

THE ROLE OF GENDER, ANDROGYNY AND ATTRACTION IN  
PREDICTING THE IDENTITY AND EFFECTIVENESS OF  
EMERGENT LEADERS

by

JANET R. GOKTEPE

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Maryland  
LD  
3231  
M70d  
Goktepe,  
J.R.  
Folio

Dissertation submitted to the Faculty of the Graduate School  
of the University of Maryland in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
1986


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APPROVAL SHEET

Title of Dissertation: The Role of Gender, Androgyny and  
Attraction in Predicting the Identity  
and Effectiveness of Emergent Leaders

Name of Candidate: Janet R. Goktepe  
Doctor of Philosophy, 1986

Dissertation and Abstract  
Approved:



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Dr. Craig Eric Schneier  
(Associate Professor)  
(Department of Organizational  
Behavior and Industrial Relations)

Date Approved:

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April 29, 1986

## ABSTRACT

Title of Dissertation: THE ROLE OF GENDER, ANDROGYNY AND ATTRACTION  
IN PREDICTING THE IDENTITY AND EFFECTIVENESS  
OF EMERGENT LEADERS

Janet R. Goktepe, Doctor of Philosophy, 1986

Dissertation directed by: Dr. Craig Eric Schneier  
Associate Professor  
Department of Organizational Behavior  
and Industrial Relations

This field study used groups performing "sex-neutral" tasks over a six- to fifteen-week period to examine determinants of emergent leadership and leadership effectiveness. The study included 149 subjects in 35 task groups (28 mixed-sex groups, 4 all-male groups, and 3 all-female groups) working in conjunction with personnel management or business policy courses. Data were collected twice during the period for all measures used in predicting the identity and effectiveness of emergent leaders (based on follower perceptions of their sex, physical and interpersonal attractiveness, and the leader's self-described sex-role identity, i.e., masculine, feminine, undifferentiated, or androgynous).

The results showed that the leader chosen by group members did not change from Time 1 to Time 2 except in one group (an all-male group). Most of the results were similar between Time 1 and Time 2, and were consistent with predictions made based upon theoretical considerations and previous research.

The hypotheses in this study were tested using a combination of statistical techniques. The results supported the major hypotheses of the study. In general, within the total sample, sex did not

influence perceptions of an emergent leader. However, within groups, the probability of a female gaining leadership status was dependent upon the relative proportion of females in the group, i.e., at least half or more members had to be female. Female leaders were rated more physically attractive than male leaders. Male leaders received the lowest ratings of physical attractiveness, even lower than male nonleaders. Leaders were rated more interpersonally attractive than nonleaders. Emergent leaders with high ratings of physical and interpersonal attractiveness were also rated higher on effectiveness. Individuals with a self-described "masculine" sex role identity emerged as leaders more than undifferentiated, feminine, or androgynous types. There were no differences in leader effectiveness ratings among the four leader types.

To my husband, Dr. Omer Goktepe, whose enlightened debate, exploration, support and encouragement have been constant sources of inspiration to me.

## ACKNOWLEDGMENTS

I would like to thank my chairman, Dr. Craig Eric Schneier, for his remarkable enthusiasm and support, for generously sharing his ideas, experience and advice with me. I would like to thank my committee members, Drs. Stephen Carroll, Mary Leonard, Judy Olian and Susan Taylor for their helpful suggestions, guidance, time and encouragement, all generously given.

I would like to thank Drs. Ramona Trade, Elgin Perry, Mike Wagner, and Ms. Alicia Siegrist, for their time and help in reviewing the statistical results.

TABLE OF CONTENTS

		<u>Page</u>
Chapter 1	Introduction	1
	Purpose of the Study	2
	Importance of the Topic	2
	Measures	3
	How This Study Differs From Previous Research	4
Chapter 2	Review of the Emergent Leadership Literature	6
	Overview	6
	Definitions and Determinants	7
	Theories and Research	9
	Similarities and Differences	11
	Sex Effects	12
	Summary	13
Chapter 3	Implications for Organizations	15
	Review of the Attraction Literature	18
	Definitions	18
	Theories and Research	20
	Non-Organizational Research	26
	Research in Management and Organizational Literature	30
	Criticisms of the Research	36
Chapter 4	Summary	36
	Selected Review of Small Groups Literature	39
	Overview	39
	Sex and Leadership	39
	Sex and Leader Effectiveness	41
	Androgyny and Leader Effectiveness	42
	Sex and Group Interaction	44
Chapter 5	Summary	45
	Derivation of Hypotheses	47
	Sex and Emergent Leadership	47
	Physically Attractive Leaders	48
	Interpersonally Attractive Leaders	49
	Androgyny and Perceptions of Emergent Leadership	50
	Attractiveness and Leader Effectiveness	51
Chapter 6	Androgyny and Leader Effectiveness	52
	Research Design and Method	53
	Overview of Research Procedure	53
	Method	54
	Sample	54
	Procedure	55
	Task	55
	Timing of the Measures	56

	<u>Page</u>
Instruments	56
Measurement of the Independent Variables	56
Member Sex	56
Sex Role Identity	58
Interpersonal Attraction	60
Physical Attraction	60
Measurement of the Dependent Variables	61
Leadership Status: Sociometric Choice	61
Leader Effectiveness	62
Measurement of Potentially Confounding Variables	63
Chapter 7	
Results and Data Analysis	64
Intercorrelations Among the Dependent Variables	64
Reliability and Validity of Instruments	64
Bem Sex Role Categories	67
Measurement of Potentially Confounding Variables	69
Results of Data Analyses for Major Hypotheses of the Study	82
Logit Model Analyses	101
Interaction Effects	104
Chapter 8	
Conclusions and Implications	107
Discussion	107
Limitations of the Study	111
Future Research	114
Appendix A	118
Bibliography	128



## LIST OF TABLES

<u>Table</u>	<u>Page</u>
Table 1 Emergent Leadership Concepts and Theories	10
Table 2 Attraction Theories	21
Table 3 Summary of Selected Studies Using Attractiveness as a Causal Variable	31
Table 4 Timeframe for Study	53
Table 5 Sample of Masculine, Feminine and Neutral Items from Bem's (1974) Sex Role Inventory	55
Table 6 Intercorrelations Among Dependent Measures Time 1	61
Table 7 Intercorrelations Among Dependent Measures Time 2	61
Table 8 Reliability Analysis of Instruments	62
Table 9 Bem Sex Role Categories (Times 1 and 2)	64
Table 10 Comparisons Among Business Majors and Non-Business Majors	69
Table 11 Sex Differences in Leadership Status in Personnel and Policy Courses	72
Table 12 Sex Role Type Differences in Leadership Status in Personnel and Policy Courses	72
Table 13 Mean Familiarity Rating Comparisons Between Leaders and Members (Times 1 and 2)	73
Table 14 Mean Familiarity Ratings of Leaders and Members Between Times 1 and 2	74
Table 15 Correlation Coefficients Showing Relation- ship Between Familiarity and Attraction	74
Table 16 Leader and Member Attractiveness and Familiarity Ratings Categories Comparisons	76
Table 17 Mean G.P.A. Comparisons and Individual Performance Scores Between Leaders and Nonleaders	77
Table 18 Correlation Coefficients Showing Relation- ships Between G.P.A. and Attractiveness	78

<u>Table</u>	<u>Page</u>
Table 19 Grade Point Average and Leader Status	78
Table 20 Profile of Groups	80
Table 21 Sex Differences in Emergent Leader Status	82
Table 22 Sex Differences in Emergent Leadership Between Leaders and Nonleaders (All Groups)	83
Table 23 Sex Differences in Emergent Leadership for Mixed Sex Groups Only	84
Table 24 Mean Physical Attractiveness Rating Comparisons Between Subsamples (Time 1)	84
Table 25 Mean Physical Attractiveness Rating Comparisons Between Subsamples (Time 2)	85
Table 26 Mean Physical Attractiveness Rating Comparisons Among Subsamples by the Same and Opposite Sex (Time 2)	87
Table 27 Mean Interpersonal Attractiveness Rating Comparisons Among Subsamples By the Same and Opposite Sex (Time 2)	88
Table 28 Mean Interpersonal Attractiveness Rating Comparisons Between Subsamples (Time 1)	89
Table 29 Mean Interpersonal Attractiveness Rating Comparisons Between Subsamples (Time 2)	90
Table 30 Sex Role Type Differences in Emergent Leaders Versus Nonleaders	92
Table 31 Leader Interpersonal Attractiveness and Effectiveness Ratings Categories Comparisons (Time 1)	94
Table 32 Leader Interpersonal Attractiveness and Effectiveness Ratings Categories Comparisons (Time 2)	94
Table 33 Leader Physical Attractiveness and Effectiveness Ratings Categories Comparisons (Time 1)	95
Table 34 Leader Physical Attractiveness and Effectiveness Ratings Categories Comparisons (Time 2)	95

<u>Table</u>	<u>Page</u>
Table 35 Mean Leader Effectiveness Ratings Comparisons Between Leader Types (Time 1)	97
Table 36 Mean Leader Effectiveness Ratings Comparisons Between Leader Types (Time 2)	98
Table 37 Mean Leader Effectiveness Ratings Comparisons Between Male and Female Leaders	99
Table 38 Mean Group Performance Score Comparisons Between Male and Female Leaders and Among Sex Role Types (Time 2)	100
Table 39 Goodness of Fit Statistics for the Leader Effectiveness Models	102
Table 40 Expected Odds of Receiving High Leader Effectiveness Ratings (Time 1)	104
Table 41 Expected Odds of Receiving High Leader Effectiveness Ratings (Time 2)	105

CHAPTER 1  
INTRODUCTION

Purpose of the Study

The purpose of this study is to explore the effects of sex-role and attractiveness stereotypes in predicting the identity and effectiveness of emergent leaders in small work groups, where extensive interaction would determine or influence these effects. Examining the combined processes of emergent leadership and interpersonal attraction within small task groups working on "sex-neutral" tasks offers a unique opportunity to evaluate how and why individuals are identified as leaders, what characteristics they possess, and their effectiveness in leading the group toward its task goal.

The present study will test predictions derived from selected theories and research from emergent leadership, interpersonal attraction and small group performance literature. Relevant empirical research provides support for these predictions which will contribute to our understanding of how interaction processes operate within groups to make some groups and leaders more effective than others, and the personal and situational characteristics which effective leaders and groups possess. Little data exists on the effects of sex, gender-related traits and attractiveness in predicting the identity and effectiveness of emergent leaders. This study views leadership and attractiveness as components of a dynamic process, in sharp contrast to most research which assumes that leadership and attractiveness are static phenomena (e.g., the assumption that

a leader is a given cause of group performance or the predominant use of yearbook facial photographs to manipulate attractiveness in research.

#### Importance of the Topic

Knowledge gained from this research will be valuable to organizations seeking to improve their productivity and increase employee morale, to compose well-balanced, creative work groups (where all points of view are freely shared), in training managers to be aware of how stereotypes operate in selecting and evaluating employees, in placing, counseling and training women and ethnic groups, in managing and avoiding sexual harassment problems, and in enhancing organizational commitment and morale.

The extant research on emergent leadership is notable in its scarcity. Yet a significant amount of time in organizations is spent in groups which do not have an appointed leader possessing legitimate authority. Committees, task forces, liaison groups, and ad hoc, informal groups of all types are utilized for important functions in applied settings. Research to date has primarily addressed formal, legitimate leaders' performance and style. Additional understanding of the emergent leadership process, rather than merely the style of those chosen as leaders, would not only increase our knowledge of organizational functioning, but also would have practical implications for those called upon to form, utilize, and enhance the effectiveness of groups in organizations.

Recent research has documented the powerful and pervasive

influence of physical attractiveness on person perception, interpersonal relations and differential socialization (e.g., Adams, 1977; Berscheid and Walster, 1974; Langlois and Stephen, 1981). Attributions of an individual's ability, social skills and effectiveness are often made solely on the basis of appearance (e.g., Dion et al, 1972; Benassi, 1982) or solely on the basis of sex (e.g., Bankard and Wittenbraker, 1980; Lord, Phillips and Rush, 1980; Shinar, 1978). Moreover, these attributions seemingly lead to differential treatment such that attractive persons generally receive more positive, and unattractive persons more negative sanctions from others (e.g., Snyder et al, 1977; Langlois and Downs, 1979; Stephan and Tully, 1977). The societal emphasis on physical appearance is readily apparent in the media, emphasizing sex-role and attractiveness stereotypes in communication (e.g., television advertisements for cosmetics, physical fitness, and weight reduction, etc.) (Berscheid and Walster, 1974).

Some researchers (e.g., Bonds, 1980; Langlois and Stephen, 1981) argue that physical appearance is as significant as age, sex and race in some areas of psychological and social inquiry. The consistent patterning of attributions and behaviors based on sex and attractiveness (well documented in research) has implications for organizations. The interface of sex-role and attractiveness stereotyping is an important area of inquiry, of particular interest to organizations seeking to improve the creativity and productivity of their work groups.

#### Measures

Measures of the predictor variables include subject sex, sex-

role identity, and physical and interpersonal attraction. Measures of the dependent variables include follower perceptions of leadership status (leader or nonleader) and leader effectiveness. Group performance, time spent working together, familiarity, individual grade point average, age and major concentration of study were measured as potential confounds. In addition, subjects were asked their opinion about the "sex-neutrality" of the tasks as a manipulation check. Except for the questions about the "sex-neutrality" of the task, all measures were taken twice, using a sample of small task groups performing together over a period of twelve or more meetings.

#### How This Study Differs From Previous Research

Reviews of the social psychological and management and organizational literature using sex and attraction as independent variables indicate that attraction has recently gained prominence as an important issue in the areas of leadership and small group performance. The influence of sex-role and attractiveness stereotypes has been recognized as potential biases in personnel recruiting and selection decisions (e.g., Carroll, 1966, 1969; Cash et al, 1977; 1981; Nolan, 1978; Bonds, 1980; Noe, 1984). This study differs from previous work in the following ways:

- (1) In examining how sex and attractiveness affects being identified and perceived as an effective leader in small work groups performing "sex-neutral" tasks with no leaders appointed a priori;
- (2) In using live subjects in task groups instead of pictures or videotapes when evaluating an individual's physical or interpersonal

attractiveness;

(3) In documenting the effects of sex-role, physical and interpersonal attractiveness in "natural" groups with members having extensive interpersonal contact over 12 or more meetings (as opposed to "short-term" laboratory experiments); and

(4) In using gender, attractiveness and gender-trait information as potential explanatory variables in assessing follower perceptions of leadership status and effectiveness.

Essentially, this study encompasses predicting leaders in small task groups, based on follower perceptions of their sex, attraction, and the leader's self-described sex role type. Selected reviews of theory and research in the areas of emergent leadership, physical and interpersonal attraction, and small group performance have been included in the next three chapters, respectively. The derivation of hypotheses, research method and design, results and implications are discussed in the last four chapters, respectively. Appendix A includes the instruments used in this study.



## CHAPTER 2

### REVIEW OF THE EMERGENT LEADERSHIP LITERATURE

#### Overview

For a long time, leadership has been studied in terms of behavioral styles, traits, and situations (e.g., Bass, 1981; Stogdill, 1974). Two overriding impressions conveyed by a survey of the research over the last two decades are a dissatisfaction with these approaches (e.g., Dansereau, Graen and Haga, 1975) and a need to redirect interest in leadership as an ongoing process rather than as an outcome or result (e.g., Hollander and Julian, 1969; Lord, 1977; Hollander, 1983).

In general, leadership theory and research are built on studies of appointed or elected leaders (Stogdill, 1974) with the assumption that the formal position (either appointed or elected) provides the leader with legitimacy and power, and that the leader impacts group performance. This view neglects the fact that leaders must emerge to deal with new situations and fill needs not met by formal leaders. It also diminishes the role of needs and perceptions of followers and the ongoing interactions within groups.

Relative to studies with appointed or elected leaders, leaders who emerge from the group as a result of the group process have been given little attention in research (e.g., Schneier, 1978; Eagly, 1970; Meeker and Weitzel-O'Neill, 1977; Eskilson and Wiley, 1976; Stein et al, 1973, 1975). By redirecting research toward the study of emergent leadership, the process issues of leadership may be more adequately addressed.

### Definitions and Determinants of Emergent Leadership

Emergent leadership has been defined in terms of differential power relationships among members of a group, as a relationship between the leader and the led in which the leader influences more than he or she is influenced. Hollander (1964) defines an emergent leader as an individual with status that permits him or her to deviate from group norms. In his "idiosyncrasy credit" theory of emergent leadership, Hollander (1964) states that leaders derive status from followers who may accord or withdraw it, in an essentially free interchange within a group context. "Status" describes the relationship of an individual to certain others and their attendant behavior toward him or her. Interpersonal perception and sociometric choice are parts of this process.

The construct of "idiosyncrasy credit" refers to status as a summative consequence of being perceived by others as contributing to the group's task and living up to expectancies applicable at any given time (Hollander, 1964). Which person achieves and retains leadership depends upon the perceptions held by others, residing in credits accrued from past interactions. Social interaction gives rise to an implicit interpersonal assessment, including personal (e.g., sex, attractiveness, etc.), task-related elements and behaviors matched by the perceiver against some social standard, referred to as an "expectancy".

When an individual fulfills these conditions over time, he or she accumulates "idiosyncrasy credits", which permit innovation in the group as one evidence of social influence. The task competent

follower who conforms to the common expectancies of the group at one stage may become the leader at the next stage (depending upon the task, follower perceptions, etc.). Correspondingly, the leader who fails to fulfill the expectancies associated with his or her position of influence may lose credits and be replaced by a follower. According to Hollander (1964), there are two factors of particular importance in an individual's attainment of emergent leadership, i.e., competence in the group's central task and being perceived as a member of the group (i.e., living up to member expectancies, mustering group support, fulfilling group goals, commanding trust and esteem from others, etc.).

