SEX OF SUPERVISOR AND PERCEPTION BY OTHERS OF SUPERVISOR'S LEADERSHIP STYLE

A Thesis

Presented to

the Faculty of Graduate Studies

University of Manitoba

In Partial Fulfillment

of the Requirements for the Degree of

Master of Arts

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by

Sheldon Hochman

May, 1975

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A dissertation submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of

MASTER OF SCIENCE

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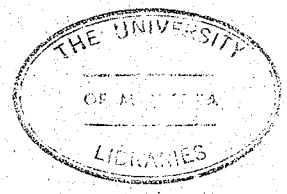

ABSTRACT

This exploratory study investigated the effect of sex of supervisor on subject perception and evaluation of the supervisor's leadership style. The sex composition of the supervisor's work unit (male, female or mixed) and the subject characteristics: sex, age, status and indentification with the supervisor or subordinates were also examined. One hundred and eighty subjects sampled from eleven different government agencies in Winnipeg, Manitoba, were randomly placed in one of the twelve cells of a 2x3x2 factorial design. The dependent variables were: the perception of leadership style as measured by five subscales of the Leader Behavior Description Questionnaire - Form XII and the evaluation of leadership style, operationally defined by a 10-item adjective check list and a 5-point attractiveness rating scale.

Sex of supervisor and sex of subordinates were manipulated by varying the given names of the characters in an organizational case study. Each subject received only one version of the case study and was unaware of the experimental interest in sex. Contrary to the predicted effect of sex-role stereotyping, sex of supervisor had a significant main effect on only one of the five perception of leadership style variables. However, this pattern is consistent with a recent study which emphasized the importance of role, not sex on the perception of others. There were no significant sex of supervisor effects with either of the two evaluative dependent variables. Although there were no significant sex of supervisor x sex of subordinate interactions, sex of subordinates did have s significant effect on one of the evaluative variables. The supervisor, regardless of sex, was viewed as more attractive when the subordinates were male than when they were female.

A somewhat unexpected result of this study was the identification of the rather pervasive influence of the subject variables (age, sex, status and identification) on the perception and evaluation of leadership style. Further analysis of these factors suggested that sex of subject was the variable primarily responsible for these effects.

ACKNOWLEDGEMENTS

I wish to express my sincere appreciation to Dr. D. Lawless, not only for his guidance and encouragement in the development of this thesis, but also for the continuing support he provided me during my years of study. I also extend my thanks to Dr. J. McIntyre for his assistance with the statistical analysis, and Dr. L. Etheredge and Dr. J. Grey for their valuable suggestions. Special thanks to Mr. G. Newman of the City of Winnipeg and Mr. R. Rogers of the Public Service Commission for their invaluable assistance in the sampling process and to the organizations and individuals whose co-operation made this study possible.

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CHAPTER I

INTRODUCTION

Scope and Purpose

The study of leadership has long attracted the attention of social scientists from a variety of related disciplines. However, the cumulative results of their endeavours have not, as yet, proven to be conclusive. In the following passage, Bennis (1959) has most aptly described the present state of leadership theory:

> Of all the hazy and confounding areas in Social Psychology, leadership theory undoubtedly contends for top nomination, and ironically, probably more has been written and less is known about leadership than about any other topic...We have invented an endless proliferation of terms to deal with it: leadership, power, status, authority, rank, prestige, influence, control, manipulation, domination and so forth, and still the concept is not sufficiently defined. (Pp. 259-260)

As research continues in an attempt to gain a clearer understanding of this complex phenomenon, an additional but as yet relatively ignored factor must also be considered. The sex of the leader has become a relevant variable.

The changing patterns of sex-role allocation in North American society have recently begun to reflect the tendency of women to become increasingly more involved in a wide variety of roles in many different types of formal

organizations. In this regard, the present and projected future movement of women into supervisory or management positions has been widely noted in the literature (Buchanan, 1969; Merrit, 1969; Archibald, 1970; Hedges, 1970; Orth and Jacobs, 1971; Loring and Wells, 1972; Oppenheimer, 1973) and is of special interest in this investigation. A number of researchers (Millman, 1971; Sherman, 1971; Hochschild, 1973; Schein, 1973) have stressed the importance of taking these changing sex-role patterns into account when conducting studies of organizational behavior. However, as Holmes and Jorgenson (1971), Schein (1971) and Roussell (1974) have indicated, social psychologists in the past have generally omitted consideration of the sex variable as part of their overall research designs. Howe (1973) has succinctly described the current condition of the literature regarding sex roles and organizational behavior in stating: "Pick up a book about sex roles and you will spend most of your time reading about women. Pick up a book about work, the meaning of work, the alienation from work, the value of work, and you will mainly be reading about men." (p. 22)

In response to this acknowledged shortcoming in organizational research, the actual behavioral effects of changing sex-role patterns have recently been subject to

systematic investigation. Studies such as Bowman, Worthy and Greyser (1965), Megargee (1969), Saleh and Lalljee (1969), Schein (1973), and Rosen and Jerdee(1973, 1974) are beginning to explore the validity of organizational theory based on the implicit assumption that managerial positions are the special and exclusive province of males. An important aspect of the examination of the effects of the sex variable on organizational behavior is the influence of sex-role stereotyping on supervisor-subordinate interactions. Organizational theorists such as Likert (1961) have come to regard these supervisor-subordinate interactions as one of the critical factors in the understanding of leadership. The present research was designed to study one specific component of this complex relationship - the influence of sex-role stereotypes on the perception of supervisory leadership style. The basic question examined was whether or not the sex of a supervisor determined how the supervisor's leadership style was perceived by others.

Literature Review

A full understanding of the relationship examined in this study must include a selected review of relevant literature from a number of areas. The review has been organized under the following headings: Organizational

Psychology, Leadership Theory, Leadership Styles, Person Perception and Sex-Role Stereotyping, because of the range of basic theoretical material selected to focus the problem.

