of novices in a subject area. With no solid background to back up many of the ideas, it was easy for an idea to sound logical, without actually being right.
The leaders were instructed to give informational and other types of statements in the LILO and HILO situations. The information that they offered was randomly selected from a list of statements judged low in orientation in the pilot study (see Appendix C).

In the LIHO and HIHO situations, the leader served only as a "guidepost" in the discussions, monitoring the direction of the groups' flow of conversation.

Because of the nature of the experiment, where a quality solution was sought, the Lost at Sea exercise was selected because it provided a quality solution. Unfortunately, the students had little or no knowledge of the subject, unlike more realistic situations where groups come together with prior knowledge and experience. Therefore the leader's orientation behavior had little effect on the group outcome. In a realistic context, where members are expected to provide experience and knowledge of the subject, orientation behavior may well produce significant changes in group solution quality.

The groups did not differ significantly in the amount of time required to reach consensus. The nature of the task may have been the major detriment to producing significance. The discussions were fairly consistent in the amount of time that was required for the groups to complete it. Being a fifteen item ranking discussion, the type of leadership did not have a significant amount of influence on the amount of time it took to complete the
task. While one assumption may be that with the leader talking more in the HILO and HIHO conditions, that these conditions would take longer. This was not the case. Although the confederates talked more, they also, in talking more, exerted more influence on the group. This may have cut down on some extra discussion that might have occurred if the leader were not talking. Also, with the ability to talk only so much about each item, the task was, in a way, "self-limiting" in its scope, as far as time was concerned.

The second and third hypotheses were only partially supported by the results. There was no significant time difference, but the questionnaire produced some interesting results. Outside of two items, all the questions that received significant results were ones dealing with the leader. As far as this study goes, the big statement was that the lack of leadership is the most noticeable. The LILO group received the worst rankings in this category, while there were no significant differences between the other three groups. But in all areas, the groups were the same. The only great difference in satisfaction dealt with the leadership aspects. Once again, it appears that the nature of the discussion itself had the biggest effect on how the groups performed.

During the creation of the high and low orientation statements for the groups, it became very apparent that these statements had to be topic bound and very regimented in order to keep within the controls. Also the statements that were given to the confederates were the only statements that they were allowed to use. This lead
to gaps where a normal flow of conversation may have occurred, using any number of statement types. In order to control the experimental situation, the leader had to be confined to these statements. But in a normal situation, if a leader happens to use other types of statements, as well as high orientation statements, that does not make him/her a low orientation leader. These other statements are normal, and should be used.

There is a chance that the sex mix in some of the groups could have had an effect on the group outcome. Though the research has been contradictory at times, there have been some interesting conclusions drawn. Kimble et al. (1981) found that:

The supposition that women are less dominant than men in conversation, (a) is not true in same-sex groups, (b) is true for half the women in mixed groups in terms of assertiveness, and (c) is true for half the women in mixed, structured discussion groups in terms of vocal assertiveness. The sex composition of the group and the structure of the discussion are important mitigating factors of the conversational dominance exhibited by women and men. (p. 1050)

In terms of this particular experiment, the variance of the sex mix may have caused some fluctuation in the group performances, as well as the task having its own effect on how the groups acted.

Eagly et al. (1981) did a study on the effect a group's surveillance would have on conformity by males in a mixed-sex group. They hypothesized that interpersonal consequences of non-conformity (alienation by the group, etc.) would cause subjects to conform more to the majority of the group's ideas.
They found that males did exhibit less conformity in these situations than females did. In relation to this study, male behavior in the mixed sex groups may have affected other potential group outcomes.

A lot of consideration must also be given to the possible emergent leaders in these groups. It was quite evident in some of the discussions, that the group members would look to the member with the most apparent "expertise" in the subject area for leadership. This person would dominate a great deal of the discussion, and had the greatest amount of influence on the groups' results. The "experts" were often far from being on course, but they were generally accepted as a group leader, especially if they offered credentials such as, "being a boy scout once," or "I own a boat." At times, these emergent leaders would become the sole leader of the group, and at other times they shared the leadership role. The main consideration here is that with a task of this nature, expertise, or at least expressed expertise in an area, can have a great effect on the group outcome.

The results for all three dependent variables suggest that orientation statements will not significantly impact discussions where the knowledge and background of group members limit their qualitative contributions. It is, however, a procedural variable. It alone, will not impact a group's task performance when the content or informational dimension of the discussion is so low that the quality solutions are impossible. Future studies should test
orientation behavior in situations where members have sufficient knowledge and experience of the subject matter under discussion.