Identity as an emergent leader has been predominantly measured by sociometric choice, i.e., simply asking all members of the group to select the individual who emerged as a leader (Bass, 1981). A number of variables have been shown to determine leadership status within a group. According to Hollander (1964), followers become leaders by showing task competence, guiding the direction of the group, mustering group support, etc. Other studies have shown (in addition to those of Hollander (1964)) consideration (i.e., being a good facilitator and allowing others in the group to contribute), consistent membership and active participation in the group, and effective communication are also determinants of emergent leadership status (Bass, 1981). Other factors associated with leadership status include being perceived as talkative, active, quick to respond, directive, dominant and assertive (Bass, 1981; Stogdill, 1974).

### Emergent Leadership Theories and Research

A number of theoretical approaches to the study of emergent leadership have been developed. Table 1 summarizes the most prominent theories.

A most prominent theory of emergent leadership is Hollander's (1958) "idiosyncrasy credit" concept discussed above. It suggests that a person's potential to be influential arises out of the positive impressions others hold of him or her. Leadership status is defined in terms of credits, representing an accumulation of positive impressions held by others as a consequence of being perceived by others as contributing to the group's tasks and living up to member expectancies.

Reinforcement theories have been developed by Bales (1953), Stogdill (1959) and Bormann (1969). According to Bales (1953), the emergence process begins with a member making proactive statements he or she feels contribute to the immediate task. The member will continue unless checked by negative feedback, and others will expect further effective behavior. These expectations raise the status of the group member; leadership will be ascribed to the person with the highest status. Bormann (1969) and Stogdill (1959) extended Bales' (1953) theory by including a description of the process of emergence and the group attainment of its goal as a primary reinforcer of a member's influence attempts. All three theories emphasize task competence and member expectations as determinants of leadership status.

The social exchange theory of emergent leadership sees the leader

Table 1

Emergent Leadership Concepts and Theories

<u>Developer/ Researcher</u>	<u>Concept/Theory</u>	<u>Description</u>
Hollander (1958)	Idiosyncrasy Credit	Leadership status is obtained as a member "accumulates" credits, or positive impressions by contributing to the task and living up to member expectations.
Bales (1953)	Reinforcement Theory	A member obtains leadership status when contributions to the group are accepted and consented to by others in the group.
Bormann (1969)	Reinforcement Theory Extension	Leadership status is gained when the member's influence assertions are consistently reinforced; the leader demonstrates the necessary capabilities.
Stogdill (1959)	Reinforcement Theory Extension	A member gains leadership status by helping the group obtain its goals.
Jacobs (1971)	Social Exchange	Leadership status is gained when a member provides benefits unavailable from other group members.
Stein (1978)	Valence Model	A member obtains leadership status when that member accumulates "valence points" by displaying verbal and nonverbal behaviors perceived as leaderlike by group members.

as a provider of benefits which the group cannot do without or obtain from others (Jacobs, 1971). The valence model of leadership emergence (Stein et al, 1978) describes a process by which members of groups become "differentiated" until one becomes the leader. The group process is confined to three stages: orientation, conflict and emergence (when one member's "valence points", similar to Hollander's (1958) "idiosyncrasy credits", accumulates and he or she consolidates his or her position as leader).

Each of the conceptual models (see Table 1) described above has been investigated and supported to some extent in research (Bass, 1981).

#### Similarities and Differences

All theories view emergent leadership as a transactional process between leaders and followers, giving importance to the role and perceptions of followers, with an emphasis on how the emergent leader influences group performance. All theories demonstrate how lower status persons may gain influence by displaying task competence, living up to member expectancies, helping the group obtain its goals, or demonstrating what others perceive to be "leaderlike" behaviors. All theories rely upon positive impressions of one member, whose behaviors are reinforced more than the others in the group.

Most theories rely upon the key concepts in Hollander's (1958) "idiosyncrasy credit" theory of emergent leadership. The social exchange theory (Jacobs, 1971) differs in the sense that all members are not equally likely to become a leader because one member may have material benefits unavailable from others. Further, Stein (1978) focuses

almost exclusively on nonverbal behaviors which are perceived as "leaderlike", i.e., participating selectively with demonstrated knowledge of the task or using body language to denote higher status or impress others in the group.

The goal of much leadership research is to determine which factors influence leader success (in terms of member satisfaction and completion of the group goal or task), particularly the effects of leadership on group performance. According to research, leaders and followers may change roles in different phases of group development, but the most effective groups show consistency in leadership status (Bass, 1981, p. 485). Similarly, groups change leaders informally if leaders cannot help groups obtain task goals (Bass, 1981). Groups tend to return to the same task leader when the task performed in Time 2 is the same as that in Time 1 (Bass, 1981, p. 482). Hence, being identified as a leader in one situation may enhance one's chances of being selected for other leadership positions, particularly when similar tasks are involved.

#### Sex Effects in Emergent Leadership

Many studies since 1965 have compared leadership styles of males and females (e.g., see reviews by Terborg, 1977; Brown, 1979; White et al, 1981), again mostly based on research with appointed or elected leaders. This research has focused on predicting or explaining satisfaction, leader style or leader behavior as a result of such traditional variables as initiating structure and consideration (e.g., Dobbins and Platz, 1984), and for the most part ignoring the process issues

of leadership. Research addressing emergent leadership has largely ignored sex as a variable with a few exceptions (e.g., Eskilson and Wiley, 1976; Schneier, 1978; Schneier and Bartol, 1980; Carbonell, 1984; Megargee, 1969). Results of these studies show that males emerge more often than females as leaders in laboratory experiments whereas males and females are equally likely to emerge as leaders in field studies.

Hollander and Julian (1969) have noted that the attractiveness of a group leader is related to his or her ability to assist the group toward achievement of its goals rather than to gain superior outcomes for himself or herself. However, before an individual's ability to promote group achievement can be assessed directly, people in the group are likely to base their judgments of the leader's attractiveness on other factors, e.g., personal and social characteristics deemed desirable, status, competence, power, prestige, etc. Hence, physical attractiveness, social desirability, and sex are likely to influence perceptions of an individual's acceptance as a leader.

### Summary

The importance and usefulness of viewing leadership as a dynamic social process by studying how individuals emerge as leaders in groups has been noted by theorists and researchers for a long time (e.g., Stogdill, 1974; Hollander, 1964; Hollander and Julian, 1969; Lord, 1977), although little work has been done when compared to research with appointed or elected leaders. These process issues of leadership



may be addressed by the study of emergent leadership, where the leader is viewed as one of several interacting parts of the process instead of as a given cause of the group's performance. Of particular interest to organizations is the question of what characteristics are possessed by a group member who emerges from the group process as an effective leader.

Process oriented research, i.e., the dynamic, transactional process approach inherent in the study of emergent leadership, is especially useful in examining differences between males and females as leaders (Hollander, 1983). The importance of including sex and gender traits in research in leadership has been noted (e.g., Bass, 1981; Deaux, 1984, 1985). This need, coupled with the needs to redirect research toward the processes which guide behavior in groups, the study of leader behavior and effectiveness as dependent variables (Vroom, 1976), and the dynamic nature of physical and interpersonal attraction (Brown et al, 1985), are partially filled by the present study.

Vroom (1976) suggests that we need a descriptive model to explain processes which govern behavior of occupants of leadership positions. Deaux (1984, p. 113) suggests that "to fully deal with the ways in which gender is influential, one must ultimately deal with the processes involved...." She argues that a limitation common to the prior research approaches including sex and gender traits is the static nature of the assumptions upon which the research is based. She argues that "attention should be directed toward more active interaction sequences, toward the processes through which gender

information is presented and acted upon." She recommends two directions to research -- to consider the choices that men and women make as opposed to the capabilities they demonstrate and to explore the process of interaction and the sequences of expectancy confirmation. This study, by focusing upon Hollander's (1958) theory of emergent leadership in which group members choose a leader informally, and reinforce behaviors which conform to their expectancies, meets Deaux's (1984) requirements.

Brown, Cash and Noles (1985) suggest that the dynamic properties of attraction should be addressed in research. They point out that researchers have assumed that attraction is a static phenomenon in conducting research almost exclusively with pictures (only a few videotapes have been used) to measure attractiveness.

In sum, the static nature of research assumptions in the areas of leadership, sex and attraction has been criticized as severely limiting and unrealistic. The present study attends to these criticisms by examining the dynamic group processes (taking into account gender traits, sex and attraction) in predicting the identity in mixed sex groups working together over a period of twelve or more sessions.

#### Implications for Organizations

Some questions of particular relevance to organizations may be addressed within this emergent leadership context. For example, are there characteristics of the social process which form a basis for a prediction of whom may be identified as an effective leader? Do emergent leaders have certain characteristics in common (e.g., are

they more physically attractive, interpersonally attractive, androgynous or "sex-typed" than non-leaders?) How are the most effective leaders of the best performing groups different than the least effective leaders of the worst performing groups?

Essentially, to emerge as a leader, one must participate; to remain acceptable to others as a leader, one must exhibit competence (Bass, 1981, p. 97). While this is intuitively acceptable, are there factors which may inhibit individuals from participating (e.g., like being the only female in an all-male group)? Are there stereotypes operating which influence behavior and acceptance of certain individuals? Does the influence of sex-role and attractiveness stereotypes on perceptions of female competence preclude their being chosen as leaders? Does attractiveness interfere with or promote an individual's ability to influence the group? Does a blending of masculine and feminine characteristics enhance or lessen an individual's chance to become identified as an effective leader? Does being the only female in an all-male group, or the only male in an all-female group preclude being chosen as a leader or inhibit participation?

Answers to these questions have implications for personnel selection, counseling, placement and training (e.g., organizations interested in identifying and developing women leaders), group composition, upward mobility programs, and organizational structure. Emergent leaders are important to organizations, in assuming leadership responsibilities in leaderless groups (e.g., task forces, ad hoc committees, informal meetings, briefings, work teams, etc.) or in groups where leaders are incompetent or deposed. Being identified

as a leader in one situation will enhance one's chances of being selected for other leadership positions, particularly if similar tasks are involved (Bass, 1981, pp. 480-485). This is particularly important for women, typically under-represented in leadership positions (Hollander, 1983).

## CHAPTER 3

### REVIEW OF THE ATTRACTION LITERATURE

#### Conceptual and Operational Definitions

Interpersonal attraction. Most theorists agree that interpersonal attraction is a "positive attitude toward another person" (Berscheid and Walster, 1978). It has been operationalized in a number of ways in research in measuring and manipulating the variable. It has been used as an independent variable to predict liking, and a dependent variable, a function of value or attitude similarity, personality trait favorability, proximity, and other factors.

Measures of interpersonal attraction include Byrne's (1971) Interpersonal Judgment Scale, which has been used extensively in the research, and unobtrusive measures like eye contact, gaze, touching, and the distance one stands from another.

Physical attraction. Physical attraction has been defined as a dimension of physical beauty, or a positive attitude toward another person's physical body and appearance (Nolan, 1978; Berscheid and Walster, 1974). It has been used as an independent variable predicting impression formation (Miller, 1970), romance, dating and marriage relationships (Berscheid and Walster, 1974; Stroebe, 1977).

Noting the lack of conceptual definitions and specific criteria used by judges when making evaluations of physical attractiveness, Berscheid and Walster (1974) succinctly outline the "truth by consensus" method which has been used most extensively in research:

"If a significant number of 'judges' designate a person as physically attractive, then that person is defined as physically attractive. Whether it was the dimple on the chin...whether more redheads than brunettes were classified as attractive is not typically a matter of concern." (p. 181)

Huston and Levinger (1978) suggest that attempts to elucidate the ingredients of physical beauty may prove fruitless. However, there are a number of studies found under the general label of "body-cathexis" which have attempted to outline and understand the relationship between an individual's attitudes toward the various parts of his or her body and feelings about themselves (i.e., their self concepts) (e.g., Secord and Jourard, 1953; Mahoney and Finch, 1976; Budge, 1981).

Recent research in the organizational literature has operationally defined physical attractiveness in terms of three items: height, weight, and facial attractiveness (e.g., Ross and Ferris, 1981). Most research in this area has relied upon the "truth by consensus" method, however, using judges to evaluate pictures or videotapes of individuals (e.g., Beehr and Gilmore, 1982; Cann et al, 1981; Cash et al, 1977; Dipboye et al, 1977; Udry and Eckland, 1982).

While definitions of interpersonal and physical attraction may vary greatly, people typically show a great deal of agreement in their evaluations of others (Berscheid and Walster, 1974; 1978). Despite the frequently heard assertion that individual differences in criteria for physical attractiveness are impossibly vast, and that beauty is entirely "in the eye of the beholder" (e.g., Cash and Janda, 1984), there is a great deal of consensus among judges when physical attractiveness ratings are actually obtained and

evaluated. For purposes of this study, interpersonal attraction is defined as a "positive attitude toward another person", and physical attraction is defined as a positive attitude toward another person's physical body and appearance.

### Theories of Attraction and Supporting Research

Many theoretical approaches to the study of attraction have been proposed and tested. Table 2 summarizes some of the most prominent models.

Impression Formation Models. Impression formation models, usually cast within an information-processing or reinforcement-affect framework, tend to focus on one person's initial awareness of another and first impressions, and tend to ignore how attraction is developed and maintained. Most of the attraction research over the past twenty years has been dominated by testing of the reinforcement-affect and information integration models of interpersonal attraction (e.g., Cooksey and Bell, 1982; Clore and Byrne, 1974; Ajzen, 1977).

Investigators of the reinforcement affect model have tested the similarity-attraction relationship most extensively. The experimental research in this area is dominated by manipulations of similarity, especially attitude similarity. Byrne's (1971) Interpersonal Judgment Scale has been used most frequently to measure interpersonal attraction. The similarity-attraction relationship suggests that similarity of attitudes provides validation for one's own beliefs, and that such validation is positively reinforcing.

Investigators of the information processing models of attraction are concerned with information and attributions about individuals

Table 2

Attraction Theories

<u>Developer/ Researcher</u>	<u>Theory/ Concept</u>	<u>Description</u>
Clore and Byrne (1974)	Reinforcement- Affect Model	Perceptions of attitude similarity are reinforcing and may result in attraction. Interpersonal attraction or liking is a function of attitude similarity.
Ajzen (1977)	Information Processing Models	Attraction depends on one's information about another. Mechanistic approach: attraction toward another is determined solely on the information to which one is exposed. Constructive approach: attraction is determined by the information to which one is exposed and the inferences one makes about another.
Stroebe (1977)	Self-esteem	Attraction toward another is determined by the self-esteem of an individual.
Goffman (1952)	Matching Hypothesis	Individuals choose dating partners similar to themselves in social desirability.
Anderson (1962)	General Integration Theory	Attraction toward another depends on the items of information about another, and the assigned weights (e.g., items related to race, sex, intelligence, and personality are weighted differently in determining one's attraction to another).
Fishbein and Ajzen (1975)	Perceived Attributes Model of Attraction	Attraction is a function of the attributes another is perceived to possess (including the subjective values associated with those attributes).
Murstein (1977)	Stimulus- Value-Role Theory	Attraction depends on the exchange value of the assets and liabilities that each of the parties brings to the situation.



Table 2, Attraction Theories, continued

<u>Developer/ Researcher</u>	<u>Theory/ Concept</u>	<u>Description</u>
La Gaipa (1977) and others	Social Exchange Theories	Individuals engage in social behavior in order to maximize profit by achieving the most favorable ratio of rewards to costs.
Heider (1958)	Balance Theory	When two individuals have similar attitudes toward an outside object, pressures toward balance arise which tend to generate interpersonal attraction. When dissimilar attitudes exist, pressures toward balance tend to generate disliking.
Winch (1958)	Complemen- tarity Theory	When the needs of two people combine in a complementary way, attraction results.
Lott and Lott (1974)	Reinforcement (Reward) Theory	Liking and affection result for those associated with an experience of reward.

(Ajzen, 1977). There are two theoretical approaches within the information processing framework, i.e., the mechanistic and constructive approaches. The mechanistic approach considers only the items of information to which an individual is exposed, whereas the constructive approach assumes that information about a person may lead to the formation of beliefs about that person's attributes (based on inferences).

Typical research procedures employed in testing the models of impression formation are to provide subjects with standardized information (usually concerning personality traits) about another person and ask subjects to rate their attraction toward that person. In general, the models predict the same results under similar circumstances.

Other theoretical approaches include self-esteem theory (Stroebe, 1977), the Stimulus-Value-Role Theory (Murstein, 1977), balance theory (Heider, 1958), complementarity theories (e.g., Winch, 1958; Schutz, 1960), and attribution theories (Duck, 1977).

All theories of interpersonal attraction seek to predict or explain why certain individuals are attracted to others, and the effects of this attraction (e.g., liking, spending time with another person, dating, developing relationships, etc). Attraction, conceptually defined as a positive attitude or evaluation of another, is influenced not only by what a person does for another directly (e.g., providing one with attention, help, or praise), but also by the nature of the social and personal characteristics that person possesses and our

evaluation of those characteristics (Lott and Lott, 1974). For example, persons who are judged to be physically attractive are better liked by persons at the outset than are physically unattractive persons (e.g., Bryne et al, 1968; Stroebe et al, 1971; Berscheid and Walster, 1974).

Two underlying themes of the physical and interpersonal attraction theories are that attraction is based upon some reinforcing or rewarding characteristic, e.g., similar attitudes or values, socially desirable traits, physical attractiveness, etc., and that this reinforcement results in liking, dating, establishing relationships or partnerships, etc.

These theoretical formulations and supporting research (which follows) have relevance to the present study since interpersonal and physical attraction are used to predict sociometric choice of an accepted leader and the leader's effectiveness in small work groups interacting together over an extended period of time. Of particular interest is the typical use of descriptive adjectives or traits to measure the social desirability or attractiveness of strangers to subjects in testing the information processing theories of attraction.