Organizational Psychology. Modern society is an organizational society (Presthus, 1962), with formal organizations playing a major role in all aspects of our lives. Pugh (1966) has stressed the importance of this point as follows:

> Most people spend a considerable portion of their time in formal organizations. Pre-school children, non-working wives, and old people are the only sizeable groups not necessarily so involved as members and even they are affected as patients, clients, customers or citizens. The bureaucratic organization, and the individual operating within it, is one of the dominant institutions of our time. (p. 235)

Organizational Psychology is the study of the structure and functioning of these organizations and the behavior of groups and individuals within them. It is rooted in many disciplines of which Bass (1965) has listed the following as the most important: Anthropology, Sociology, Social Psychology, Educational Psychology, Clinical Psychology, Social Psychology, Administrative Science, Political Science, Economics, Operations Research, Industrial Engineering,

Engineering Psychology, Experimental Psychology, and Psychometrics.

The formal organization, defined by Schein (1965) as:

> ...the rational co-ordination of the activities of a number of people for the achievement of some explicit purpose or goal, through division of labor and function, and through a hierarchy of authority and responsibility. (p. 8)

is the prime focus of Organizational Psychology. As this definition includes many different types of organizations, from government agencies, educational institutions and retail establishments to service organizations and fraternal societies, various theorists such as Etzioni (1961), Blau and Scott (1962), and Katz and Kahn (1966) have developed specific typologies designed to systematically account for significant differences in structure and function.

The formal study of organizational behavior is a relatively recent development, dating back to the beginning of this century. The early contributions to the field can be viewed as representing two major schools of thought viz. the Classical or Formal School exemplified by Taylor (1911), Urwick (1943), Weber (1946), and Fayol (1949), and the Human Relations or Informal School exemplified by Mayo (1933),

Roethlisberger and Dickson (1939), Maslow (1954), McGregor (1960), and Lewin (1951). The former assumed that the most efficient organization would also be the most satisfying, while the latter assumed that the most satisfying organization would be the most efficient. The resolution of the conflict inherent in these diametrically opposed positions, as well as the incorporation of many other diverse findings and perspectives, required viewing the organization as a system. Organizational behavior became to be considered in terms of the complex, dynamic, inter-relationships of many different types of variables from different levels in the organization. In this regard, Scott (1971) has concluded that:

> The distinctive qualities of modern organizational theory are its conceptual-analytical base, its reliance on empirical research data and, above all, its integrating nature. These qualities are framed in a philosophy which accepts the premise that the only meaningful way to study organization is to study it as a system. (p. 19)

In essence, the individual, in the group, in the organization, in the surrounding environment has become the framework for theoretical and practical inquiry. Some representative works utilizing this perspective include: Likert (1961), Leavitt (1964), Seiler (1967), Price (1968), March

and Simon (1958) and Haire (1959). It is within this systems-oriented framework that Kelly (1969) offers the following description of Organizational Psychology:

> That field of psychology that studies man's behavior and attitudes in an organizational setting; the organization's effect on his perceptions, feelings, and actions; and his effect on the organization; particularly how his behavior affects the achievement of the organization's purpose. ...Inherent in this approach is the notion of reciprocity which assumes that all social actions inevitably invite reactions. (p. 57)

Leadership theory. Although systematic investigations of leadership are relatively new, man's attempt to understand leadership has a long history. For, as Petrullo and Bass (1961) have commented: "Military men, journalists, politicians, novelists, dramatists, poets, feminists, financiers and physical scientists have all circulated ideas on leadership." (p. xxvii)

In spite of (or perhaps because of) the enormous amount of comment and research on the subject, there remain many divergent and contradictory theories and perspectives. A cursory review of the many publications dealing with the study of leadership indicates an initial lack of consensus concerning an appropriate definition of leadership. In fact, as Carter (1958) and Gibb (1969a)have

concluded, there almost appear to be as many definitions as there are researchers examining the issue. The definition of leadership must therefore be viewed within the perspective of the specific investigation or school of thought being considered.

The focus of the present research is on the leader as an individual in a formal position of supervision. This is not to minimize the presence and potential importance of informal leadership in affecting organizational behavior. It is rather that the specific interest of this study is the perception of the leadership style of the formally designated supervisor. This conception of leadership is similar to the position adopted by Shartle and Stogdill (1952) in the Ohio State University Studies on naval leadership.

The study of leadership has developed in accordance with three major theoretical perspectives:

A. The Individual Approach

From the beginning of the century, investigators such as Gowin (1915), Tead (1935), Allport (1937), Barnard (1938), and Bogardus (1942) tended to concentrate on the discovery of physical, intellectual and personality traits which distinguished formally designated leaders

from followers. A number of reviews (Bird, 1940; Gibb, 1947; Stogdill, 1948; Mann, 1959; Jennings, 1961) of the trait approach are available and appear to be in general agreement that this perspective has failed to provide a satisfactory explanation of leadership. Stogdill (1948) concluded his survey of 124 studies by stating that: "...a person does not become a leader by virtue of the possession of some combinations of traits, but the pattern of personal characteristics of the leader must bear some relevant relationship to the characteristic activities and goals of the followers." (p. 64) Thus, it became apparent that an adequate analysis of leadership involved not only a study of leaders, but also of situations. Gouldner (1950), Fiedler (1961) and Gibb (1969a) have all critically examined the trait approach and have speculated on some of the possible factors which account for its apparent shortcomings. Overall, investigators in this tradition have come to the conclusion that while certain minimal abilities are required of all leaders, these are widely distributed among non-leaders as well. Furthermore, the traits of the leader which are necessary and effective in one group or situation may be quite different from those required of a leader in a different setting.

The limitations of the trait approach led to a large number of studies (Lewin and Lippit, 1938; Kahn and Katz, 1953; Shartle, 1956; Baumgartel, 1957; Tannenbaum and Schmidt, 1958; Stogdill and Coons, 1957; Argyle, Gardner and Cioffi, 1958; Fiedler, 1958; Likert, 1961; Day and Hamblin, 1964) which examined the effect of leader attitudes or behavior on subordinate output (output measures have typically been considered in terms of such things as: job satisfaction, morale, turnover, absenteeism, grievance rate, profits and quantity and quality of production). Once again the major emphasis of these studies was the individual, formally appointed leader apart from the consideration of any other factors or variables. Where leader attitudes were studied it was generally, explicitly or implicitly, assumed that a specific type of leadership style or behavior stemmed from them. Thus, since the end of the Second World War, research emphasis shifted from a search for personality traits to a search for behavior which made a difference in the performance or satisfaction of the followers.