Even though the results were inconclusive, orientation behavior did see, to show some signs of increasing member satisfaction with the leader. The mean ranks did consistently point in that direction. It is possible that group members feel more comfortable when the leader guides the group and gives the task some direction. But the leader fell short in other areas, leaving little discernment among group members of the different leadership types. A possible correction of this problem would be an expansion of the list of statements that the leader may use. This would allow for greater flexibility of the leadership role in the experimental situation. A great amount of consideration must be given to control of the dependent variable when creating such a list.

Implications for Future Research

Orientation is an important tool in small group communication. Previous research has shown this. Future research should try to develop ways to find out exactly how important it is in relationship to other variables. Total isolation of this variable is probably not the best answer. There are other elements of conversation that need to be used in conjunction with orientation statements. The idea is to provide a leader who can use the best of all worlds. The ability to combine orientation, knowledge, humor, conflict resolution, whatever mix works best, is what will create an
effective leader. And that mixture may vary, depending on the type of discussion and group.

Taping the discussions originally had one purpose, and that was to make sure that the confederates were performing properly. But it also became an extremely useful tool for studying the group process, and the leader's role in that process. Recording the sessions proved to be invaluable in reviewing the results, and it is suggested that it be used in future group research.

As mentioned before, the discussion used in this experiment was very useful for quantifying group results. But it may have also been too regimented for the type of discussion quality that was being sought. Experiments using other types of discussions, such as those on policy, where a greater range of ideas can be used, are encouraged.

A variation of the above idea may be to differ the task types in order to determine which situation that orientation behavior would be the most effective in. It is highly possible that orientation behavior is not the best choice of leadership for a rank-ordering type task. But it may be highly effective in brain-storming type discussions or different types of tasks. Research of this manner could help define the effectiveness of orientation behavior on a situational basis.
SUMMARY

Orientation behavior remains an under-researched phenomenon. Much has been learned about its characteristics, but little about its applications. This study sought to provide the leader with a tool to make the group process more effective. The hypotheses offered were not supported or only partially supported by the results. Orientation behavior did not produce better times, products, or member satisfaction in this situation. But many insights into the process were brought forth by this study. Probably the most important is that one aspect of communication theory is probably not enough to produce the perfect leader, the perfect group, or the perfect discussion. It is the combination of any number of concepts, finding the right "mixture" for the right situation. Communication is a dynamic field where there is no one "truth," because all situations are not the same. The challenge of research is to find the right solutions for each problem that arises. In a world where groups make many of the important decisions that affect our lives, we must continue to explore ways to make them produce the most effective outcomes.
APPENDIX A

LOST AT SEA WORKSHEET
LOST AT SEA WORKSHEET

Instructions: You are adrift on a private yacht in the South Pacific. As a consequence of a fire of unknown origin, much of the yacht and its contents have been destroyed. The yacht is now slowly sinking. Your location is unclear because of the destruction of critical navigational equipment and because you and the crew were distracted trying to bring the fire under control. Your best estimate is that you are approximately one thousand miles south-southwest of the nearest land.

Below is a list of fifteen items that are intact and undamaged after the fire. In addition to these articles, you have a serviceable, rubber life raft with oars large enough to carry yourself, the crew, and all the items listed below. The total content of all survivors' pockets are a package of cigarettes, several books of matches, and five one-dollar bills.

Your task is to rank the fifteen items below in terms of their importance to your survival. Place the number 1 by the most important item, and number 2 by the second most important, and so on through number 15, the least important.