Frequently, interpersonal attitudes (e.g., forming a basis for attraction) about another person are measured by rating a series of descriptive adjectives following observation of the person (e.g., Lott and Lott, 1974; Anderson, 1968; Ajzen, 1977). The information processing theorists argue that attraction toward another is based upon how an individual processes this trait information and forms an evaluation. Quite analogously, the reinforcement-affect theorists argue that "good" traits will function as rewards because inter-

action with persons possessing such traits is likely to result in satisfying outcomes (Lott and Lott, 1974). Conversely, interaction with persons possessing "bad" traits is likely to lead to interpersonal hostility or disliking. Under ordinary circumstances, similarity of personality traits seem to be rewarding for the same reason that "good" traits are, i.e., positive, satisfying interaction. Attitude similarity leads to a different source of reward -- that of validating one's interpretation of events and enabling one to operate more effectively within the social environment (Clore and Byrne, 1974).

This study seeks to show that ratings of interpersonal attractiveness or social desirability are predictive of being sociometrically identified as an accepted and effective leader by the group. Krebs and Adinolfi (1975) found that sociometrically accepted persons of both sexes were more attractive than "isolates". There is also evidence that experts (i.e., leaders) are generally better liked, and that higher status persons (i.e., emergent leaders) are more liked than lower status persons (Tedeschi, 1974). An individual's social desirability or attractiveness rating is hypothesized to have a predictable relationship to their sociometric position within their group (i.e., as a leader or nonleader), and to the leader's rating of effectiveness.

Clore and Byrne (1974) argue that similar attitudes are reinforcing and result in interpersonal attraction because they provide validation and confirmation of one's own beliefs. Anderson (1968) and the information processing theorists argue that socially desirable

traits are reinforcing and result in interpersonal attraction because they provide the anticipation of rewarding, successful interaction and relations.

#### Research Not Directly Related to Organizational/Work Issues

There is a large body of research which explores the relationships between physical and/or interpersonal attraction and perceptions, behaviors, attitudes, values, personality traits, and many other diverse variables of interest to researchers in social psychology. Reviews of this research (e.g., Huston and Levinger, 1978; Berscheid and Walster, 1974, 1978; Cash, 1981; Adams, 1977; Duck, 1977) show substantial, consistent support for three findings particularly relevant to this research.

These results confirm that there is a physical attractiveness stereotype labeled the "what is beautiful is good" hypothesis (Dion et al, 1972; Berscheid and Walster, 1974; Adams, 1977; Cash, 1981). The stereotype may have a bi-directional nature (Hickling et al, 1979; Owens and Ford, 1978), i.e., "what is good is beautiful". Additionally, there is support for the self-fulfilling nature of this stereotype (Snyder, 1982; Downs et al, 1982; Snyder et al, 1977). In other words, individuals tend to behave in a manner consistent with the expectations which others hold of them, essentially confirming others' behavioral expectations. For example, physically attractive individuals generally receive more positive sanctions from others, who expect them to be more socially skilled, intelligent, etc.

Huston and Levinger (1978) present some findings particularly

relevant for organizational settings. Results of studies suggest that attractive individuals are given preferential treatment, are seen as more responsible for good deeds and less responsible for bad ones, have more impact when evaluating others, and have their performances upgraded. Others are more responsive to attractive persons, more ready to provide them with help, and more willing to work hard to please them (Huston and Levinger, 1978).

Research in the area of attractiveness stereotyping has become sophisticated, as indicated by the recent development of an instrument to measure physical attractiveness stereotyping (Downs et al, 1982). This instrument, somewhat analagous to the Women as Managers scale (Spence and Helmreich, 1972), designed to measure attitudes toward women in management, is designed to measure stereotyping based upon physical attraction.

#### Physical Attractiveness Stereotype

The results of a number of laboratory studies and experiments indicate the existence of a physical attractiveness stereotype -- i.e., physically attractive individuals are presumed to have more socially desirable traits, to achieve greater social and professional success than unattractive persons, and to lead happier lives than the unattractive (Dion et al, 1972; Berscheid and Walster, 1974; Adams, 1977).

In their classic study, Dion, Berscheid and Walster (1972) found that the expectations of men and women concerning the personality characteristics possessed by physically attractive people were virtually the same. Physically attractive people were perceived to

be more "sexually warm and responsible, sensitive, kind, strong, interesting, poised, modest, social, and outgoing" than persons of lesser attractiveness. The authors labeled this stereotypical view as "what is beautiful is good".

A number of studies have shown that a child's physical attractiveness affects the teacher's expectations of the child's intellectual potential (e.g., Clifford and Walster, 1973; Demeis and Turner, 1978; Rosenthal and Jacobson, 1968). The more attractive the child, regardless of the sex of the child or teacher, the higher the educational potential, IQ, and social skills the teacher assumed the child to have.

In studies designed to test the effects of physical attractiveness on perceptions of counselors' and instructors' effectiveness, ability, and competence, results show consistently that physical attractiveness has a major impact on perceptions of effectiveness and ability (e.g., Lombardi and Tocci, 1979; Vargas and Borkowski, 1983; Benassi, 1982; Elovitz and Salvia, 1982; McKee and Smouse, 1983).

Physical attractiveness has been found to influence evaluations of performance as well (e.g., Landy and Sigall, 1974; Anderson and Nida, 1978; Dion and Stein, 1978; Ross and Ferris, 1981; Blouin, 1982). Using essays that were attributed to either an attractive or unattractive writer, Landy and Sigall (1974) found that the less physically attractive the writer, the lower the subjects' evaluations of the essays. Anderson and Nida (1978) extended the previous study by Landy and Sigall (1974) and found that highly attractive persons were given the highest evaluation by members of the opposite sex, and persons of medium attractiveness received the highest evaluations

from members of the same sex.

In an organizational field study, Ross and Ferris (1981) found that physical attractiveness may lead to higher salary and better performance evaluations among accountants in two public accounting firms.

Research has demonstrated a bidirectional nature of the "what is beautiful is good" hypothesis, i.e., "what is good is beautiful." Studies have shown that persons of high occupational status are perceived as more attractive than the same individuals introduced as persons of low occupational status (e.g., Hickling et al, 1979; Owens and Ford, 1978).

In a well-known study by Snyder, Tanke and Berscheid (1977), the physical attractiveness stereotype was found to have a self-fulfilling nature. Anderson and Bem (1981) extended their study to include androgyny as a potential explanation of individual differences in responsiveness to physical attractiveness. Both studies indicate that individuals who are perceived as physically attractive come to behave in a "friendly, likeable, and sociable manner," (Snyder et al, 1977).

The results show convincing evidence that a physical attractiveness stereotype exists in which attractive people are attributed a wide range of social skills and status, that "good" people are seen as attractive, and that this stereotype, like others, may have a "self-fulfilling" nature.



### Research in the Management and Organizational Literature

During the last ten years, a number of studies have extended the research in non-work settings to organizational settings. Most of the studies examining attractiveness effects have concerned selection and employment decisions. These studies are summarized in Table 3.

In general, studies investigating the impact of physical attractiveness on employment decisions involving sex-neutral or "in-role" jobs support the research from social psychology which predicts that physical attractiveness is an advantage when forming impressions and establishing relationships. Generalizing to employment situations is, however, problematic. A number of factors influence predictions, including sex-role stereotyping and job type (i.e., whether the job has been held traditionally by males or females).

Studies focusing on attractiveness effects in hiring decisions (e.g., Bonds, 1980; Beehr and Gilmore, 1982; Boor, 1983; Cann et al, 1981; Cash et al, 1977; Dipboye et al, 1975, 1977; Greenwald, 1981; Heilman and Saruwatari, 1979; Heilman and Stopeck, 1985; Jackson, 1983; Noe, 1984; Kushnir, 1982; Larkin and Pines, 1979; Nolan, 1978) have generally found that attractive applicants are preferred over unattractive applicants unless the applicants are applying for "out of role" jobs. Hence, job type (i.e., traditionally masculine or feminine) appears to moderate the effects of the attractiveness stereotype, suggesting that sex of applicant and job type may interact in a predictable way.

Table 3

Summary of Selected Studies Using Attractiveness  
As a Causal Variable

<u>Researcher</u>	<u>Description/Conclusion</u>
Beehr and Gilmore (1982)	Applicant attractiveness and the rater's perceived relevance of attractiveness for the job influenced the hiring decision. Attractive applicants were preferred for jobs considered to require attractive people (e.g., extensive contact with the public). Study used only males as applicants.
Bonds (1980)	Attractive applicants were preferred to unattractive applicants by 32 white male recruiters evaluating bogus resumes.
Boor (1983)	Physical appearance influenced interview evaluations and selection of women only applying for a medical residency training program.
Cann et al (1981)	Male and attractive applicants were preferred for a job as a department store manager by students rating bogus resumes.
Cash et al (1977)	Attractive male candidates were preferred for masculine jobs; attractive female candidates were preferred for feminine jobs. Seventy-two professional male and female personnel consultants evaluated bogus resumes.
Cash and Janda (1984)	Less attractive, less femininely groomed women were selected as more suitable for managerial positions by corporate executives.
Dipboye et al (1975)	Attractive males were preferred for a managerial position by students and professional interviewers evaluating bogus resumes.
Dipboye et al (1977)	Male applicants chosen over female applicants and attractive chosen over unattractive applicants.
Greenwald (1981)	Physical attractiveness had a negligible effect on perceived suitability for hiring of women seeking entry-level clerk-typists positions.
Heilman and Saruwatari (1979)	Unattractive women were preferred for the managerial position; attractiveness was a hindrance for women seeking out of role jobs.

Table 3, Summary of Selected Studies Using Attractiveness as a Causal Variable, Continued

<u>Researcher</u>	<u>Description/Conclusion</u>
Heilman and Stopeck (1985)	Success of attractive women was attributed most often to reasons other than skill, while the ascent to upper management of plainer women and attractive men was credited to ability.
Jackson (1983)	Masculine and androgynous persons were preferred for masculine occupations; feminine and androgynous persons were preferred for feminine jobs regardless of biological sex or physical attractiveness by 118 personnel consultants evaluating bogus applicants for masculine, feminine and sex-neutral occupations.
Kushnir (1982)	Attractive males chosen most often as business partners over unattractive males and attractive or unattractive females.
Larkin and Pines (1979)	Overweight individuals received consistently lower ratings for hiring, regardless of actual demonstrated job performance on video-tape.
Noe (1984)	Males were preferred for masculine jobs; females were preferred for the feminine job by professional college recruiters evaluating bogus resumes.
Nolan (1978)	Found a significant race/sex/physical attractiveness interaction for communicative ability using students to rate job applicants appearing on video tapes.

### Effects of Job Candidate Sex, Attractiveness and Job Type

In studies where the effects of candidate sex, physical attractiveness and job type on interviewer evaluations have been manipulated, Cash, Gillen and Burns (1977), Noe (1984), Heilman and Saruwatari (1979), Heilman and Stopeck (1985), Cann and others (1981), Dipboye and others (1977), and Jackson (1983) have found that males receive more favorable evaluations for "masculine" jobs (e.g., industrial engineer, manager or executive) and females receive more favorable evaluations for "feminine" jobs (e.g., nurse or secretary).

Most of these studies have used students in a university classroom to evaluate resumes of bogus job applicants, with small pictures attached to the resumes or applications which have been judged a priori to be of attractive or unattractive levels. A few studies have used professional recruiters on the college campus (Noe, 1984) or personnel consultants (Cash et al, 1977) to evaluate these "paper people" (i.e., fictitious job applicants with sex, attractiveness, qualifications or other factors manipulated via their resumes or job applications) hoping to increase the external validity of their results. The same effects were found, i.e., attractive females are preferred for jobs traditionally held by women and attractive males are preferred for jobs traditionally held by males.

Several studies have shown that attractiveness may actually be a hindrance for women seeking "out of role" positions. Unattractive women were preferred over attractive women for a managerial

position when evaluated by students in a role-play study (e.g., Heilman and Saruwatari, 1979) and by corporate executives (e.g., Cash and Janda, 1984). Cash and others (1977) found that physical attractiveness helps unless seeking jobs considered inappropriate for the sex of applicant (e.g., a male seeking a secretarial position).

In studies assessing business partnership potential, attractive males were consistently chosen as potential business partners (Ross and Ferris, 1981) over unattractive males or attractive females (e.g., Kushnir, 1982). In a recent study by Heilman and Stopeck (1985), success of attractive women was attributed most often to reasons other than skill, while the ascent of plainer women and attractive men was credited to ability. The authors say that the unfavorable way people view an attractive woman will likely affect her credibility, desirability as a superior, and her perceived legitimacy as a leader (Heilman and Stopeck, 1985, p. 387). The authors argue, however, that to the extent that being attractive can be separated from being feminine, appearance should not be a hindrance for a good looking woman.

#### Sex, Attractiveness and Androgyny

Jackson (1983) investigated the effects of sex, physical attractiveness and sex role perceptions of "occupational suitability" using professional personnel consultants. Regardless of biological sex or attractiveness, masculine and androgynous persons were preferred to feminine persons for masculine occupations while feminine persons were preferred for feminine occupations. In a second study, Jackson (1983b) found that when personnel consultants evaluated employees for

promotion, training, delegation of work, etc., decisions about career development were more strongly influenced by gender trait information than by biological gender or attractiveness.

#### Physical Attractiveness and Leadership

Mason (1957) investigated the judgments of leadership based upon physiognomic cues. He found that subjects shared a common conception of what a leader looks like in judging photographs of actual leaders and non-leaders in an organization. Subjects agreed with each other in their judgments of selecting one "most likely to be the best leader." In a more recent study, Noe (1984) found that males were perceived as having more leadership capability than females. Unattractive females were seen as possessing significantly less leadership capability than the other candidates in the study.

Bass (1981) cited a number of studies which reported a low positive correlation between attractiveness and leadership. Stogdill (1974) noted the sparsity of research relating physical attractiveness to leadership in his 1974 review of the literature. He found that "leaders tend to be regarded as more attractive than members of lower status" (Stogdill, 1974, p. 214). He cited four studies which found a significant, positive relationship between attractiveness and leadership status. In his earlier review, 13 studies found a positive relationship between appearance and leadership; nine between height and leadership, and seven between weight and leadership. These studies were not examining effects of an attractiveness stereotype, dealt mostly with males, and did not account for gender or gender trait information.

### Criticisms of the Research

The findings from the studies investigating the physical attractiveness effects within the selection framework cannot be considered conclusive for a number of reasons.

First, none of the studies required recruiters or evaluators to participate in actual interviews, but rather to rate fictitious "paper people" with photographs attached to bogus resumes or applications. Hence, it is possible that these findings may be applicable only to pre-interview screening decisions made by recruiters. Second, responses may be the direct result of demand characteristics or hypothesis guessing, especially for studies using extremes (very attractive or very unattractive applicants). Third, interviewers are presented with only limited information about job candidates. Hence, their responses are likely to be influenced by stereotypical perceptions. During a real interview, job candidates have the opportunity to disconfirm any stereotypes held by the interviewers. Finally, the studies have used rather low level jobs (e.g., clerk-typists, automobile salesman, department store manager, etc.), some have used only one applicant for each job (e.g., Cash, Gillen and Burns, 1977; Beehr and Gilmore, 1982), and some have used only males (e.g., Ross and Ferris, 1981; Beehr and Gilmore, 1982) or females (Greenwald, 1981).

### Summary

The research findings from the social psychological literature confirm that there is a physical attractiveness stereotype (Dion et al, 1972; Adams, 1977; Berscheid and Walster, 1974; Cash, 1981),

i.e., individuals are attributed a wide range of skills and abilities simply on the basis of attractiveness. This stereotype has been labeled the "what is beautiful is good" hypothesis.

This stereotype has been shown to have both a bi-directional nature (i.e., "what is good is beautiful") (Hickling et al, 1979) and a self-fulfilling nature (i.e., physically attractive individuals may in fact come to act more socially skilled in confirmation of others' expectations based upon the stereotype).

The research in the management and organizational literature has found support for the attractiveness stereotype only in certain situations. For example, in the selection studies, sex of applicant, sex of rater, job type, gender trait information, and perceived relevance of attractiveness for the job may all moderate the effects of the stereotype. Hence, generalizing to employment situations may be tenuous.

Attractiveness is helpful when applying for sex-neutral or jobs considered appropriate for the particular sex of the applicant. It is a hindrance for women when applying for typically male jobs because attractiveness and femininity have a well-established relationship (Heilman and Stopeck, 1985) such that attractive females are deemed more feminine (and hence should seek "feminine" jobs).

These findings are particularly relevant within the context of the present study, in which individuals must exhibit leaderlike behaviors to meet member expectancies in order to gain status within task groups. To the extent that attractive individuals are attributed social skills or are in fact more socially skilled as a result of



differential treatment or social conditioning (e.g., their suggestions and opinions are consented to or reinforced by group members), they may be identified and perceived as effective leaders. Attractive individuals may be identified as leaders much more often than unattractive individuals. Further, if attractive women are viewed as more androgynous than feminine, they may gain status as leaders more easily.

Whether sex role or attractiveness biases will be operating in the present study is not known. It seems likely, however, that attractive individuals will be identified as leaders much more often than unattractive individuals. Women may or may not be identified as leaders, depending upon the sexual composition of the group, group members' perceptions, and biases held by group members. Given the extensive interpersonal interaction among group members, the effects of sex-role stereotypes may be mitigated (e.g., Rice et al, 1980).

## CHAPTER 4

### SELECTED REVIEW OF THE LITERATURE ON SMALL GROUPS

#### Overview

This study is fundamentally concerned with predicting an emergent leader and that leader's perceived effectiveness, and hence the individual (the leader) is primarily the unit of analysis. However, it focuses upon a test of an emergent leadership theory (Hollander, 1964), in which the leader is part of a group of individuals (followers) from whom he derives leadership status. Hence, it is impossible to separate the leader and group, since followers may become leaders and leaders may become followers during the phases of group development.

It is important to examine the literature on groups to select findings relevant to this study. Schriesheim (1980) suggests that "leadership research might benefit from more careful attention to the literature on groups," (p. 191). Variables of particular importance within the small group literature include sex, leadership and androgyny, and group interaction (as they relate the the variables of concern in this study). Reviews by Zander (1979), Hackman and Morris (1975) and Haythorn (1968) indicate that relatively few studies include sex and attractiveness as causal or moderating variables in the research.