It is difficult to compare the results of many of these projects as the specific aspects of behavior or leadership style examined as well as the measuring instruments

used have varied. However, in spite of these limitations certain consistent patterns seem to have emerged. McGrath (1961) in his summary of the literature has indicated two clusters of leadership behavior and attitudes which have been the focus of most psychological research in the area. The autocratic, task oriented leader characterized by: centralization of authority, responsibility and decision making; a heavy emphasis on obedience; a minimization of intra group communication except insofar as it goes through the leader and is focused upon him; and a heavy or exclusive reliance on external control of human behavior. And the democratic, employee-oriented leader characterized by: decentralization of responsibility and decision making; maximum involvement and participation of every member in group activities and in the determination of objectives; encouragement of interpersonal contacts and relations through the group structure and a heavy reliance on self-control and self-direction for the control of human behavior.

An explanation of the phenomenon of leadership solely in terms of supervisory leadership style or attitude has proven to be inadequate. Sales (1966) concluded his review of the literature relating supervisory

style and productivity by stating that:

> ...in neither experimental studies nor survey investigations has an adequate test of the theory proposed by the human relations oriented researchers, i.e. that democratic leadership is more effective than autocratic leadership been made. The experimental studies have not created the conditions necessary for such tests, while survey studies have introduced contaminating variables which render proper interpretation of the observed relationship difficult. (p. 285)

Thus, those theories of leadership which focused exclusively on the traits, behavior or attitudes of the leader came to be regarded as representing too simple an approach to the topic.

B. The Situational Approach

During the same period as the Individual Approach, attention began to focus upon the context of leadership, i.e. the situation in which leadership took place (Jenkins, 1947; Hemphill, 1949; Hamblin, 1958). Situation oriented researchers assumed that it was unreasonable to expect one leader to always be able to do everything better than anyone else. Stodill (1948) cogently expressed the essence of this perspective when he wrote:

> It is not especially difficult to find persons who are leaders. It is quite another thing to place these people in different situations where they will be able to function as leaders. Thus any adequate analysis of leadership involves not only a study of the leaders but also of the situation in which the leadership acts occur. (Pp. 64-65)

One school of thought within this perspective has proposed that subordinate characteristics influence the effect which leadership style has on output. The characteristics examined have typically been either subordinate personality variables or subordinate expectations regarding appropriate leadership style. Studies such as Jackson (1953), Hemphill (1955), Haythorn, Couch, Haefner, Langham, and Carter (1956), Foa (1957), and Vroom and Mann (1960) have presented evidence that subordinate expectations and group standards with regard to appropriate leadership behavior interact with subordinate perceptions of this behavior to influence group satisfaction and performance. Other situational approaches have focused upon such factors as the institutional setting (Christie, 1952; Halpin, 1955) and the nature of the task at hand (Carter and Nixon, 1949; Carter, 1953; Faunce, 1958).

Perhaps the most influential of the situational perspectives has been the group or functional approach to the study of leadership. Leadership is described as the

performance of acts which assist the group in achieving certain ends and is thus defined by Hersey and Blanchard (1969) as: "...the process of influencing the activities of an individual or a group in efforts toward goal achievement in a given situation." (p. 60) Leadership is viewed as a process rather than a personal characteristic and is considered to be a function of the leader, the follower and the situation.

Advocates of this approach (Benne and Sheats, 1948; Knickerbocker, 1948; Bavelas, 1960; Krech, Crutchfield and Ballachey, 1962; Mann, 1965) have attempted to delineate the types of behavior which were necessary for a group to survive and attain its goals. Although the terminology may vary, a review of the many studies which have incorporated this functional perspective clearly indicates what appears to be two basic types of group functions - the task function, which is mainly concerned with the achievement of some specific goal and the human function, which is concerned with the maintenance or strengthening of the group itself (Bales and Slater, 1955; Fleishman, Harris and Burtt, 1955; Halpin and Winer, 1957; McGregor, 1960; Blake and Mouton, 1964; Argyris, 1965; Katz and Kahn, 1966; Merton, 1969; Mitchell, 1970). Many of

these researchers have applied the two concepts to the behavior of the formal leader of a group and utilized them as descriptions of leadership style. However, situational purists define an effective leader as one who is able to influence the group in such a manner that it attains or approaches its goals. This is not necessarily the formal leader and in fact, the leadership of any group is generally viewed as being shared among several members.

C. The Organizational Approach

To pursue this examination of leadership it is necessary to escalate the level of discussion from the group to the organization. The organizational or interactional approach to leadership is similar to the situational approach in that the focus is on the situation in which the leadership occurs. However, at the organizational level the total situation, including the structure and functioning of the organization in which the group is operating is examined, rather than a more limited emphasis on the particular situation of the group in question. For as Argyris (1961) has noted: "...it may not be possible to study leadership phenomenon in the organizational setting without studying the nature of the

organization." (p. 336). Of special importance is the attempt of this approach to examine leadership within a systems frame of reference, whereby the divergent emphases of the individual and situational approaches are integrated and expanded to include the simultaneous influence of the many different types of variables which have been found to be relevant in the study of leadership. For, as Gibb (1969b) has commented: "Leadership is a function of personality. It is also a function of the social system. But more basically, it is a function of these two in interaction." (p. 216) A large number of researchers including Pelz (1951), Burke (1965), Bowers and Seashore (1966), Fiedler (1967), Cummings and Scott (1969), Reddin (1970), Dawson (1973), and Hollander and Julian (1973) have emphasized this systems-oriented perspective in their studies of leadership.

One of the most important contributions of the organizational-systems-oriented approach is the recognition of the necessity of considering the phenomenological field of each individual in the situation. Thomas and Thomas (1928) have laid the groundwork for this approach in their observation: "If men define situations as real, they are real in their consequences." (p. 572) Likert (1959) following in the tradition of Thomas and Thomas, has arrived at a

similar conclusion: "An individual's reaction to any situation is always a function not of the absolute character of the interaction, but of his perception to it. It is how he sees things that counts, not objective reality." (p. 161) Others, such as Scott (1956), Bescoe and Lawshe (1959), Zalkind and Costello (1962), Cantril (1963), McGregor (1967), Gibb (1969b), Kolsa (1969) and Nord (1972) have emphasized the significance of this point and incorporated it into empirical research. It is the acknowledgement of the simultaneous influence of follower perceptions and other factors such as the personality and behavior of the leader, the nature of the task and institutional setting, the organizational and group structure, and the surrounding culture which define leadership in an organizational context.