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>sextant</td>
</tr>
<tr>
<td>2</td>
<td>shaving mirror</td>
</tr>
<tr>
<td>3</td>
<td>five-gallon can of water</td>
</tr>
<tr>
<td>4</td>
<td>mosquito netting</td>
</tr>
<tr>
<td>5</td>
<td>one case of U.S. Army C rations</td>
</tr>
<tr>
<td>6</td>
<td>maps of the Pacific Ocean</td>
</tr>
<tr>
<td>7</td>
<td>seat cushion (flotation device approved by the Coast Guard)</td>
</tr>
<tr>
<td>8</td>
<td>two-gallon can of oil-gas mixture</td>
</tr>
<tr>
<td>9</td>
<td>small transistor radio</td>
</tr>
<tr>
<td>10</td>
<td>shark repellent</td>
</tr>
<tr>
<td>11</td>
<td>twenty square feet of opaque plastic</td>
</tr>
<tr>
<td>12</td>
<td>one quart of 160-proof Puerto Rican rum</td>
</tr>
<tr>
<td>13</td>
<td>fifteen feet of nylon rope</td>
</tr>
<tr>
<td>14</td>
<td>two boxes of chocolate bars</td>
</tr>
<tr>
<td>15</td>
<td>fishing kit</td>
</tr>
</tbody>
</table>
15 sextant
1 shaving mirror
3 five-gallon can of water
14 mosquito netting
4 one case of U.S. Army C rations
13 maps of the Pacific Ocean
9 seat cushion (flotation device approved by the Coast Guard)
2 two-gallon can of oil-gas mixture
12 small transistor radio
10 shark repellent
5 twenty square feet of opaque plastic
11 one quart of 160-proof Puerto Rican rum
8 fifteen feet of nylon rope
6 two boxes of chocolate bars
7 fishing kit
APPENDIX B

QUESTIONNAIRE
<table>
<thead>
<tr>
<th>Statement</th>
<th>STRONGLY AGREE</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt comfortable with the other group members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The group's final decision was a good one</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our group thoroughly analyzed the question presented us</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The other group members did a good job in this discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The discussion was interesting for me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I got involved in this task</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had a sense of achievement after finishing work on this task</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am pleased with my performance in this group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt that I was really a part of this discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found this task to be a challenging one</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRONGLY AGREE</td>
<td>STRONGLY DISAGREE</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>Our assigned leader took an active part in the discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The assigned leader was functional in the setting and pursuit of group goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The leader provided task-relevant information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The assigned leader turned out to be the actual leader of this group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The leader emphasized goal accomplishment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The leader encouraged participation by the group members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our leader did a good job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was satisfied with the outcome of our group discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The group was effective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information relevant to the issue was adequately analyzed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt confident in presenting my ideas to the others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had a clear idea of the group's goals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX C

HIGH AND LOW ORIENTATION STATEMENTS
Low Orientation Statements

I don't think that the . . . . . . is the best choice.
Who knows the most about this stuff?
Some of these things aren't going to do us any good.
How long do we have to do this?
The . . . . . . might be used for . . . . . .
I don't see where the . . . . . . is more important than the . . .
What would anyone use that for?
I think that the . . . . . . is important.
I think that the . . . . . . is the most important item.
I think we should go with the . . . . . . next.
How long can a person go without food or water?
The . . . . . . might be of some help, but I don't think that it's a necessity.
I don't see what good a . . . . . . would do.
If I were in this situation, I think I would look at those things most essential to survival.
I think we need to make a decision on the . . . . . . before it's too late.
I think we're making a mistake by not going with the . . . . . .
We should just toss all of the unnecessary stuff aside until later.
Wasn't there a movie about something like this?
I don't know if this will help, but . . . . . . can be used for . . . .
I think that we should try to get to the nearest land, or shipping lanes, or something like that.
Why don't we get this over with as quickly as possible?
I don't know what to do; I'm not a very good leader.
I'm not very good at leading a group.
High Orientation Statements

Let's get back to the main discussion.
Let's set up an agenda for how we want to do this.
Are we where we want to be at this point in the discussion?
Why don't we make a decision on that now?
Is that our decision? Then let's go with it.
Let's get started.
Let's stop for a second, and summarize where we are.
What are our alternatives?
Let's move on to the next point.
Are we agreed on that?
Let's not argue about this; let's vote and move on.
Let's look at this from another angle.
Why don't we vote on that?
I propose we start by isolating the top five choices.
Let's isolate the last five choices.
I think we need to decide on that.
Let's go back to what we were talking about earlier.
Is there anything in the directions that will help us?
Are there any other options available?
What are our options?
That's a good point, does anyone have any more information on that?
Is that relevant?
Is everyone happy with that decision?
What do you have to add, . . . . . . . .
REFERENCES CITED


BIBLIOGRAPHY

Books


Articles


Bell, M. A. The effects of substantive and affective verbal conflict on the quality of decisions if small problem solving groups. Central States Speech Journal, 1979, 30, 75-82.


Fisher, B. A. Content and relationship dimensions of communication in decision-making groups. Communication Quarterly, 1979, 3-11.


Dissertation