#### Sex and Leadership

Small group research has generally disregarded sex as a variable of concern (Aries, 1973) until recently. During the last

fifteen years, a few studies have examined differences in behaviors of males and females in mixed sex groups. Differences in behavior is usually attributed to cultural role differences; these studies examine sex role stereotypes to see if they hold.

A few laboratory studies using sexually heterogeneous groups have found that women are less likely to become the leader (Eskilson and Wiley, 1976), and are less inclined to seek that role (Megargee, 1969; Carbonell, 1984) even when "high dominant" females (as pre-determined by a personality test) are paired with "low dominant" males. These results may be biased, however, because of the short-time duration of the study and the nature of the task (it's sex orientation). Interestingly, in these studies, the dominant woman is inclined to assign the leader role to the man. When women change the nature of the task (to more "sex-neutral" or "feminine" tasks), they were more likely to assume the leader role.

There are still relatively few studies of women who serve as leaders of mixed sex groups, whether through appointment, election, or the informal process of emergence (Hollander, 1983). A few studies have examined sex effects in emergent leadership in non-laboratory settings (e.g., Schneier, 1978; Schneier and Bartol, 1980). In a field study using mixed sex groups performing sex neutral tasks with extensive interaction, Schneier and Bartol (1980) found that there were no significant differences in the proportion of males and females to assume the leader role.

Hollander (1983) indicates that the majority of research findings show that members who participate more are likely to be more influential and emerge as leaders. This conclusion has received mixed support, however (e.g., Zander, 1979; Stein, 1978), as expertise on the task and the nature of the participation (task oriented or irrelevant to the task) appear to moderate the effects of participation. In general, however, if a person has specific abilities related to the group task, he or she will be more active in the group and will be more likely to emerge as a leader (Zander, 1979). Bass (1981) found that in general, group members who participate more in task groups emerge as leaders; however, to maintain their status as leaders, they must demonstrate competence.

#### Sex and Leader Effectiveness

Reviews of the large body of literature examining sex differences in leadership with regard to leader behavior, leader effectiveness and subordinate satisfaction (Terborg, 1977; Brown, 1979; Bartol, 1977; White et al, 1981; Dobbins and Platz, 1984; Hollander, 1983; Rice et al, 1980) have reached conflicting conclusions. In general, males are much more likely to be in appointed or elected leadership positions in organizations (Hollander, 1983) and are more likely to be identified as leaders. Rice and others (1980) found that male-led groups performed better than female-led groups when females were appointed and led all-male followers.

In a meta-analytic review of 18 studies which examined leader effectiveness in terms of subordinate satisfaction and group performance,

Dobbins and Platz (1984) found that male and female leaders are "equally effective, have equally satisfied subordinates, and demonstrate equivalent results in terms of group performance," Bartol (1977) also concluded that organizations may expect equivalent performance from male and female leaders. White et al (1981) suggest, however, that the issue of sex-differences in leader behaviors and effectiveness is still not resolved. They caution that many studies which have been conducted are not field studies or field experiments, involve mostly college students as subjects, and hence offer only tentative findings. They recommend more research into differences in performance of male-led and female-led groups, using objective measures of performance.

#### Androgyny and Leader Effectiveness

The androgynous individual, whose behavior blends masculine and feminine personality characteristics, has become the focus of many recent psychological studies (e.g., Bem, 1974; Spence and Helmreich, 1978; reviews by Deaux, 1984, 1985). There are very few empirical studies which examine the relationship directly between androgyny and leader style (Frye, 1980), leader identification (Banfield, 1976) or leader descriptions (Powell and Butterfield, 1979). In his study using students, Frye (1980) found a very strong relationship between sex-role identity (as measured by the Bem (1974) Sex Role Inventory (BSRI)) and leadership style (as measured by the Leadership Opinion Questionnaire, (LOQ), Fleishman, 1957). The author suggests that the BSRI and the LOQ might in fact be measuring the same qualities (i.e., consideration or expressive behaviors and initiating structure

or instrumental behaviors). Deaux (1985) essentially confirms this in her review of the research on gender. She suggests that the masculinity and femininity measures show good predictability for behaviors that require assertive or nurturant behavior, respectively. It follows that if emergent leaders must demonstrate both assertive and nurturant behaviors in order to derive leadership status from followers, then androgynous individuals (demonstrating both types of behaviors) appear to meet those criteria.

Powell and Butterfield (1979) found that business students described the successful manager in masculine rather than androgynous terms on the Bem (1974) Sex Role Inventory. In a study of 27 women in middle management in organizations, Banfield (1976) found that 16 were described as masculine or androgynous, and only one as "feminine".

As originally stated by Bem (1974), androgynous individuals, whose behaviors transcend the limitations of stereotypic sex-roles, are more flexible in their behaviors, and hence better able to perform "masculine" tasks than traditionally masculine or feminine sex-typed persons.

There is considerable evidence in the literature the flexible leaders are more effective (House, 1971; Hersey and Blanchard, 1977; Fiedler, 1967). An effective leader is viewed as someone with both instrumental and expressive behaviors, with supporting and helping behaviors, blending masculine and feminine characteristics (Sargent, 1981). Situational theories of leadership emphasize the point that

various situations call for different leadership styles. Even those theorists supporting a "one-best way" approach to leadership (e.g., Blake and Mouton, 1964), characterize an effective leader as one flexible enough to exhibit high concerns for both tasks and people. Hence, to the extent that androgynous individuals are more motivated, have higher self-esteem and achievement motivation (Spence and Helmreich, 1978), are more flexible (Sargent, 1981) and are characterized by both assertive and nurturant behaviors, they may be identified as leaders more than sex-typed individuals.

An androgynous person who could reflect both a high concern for people as well as a high concern for the task would be expected to be a more effective leader than either a stereotypically masculine or feminine person, i.e., an individual limited by virtue of his or her adherence to a stereotypic sex-role identity (Frye, 1980). Research in a variety of situations indicates that leaders are rated as more effective when they score high in both consideration and initiating structure (Stogdill, 1974, p. 140), quite similar to those personality characteristics which describe an androgynous individual (i.e., assertive and nurturant).

#### Sex and Group Interaction

Most research measures inputs and outputs and then infers the interaction process (e.g., Shaw, 1976). There is relatively little research on sex composition and group process. In fact, until recently, most research controlled for sex effects (i.e., used all male or all female groups). In the limited research, results have

shown that men may be more aggressive and women less competitive and more conforming (Hollander, 1983). However, as Haythorne (1968) cautions, results must be carefully interpreted taking into consideration the nature of the group task and the dependent variables being studied.

In a recent review of the literature on sex differences in group interaction, Anderson and Blanchard (1982) found that there are not significant differences between men and women in total participation rates, and that interaction rates are affected by the sexual bias of the group's task but unaffected by sexual composition of the group. They found that sex differences in interaction were not related to differences in group performance. These findings are inconsistent with those of Hollander (1983), who suggests that males participate more in mixed-sex groups than females, and are much more likely to be identified with the leader role.

### Summary

Despite the large volume of studies on group performance, and comparatively few studies addressing group composition, relatively little is known about what makes some groups more effective than others. One of the most striking aspects of small group research is the lack of attention to group composition and group member characteristics (e.g., Shaw, 1976; Hackman and Morris, 1975; Zander, 1979).

While there is a huge number of studies, there are few replications. Many of the hypotheses stated by Shaw (1976) are based upon one study. There appears to be no commonly shared language, few



studies which address construct validity issues and a domination of laboratory studies (as opposed to field studies in natural settings). As Osborn and Vickers (1976) and Rice and others (1980) caution, laboratory experiments may present serious limitations when investigating sex-roles and leadership.

In general, there is mixed support concerning the likelihood that females will assume the leader role in sexually heterogeneous groups (Megargee, 1969; Carbonell, 1984; Schneier and Bartol, 1980). However, males appear to be identified more often as leaders when their participation rates are higher than females (Hollander, 1983). Research has shown that interaction rates of males and females are affected by the sexual bias of the group's task (Anderson and Blanchard, 1982). Hence, results must be interpreted carefully, taking into consideration the nature of the task.

## CHAPTER 5

### DERIVATION OF HYPOTHESES

The preceding selected reviews of the emergent leadership, physical and interpersonal attraction and small group performance literature have shown a number of consistent findings which are relevant to the set of hypotheses developed in this chapter. The basic research goal of this study is to investigate the role of sex, attractiveness and androgyny in predicting follower perceptions of emergent leaders, and emergent leader effectiveness. The theoretical formulations and supporting research cited earlier and summarized at the end of the preceding chapters provide support for each hypothesis stated below. The hypotheses to be tested by this study are stated in directional form.

#### Sex and Emergent Leadership

Two laboratory experiments (Megargee, 1969; Carbonell, 1984) have demonstrated that males are more likely to emerge as leaders when paired in dyads with "more dominant" females when performing masculine or sex-neutral tasks. However, the general limitations of the artificial, short-term laboratory experiment "may be more serious in the area of sex roles and leadership than in many other areas of research," (Rice, Bender and Vitters, 1980, p. 75; Osborn and Vickers, 1976).

Osborn and Vickers (1976) suggest that experiments tend to elicit subject responses based on readily available stereotypes, and may yield deceptive data in overstating the influence of sex stereotyping. Also, tasks used by researchers are often not sex neutral. Because of past experience and social conditioning, males and females are not able to identify with the task with equal ease. It appears that the "long

term", real life, field setting may provide a more realistic basis for conclusions related to both leadership and sex role stereotyping.

In a field study similar to the one proposed in this study, which included extensive interpersonal contact, Schneier and Bartol (1980) found no difference in the proportion of males and females to emerge as leaders in mixed sex groups performing sex neutral tasks. This study expects to replicate the findings in that study:

1. There will not be a significant difference in the proportion of males and females to emerge as leaders in the total sample.

#### Physically Attractive Leaders

Research from social psychology has shown that there is a physical attractiveness stereotype, i.e., attractive individuals are attributed a wide range of social skills (Dion et al, 1972; Berscheid and Walster, 1974, 1978; Adams, 1977; Cash, 1981; Huston and Levinger, 1978) and abilities (Landy and Sigall, 1974; Elovitz and Salvia, 1982). Attractive individuals are expected to perform better and have a higher IQ than less attractive individuals (Clifford and Walster, 1973; Carver, Glass, Snyder and Katz, 1977; Ross and Ferris, 1981; McKee and Smouse, 1983; Munig, 1979; Lerner, 1965; Larkin and Pines, 1979; Demeis and Turner, 1978).

Research in the management and organizational literature has consistently shown that attractive individuals are perceived as leaders (Mason, 1957), and that being attractive is strongly related to being chosen as a business partner (Ross and Ferris, 1981; Kushnir, 1982), or a leader (Stogdill, 1974). Studies examining the role of physical attraction in selection, hiring and performance appraisal have shown consistent

preference for attractive individuals for sex-neutral jobs (Cash, 1981; Cash et al, 1977; Dipboye et al, 1975,1977; Bonds, 1980; Cann et al, 1981; Jackson 1983). Table 3 summarizes these studies.

2. Physically attractive individuals will emerge as leaders more than individuals of lesser physical attractiveness.

### Interpersonally Attractive Leaders

Since interpersonal attraction or liking has been operationalized in the social psychological research as a function of physical attraction (Berscheid and Walster, 1974; Byrne et al, 1968), attitude similarity and time spent with a person, social desirability of personality traits (Cooksey and Bell, 1982), socioeconomic background similarity (Berscheid and Walster, 1978), and intelligence (Riskind and Wilson, 1982) among others, it seems logical to conclude that leaders perceived as physically attractive and similar to members with respect to social desirability, socioeconomic background, etc., may also be perceived as interpersonally attractive as well. Interpersonal attractiveness and leadership are correlated in a number of studies (e.g., Stogdill, 1974; Bass, 1981) or attractiveness and business partnerships (e.g., Ross and Ferris, 1981; Kushnir, 1982).

Research in the area of emergent leadership within the small group interaction process predicts that individuals who are more socially skilled, i.e., talk more or obtain status or prominence within the group (Hollander, 1964; Hollander and Julian, 1969; Zander, 1979) are usually chosen as leaders. In order to obtain leadership status, therefore, certain interpersonal and technical skills must be demonstrated.

During this process, interpersonally attractive individuals are most likely to be perceived as emergent leaders. Otherwise, group members would not reinforce their influence attempts (Hollander, 1964; Bales, 1953; Bormann, 1969; Hollander and Julian, 1969). Based on this evidence:

3. Interpersonally attractive individuals will emerge as leaders more than individuals of lesser interpersonal attractiveness.

#### Androgyny and Perceptions of Emergent Leadership

There is evidence in the leadership literature that leaders are described with androgynous characteristics (e.g., Bass, 1981; Sargent, 1981), i.e., blending both masculine (e.g., assertive) and feminine (e.g., nurturant) characteristics. Powell and Butterfield (1979) found that business students described the successful manager in masculine rather than androgynous terms on the Bem Sex Role Inventory. In a study of 27 women in middle management in organizations, Banfield (1976) found that 16 were described as masculine or androgynous, and only one as feminine.

A large number of leadership theories indicate that leaders must be flexible demonstrating instrumental behaviors and consideration, i.e., concerns for both tasks and people (i.e., Bass, 1981; Stogdill, 1974; Blake and Mouton, 1964; Sargent, 1981), and score high in both consideration and initiating structure (Stogdill, 1974). These characteristics may be particularly important for emergent leaders, who must gain acceptance by the group (i.e., in Hollander's terms

"meet member expectancies") by showing concern for all points of view, and demonstrating necessary skills (Stogdill, 1974; Bass, 1981). To the extent that androgynous individuals are characterized by both assertive and nurturant behaviors (Deaux, 1985), they may be identified as leaders more than sex-typed individuals:

4. Individuals with androgynous sex role identities will emerge as leaders more than individuals with other sex role identities.

#### Follower Perceptions of Leader Effectiveness

Attractiveness and Leader Effectiveness. While not directly related to leaders, research has demonstrated that high levels of physical and interpersonal attractiveness of students, instructors and counselors are predictive of high ratings of their IQ levels, effectiveness, competence, or ability (Benassi, 1982; Bonds, 1980; Elovitz and Salvia, 1982; Clifford and Walster, 1974; Vargas and Borkowski, 1983; Carver et al, 1977; Lombardo and Tocci, 1979; McKee and Smouse, 1983); and higher recommendations for hiring for sex-neutral or "in-role" jobs (e.g., Dipboye et al, 1975, 1977; Cann et al, 1981; Greenwald, 1978; Heilman and Saruwatari, 1979); and attributions for success (Gochman, 1979; Nesdale, Rule and Hill, 1978).

In addition, the self-fulfilling nature of the attractiveness stereotype is relevant here. When individuals are perceived as attractive and are attributed skills and abilities, they may in fact exhibit more confidence and raise their own expectations, resulting in actual higher performance (Snyder et al, 1977; Cash et al, 1977). Others

expect behavioral confirmations of stereotyped impressions and attributions, and reinforce behavior which confirms their judgments. To the extent that such stereotyping and behavioral confirmations exist, one would expect this hypothesis to be confirmed.

5. Physically and interpersonally attractive leaders will receive higher effectiveness ratings than leaders of lesser physical and interpersonal attractiveness.

Androgyny and Leader Effectiveness. Based on the leadership literature showing that effective leaders exhibit both instrumental and expressive behaviors (e.g., Stogdill, 1974; Bass, 1981), it seems clear that androgynous leaders (who demonstrate those behaviors) will be perceived as more effective than masculine or feminine leaders. Sargent (1981) argues that androgynous managers who blend masculine and feminine characteristics are the answer for organizations in the future, and bases her conclusions on theoretical and empirical findings that suggest that managers benefit from exhibiting both instrumental and expressive behaviors. Androgynous individuals are more flexible (e.g., Bem, 1974), and the flexibility requirement between leader behaviors and effectiveness is well documented in leadership theories (e.g., House, 1971; Hersey and Blanchard, 1977).

6. Leaders with androgynous sex role identities will receive higher effectiveness ratings than leaders with other sex role identities.

## CHAPTER 6

### RESEARCH DESIGN AND METHOD

#### Overview of Research Procedure

Since a major goal of the present study was to assess the effects of sex and attractiveness in predicting the identity and effectiveness of emergent leaders (the two dependent variables of this study), a field study was used. As Rice, Bender and Vitters (1980) suggest, laboratory experiments may present serious limitations especially relevant to the investigation of sex roles and leadership. These authors argue that laboratory studies may yield deceptive data in overstating the total influence of sex stereotyping.

Hence, a field setting using undergraduate college students working in conjunction with business policy and personnel courses was used. Subjects worked in small groups on "sex-neutral" tasks for the entire time period (twelve or more sessions). Subjects had extensive interpersonal contact which provided them with a more realistic basis for their behavior (as opposed to short-term, artificial laboratory situations where responses may be based on readily available stereotypes). Given the dynamic nature of the group process, data were collected twice to examine the effects over time of sex and attractiveness, and possible changes in leadership status between Times 1 and 2.

The natural setting of the study, the non-contrived nature of the groups and tasks, the importance of group performance for the course grade, and the twelve to fifteen sessions during the study in which there was extensive interpersonal contact inside and outside of class, were all considered in defining this study as a field study rather than a laboratory experiment (Cook and Campbell, 1976, p. 224).



In a recent review and discussion of laboratory versus field research, Olian (1986) states that the "crucial discriminator between the two settings is whether decisions were implemented in the actual criterion context." She describes features common to laboratory studies that might introduce demand characteristics, such as a contrived environment which included experimentally created manipulations. According to her definition, this study would be considered a field study because it was conducted in a realistic setting with the course grade being the criterion.

#### METHOD

##### Sample

Data were collected twice from 87 groups in personnel or policy courses. Of these 87 groups, 35 groups (40 percent) were included in the study, while 52 groups (almost 60 percent) were excluded. Of these 52 groups, 40 groups (77 percent) were excluded because of missing data as a result of students dropping courses, failing to complete the surveys, etc. Twelve groups (23 percent) were excluded because of lack of agreement on the leader choice.