Leadership styles. As has been indicated in the preceding discussion, the study of leadership styles has played an important role throughout the development of leadership theory. The indentification of various leadership styles and their relation to many different types of organizational variables has been the focus of researchers operating within the individual, situational and organizational perspecitives. A review of these studies has clearly

indicated two basic styles of leadership - the task oriented and the people oriented approaches. As Fiedler (1967) has observed:

> ...most leadership research has pointed to two or three main modes of interpersonal behavior by which leaders attempt to exert influence and control. In grossly over-simplified terms, the leader can take primary responsibility for the group, he can be autocratic, controlling, managing, directive and task oriented in his interactions with his members. Alternatively, he can share decision-making and leadership with his group: he can be democratic, permissive, non-directive, considerate of his group members' feelings and therapeutic in his leadership. Many workers in this area have, therefore, found it expedient to develop or work with tests and measures which tap these two types of leader attitudes and behaviors. (p. 37)

Although a number of different research programs have focused on the two dimensions of task and people orientation, it is generally accepted that the Ohio State Leadership Studies have proven to be one of the most complete and extensive of these endeavours (Korman, 1966; Dawson, Messe, and Phillips, 1972; Gibb, 1972; Dawson, 1973; Templer, 1973). These studies, as described by Stogdill and Coons (1957), attempted to identify through factor analytic procedures the smallest number of dimensions which would adequately describe leadership behavior. Two questionnaires, based on the assumption that the

supervisor would be the leader, were developed to measure these dimensions viz. the Leader Behavior Description Questionnaire, L.B.D.Q. (Fleishman, 1953a),which measured subordinate perceptions of leader behavior and the Leader Opinion Questionnaire, L.O.Q. (Fleishman, 1953b),which examined how the leader felt he ought to behave. Although nine a priori dimensions were originally postulated, Halpin and Winer (1952), in a study of airplane commanders, demonstrated that these reduced to four factor analytic dimensions which were named: Consideration, Initiation of Structure, Production Emphasis, and Sensitivity. Of these, Consideration and Structure were by far the most important, accounting for 83% of the variance between them. These same two factors were also identified in factor analytic ratings of industrial foremen (Fleishman, Harris and Burtt, 1955), State-police supervisors (Bass, 1963) and ROTC students (Meuwese, 1964). Fleishman and Harris (1962) have defined Consideration and Structure as follows:

> Consideration includes behavior indicating mutual trust, respect, and a certain warmth and rapport between the supervisor and his group. This does not mean that this dimension reflects a superficial 'pat-on-the-back', first name calling kind of human relations behavior. This dimension appears to emphasize a deeper concern for group members' needs and includes such behavior as allowing subordinates more participation in decision

> making and encouraging more two-way communication.
>
> Structure includes behavior in which the supervisor organizes and defines group activities and his own relation to the group. Thus, he defines the role he expects each member to assume, assigns tasks, plans ahead, established ways of getting things done and pushes for production. This dimension seems to emphasize overt attempts to achieve organizational goals. (Pp. 43-44)

Similar definitions are given by Halpin (1954), Hemphill (1955), Rambo (1958) and Fleishman and Peters (1962). Consideration can be seen to correspond to the people oriented dimension and Structure to the task oriented dimension.

The great majority of the studies utilizing Consideration and Structure have been concerned with relating the underlying dimensions of people and task orientation to differences in subordinate productivity and morale. Many researchers have found a high-consideration, high-structure combination to be related to maximal satisfaction and performance (Halpin, 1957; Rubenowitz, 1962; Blake and Mouton, 1964; Fleishman and Simmons, 1970; Yukl, 1971). However, the assumption of independent dimensions on which this pattern is based (Stogdill and Coons, 1957) has not been empirically demonstrated. The available data, in fact suggest that Consideration and Structure are often

interdependent and at times negatively correlated (Lowin, Hrapchak and Kavanagh, 1969; Weissenberg and Kavanagh, 1972). Thus, as Kerr, Schreisheim, Murphy and Stogdill (1974) have concluded: "...it is often extremely difficult for a leader to behave in such a way that his subordinates will perceive him to be simultaneously high in both Consideration and Structure." (p. 63)

A number of extensive reviews have documented an overall lack of consistent relationships in studies relating Consideration and Structure to various organizational output measures (Vroom, 1964; Anderson, 1966; Korman, 1966; Campbell, Dunnette, Lawler and Weick, 1970; Evans, 1970). In summary, Lowin, Hrapchak, and Kavanagh (1969) have stated: "There appears to be much evidence that Consideration and Structure can each correlate positively, negatively, both positively and negatively (depending on other variables), and only weakly if at all with effectiveness and morale indices." (p. 239)

In view of the general use of correlational designs in studies of leader behavior, an important criticism has been raised by Korman (1966), Lowin and Craig (1968) and Yukl (1971), to the effect that neither the causality or direction of the relationship between leader behavior and organizational

functioning has been firmly established. In support of this observation, it has been demonstrated that under certain conditions prior subordinate performance causes subsequent leader behaviors (Vroom, 1964; Lowin and Craig, 1968; Farris, 1969; Farris and Lim, 1969). A recent study by Dawson, Messe and Phillips (1972) has clarified this issue somewhat by emphasizing the reciprocal nature of relationship.