Groups which were excluded from the analysis because of missing data and lack of agreement on the leader were not systematically different on certain background variables than those groups which were included in the analysis. Grade point average, age, and sexual composition of those groups does not appear to be different than for groups included in the study. Personnel and policy tasks were equally distributed between groups that were included in the study and those that were excluded so that approximately the same proportions of personnel

and policy tasks remained.

### Procedure

Task. The groups performed a series of exercises in personnel or business policy as part of the course requirements. These exercises consisted of group reports of case studies involving diverse problems relating to business organizations. Group membership remained fixed throughout the entire six-week summer session or fifteen-week fall semester of the study. While the time periods vary considerably, groups were required to complete the same number of projects in the summer sessions as those required in the fall sessions. Hence, groups spent as much time together in summer as in fall. In fact, some groups in summer classes reported spending more time together than groups in fall classes.

These tasks were considered sex neutral, a central concern in ascertaining external validity of the study. There is no reason to believe, based upon prior conditioning and experience, that males should perform differently on these tasks than females. As a manipulation check, subjects were asked to give their opinion about the sex-neutrality of the tasks performed in their groups (at the last session).

In addition, in order to further investigate the correctness of the assertion that these tasks were sex neutral, descriptions of the tasks performed by students in personnel and policy courses were given to four judges (lecturers or teaching assistants in the College of Business and Management who had not taught these courses). These judges rated each task along a nine-point continuum ranging from masculine to feminine. This procedure has been used in other research to ascertain the degree of sex typing of particular occupations (Cash,

Gillen and Burns, 1977).

Timing of the measures. Table 4 presents a timeframe in which this field study was conducted. During the first week of class, subjects were randomly assigned to groups. After completing their second task (or about half-way through their assignments), but before receiving feedback about performance, measurement of the predictors (and potential confounding variables) was taken. At the next session, the measurement of the dependent variables was taken. This completed measurement at Time 1.

Measurement of the predictors and potential confounding variables was taken again toward the end of the course, with measurement of the dependent variables taken at the last class. Each of the instruments was administered twice during the 12 to 15-session period of time. The measures were explained to students as being used for research purposes only, with total confidentiality of responses, with no relationship to the students' course grades. Participation in the study was voluntary.

### Instruments

#### Measurement of the Independent Variables

The independent or predictor variables of this study include sex, sex-role identity (i.e., undifferentiated, masculine, feminine, or androgynous), interpersonal attractiveness and physical attractiveness. Each of the measures will be discussed below, addressing validity and reliability issues. All of these measures have been used extensively in prior research. Appendix A includes all measures used in this study.

Member Sex. Each subject was asked to indicate his or her sex on Bem's (1974) Sex Role Inventory and the instruments measuring physical and interpersonal attractiveness.

Table 4  
Timeframe for Study

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First or Second Session	Subjects randomly assigned to task groups (with no leaders designated <u>a priori</u> ) of 3 to 7 members each.
Middle Session (After group has completed one-half of its tasks)	Measurement of the predictor variables: sex, physical attractiveness, interpersonal attractiveness, sex role identity and potentially confounding variables.
Next Session	Measurement of the dependent variables: choice of the emergent leader and leader effectiveness.
Completion of Time 1 Measures	Obtain group performance scores.
Next to the Last Session	Measurement of the predictor variables.
Last Session	Measurement of the dependent variables. Manipulation Check: Sex Neutrality of the Tasks
Completion of Time 2 Measures	Obtain individual and group performance scores from instructors.

---

Subjects: 149 male and female undergraduate students enrolled in business policy and personnel courses at the University of Maryland.

Leaders: Chosen by secret ballot by group members without consulting each other.

Groups: 35 groups (28 mixed-sex groups, 4 all male, and 3 all female groups) with 3 to 7 members in each group.

Tasks: Sex-neutral tasks. Assigned cases in undergraduate personnel or business policy courses as part of the course requirements.

Setting: Small work groups working inside and outside of classes.

---

Sex Role Identity. Bem's (1974) Sex Role Inventory measures sex role identity consistent with the theory that masculinity and femininity are two independent qualities. It is composed of a total of 60 personality traits, of which 20 are considered traditionally masculine, 20 are considered traditionally feminine, and twenty neutral. Assignment of a particular sex-type to a personality trait came as a result of a study with 100 Stanford University students used as judges, deciding which traits would be more desirable in American society for a man or a woman. The twenty neutral personality traits serve as a measure of social desirability, indicating how socially desirable the subject views himself or herself regarding items that are "sex-neutral." (See Appendix A for a complete listing of these items and the Bem (1974) Sex Role Inventory.) For purposes of this study, only the masculine and feminine items were used. The table below includes a sample of these items taken from the inventory.

Table 5  
A Sample of the Masculine, Feminine  
and Neutral Items from Bem's (1974)  
Sex Role Inventory

Masculine Items	Feminine Items	Neutral Items
Acts as a leader	Cheerful	Adaptable
Aggressive	Does not use harsh language	Conscientious
Assertive	Eager to soothe hurt feelings	Friendly
Dominant	Gentle	Reliable
Has leadership abilities	Loyal	Sincere
Independent	Sensitive to the needs of others	Tactful
Individualistic	Understanding	Truthful

The scoring of the Bem Sex Role Inventory (BSRI) produces four distinct categories of sex-role identity. These include androgynous (above the median on the masculine and feminine scales), masculine (above the median on the masculine scale, below the median on the feminine scale), feminine (below the median on the masculine scale, above the median on the feminine scale), and undifferentiated (below the median on both the masculine and feminine scales).

		Masculinity Score	
		Below Median	Above Median
Femininity Score	Below Median	Undifferentiated	Masculine
	Above Median	Feminine	Androgynous

The normative data for the Bem (1974) Sex Role Inventory are based on administration to over 550 college-age males and 350 college-age females. All three scores, masculinity, femininity, and social desirability, were found to be highly reliable, with coefficient alpha measures of internal validity between .70 and .86 and test-retest reliability very high ( $r = .89$  to  $.90$ ).

In attempts to establish the validity of the BSRI, cross-validity studies were performed between the BSRI and two well known bipolar measures of sex-role identity, the M-F scales of the California Psychological Inventory (Gough, 1952) and the Guilford-Zimmerman Temperament Survey (1959). Little or no correlation was found between the scores of the BSRI and the other two measures, which suggests that the BSRI, in embodying the principle of masculinity and femininity as independent dimensions, measures aspects of sex-roles not reflected

in the other two measures, which view masculinity and femininity as bipolar (Bem, 1974).

Construct validity studies conducted by Bem indicate that individuals classified as masculine choose stereotypically masculine behavior patterns, feminine types choose stereotypically feminine behaviors, and androgynous types behave in a less stereotypical way, choosing more situationally appropriate behaviors (Bem, 1975, 1976).

Each subject described themselves using Bem's (1974) inventory, and was assigned a sex-role identity upon that basis (i.e., masculine, feminine, androgynous or undifferentiated).

Interpersonal Attraction. Each member of each group was asked to rate the interpersonal attractiveness of each other member of their group on a scale of 1 (not at all) to 7 (a great deal) in response to six questions used as a measure of interpersonal attraction (based on Byrne's (1971) Interpersonal Judgment Scale, pp. 426-427). This instrument has been used extensively in the interpersonal attraction research over the last twenty years, probably more than any other instrument.

Physical Attraction. Each member of each group was asked to rate the physical attractiveness of each other member of their group on a scale from 1 (not at all attracted) to 7 (extremely attracted) for each of the three items in the instrument (i.e., face, body, and overall grooming). Individual physical attractiveness scores were obtained by averaging the ratings for that individual given by all other members. The higher the number, the higher the physical attractiveness level as

rated by other members of the group. Leader and nonleader scores were thus readily obtained for analysis.

The physical attractiveness scale used in the study has been used in other studies, most recently in a study of dynamic attractiveness by Brown and others (1985).

#### Measurement of the Dependent Variables

The dependent variables include leadership status (leader or nonleader) and leader effectiveness. Appendix A contains all measures used in this study.

Leadership Status: Sociometric Choice of the Leader. At Times 1 and 2 (see Table 4), each member of each group was asked to identify the leader of his or her group. Each member was asked to write the name of that person on a piece of paper without consulting other group members. This method has been used repeatedly (Bass, 1981; Stogdill, 1974) in the leadership literature.

According to Bass (1981, pp. 243-245), sociometry and rated observation are the common ways of measuring the status and esteem of members, used to distinguish the choice of emergent leaders in groups. Bass (1981) states that sociometric choice of the leader by peer ratings has continued to demonstrate strong predictive validities.

Groups in which leader choice was not unanimous were discarded from the analysis if more than one or two persons disagreed on the nomination of the leader, depending upon the number of members in the group. Specifically, in three, four, or five member groups, two, three or four members must have agreed, respectively. In six or seven



member groups, four or five members must have agreed, respectively. Of the 47 groups with complete data, 12 (about 25 percent) groups were excluded from the analysis because of lack of agreement on the choice of the group leader.

In order to explain any possible shifts in the leader role, group performance scores at Times 1 and 2 were obtained from the instructors. In general, this leader role should remain stable, especially if the tasks are similar in Times 1 and 2 (Bass, 1981, pp. 480-485).

Leader Effectiveness. Each member of each group was asked to rate the leader's overall effectiveness as a leader, organizer, etc. of the group on a Likert-like scale from 1 (extremely ineffective) to 7 (extremely effective). The leader's overall effectiveness score was an average of the ratings given by nonleaders. The six questions used to measure leader effectiveness were taken from the Institute of Social Research Survey of Organizations (Hausser et al, 1977). The supervisory leadership questions were used which emphasize leader support, goal emphasis, and work facilitation because they best reflect the characterization of an effective emergent leader (Hollander, 1964).

Limited choices of instruments with established validity and reliability to measure leadership effectiveness resulted in the extraction of these questions from a well known survey. However, these six questions had not been validated as a separate instrument, for which reliability and validity were unknown. Hence, the reliability of this instrument was checked, and found to be high at both Times 1 and 2. The alpha coefficients were .88 and .86 at Times 1 and 2, respectively.

Further, test-retest reliability of the scale was high, with a correlation coefficient of .80.

#### Measurement of Potentially Confounding Variables

At Times 1 and 2, at the same time the predictor variables were measured, some additional measures were taken to address potentially confounding variables. These included the composition of the group by sex, time the group spent working together, familiarity among members, age, grade point average, and major concentration of study. At the very end of the course, subjects were asked to give their opinions about the sex neutrality of the tasks performed by their group as a manipulation check. In addition, four independent judges (teaching assistants and lecturers in the College of Business and Management) rated the tasks to further test the assertion that the tasks used in the study were not sex-typed.

## CHAPTER 7

### RESULTS AND DATA ANALYSIS

The primary goal of the research was to identify factors which predict follower perceptions of an emergent leader and that leader's effectiveness, the two dependent variables of interest. As potential predictors, subject sex, physical and interpersonal attractiveness (as rated by other group members) and sex role identity (self-described) were investigated.

#### Intercorrelations Among the Dependent Variables

Data analysis initially focused on examining the intercorrelations among the dependent variables. Tables 6 and 7 show the results for Times 1 and 2, respectively. The results indicate that the six questions measuring leadership effectiveness were all positively correlated. Leaders rated favorably on any one dimension of leadership effectiveness tend to be rated favorably on all of them.

#### Reliability and Validity of Instruments

The internal consistency of the instruments used in this study was assessed through the reliability coefficient alpha measure. Results of this analysis for the four instruments used in this study at Times 1 and 2 are shown in Table 8. The alpha coefficients for all the scales were high, ranging from .85 to .94.

The reliability coefficients for the leader effectiveness scale for Times 1 and 2 were .88 and .86, respectively. The reliability coefficients for the Bem Sex Role Inventory administered at Times 1 and 2 were .86 and .87, respectively. These are consistent with

Table 6  
Intercorrelations Among Dependent Measures  
(Time 1)

Variable (Leader Effectiveness Scale)	1	2	3	4	5	6
1. Overall effectiveness.	1.00	.67	.65	.63	.61	.53
2. Encourages members to give their best effort.	.67	1.00	.64	.58	.65	.53
3. Maintains high performance standards.	.65	.64	1.00	.53	.65	.38
4. Helps plan and schedule work.	.63	.58	.53	1.00	.60	.55
5. Offers new ideas for solving task-related problems.	.61	.65	.65	.60	1.00	.50
6. Willing to listen to everyone's point of view.	.53	.53	.38	.55	.50	1.00

Table 7  
Intercorrelations Among Dependent Measures  
(Time 2)

Variable (Leader Effectiveness Scale)	1	2	3	4	5	6
1. Overall effectiveness.	1.00	.66	.72	.70	.68	.50
2. Encourages members to give their best effort.	.66	1.00	.64	.64	.65	.54
3. Maintains high performance standards.	.72	.64	1.00	.73	.61	.50
4. Helps plan and schedule work.	.70	.64	.73	1.00	.66	.43
5. Offers new ideas for solving task-related problems.	.68	.65	.61	.66	1.00	.38
6. Willing to listen to everyone's point of view.	.50	.54	.50	.43	.38	1.00

those obtained in other studies using the Bem measure (Bem, 1974).

Test-retest reliabilities were also obtained for the four instruments, and the correlation coefficients are shown in Table 8. The correlation coefficients show the relationship between the item responses on the scale at Time 1 administration of the instrument and the same item responses on the scale at Time 2 administration of the instrument. These coefficients range from a low of .74 for the interpersonal attraction instrument to highs of .86 for the Bem Sex Role Inventory and the physical attraction instrument.

Table 8  
Reliability Analysis of the Instruments  
(Time 1 and Time 2)

Name of Scale	Number of Items	Internal Consistency Reliability Coefficient Alpha		Test- Retest Correlation
		Time 1	Time 2	
Leader Effectiveness	6	.88	.86	.80
Bem Sex Role Inventory	60	.86	.87	.86
Interpersonal Attraction	6	.85	.89	.74
Physical Attraction	3	.94	.94	.86

### Bem Sex Role Categories

Initially, individuals were categorized into groups based on their answers to the Bem Sex Role Inventory. Table 9 shows the results. At Time 1, three leaders were excluded from the analysis since their scores were on the medians. At Time 2, two leaders were excluded because their scores were on the medians.

The medians obtained from this sample were 5.1 and 4.8 for the masculine scale and feminine scale, respectively, at Time 1, and 5.1 and 4.9 for the masculine scale and feminine scale, respectively, for Time 2. These medians are consistent with those generally obtained from college samples. Orlofsky (1982) reported 4.85 for both scales; Orlofsky, Aslin, and Ginsburg (1977) reported 4.90 for the masculine scale and 4.85 for the feminine scale medians. Another study (Frye, 1980) using University of Maryland business school students found a median of 5.0 for the masculine scale, and a median of 4.85 for the feminine scale.

A major conceptual difference between the four-fold categorization procedure used in this study and Bem's earlier scoring procedure is that Bem's earlier procedure required only that masculine and feminine scores be similar in order for a person to be considered androgynous, while the four-fold classification procedure requires that the two scores be both similar and high (above the medians). In effect, the four-fold procedure uses both balance and level considerations to identify androgynous persons and there appear to be sound conceptual and empirical reasons for doing so (Motowidlo, 1981). However, it does have a limitation. It is sample specific. This issue has been addressed

Table 9  
Sex Role Categories\*  
(Based on Responses to Bem Sex Role Inventory)  
(n=149)

<u>TIME 1</u>	CATEGORIES:	On-Median	Undifferentiated	Feminine	Masculine	Androgynous	Row Total
	LEADERS (n=35)						
	Males (n=21)	1	1	2	15	2	21
	Females (n=14)	2	2	5	3	2	14
	NONLEADERS (n=114)						
	Males (n=57)	7	17	6	15	12	57
	Females (n=57)	8	9	25	3	12	57
	Column Total	18	29	38	36	28	149
<hr/>							
<u>TIME 2</u>							
	LEADERS (n=35)						
	Males (n=21)	1	2	3	12	3	21
	Females (n=14)	1	4	3	4	2	14
	NONLEADERS (n=114)						
	Males (n=57)	5	15	7	18	12	57
	Females (n=57)	3	9	26	6	13	57
	Column Total	10	30	39	40	30	149

\*Based on a median-split approach. Time 1: Masculine Scale Median = 102(5.1), Feminine Scale Median = 96(4.8). Time 2: Masculine Scale Median = 102(5.1), Feminine Scale Median = 98(4.9).

in other research, and suggestions and alternatives made for dealing with this limitation, including the development of standardized scoring indices.

#### Measurement of Potentially Confounding Variables

A number of measures were taken simultaneously with the predictors to address potentially confounding variables. These measures included major concentration of study, age, time spent working together, nature of the task, familiarity among members, grade point average and composition of the group by sex.

Major Concentration of Study. The sample included 114 business majors and 30 non-business majors. Of the 30 non-business majors, 6 became leaders (or 20 percent). Of the 114 business majors, 29 became leaders (or 25 percent). The table below compares these subsamples.

Table 10  
Comparisons Among Business Majors  
and Non-Business Majors  
(Time 2)

Subsamples	Business Majors	Non-Business Majors	Total	Chi- Square
Leaders	29	6	35	.143
Nonleaders	85	24	109	

The Chi-square statistic is not significant, indicating that there were no significant differences between business and non-business majors in gaining leadership status in groups.



Age. The age of leaders ranged from 20 to 42 years old, with an average age of 23. The age of nonleaders ranged from 20 to 31 years old, with an average of about 23.

Time Spent Working Together. Each member of each group was asked to estimate the hours spent working together as a group, and the number of meetings held. The mean number of hours spent together for all groups was 14.8 hours, or about 15. The number of hours ranged from one to one hundred hours. The average number of meetings reported was 7.4, or about 7.

Nature of the Task. At the final class session, all individuals were asked to indicate their opinion about the sex neutrality of the task. When asked to indicate the probability that males and females could equally perform the group's task, on a scale of zero percent (not at all likely) to 100 percent (highly likely), 115 individuals answered. Their mean score was 89.93, indicating that most felt that males and females could equally perform the tasks.