To further clarify the current ambiguity in the leadership literature, it has been suggested that the influence of various situational variables on the relationship between Consideration, Structure and organizational behavior should be examined (Katzwell, Barrett, and Parker, 1961; Korman, 1966; Lowin, Hrapchak and Kavanagh, 1969; Yukl, 1971). Kerr, Schreisheim, Murphy and Stogdill (1974) have carried out a detailed review of the situational elements which are said to exert significant influence upon the relationship between the independent variables Consideration and Structure and the dependent variables satisfaction, morale and performance. They have presented the following, as an initial categorization of these situational variables:

> Subordinate considerations. Expertise, experience, competence, knowledge of job, hierarchical level of occupied position, expectations concerning leader behavior, perceived organizational independence, and psychological aspects.
>
> Supervisor considerations. Similarity of attitudes and behavior to those of higher management, and upward influence.
>
> Task considerations. Degree of time urgency, amount of physical danger, permissible error rate, presence of external stress, degree of autonomy, degree of job scope, importance and meaningfulness of work, and degree of ambiguity. (p. 73)

The purpose of the present research was to examine how one such additional situational element viz. the sex of the supervisor, influenced one specific aspect of the relationship between Consideration, Structure and organizational outputs viz. the perception of leadership style. The study was designed to determine if the sex of the supervisor had any effect on how the supervisor's leadership style (in terms of Consideration and Structure) was perceived by others.

Person perception. The organizational-systems-oriented approach to the study of leadership has emphasized the necessity of examining the perception of a leadership situation rather than focusing exclusively on the behavior of the leader itself. Likert (1961), has

placed major emphasis on the importance of this principle, and has expressed his ideas as follows:

> The supervisory act alone does not determine the subordinates response. The subordinates' reaction to the supervisor's behavior always depends upon the relationship between the supervisory act as perceived by the subordinate and the expectations, values and interpersonal skills of the subordinate. (Pp. 94-95)

Or, as Nord (1972) has stated more simply: "...it is the way a person 'sees' the situation, not the situation per se, that has important practical implications for organizational behavior." (p. 19)

The literature examining the nature of the perceptual process, and particularly dealing with person perception is so extensive that it is inappropriate to examine it in detail. Let it suffice to say that this is a complex phenomenon with many diverse variables affecting each perceptual end product. Included among the many factors which have been identified as influencing this process are: an individual's past experiences (Bruner and Tagiuri, 1954), the halo-effect (Symonds, 1925; Grove and Kerr, 1951), projection (Murray, 1933; Sears, 1936; Feshback and Singer, 1957), and set (Kelley, 1950; Strickland, 1958). Secord and Backman (1964), in their discussion of person perception, have presented an additional description of

factors related to the stimulus person and the perceiver which affect the perceptual process. Included among these is the influence of stereotyping, a factor which is of particular significance in the design of this study and described by Secord and Backman (1964) as having three characteristics: the categorization of persons, a consensus on attributed traits and a discrepancy between attributed traits and actual traits. A number of studies have examined the effect of stereotyping upon person perception and have established that this is an important source of perceptual distortion (McKeachie, 1952; Haire, 1955; Haire and Grunes, 1958; Cecil, Paul and Olins, 1973).

Sex-role stereotyping. The existence of sex-role stereotypes (consensual beliefs about the differing characteristics of men and women in our society) appears to be very well documented. Basically, in terms of the focus of this research, these studies may be grouped into two major categories. Those which describe the male as task oriented, instrumental, non-emotional, and the female as expressive, human relations or people oriented (Anastasi and Foley, 1949; Klein, 1950; Komarovsky, 1950; Sherriffs and Jarrett, 1953; Parsons and Bales, 1955; Vollmer and

Kinney, 1955; Leik, 1963; Heilbrun, 1968; Rosenkrantz, Vogel, Bee, Broverman and Broverman, 1968; Royal Comission on the Status of Women, 1970; Loring and Wells, 1972); and those which view the male and masculine sex-typed behavior as being of higher social value than the female and feminine sex-typed behavior (Kitay, 1940; Fernberger, 1948; Klein, 1950; Sherriffs and Jarrett, 1953; McKee and Sherriffs, 1957a, 1957b, 1959; Lynn, 1959; Goldberg, 1968; Rosenkrantz et. al., 1968; Broverman, Broverman, Clarkson, Rosenkrantz and Vogel, 1970)

An important consequence of the pervasive influence of sex-role stereotyping, is the tendency to view certain social roles or occupations as sex-linked. According to Merton, "...occupations can be described as 'sex-typed' when a large majority of those in them are one sex and when there is an associated normative expectation that this is how it should be." (Epstein, 1970, p. 152) Shuval (1963) has also emphasized this observation in stating that: "In all societies there are certain occupations that are specifically sex-linked. This means that as a general rule members of only one sex are considered legitimate recruits and practitioners of these occupational roles." (p. 171) In reference to this

distinction, Schein (1972) has stated: "Judging from the high ratio of men to women in managerial positions and the informal belief that this is how it should be, the managerial job can be classified as a masculine occupation." (p. 334) A number of divergent references in the literature provide additional support for this assertion. For example, Schein (1973) has found that successful middle managers are perceived to possess the characteristics, attitudes and temperaments more commonly ascribed to men in general than to women; others such as Krech, Crutchfield and Ballachey (1962), McGregor (1967), Buchanan (1969), Lutes (1971), and Prather (1971) have described the model of the leader or manager in our society as being a masculine one.

Theoretical Framework

The study of the functioning of an ongoing organization can be viewed from the perspective of an organizational-systems level research model developed by Lawless (1972). This model (Figure 1) facilitates the examination of any number of variables in a systematic and precise manner while taking into account the complex, inter-related and dynamic features of organizational behavior. Although other components of the model are

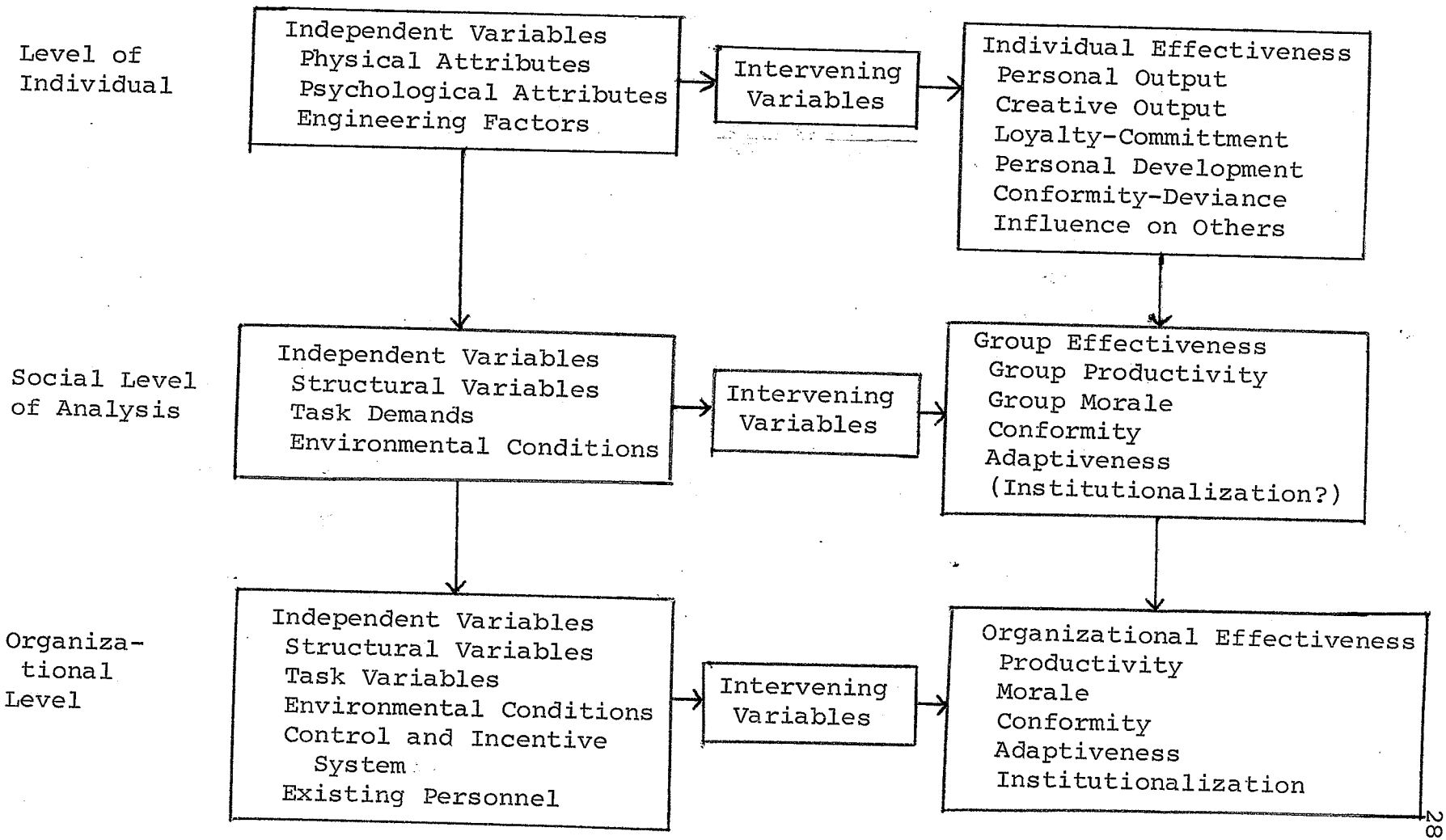

Figure 1 The Complex Model of Organizational Effectiveness (Lawless, 1972)

important for a complete understanding of the major variables and relationships associated with the study of supervisory behavior, it is the intent of this study to examine a number of selected relationships at the individual level (Figure 2). This focus is based on the following factors as presented in the preceding literature review. In our society management or supervision is presently a male sex-typed occupation. Thus, most of the organizational behavior literature has implicitly assumed that a supervisor will be a male. However, the situation is changing with more women in various organizations moving into supervisory positions. This trend appears to be gaining momentum and would lead to speculation that large numbers of female supervisors will soon be a fact of organizational life. What are some of the consequences of this development? Is research based on the assumption that the supervisor will be a male valid when females undertake this role? For example, Fiedler's (1967) Contingency Model of Leadership Effectiveness, which is clearly based on a male leadership pattern, may be significiantly altered in situations involving female leadership. The present investigation addresses itself to this issue by focusing on one specific consequence of the sex