As an additional check on the sex neutrality of the task, four independent judges (teaching assistants or lecturers in the College of Business and Management) were asked to rate the sex neutrality of the tasks. Each judge was given a description of the tasks and asked his or her opinion about the degree to which the tasks were sex-typed.

The tasks were rated along a 9-point scale from 1 (highly masculine) to 9 (highly feminine), consistent with procedures used in other studies. The average rating given by the judges for the policy task was 4.4, and 5.8 for the personnel task. The range from 4 to 6 is generally considered sex neutral (Cash, Gillen and Burns, 1977). Hence, the judges perceived these tasks to be within the sex neutral range.

The personnel and policy tasks were not perceived to be sex typed by the students or the judges. To confirm these findings, personnel and policy courses were examined separately. Analyses of differences between males and females in gaining leadership status were conducted. There were no significant differences between the sexes or sex role types in emerging as leaders in personnel or policy groups.

In order to evaluate the differences between sexes and sex role types in gaining leadership status in personnel and policy courses, a chi-square statistic was used. If one task were more feminine or masculine than the other, one would expect more feminine or masculine types to emerge as leaders, or more females or males. Tables 11 and 12 show that there were no significant differences in the patterns of results between males and females, or among the four sex role types, to emerge as leaders in either personnel or policy courses.

Table 11  
Sex Differences  
in Emergent Leader Status Between  
Personnel and Policy Courses  
(Time 2)  
(Row Percentages Used)

<u>Personnel</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>	<u>Chi-Square</u>	<u>Significance</u>
Leaders	50%	50%	100%	.00	1.00
Nonleaders	50%	50%	100%		
<hr/>					
<u>Policy</u>					
Leaders	64%	36%	100%	.933	.33
Nonleaders	50%	50%	100%		

Table 12  
Sex Role Type Differences  
in Emergent Leader Status Between  
Personnel and Policy Courses  
(Time 2)  
(Row Percentages Used)

<u>Personnel</u>	<u>Undiffer-entiated</u>	<u>Feminine</u>	<u>Masculine</u>	<u>Androgynous</u>	<u>Chi-Square</u>
Leaders	22%	11%	44%	22%	2.57*
Nonleaders	24%	32%	22%	22%	
<hr/>					
<u>Policy</u>					
Leaders	17%	21%	50%	13%	6.21**
Nonleaders	22%	31%	23%	25%	

\*Significance level = .46

\*\*Significance level = .10

Familiarity Among Members. All members were asked to respond to two questions asking to what extent they were familiar with the other members' strengths and weaknesses with respect to the task, understand their personal work preferences, etc. The results for both Times 1 and 2 show similar results. Leaders receive significantly higher ratings at both Times 1 and 2, i.e., members feel that they know the leader better.

Table 13  
Mean Familiarity Ratings Comparisons  
Between Leaders and Members  
(Times 1 and 2)

<u>Time 1</u> Subsamples	Mean Rating	T-Value	2-Tail Probability
Leaders	4.38		
Vs.		5.74	.000
Nonleaders	3.90		
<u>Time 2</u>			
Leaders	4.81		
Vs.		3.77	.000
Nonleaders	4.40		

It was expected that nonleaders would know leaders better, and that group members would know each other better the longer they were together. Since leaders generally talk more (Hollander, 1983) and share information about themselves as a result, members are more likely to know more about their personal work preferences, etc.

The questions asked omitted reference to prior knowledge; they related to specific skills and abilities related to the task. Table 14 shows that familiarity significantly increased between Times 1 and 2 for both leaders and nonleaders.

Table 14  
Mean Familiarity Ratings  
of Leaders and Members  
Between Times 1 and 2

	Mean Familiarity Ratings		T-Value	2-tail Probability
	Time 1	Time 2		
Leaders	4.38	4.81	1.93	.05
Members	3.90	4.40	2.90	.01

Table 15 shows the relationship between familiarity and attraction. The significance levels indicate a very strong relationship between familiarity ratings and attractiveness ratings.

Table 15  
Correlation Coefficients Showing the  
Relationship Between Familiarity and Attraction  
(Time 2)

Familiarity Rating	Physical Attractiveness Rating	Correlation Coefficient	Significance
Leader	Leader	.337	.000
Member	Member	.311	.000

Familiarity Rating	Interpersonal Attractiveness Rating	Correlation Coefficient	Significance
Leader	Leader	.449	.000
Member	Member	.473	.000

Since leaders are perceived as more physically and interpersonally attractive than nonleaders, members may want to identify with the attractive individuals because it enhances their own self image, esteem or status within the group. This is reflected in Table 16 which shows that individuals consistently give high physical and interpersonal attractiveness ratings to both leaders and members with high ratings of familiarity. Individuals both want to be identified with attractive people, and see those with whom they are most familiar as most attractive. Individuals consistently give low physical and interpersonal attractiveness ratings with low familiarity ratings.

Table 16  
 Leader and Member Attractiveness and  
 Familiarity Ratings Categories\*Comparisons  
 (Time 2)

Leader Familiarity Ratings		<u>Leader Interpersonal Attractiveness Ratings</u>				
		<u>Low Rating</u>	<u>High Rating</u>	<u>Total</u>	<u>Chi-Square</u>	<u>Significance</u>
Low Rating	29	11	40	14.13	.0002	
High Rating	16	36	52			
Member Familiarity Ratings		<u>Member Interpersonal Attractiveness Ratings</u>				
		<u>Low Rating</u>	<u>High Rating</u>	<u>Total</u>	<u>Chi-Square</u>	<u>Significance</u>
Low Rating	36	23	59	7.007	.008	
High Rating	24	43	67			
Member Familiarity Ratings		<u>Member Physical Attractiveness Ratings</u>				
		<u>Low Rating</u>	<u>High Rating</u>	<u>Total</u>	<u>Chi-Square</u>	<u>Significance</u>
Low Rating	30	21	51	4.98	.03	
High Rating	19	35	54			

\*Categories were developed by dividing ratings at the median.

Grade Point Average. Subjects were asked to report their grade point averages. The table below shows the results of comparing the mean grade point averages of leaders versus nonleaders, as well as mean individual performance scores obtained from the instructors.

Table 17  
Mean G.P.A. Comparisons and  
Individual Performance Scores Between  
Leaders and Nonleaders  
(Time 2)

Subsamples	Mean G.P.A.	T- Value	Mean Individual Performance Scores	T- Value
Leaders	3.02		90.9	
Vs.		2.03*		4.44**
Nonleaders	2.84		86.2	

\*significant ( $p < .05$ )

\*\*significant ( $p < .001$ )

Leaders had significantly higher grade point averages and higher individual performance scores than nonleaders. There are a number of possible explanations for this.

Table 19 shows the correlation coefficients between grade point average and physical and interpersonal attractiveness ratings. There are no statistically significant relationships between grade point average and attractiveness, although there is a marginal association between ratings of interpersonal attractiveness for leaders and grade point average.



Table 18  
Correlation Coefficients Showing the  
Relationship Between Grade Point Average  
and Attractiveness  
(Time 2)

Grade Point Average and	Correlation Coefficient	Significance
Leader Physical Attraction	.01	.46
Member Physical Attraction	-.01	.160
Leader Interpersonal Attraction	.16	.06
Member Interpersonal Attraction	.06	.25

In order to evaluate differences in grade point averages and leader status in groups, a chi-square statistic was used. Most leaders (41.2 percent) had grade point averages between 2.80 and 3.20 out of a perfect average of 4.0. Most nonleaders (53 percent) had grade point averages less than or equal to 2.80. Table 20 shows the results of the analysis.

Table 19  
Grade Point Average  
and Leader Status  
(Time 2)

G.P.A. Categories	2.80 or Below	2.80 to 3.20	3.21 to 3.60	3.61 to 4.0	Total	Chi- Square
<u>Subsamples</u>						
Leaders	11	14	5	4	34	8.117*
Nonleaders	53	38	4	5	100	71.76**

\*significance level = .05

\*\*significance level = .01

Composition of the Group by Sex. The results of the statistical analyses indicate that there were no significant differences in the proportion of males and females to emerge as leaders within the total sample. However, a closer examination of each group's sex ratio shows that the proportion of males and females within each group could affect leader emergence.

Table 20 indicates that the probability of a female becoming a leader within a group is dependent upon the relative proportion of females in the group, i.e., at least fifty percent or more of the members must be female. Given their relative proportion in the total sample, the mean of the probabilities of a female becoming a leader is .48, whereas the observed probability of females becoming leaders is .40 (14/35). The corresponding t-value using 34 degrees of freedom, and a sample standard deviation of .28, is 1.69, statistically significant at the .05 level.

In general, females emerged as leaders in groups only in which there were an equal or greater number of females, except in one group. In this one exceptional group, a female emerged in a group with only herself and three other males. She described herself as having a feminine sex role identity at Time 1, and an androgynous sex role identity at Time 2. In two groups, males emerged as leaders when they were the only male with two or three other females. Both of these leaders described themselves as having masculine sex role identities at Times 1 and 2. The table below shows the profile of groups used in this study.

Table 20  
 PROFILE OF GROUPS  
 Group Composition By Sex, Leader Sex  
 and Leader Sex Role Type

Group Number	Number of Males	Number of Females	Total	Leader Sex *	Leader Sex Role Identity **	
					Time 1	Time 2
1	3	2	5	M	M	A
2	3	2	5	M	A	M
3	2	3	5	M	M	M
4	3	3	6	F	M	M
5	1	4	5	F	U	U
6	3	2	5	M	M	A
7	3	4	7	F	F	F
8	3	3	6	F	A	--
9	5	1	6	M	M	M
10	1	3	4	M	M	M
11	2	1	3	M	M	M
12	1	2	3	F	M	M
13	1	2	3	F	F	U
14	2	2	4	M	-	F
15	1	3	4	F	F	F
16	0	3	3	F	M	M
17	1	2	3	M	M	M
18	3	1	4	M	M	M
19	2	2	4	M	M	M
20	2	1	3	M	F	F
21	0	4	4	F	F	F
22	0	4	4	F	--	A
23	4	0	4	M	M	M
24	3	1	4	M	A	A
25	1	3	4	F	A	M
26	3	1	4	F	F	A
27	2	2	4	M	M	U
28	4	0	4	M	M	M
29	2	2	4	M	M	M
30	2	2	4	F	U	U
31	2	1	3	M	F	F
32	3	1	4	M	U	U
33	4	0	4	M	M	M
34	4	0	4	M	M	--
35	2	4	6	F	--	U

\*M = Male, F = Female

\*\* M = Masculine, F = Feminine, U = Undifferentiated, A = Androgynous  
 -- indicates that individual's score was on the median; leader could not be categorized.

Some of these findings suggest alternative explanations for the major conclusions reported in this study. They also offer additional insight into issues and directions for further research. The limitations and implications of these effects for this study are addressed in Chapter 8, with suggestions for improvement of this study in a future extension and replication.

### Results of the Data Analyses

The results of the data analyses for Times 1 and 2 are discussed below for each hypothesis separately (the derivation of which and theoretical support were explained in Chapter 5). All hypotheses are stated in directional form.

#### Sex and Emergent Leadership

Hypothesis 1. There will not be a significant difference in the proportion of males and females to emerge as leaders in the total sample.

The results from both Times 1 and 2 are identical, and indicate that there is no statistically significant difference in the proportion of males and females to emerge as leaders in the total sample. Table 21 shows the number of males and females gaining leadership status.

Table 21  
Sex Differences in Emergent  
Leadership Status  
(n=149)

	Males	Females	Total	Chi-Square
Leaders (n=35)	21	14	35	.71005*
Nonleaders (n=114)	57	57	114	
TOTAL	78	71	149	

\*p=.3994

Since the number of leaders was "fixed", i.e., there were no more than 35 individuals who could emerge as leaders (one leader for each group), a Chi-square statistic for the entire sample would not accurately reflect the differences, if any, in the proportion of males and females to emerge as leaders. Therefore, a Chi-square statistic for each row (leaders only and nonleaders only) was used to examine specific differences within rows. The results are shown in Table 22. Again, there was no difference in the proportion of males and females to emerge as leaders, or in the proportion of males and females to emerge as nonleaders, in the total sample.

Table 22  
Sex Differences in  
Emergent Leadership Between  
Leaders and Nonleaders  
(n=149)

	Males	Females	Total	Chi-Square
Leaders (n=35)	21	14	35	1.4
Nonleaders (n=114)	57	57	114	--
TOTAL	78	71	149	

The seven same-sex groups (four all-male and three all-female groups) were excluded from the 35 group sample, and the Chi-Square statistic used again to compare sex differences. Table 23 shows that there were no differences between males and females in gaining leadership status.

Table 23  
Sex Differences in Emergent Leadership  
(28 Mixed Sex Groups Only)  
(n=122)

	Males	Females	Total	Chi-Square
Leaders (n=28)	17	11	28	1.29
Nonleaders (n=94)	45	49	94	.17
TOTAL	62	60	122	

Physical Attraction and Emergent Leadership

Hypothesis 2. Physically attractive individuals will emerge as leaders more than individuals of lesser physical attractiveness.

The results from both Times 1 and 2 show similar results.

Leaders are rated as more physically attractive than nonleaders; female leaders are rated as more physically attractive than male leaders; and female members are rated as more physically attractive than male members.

Table 24  
Mean Physical Attractiveness  
Rating Comparisons Between Subsamples  
(Time 1)

Subsample	Mean Rating	T-value	2-tail probability	1-tail probability
Leaders (n=35) Vs. Nonleaders (n=114)	4.83 4.68	1.30	.198	.099
Male Leaders (n=21) Vs. Female Leaders (n=14)	4.29 5.60	-5.15	.000	.000
Male Nonleaders (n=57) Vs. Female Nonleaders (n=57)	4.62 4.90	-2.16	.034	.018

Table 25  
 Mean Physical Attractiveness  
 Rating Comparisons Between Subsamples  
 (Time 2)

Subsample	Mean Rating	T-value	2-tail probability	1-tail probability
Leaders (n=35) Vs. Nonleaders (n=114)	4.99	1.51	.135	.068
Male Leaders (n=21) Vs. Female Leaders (n=14)	4.51	-4.66	.000	.000
Male Nonleaders (n=57) Vs. Female Nonleaders (n=57)	4.78	-2.37	.020	.010

Theoretical considerations predict that the difference will be in a given direction (as indicated by the directional hypotheses used in this study). A one-tailed test is appropriate for testing such differences.

It is interesting to note that female leaders received the highest physical attractiveness ratings, significantly higher than those of male leaders. In sharp contrast, male leaders received the lowest physical attractiveness ratings, even lower than male and female nonleaders. This finding is relevant when considering findings from laboratory studies which show that physical attractiveness is often a hindrance for women seeking "out of role" positions, but an advantage for men.

Several explanations are plausible for this finding. The results support the assertion that tasks in this study were perceived as sex neutral, and hence attractiveness was beneficial for women.



Generally, attractiveness has been found to be beneficial for both sexes when tasks are sex neutral, but attractiveness was not a necessary requirement for males. In this study, the most unattractive males were able to gain leadership status in groups.

In laboratory studies, subjects are generally asked to select bogus candidates on the basis of fictitious employment applications, which include pictures. Physically attractive women are generally selected for positions which have been traditionally held by women (e.g., feminine-typed jobs such as teaching, nursing, or clerical jobs), whereas less attractive women have been selected for masculine typed positions (e.g., managerial positions). However, attractive individuals, regardless of sex, are selected for positions judged as "sex neutral". The limitations of these laboratory studies were discussed earlier in Chapter 3.

To investigate the differences in ratings of physical and interpersonal attractiveness given by males and females to the same and opposite sex, t-tests were used. Ratings have been shown to differ by the evaluator's sex for evaluations of the same and opposite sex individuals. It has been shown that when evaluating essays, highly attractive writers of the same sex as the rater received lower ratings than moderately attractive individuals. In contrast, highly attractive writers of the opposite sex of the rater received higher performance ratings than persons of moderate or low levels of attractiveness.

The results shown in Tables 26 and 27 indicate that males give other male leaders and members lower physical attractiveness ratings than they give to female leaders and members. Males give significantly higher interpersonal attractiveness ratings to male members than to female members. In contrast, there is no significant difference between physical or interpersonal attractiveness ratings females give to male or female members. Overall, males received much lower physical attractiveness ratings than females, and male leaders received about the same ratings by males and females, 4.45 and 4.59, respectively.

Table 26  
Mean Physical Attractiveness Rating Comparisons  
Among Subsamples by the Same and Opposite Sex  
Raters (Time 2)

	Mean Physical Attractiveness Rating	T- Value	2-tail probability
<u>Ratings by Males</u>			
Male Leaders (n=31)	4.45		
Female Leaders (n=18)	5.56	-3.45	.001
Male Members (n=35)	4.31		
Female Members (n=35)	4.98	-3.11	.004
<u>Ratings by Females</u>			
Male Leaders (n=26)	4.59		
Female Leaders (n=25)	5.65	-3.01	.004
Male Members (n=41)	4.87		
Female Members (n=41)	4.83	.29	.775

Table 27  
 Mean Interpersonal Attractiveness Rating Comparisons  
 Among Subsamples by the Same and Opposite Sex Raters  
 (Time 2)

	Mean Interpersonal Attractiveness Rating	T- Value	2-tail Probability
<u>Ratings by Males</u>			
Male Leaders (n=34)	5.61		
Female Leaders (n=18)	5.58	.14	.886
Male Members (n=37)	5.35		
Female Members (n=37)	5.19	2.79	.008
<u>Ratings by Females</u>			
Male Leaders (n=27)	5.40		
Female Leaders (n=28)	5.88	-1.78	.082
Male Members (n=39)	5.32		
Female Members (n=39)	5.31	.16	.870

Interpersonal Attraction and Emergent Leadership

Hypothesis 3. Interpersonally attractive individuals will emerge as leaders more than individuals of lesser interpersonal attractiveness.

The results from both Times 1 and 2 show consistent and similar results. Leaders are rated as more interpersonally attractive than nonleaders; female leaders are rated as more interpersonally attractive than male leaders; and female nonleaders are rated as less interpersonally attractive than male nonleaders (in Time 1 only). The tables below show the results of t-tests.

Table 28  
Mean Interpersonal Attractiveness  
Rating Comparisons Between Subsamples  
(Time 1)

Subsample	Mean Rating	T-value	2-tail probability	1-tail probability
Leaders (n=35) Vs. Nonleaders (n=114)	5.56 5.37	3.17	.002	.001
Male Leaders (n=21) Vs. Female Leaders (n=14)	5.40 5.85	-2.17	.009	.005
Male Nonleaders (n=57) Vs. Female Nonleaders (n=57)	5.34 5.25	1.55	.126	.063

In contrast to the findings relating to physical attractiveness, male leaders received higher interpersonal attractiveness ratings than either male or female nonleaders, but still lower ratings than female leaders, who received the highest ratings on interpersonal attractiveness.

Table 29  
 Mean Interpersonal Attractiveness  
 Rating Comparisons Between Subsamples  
 (Time 2)

Subsample	Mean Rating	T-value	2-tail probability	1-tail probability
Leaders (n=35) Vs. Nonleaders (n=114)	5.60 5.36	3.42	.001	.0005
Male Leaders (n=21) Vs. Female Leaders (n=14)	5.52 5.76	-1.42	.160	.080
Male Nonleaders (n=57) Vs. Female Nonleaders (n=57)	5.17 5.21	-.57	.568	.284

There were significant differences between interpersonal attractiveness ratings of leaders and nonleaders, and male and female leaders for both Times 1 and 2. However, there were no significant differences between ratings of male and female nonleaders for Times 1 and 2.

Female leaders consistently received the highest ratings at Times 1 and 2 for both the physical and interpersonal attractiveness ratings among members. This is not surprising since interpersonal attraction is often operationalized as a function of physical attraction (Berscheid and Walster, 1974). It is surprising, however, that male leaders received high ratings for interpersonal attractiveness but low ratings for physical attractiveness. These ratings would be expected to move together. The low physical attractiveness ratings for male leaders are due to low ratings by nonleaders of the same and opposite sex.

Androgyny and Emergent Leadership

Hypothesis 4. Individuals with androgynous sex role identities will emerge as leaders more than individuals with other sex role identities.

Results for both Times 1 and 2 show similar results, i.e., that regardless of sex, individuals with a masculine sex role identity emerged as leaders more than those with a feminine, undifferentiated, or androgynous sex role identity. This hypothesis was not supported, but there are several possible explanations, including small sample sizes, general limitations associated with using the Bem instrument (discussed earlier), and others.

Using a chi-square statistic for the entire sample would not be appropriate for the same reasons cited in the discussion on page 66. Since the number of leaders is "fixed", i.e., only 35 individuals may emerge as leaders in this study, a separate chi-square statistic was used to examine differences for leaders and nonleaders separately. The results for Times 1 and 2 are shown in Table 30. Masculine types, regardless of sex, were more likely to emerge as leaders than any of the other types. There were no significant differences among nonleaders.

Business school students may be different than students in other disciplines. The median for the masculine scale was slightly higher (5.1) than those medians obtained from college students in other disciplines (4.85 and 4.90 reported respectively by Orlofsky, 1982, and Orlofsky and others, 1977). The median for the feminine scale was

identical to those obtained from college students in other disciplines.

The Bem instrument has been criticized because the four-fold classification scoring procedure is sample specific. Individuals classified as masculine in one sample might be androgynous in another sample. In addition, the categorical scoring procedure is more rigorous than other procedures, and results in fewer individuals being classified as androgynous. Further, the masculine scale on the Bem instrument has two items related directly to leadership (i.e., "acts like a leader" and "has leadership abilities") which could induce confounding effects. However, this instrument has been used in other leadership studies to describe leader behavior. Banfield (1976) and Powell and Butterfield (1979) found that leaders or managers in organizations were described as masculine or androgynous sex role types.

Table 30  
Sex Role Type Differences  
in Emergent Leaders Versus Nonleaders

Status	SEX ROLE IDENTITIES				Chi-Square
	Undifferentiated	Feminine	Masculine	Androgynous	
(Time 1)					
Leaders (n=32)	3	7	18	4	15.75*
Nonleaders (n=99)	26	31	18	24	3.48
(Time 2)					
Leaders (n=33)	6	6	16	5	9.79**
Nonleaders (n=106)	24	33	24	25	2.15

\*  $p < .01$

\*\* $p < .05$

---

Those individuals whose scores were on the median were excluded from the analysis.

Attractiveness and Leader Effectiveness

Hypothesis 5. Physically and interpersonally attractive leaders will receive higher effectiveness ratings than leaders of lesser physical and interpersonal attractiveness.

Results for both Times 1 and 2 show similar and consistent findings. Members give high leader effectiveness ratings with high interpersonal and physical attractiveness ratings. Alternatively, members give low leader effectiveness ratings with low physical and interpersonal attractiveness ratings.

Tables 31 and 32 show the results of leader interpersonal attractiveness ratings and leader effectiveness ratings comparisons for Times 1 and 2, respectively. The "high" and "low" categories were developed by dividing both the interpersonal attractiveness and effectiveness ratings given by members of leaders at the median. Medians for leader effectiveness were 5.50 and 5.67 for Times 1 and 2, respectively. Medians for interpersonal attractiveness ratings were 5.67 for both Times 1 and 2.

Tables 33 and 34 show the results of leader physical attractiveness ratings and leader effectiveness ratings for Times 1 and 2, respectively. Medians for physical attractiveness ratings were 5.0 for both Times 1 and 2.

These results confirm the "what is beautiful is good" hypothesis from the social psychological research which asserts that attractive individuals are perceived as more intelligent, competent, socially skilled, etc., than individuals of lesser attractiveness.



Table 31  
 Leader Interpersonal Attractiveness  
 Rating Categories\* Comparisons  
 Time 1 (n=85)

	Low Rating	High Rating	Total	Chi- Square
Leader Effectiveness Rating Categories*				
Low Rating	35	9	44	14.45**
High Rating	15	26	41	
Total	50	35	85	

\*Categories were developed by dividing both the interpersonal attractiveness ratings and effectiveness ratings of leaders at the median.

\*\*significance level = .0001

Table 32  
 Leader Interpersonal Attractiveness  
 Rating Categories\* Comparisons  
 Time 2 (n=88)

	Low Rating	High Rating	Total	Chi- Square
Leader Effectiveness Rating Categories*				
Low Rating	29	17	46	9.14**
High Rating	12	30	42	
Total	41	47	88	

\*\*significance level = .003

Table 33  
 Leader Physical Attractiveness Rating  
 Categories\* Comparisons  
 Time 1 (n=74)

Leader Effectiveness Rating Categories*	Low Rating	High Rating	Total	Chi- Square
Low Rating	24	12	36	9.09**
High Rating	11	27	38	
Total	35	39	74	

\*Categories were developed by dividing both the physical attractiveness ratings and effectiveness ratings of leaders at the median.

\*\*significance level = .003

Table 34  
 Leader Physical Attractiveness Rating  
 Categories\* Comparisons  
 Time 2 (n=62)

Leader Effectiveness Rating Categories*	Low Rating	High Rating	Total	Chi- Square
Low Rating	19	15	34	4.81**
High Rating	7	21	28	
Total	26	36	62	

\*\*significance level = .03

### Androgyny and Leader Effectiveness

Hypothesis 6. Leaders with androgynous sex role identities will receive higher effectiveness ratings than leaders with other sex role identities.

Results for Times 1 and 2 show similar findings. Leader effectiveness ratings were compared among all four types of leaders, using t-tests for groups (e.g., masculine versus androgynous types, feminine versus masculine types, etc.). Ratings by nonleaders showed that no one type was rated as more effective than any other type. Table 35 shows the mean leader effectiveness ratings comparisons between leader types for Time 1, and Table 36 shows the results for Time 2.

While no significant differences were found in leader effectiveness ratings by followers among the four leader types, there are several possible explanations. For example, the subsamples were rather small, ranging from 10 to 67 nonleaders at Time 1 and 20 to 52 nonleaders at Time 2. The instrument used to measure leader effectiveness was also of unknown validity, although reliability coefficients were high for Times 1 and 2.

In addition to comparing leader effectiveness ratings among the four leader types, ratings were compared between male and female leaders. There were no differences in leader effectiveness ratings between male and female leaders. Table 37 shows the results for Times 1 and 2.

Table 35  
 Mean Leader Effectiveness Ratings  
 Comparisons Between Leader Types  
 Time 1

Type	Mean Rating	T-value	2-tail Probability
Undifferentiated (n=10) Vs. Androgynous (n=17)	5.22 4.95	.53	.608
Masculine (n=67) Vs. Androgynous (n=17)	5.44 4.95	1.38	.195
Feminine (n=26) Vs. Androgynous (n=17)	5.47 4.95	1.32	.201
Feminine (n=26) Vs. Masculine (n=67)	5.47 5.44	.14	.891
Undifferentiated (n=10) Vs. Feminine (n=26)	5.22 5.47	-.60	.562
Undifferentiated (n=10) Vs. Masculine (n=67)	5.22 5.44	-.58	.585

Three groups were excluded from the analysis since their leaders were excluded because their scores were on the median.

It is interesting to note that, while there are no statistically significant differences among the four leader sex role types, the rankings of the mean effectiveness ratings were reversed for Times 1 and 2. At Time 1, androgynous, undifferentiated, masculine and feminine types were rated in ascending order. At Time 2, feminine,

Table 36  
 Mean Leader Effectiveness Ratings  
 Comparisons Between Leader Types  
 Time 2

Type	Mean Rating	T-value	2-tail Probability
Undifferentiated (n=23) Vs. Androgynous (n=17)	5.62 5.69	-.30	.765
Masculine (n=52) Vs. Androgynous (n=17)	5.60 5.69	-.44	.663
Feminine (n=20) Vs. Androgynous (n=17)	5.31 5.69	-1.47	.152
Feminine (n=20) Vs. Masculine (n=52)	5.31 5.60	-1.20	.240
Undifferentiated (n=23) Vs. Feminine (n=20)	5.62 5.31	1.24	.222
Undifferentiated (n=23) Vs. Masculine (n=52)	5.62 5.60	.12	.901

Two groups were excluded from the analysis since their leaders were excluded because their scores were on the median.

masculine, undifferentiated and androgynous leader types were rated in ascending order, reversing Time 1 results. One possible explanation is that certain leaders were recategorized at Time 2, based upon their answers to the Bem Sex Role Inventory. The same leaders may have received different effectiveness ratings between Times 1 and 2.

Table 37  
Mean Leader Effectiveness Ratings  
Comparisons Between Male and Female Leaders

Subsample	Mean Rating	T-value	Subsample	Mean Rating	T-value
Male Leaders (n=76)	5.30		Male Leaders (n=71)	5.50	
Vs.		-1.0	Vs.		-1.0
Female Leaders (n=58)	5.47		Female Leaders (n=51)	5.65	

Group performance and member satisfaction are sometimes used as objective measures of leader effectiveness. In addition to using ratings by followers of leader effectiveness, group performance scores were obtained and examined for differences between male and female leaders, and among the four leader types (i.e., masculine, feminine, undifferentiated, and androgynous). Results are shown in Table

While leader effectiveness ratings by nonleaders showed that no one type received significantly higher ratings than any other type, group performance scores among the different types of leaders did reveal some differences. At Time 2, groups with undifferentiated leader types had significantly higher performance ratings than groups with leaders who described themselves as androgynous, masculine or feminine. Four females and two males were typed as undifferentiated leaders at Time 2.

Table 38  
 Mean Group Performance Scores Comparisons  
 Between Male and Female Leaders and Among  
 Sex Role Leader Types  
 Time 2

Subsample	Mean Rating	T- Value	2-Tail Probability
Male Leaders Vs. Female Leaders	86.88 88.10	-1.79	.075
Sex Role Types:			
Undifferentiated Vs. Feminine	89.38 86.36	2.78	.008
Undifferentiated Vs. Masculine	89.38 87.45	2.40	.020
Undifferentiated Vs. Androgynous	89.38 85.95	2.85	.007
Feminine Vs. Masculine	86.36 87.45	-1.08	.288
Masculine Vs. Androgynous	87.45 85.95	1.32	.197
Feminine Vs. Androgynous	86.36 85.95	.30	.766

### Logit Model Analysis

The statistical results in the prior analyses were examined for purposes of hypothesis testing using t-tests and chi-square statistics. A supplementary analysis was conducted using a logit approach. The logit method was used in this study to test the explanatory power of the model and any emerging interactions that seemed particularly obvious. The logit model was used to assess the goodness of fit using gender, physical attractiveness, interpersonal attractiveness, and sex role type upon the dependent variables of interest (leader status and leader effectiveness).

Prior to beginning analyses, the frequency distribution of the raw data across cells was examined to identify cells having zero or very low counts. Odds ratios (used in logit analyses) cannot be computed when zero cells are frequent. Since this occurred in most instances, data were collapsed across adjacent cells to increase cell sizes. This procedure continued and ultimately resulted in a 2 x 2 x 2 x 2 x 4 design (leader or nonleader, male or female, high or low interpersonal attractiveness, high or low physical attractiveness, and masculine, feminine, undifferentiated or androgynous types), or 64 cells. The frequency distribution of the collapsed data was again examined to confirm that frequencies in categories were not violated. Zero cells were again frequent, especially for the leader status case. The patterns of results obtained before and after collapsing were compared to determine that collapsing did not distort the data.

Tests of partial and marginal association were used to determine



the significance of model components as well as to identify the most parsimonious model which adequately describes the data. A deletion strategy was used to identify how complex a model was needed for the data. The model was limited to testing the four predictor variables of interest, and any promising interaction effects based on the pattern of means observed.

The "goodness of fit" of the models used in this study was assessed through the likelihood ratio or the Pearson chi-square statistic, each of which has a chi-square distribution. The statistics are designed to determine whether the model provides an adequate fit for the data. The adequacy of the fit is contingent upon the significance level and the degrees of freedom used in the analysis. Table 39 shows the goodness of fit statistics for the main effect

Table 39  
Goodness of Fit Statistics for the  
Leader Effectiveness Models

<u>Model</u>	<u>Time</u>	<u>df</u>	<u>Maximum Likelihood</u>	<u>p</u>	<u>Chi- Square</u>	<u>p</u>
Dependent Variable: Leader Effectiveness						
Independent Variables:						
Sex, Interpersonal Attraction, Physical Attraction and Type	2	25	23.19	.57	21.77	.65
Sex, Interpersonal Attraction and Physical Attraction	1	25	20.31	.73	15.38	.93
Sex, Interpersonal Attraction	2	4	3.65	.45	3.23	.52
Sex, Interpersonal Attraction	2	1	4.49	.03	4.26	.04

models evaluated for leader effectiveness. The fit of the model is considered adequate if the statistic is nonsignificant.

Based on the magnitudes of the chi-square values for the four different models at Time 2, results shown in Table 39 indicate that the best fitting model was the one including the main effects of all four independent variables (e.g., sex, interpersonal attractiveness, physical attractiveness, and type). Since prior examination of Time 1 frequencies showed more empty cells than Time 2 frequencies, the different models were not tested for Time 1 except the one including all four independent variables.

To test whether an independent variable in a given model contributed in a statistically significant way, a comparison was made with a model excluding that independent variable by examining the differences in the likelihood ratios (or the chi-square goodness of fit) statistics of the models. The results shown in Table 39 indicate that the best fit was obtained when all four components were included in the model.

Based on the results shown in Table 39, the model containing all four main effects for leader effectiveness was the most adequate at Times 1 and 2, although the results should be viewed with caution. Even after collapsing the data to 64 cells, there were still many cells with zeros or less than five observations. Use of logit requires at least five observations per cell for 80 percent of the cells.

Interaction Effects

Interaction effects were derived from the tables of expected frequencies in the results for the leader effectiveness model containing all four main effects variables. Tables 40 and 41 show the effects for leader effectiveness ratings of masculine, androgynous or feminine males with low physical and interpersonal attractiveness ratings versus masculine, feminine and androgynous females with high physical and interpersonal attractiveness ratings. The odds ratios were calculated from the frequency tables in accordance with the procedure recommended by Goodman (1978). These particular effects were selected for evaluation based on the pattern of means observed in prior analyses (see Tables 24 and 25) and because the cells had more numbers in them relative to other cells.

Table 40  
Expected Odds of Receiving  
High Leader Effectiveness Ratings  
Time 1

		<u>MALES</u>		
		Masculine	Androgynous	Feminine
<u>FEMALES</u>	With High Physical Attractiveness Ratings, High Interpersonal Attractiveness Ratings			
	Type: Feminine	1.34	10.98	16.66
	Androgynous	.21	1.71	2.58
	Masculine	.52	4.28	6.49

The odds of receiving high leader effectiveness ratings are 16.66 to 1 in favor of feminine, highly attractive females over feminine, less attractive males. The odds are reduced to only 1.34 to 1 when attractive, feminine females are compared to unattractive, masculine males. The odds are reduced even further to only .52 to 1 when attractive, masculine females are compared to unattractive, masculine males.

Table 41  
Expected Odds of Receiving  
High Leader Effectiveness Ratings  
Time 2

		<u>MALES</u>		
		With Low Physical Attractiveness Ratings, Low Interpersonal Attractiveness Ratings		
Type:		Masculine	Androgynous	Feminine
<u>FEMALES</u>				
With High Physical Attractiveness Ratings, High Interpersonal Attractiveness Ratings				
Type:	Feminine	2.33	18.8	33.15
	Androgynous	.62	4.98	8.76
	Masculine	3.31	26.78	47.13

While the odds are higher for Time 2 compared to Time 1, the results are similar since they are in the same direction. For example, the odds of receiving high leader effectiveness ratings improved for attractive, feminine females to 33.15 to 1 over unattractive, feminine males. The odds of receiving high leader effectiveness ratings

are much greater (47.13 to 1) for masculine, attractive females over unattractive, feminine males. Feminine and masculine attractive females have a slight edge over unattractive masculine males, i.e., females are likely to receive higher effectiveness ratings. In general, Times 1 and 2 results indicate that attractive female leaders have higher odds of receiving high leader effectiveness ratings than unattractive male leaders, regardless of type.