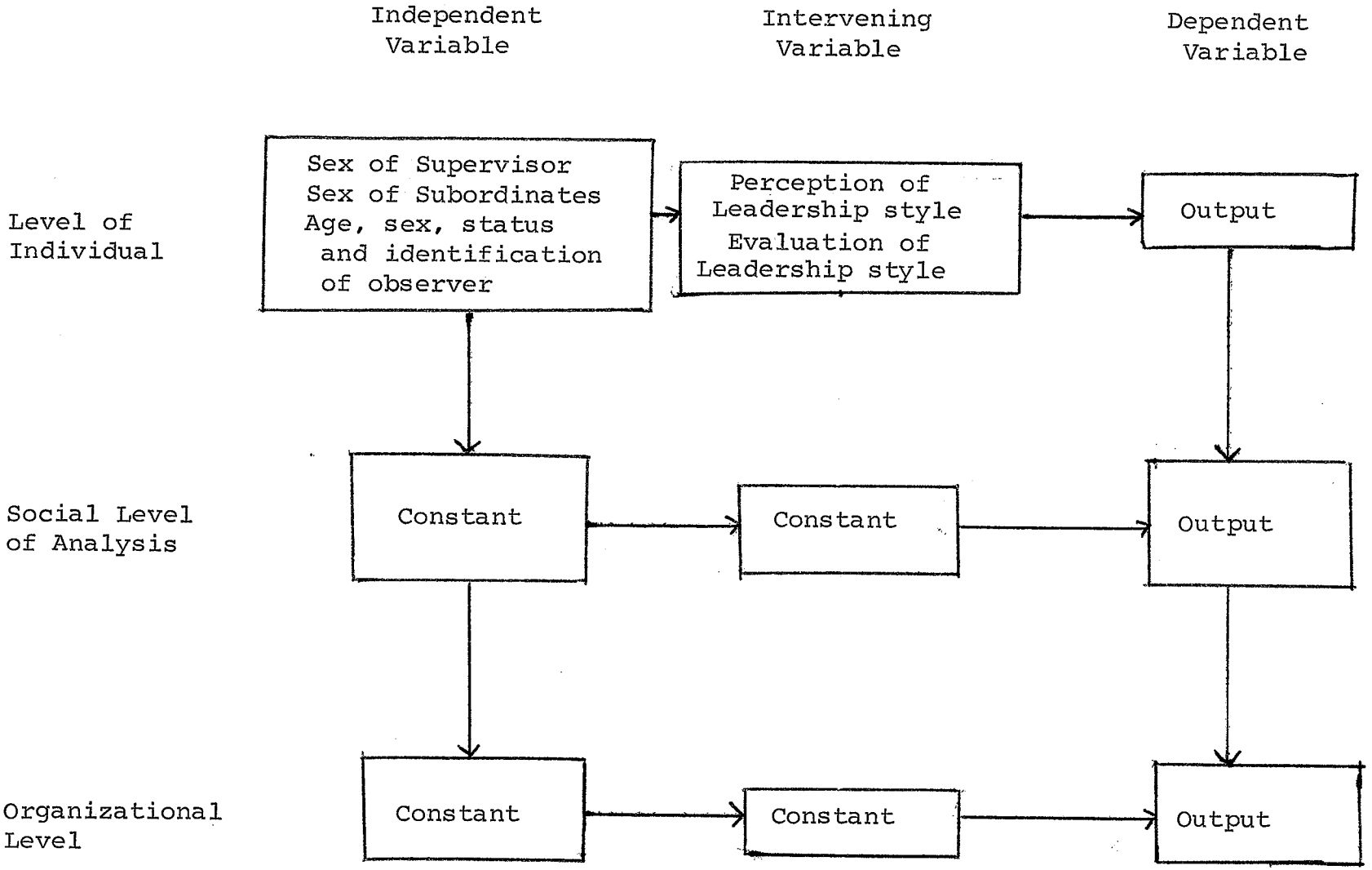

Figure 2 Application of Lawless' (1972) Model to the Study of Sex of Supervisor

of supervisor variable - the effect of sex of supervisor on the perception and evaluation of supervisory leadership style. This is an important point because the literature review has indicated that changes in perception and evaluation contribute to changes in behavior and thus ultimately, affect output measures at the individual, group and organizational levels. This would be a complex process requiring further empirical research. This study focuses on the initial change in perception and evaluation. Thus, the major relationships to be examined are: the effect of the sex of supervisor on the perception of supervisor leadership style; the effect of the sex of supervisor on the evaluation of supervisory leadership efficacy; the effect of the sex of supervisor on the relationship between perception and evaluation of leadership style; and the effect of observer sex, age, status and identification (with the supervisor or subordinates) on the aforementioned relationships.

Effect of sex of supervisor on the perception of leadership style. It has been demonstrated that the perception of leadership style is an important factor in the understanding of leadership within an organizational-systems frame of reference, i.e. it is an individual's perception

of a stimulus event which is of prime importance, not merely the physical properties of that event. In this regard, Jackson (1953), Webber (1970), Graen, Dansereau and Minami (1972), and Dawson (1973) have all cautioned that leader behavior questionnaires do not measure patterns of leader behavior but the perceived patterns of leader behavior, and that these perceptions are those of the subordinates. Dawson (1973) concluded that the perception of leadership style is influence by events and circumstances other than leadership behavior. Sex of supervisor is one such factor.

In our society, management is viewed as a male sex-type occupation. A female supervisor is therefore somewhat unique, incongruent with common expectations. (Rosen and Jerdee, 1973) In this situation it is reasonable to assume that the perception and evaluation of supervisory leadership style will be influenced by the sex of the supervisor. It is the purpose of this study to examine the validity of this hypothesis. However, it is more difficult to specify the exact nature of this relationship, as the literature, in three varying lines of reasoning suggests quite different results.

Studies such as Haire and Grunes (1958) which have examined the effects of stereotyping upon person perception

would suggest that in accordance with the common stereotype of the female as expressive and human relations oriented, a female supervisor will be perceived as more people oriented and less task oriented than a corresponding male supervisor. This initial possibility is further supported by Merton's assertion regarding the saliency of the sex status of the minority sex occupant of a sex-typed occupation. Thus within this framework, the characteristics commonly associated with the female sex would be expected to exert greater influence on the perception of leadership style than those characteristics commly associated with the role of manager. However, Friedland, Crockett and Laird (1973) experimentally examined the effects of role and sex on the perception of others and concluded that: "Contrary to the implications of previous studies of sex stereotypes, role, not sex, carried the greatest weight for subject's attribution of personality characterstic." (p. 273) Thus, given their identical roles, a female supervisor would be expected to be perceived in a similar manner as a corresponding male supervisor. The final possibility, suggested by Pheterson, Kiesler and Goldberg (1971) and Robie (1973) is that of a contrast effect whereby a female in a male sex-typed occupation would be perceived as "out-maleing" the males and therefore as more task oriented and less people oriented than a corresponding male.

Effect of sex of supervisor on the evaluation of leadership style. Much of the sex-role stereotype literature suggests that a male supervisor would be perceived more effective than an identical female supervisor for as Rosen and Jerdee (1973) have stated: "...culturally expected 'female' behavior would be viewed as conflicting with role demands for supervisors." (p. 45) However, in direct opposition to this prediction, a study of female performance by Pheterson, Kiesler and Goldberg (1971) concluded: "...women who are attempting to accomplish are judged less favorably than men, but that women who have successfully accomplished work are evaluated as favorably as are men." (p. 114) Thus, a female supervisor who has functioned in that capacity for a number of years would be viewed as having successfully accomplished a task and therefore be evaluated in a similar fashion as a corresponding male supervisor.

Effect of sex of supervisor on the relationship between perception and evaluation of leadership style. The design of this study limits the examination of the relationship between the perception and evaluation of leadership style to a correlational analysis. However, it is useful to obtain a measure of their association as many

studies have utilized the relationship between perception and evaluation of leadership style as one measure of leadership effectiveness (Fleishman, Harris and Burtt, 1955; Halpin, 1957; Spitzer and McNamara, 1964). Of particular importance is the effect of the sex of the supervisor on this relationship, as all of the existing research has focused exclusively on male supervisors. If there is a systematic effect due to the sex of the supervisor, then the conclusions drawn from the earlier studies could not be generalized to situations involving female supervisors and further research focusing on this point would be required. Korman (1966) in his review of studies dealing with Consideration, Structure and organizational criteria has indicated the need for just such an examination of situational variables which may interact with the effects of Consideration and Structure on performance.