The results shown in earlier analyses indicate that females who emerge as leaders (typically in groups with an equal number or majority of females) receive high physical and interpersonal attractiveness ratings, while male leaders are rated by both the same and opposite sex as unattractive. In ratings of effectiveness, however, highly attractive, feminine female leaders have an edge over male leaders in general, but only a slight edge over masculine male leaders. It seems that masculine males, regardless of how unattractive, are able to gain leadership status and receive only slightly lower effectiveness ratings than female leaders (there were no statistically significant differences reported between male and female leaders in Table 37).

## CHAPTER 8

### CONCLUSIONS AND IMPLICATIONS

#### Discussion

The results of this study indicate that persons who emerged as leaders in their groups had significantly higher interpersonal attractiveness ratings than nonleaders, and a masculine sex role identity (i.e., they described themselves as possessing a high degree of masculine characteristics and a low degree of feminine characteristics as measured by the masculinity and femininity scales, respectively, on the Bem Sex Role Inventory). Further, interpersonally and physically attractive leaders also received the highest effectiveness ratings, corroborating the "what is beautiful is good" hypothesis from social psychological research.

Female leaders received significantly higher physical attractiveness ratings than male leaders. Males received the lowest ratings for physical attractiveness, by both male and female members. Within the total sample, there were no differences in the proportion of males and females to emerge as leaders when chi-square analyses were used. However, within groups, the probability of a female gaining leadership status was dependent upon the relative proportion of females in the group, i.e., at least half or more members had to be female.

There were no significant differences in effectiveness ratings between male and female leaders, nor among the four sex role types (i.e., masculine, feminine, androgynous or undifferentiated leaders),

when using t-tests to compare differences. However, when interaction effects are considered in the Logit model, attractive female leaders, regardless of sex role type, have higher odds of receiving higher leader effectiveness ratings over unattractive males, regardless of type. The odds are greatly reduced when comparing attractive feminine females and unattractive masculine males, although females still have a slight edge.

For the most part, the findings of this investigation corroborate those of previous research. The implications for organizations are numerous and described in greater detail in Chapter 1, and the summaries at the end of Chapters 2, 3 and 4.

The issue of women as leaders "looms large in research and policy considerations" (Bass, 1981). Since women are now participating in high proportions in the work force, sex, sex role and attractiveness-based prejudices may have a direct impact upon them. According to Kanter (1977), the important issue is for women to be perceived and identified as leaders in organizations, where the proportions of women in upper level management positions have been small. This study has addressed several important factors which influence and determine identification and effectiveness as a leader.

Studies have shown that most women feel comfortable working for a man, but most men feel uncomfortable working under the direction of a woman. In mentoring relationships, the informal learning-teaching system remains vital for organizations. It is the key to organization's developmental activities, and to its future. Studies have shown that males are reluctant to be mentors to women, for fear of rumors, attraction,

or being charged with sexual harassment.

Given the importance of mentors, it is important for young female executives to attract the attention of older male executives who are willing to be their mentors. Also, more women in senior positions are becoming mentors to junior men, a situation in which people have even less experience. One problem is that there are many similarities between a growing mentor relationship and the evolution of a romantic relationship (Westoff, 1985). It is important that women not fall into a stereotype that keeps them deferential; they should be aggressive and independent.

Decisions as to whom is chosen for managerial positions often depend in part on past performance, demonstrated leadership ability and perceptions of leadership effectiveness. There are many opportunities in organizations to demonstrate leadership skills. For example, in leaderless teams, task forces, ad hoc committees, informal staff meetings, briefings and seminars, in which there are no appointed leaders, opportunities exist to gain prominence as a leader.

Many of the newer organizational structures use project teams composed of several individuals with diverse backgrounds and training. These teams provide particularly good opportunities to demonstrate interpersonal skills and leadership competencies. This study provides insight into what people must do and what characteristics they must possess in order to be perceived as leaders by others. Specifically, demonstrating masculine characteristics (e.g., dominance, assertiveness, aggressiveness, and independence) and being interpersonally attractive are important requisites for being identified as a leader.



Being physically attractive ("what is beautiful is good") is important for females in gaining leadership status, but not important for males, who may be unattractive and yet gain leader status and receive equivalent effectiveness ratings when compared to females.

More women are entering the work force in non-traditional jobs like accounting and business, law, engineering and medicine. Research in this area can aid women entering these professions by offering insight into the processes operating within organizations and groups which may affect them.

### Limitations of the Study

This study relied upon t-tests and chi-square statistics for purposes of hypothesis testing, and was limited to the extent that such non-multivariate techniques did not accommodate potentially confounding effects such as the composition of the group by sex, familiarity and grade point average. While the design of the present study took into account confounding effects by measuring and evaluating certain factors, it was limited to testing these effects with correlation coefficients, t-tests, and chi-square statistics as well.

These statistical techniques do not permit systematic evaluation of the relationship among all of the variables at the same time. The chi-square approach provided estimates of the effects of the variables on each other, but its application to tables with more than two variables is complicated. Further, these techniques are unable to identify interaction effects. Regression analysis or analysis of variance were not appropriate for statistical analyses of categorical data in this study, particularly involving a dichotomous dependent variable. Ideally, a logit model approach could have been used, which typically involves an iterative testing procedure by which the best fitting and most parsimonious model is selected. The small sample size in this study precluded use of a saturated logit model, which requires at least five observations per cell for at least 80 percent of cells, with no more than 5 percent empty cells (Goodman, 1978).

Other limitations include the effects of timing (six versus fifteen weeks), different tasks (personnel versus policy), familiarity, grade point average, and composition of the group by sex, on the results. Each of these issues was addressed earlier and need to be considered when evaluating the findings of this study. Some may be dismissed with plausible alternative explanations, while others raise important questions for further study.

While data were collected for both summer and fall courses, the students were required to complete the same number of projects and worked together for equivalent periods of time. In fact, some summer courses required that students work together much more closely than those in fall courses because of time constraints imposed by the course requirements. Some students in summer classes reported spending much more time together than students in fall classes.

With respect to familiarity, it is expected that members know leaders better than other members since leaders generally disclose more information about themselves, influence the group, and impose their work standards and procedures on the group. In fact, familiarity ratings of both leaders and members significantly increased over Times 1 and 2, supporting the conclusion that familiarity is a result of spending time together working on the task assignments. To rule out the possibility of familiarity before the group formed, a future study could include a question specifically addressing prior knowledge.

It was expected that individuals would give high ratings of familiarity with high ratings of attractiveness since individuals want to be identified with attractive people because it enhances their own self image.

Grade point averages were higher for leaders, and lower for nonleaders, another expected finding. However, there was no significant relationship between grade point average and attractiveness, indicating that these are independent of each other. Since there is a relationship between being interpersonally attractive and becoming a leader, and between ratings of attractiveness and effectiveness, these may be better predictors of high leader effectiveness ratings and leader status.

Ratings concerning the sex neutrality of the tasks should be obtained from experts in the future. Independent experts (e.g., well known and respected scholars who have broad knowledge of sex role stereotyping) could provide a more objective, authoritative opinion than teaching assistants in the College of Business and Management. In fact, future research should consider all of the issues raised in this discussion to more adequately address the research questions asked by this study.

### Future Research

Some of the findings of this investigation support those of previous research, while other findings raise new and interesting questions, offering new directions for further research. For example, replication of this study using groups with different demographic characteristics might reveal differences in leadership emergence. There may be a greater acceptance of women as leaders among students in certain parts of the country. For example, regional differences in attitudes may affect whether women emerge as leaders in the South versus the North or Midwest regions of the country.

This study could be extended and improved upon as previously discussed in the limitations section, by specifically controlling for the number of males and females in each group, and examining the differences in leadership emergence in groups with varying sex ratios. It would be useful to examine differences in leader sex for groups with different proportions of males and females, and to investigate the personality types of the leaders and nonleaders in the groups. For example, do females with "dominant" personalities become leaders more than females with "submissive" personality types, and what are the relative proportions of males and females in those groups in which females emerge?

Further research is needed, designed to objectively measure nonleaders' attitudes toward women as managers, as well as their attitudes toward physical attractiveness. Instruments such as the Attitudes toward Women as Managers (Spence and Helmreich, 1972) and the Attitudes toward Physical Attractiveness scale (Downs et al, 1982) could be used to examine attitudes and evaluate differences.

The Bem Sex Role Inventory could be administered to students in different disciplines and results compared across samples. Comparing results could address both construct validity issues and development of a standardized score across samples to enhance future research with the instrument. It would be valuable to examine differences among personalities of individuals classified among the four sex role types. For example, do masculine types score higher on the dominance scale than feminine types? It might be beneficial to use different scoring procedures for the Bem instrument and compare results.

Future research could compare differences between groups in which there was agreement or no agreement on the leader choice among members. For example, are groups in which one leader emerges (as opposed to several leaders) more cohesive, or better performing groups? Are there more masculine or dominant types in such groups? Answers to these questions will offer revealing insight into structuring groups and committees.

Replication of the study in other field settings using experimental controls should be undertaken, designed to address and evaluate the relationship between sex, sex role identity and attractiveness in predicting leader emergence and effectiveness. Both sex role identity and attractiveness may affect one's leadership style. It seems clear that there may be a direct relationship between the dimensions often used to describe leadership style (e.g., a task or relationship orientation) and sex role identities (e.g., masculine or feminine).

In a future extension of this study, group members could be asked to describe each of the other members using the Bem instrument,

as well as to describe their "ideal" leader and their present leader. Examination and analysis of the differences between the sex types of "actual" leaders versus the sex types of "ideal" leaders might reveal that individuals prefer androgynous types in certain groups or settings, whereas they prefer other types in other settings. Further, it would be meaningful to evaluate leaders of groups in terms of their subordinates satisfaction and their group's performance, two somewhat objective measures of a leader's effectiveness.

Additional research could investigate the career choices and decision mechanisms employed by women who select non-traditional occupations to determine if any commonalities exist in the process leading to their choices. In the case of women managers, the processes which led to achievement of the leadership role need to be studied for commonalities. For example, to what extent did the mentoring process help or hinder their ascendance within the organization? To what extent did first assignments and training opportunities help in advancing through the organization? If individuals are being artificially blocked from advancement, the personal, structural or environmental factors should be identified for similarities across organizational settings.

Methodological deficiencies in research should be addressed. Longitudinal studies should be undertaken to determine how the woman manager's career changes over the years, and if there is a "career-cycle" common to most women managers. There needs to be more research with varied populations, including women in managerial positions (not "administrative work" which may simply be clerical work). Development

and validation of instruments to measure variables would be useful.

There are numerous leadership theories which could be tested in field settings under emergent conditions. Certain theories appear to be well matched to emergent leadership situations. Attribution theory (Kelley, 1967; Calder, 1977; Green and Mitchell, 1979) addresses the process issues by explaining how individuals make inferences and subjective interpretations about what causes certain behaviors. If the process described in the theory accurately reflects how leadership is situationally defined and inferred from observing behaviors, then it predicts the attribution of leadership. Future work could be directed at the underlying nature of the attribution process, how members actually attain leader status in groups, and what personal and situational variables affect the perception of leadership.

The notion of emergent leadership provides an approach to understanding how leader status and influence are attained, used, and become effective. Research to date provides some excellent clues to the workings of this complex process. Further conceptual and empirical work can make significant contributions to our understanding.



APPENDIX A

Name \_\_\_\_\_  
 Group Number \_\_\_\_\_  
 Course \_\_\_\_\_ Instructor \_\_\_\_\_  
 Date \_\_\_\_\_ Age \_\_\_\_\_ Sex \_\_\_\_\_  
 Major \_\_\_\_\_ G.P.A. \_\_\_\_\_

INSTRUCTIONS: On the back of his sheet, you will be shown a number of personality characteristics. Use those characteristics in order to describe yourself. That is, indicate, in a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristics unmarked.

Example:

Mark "1" if it is NEVER or ALMOST NEVER TRUE that you are helpful.  
 Mark "2" if it is USUALLY NOT TRUE that you are helpful.  
 Mark "3" if it is SOMETIMES BUT INFREQUENTLY TRUE that you are helpful.  
 Mark "4" if it is OCCASIONALLY TRUE that you are helpful.  
 Mark "5" if it is OFTEN TRUE that you are helpful.  
 Mark "6" if it is USUALLY TRUE that you are helpful.  
 Mark "7" if it is ALWAYS OR ALMOST ALWAYS TRUE that you are helpful.

Thus, if you feel it is sometimes but infrequently true that you are "helpful", never or almost never true that you are "secretive", always or almost always true that you are "freindly", and often true that you are "adaptable", then you would rate these characteristics as follows:

Helpful	3	Friendly	7
Secretive	1	Adaptable	5



The Masculine, Feminine and Neutral Items on the Bem Sex-Role Inventory

<u>Masculine Items</u>	<u>Feminine Items</u>	<u>Neutral Items</u>
Acts as a leader	Affectionate	Adaptable
Aggressive	Cheerful	Conceited
Ambitious	Childlike	Conscientious
Analytical	Compassionate	Conventional
Assertive	Does not use harsh language	Friendly
Athletic	Eager to soothe hurt	Happy
Competitive	feelings	Helpful
Defends own beliefs	Feminine	Inefficient
Dominant	Flatterable	Jealous
Forceful	Gentle	Likeable
Has leadership abilities	Gullible	Moody
Independent	Loves children	Reliable
Individualistic	Loyal	Secretive
Makes decisions easily	Sensitive to the needs	Sincere
Masculine	of others	Solemn
Self-reliant	Shy	Tactful
Self-sufficient	Soft spoken	Theatrical
Strong personality	Sympathetic	Truthful
Willing to take a stand	Tender	Unpredictable
Willing to take risks	Understanding	Unsystematic
	Warm	
	Yielding	

Note: A subject indicates how well each item describes himself or herself on the following scale: (1) never or almost never true; (2) usually not true; (3) sometimes but infrequently true; (4) occasionally true; (5) often true; (6) usually true; (7) always or almost always true.

Date \_\_\_\_\_ Name (Print) \_\_\_\_\_  
 Instructor \_\_\_\_\_ Group Number \_\_\_\_\_  
 Course \_\_\_\_\_ Time \_\_\_\_\_

Group Member Evaluation: Interpersonal Attraction

Instructions: Print the first and last names of each of your group members in the spaces provided. Then consider each of the six questions and indicate which number on the scale below represents the degree to which each question can be answered. Answer each question for each group member.

Not at all A great deal  
 1      2      3      4      5      6      7

Group Members	How much do you like each group member?	How much time would you like to spend with each group member in an experiment?	How well adjusted is each group member?	How knowledgeable of current events is each group member?	How intelligent is each group member?	How moral is each group member?

Byrne (1971) Interpersonal Judgment Scale.

Date \_\_\_\_\_

Name \_\_\_\_\_

Instructor \_\_\_\_\_

Group Number \_\_\_\_\_

Course \_\_\_\_\_ Time \_\_\_\_\_

Male \_\_\_\_\_ Female \_\_\_\_\_ Age \_\_\_\_\_

Group Member Evaluation: Physical Attraction

Instructions: Print the first and last names of each of your group members in the spaces provided. Then consider each item and indicate the number on the following scale which best represents your feelings of attraction about that item related to each group member. Rate each group member in each of the 3 items. Responses are confidential and used for research purposes only.

Not at all Attracted Extremely Attracted  
 1 2 3 4 5 6 7

Group Member	Face	Body	Overall Grooming

Name \_\_\_\_\_

Date \_\_\_\_\_

Course \_\_\_\_\_ Instructor \_\_\_\_\_

**Instructions:**

Print the first and last names of each of your group members in the spaces provided below. Then indicate the number on the following scale which best represents your answer to the questions below.

Not at All A great deal  
 1 2 3 4 5 6 7

Group Member	To what extent are you familiar with this member, know their strengths and weaknesses with respect to the task, understand their personal work preferences, etc.?	To what extent do you know this member, their likes and dislikes, what they can do well, poorly, etc. with respect to the group's project?

**Familiarity Measure**

Name \_\_\_\_\_

Date \_\_\_\_\_

Course \_\_\_\_\_ Instructor \_\_\_\_\_

Group \_\_\_\_\_

1. Given what has happened to date in the group, who do you feel emerged as the leader of your group? Put one person's name below who guided the direction of the group, obtained group support, and influenced what happened more than others most of the time.

Leader's Name \_\_\_\_\_

2. Leader Effectiveness

How effective would you rate the leader along the following dimensions?

Extremely Ineffective \_\_\_\_\_ Extremely Effective

1                    2                    3                    4                    5                    6                    7

1. Overall effectiveness as a leader, organizer, supervisor, etc. of the group. \_\_\_\_\_
2. Encourages people in the group to give their best effort. \_\_\_\_\_
3. Maintains high standards of performance. \_\_\_\_\_
4. Helps plan and schedule work. \_\_\_\_\_
5. Offers new ideas for solving task related problems. \_\_\_\_\_
6. Willing to listen to everyone's point of view. \_\_\_\_\_





Date \_\_\_\_\_

Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Position \_\_\_\_\_

Please read the descriptions of two tasks shown below. How would you rate the task described along the following dimensions?

Masculine									Feminine
1	2	3	4	5	6	7	8	9	

\_\_\_\_\_ 1. Students worked together in small groups. Groups were required to prepare two or more written reports and oral presentations which included a strategic analysis of business firms. The reports included recommendations for helping the business get started, grow or change directions. Reports consisted of a minimum of three components -- problem analysis, alternatives, and recommendations. Generally, emphasis focused on looking at the business as a whole, not just one particular area such as personnel, accounting, marketing, finance, management, etc.

\_\_\_\_\_ 2. Students worked together in small groups. Groups were required to prepare five or more reports which included an analysis of an organizational problem and recommendations for solving the problem. Group exercises required a team effort, and focused on specific functional areas within human resource management. For example, groups were required to design human resource planning systems, or to develop training, compensation, or performance appraisal systems for the organization.

Task Descriptions: Rated by Judges

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