Effect of observer sex, age, status and identification on aforementioned relationships. Kelly (1969) and Graham and Oleno (1970) have stressed the view that different points of reference generate different perspectives of the same event. Hence, an examination of the effects of selected subject characteristics has been included in this study.

Statement of the Problem

The present study was primarily designed to examine the effect of the sex of supervisor on the perception and evaluation by others of the supervisor's leadership style. The examination of this issue is currently at an exploratory stage with contradictory hypotheses suggested by the literature. Therefore, rather than proposing specific hypotheses regarding the direction and strength of the relevant effects, it would appear more appropriate at this point to pose the following series of questions designed to provide an initial broad clarification of the topic:

-What effect does the sex of the supervisor have on the perception by others of the supervisor's leadership style?

-What effect does the sex of the supervisor have on the evaluation by others of the supervisor's leadership style?

-What effect does the sex of the supervisor have on the relationship between perception and evaluation of the supervisor's leadership style?

-What are the effects of observer sex, age, status and identification on the aforementioned relationships?

CHAPTER II

METHOD

Sample

The sample was composed of 109 male and 133 female non-professional government employees from eleven different agencies or units (Appendix A) within the federal, provincial and municipal government structure in Winnipeg, Manitoba. Subjects volunteered to participate in a study of supervisory behavior, endorsed by the University of Manitoba, Faculty of Arts. (Appendix B) Public organizations such as these were utilized in order to control for the possible effect of organizational type upon the results of the study and as an attempt to secure a large sample from outside the University of Manitoba subject pool. It was anticipated that public organizations would be more receptive to sanctioning the use of their employees in a project of this type than would private organizations.

Experimental Design

A 2x3x2 fixed effects factorial analysis of variance procedure was employed. The independent variables

were (1) sex of the supervisor (male or female); (2) sex of the subordinates (male, female, or mixed); and (3) subject characteristic (age, sex, status and identification). The sex of subordinate manipulation was included in the design in order that the generalizability of the data to various sex composition work groups could be examined. The dependent variables examined were (1) the perception of leadership style; and (2) the evaluation of leadership style.

Sampling was planned to include at least fifteen subjects in each of the twelve cells of the design (based on sex of the subject as the classification variable). To ensure an equal sample size throughout the design, subjects were randomly eliminated from any of the cells which exceeded this specified number. This procedure yielded a total sample size of N = 180. Each subject participated in only one experimental condition, with the assignment of subjects to conditions completely randomized.

The present study incorporated an approach which many researchers examining the effect of the sex variable have utilized (Goldberg, 1968; Fidell, 1970; Pheterson, Kiesler and Goldberg, 1971; Cecil, Paul, and Olins, 1973; Friedland, Crocket and Laird, 1973; Rosen and Jerdee,

1973, 1974). Some subjects were presented with an organizational case study involving a female supervisor and some with a case study involving a male supervisor. Each subject received only one sex condition and was unaware that a comparison of male and female supervisor was involved. The effectiveness of this approach in actually testing the stated hypotheses of any study is dependent upon subject naivety regarding the purpose of the study and the experimental manipulation. However, none of the published reports have indicated how this important assumption has been empirically validated. The present study included a post experimental questionnaire (Appendix C) specifically designed to assess this factor.

Measurement Instrument

Stimulus material. This examination of the effect of sex of supervisor upon the perception and evaluation of supervisory leadership style was conducted within the context of an organizational case study (Appendix C) focusing on the response of an office unit to a temporarily increased work load. In order to manipulate the sex of supervisor and the sex of subordinates, twelve versions of the case study were developed. All versions contained the identical content but varied to represent all the

possible combinations of the experimental variables sex of supervisor and sex of subordinates (based on two different versions of the mixed subordinate condition to counterbalance any biases due to sex X subordinate personality interactions). Sex of supervisor was varied by substituting "Ralph" for "Ruth", and sex of subordinate by varying "Jack" and "Jane", "Martin" and "Mary", "Frank" and "Florence", and "Paul" and "Patricia". The case study was designed to reflect approximately equal amounts of task and people orientation to allow for maximum variation in the relative amounts of these factors perceived in the situation. This feature of the case study was established by a pre-test (Appendix D) whereby a panel of judges (graduate student in Organization Psychology, Social Worker and an Undergraduate Psychology major) in a line by line rating of the supervisors behavior viewed 41.4% as people oriented, 47.6% as task oriented and 11% as ambivalent in regards to these two dimensions. The following factors were held constant in the case study: type and size of company; age, marital status and experience of the supervisor; nature of supervisor's job; and length of time the work unit had been together.

Subject characteristics age, sex and status were recorded on the face sheet of each experimental booklet. Identification was operationalized by the subject's response to a direct question regarding with whom they most strongly identified or felt closer to - the supervisor or the subordinates?

Dependent variables. The two dependent variables examined were: the perception of supervisory leadership style and the evaluation of supervisory leadership style. They were operationally defined as follows:

i) Perception of Leadership Style

The principal focus of this study was the effect of sex of supervisor on the perception of supervisory leadership style, specifically in terms of the two major dimensions identified in the leadership literature viz. people and task orientation. For the purposes of this investigation these dimensions were operationally defined by the Ohio State Leadership Study factors Consideration and Structure as determined by the Leader Behavior Description Questionnaire - Form XII (Stogdill, 1963). The format was modified to exclude any reference to the sex of the supervisor as the original version was exclusively designed for use with a masculine supervisor. The necessity for such a modification

accentuates the relevance of the study of the effects of the sex variable on organizational behavior as, for at least a decade, all research utilizing this prominent scale has been based on the implicit assumption that the leader will be a male. The total scores on each set of ten items which constituted the Consideration and Structure subscales were taken as the measure of people and task orientation respectively. The subscales of Demand Reconciliation (five items), Integration (five items) and Production Emphasis (ten items) were included as supplementary factors. They are defined in the Leadership Behavior Description Questionnaire, manual as follows:

> Demand Reconciliation - reconciles conflicting demands and reduces disorder to system.
>
> Integration - maintains a closely knit organization; resolves inter-member conflict.
>
> Production Emphasis - applied pressure for productive output. (p. 3)

Demand Reconciliation and Integration represent an interest in the group process or interpersonal interactions while Production Emphasis includes a strong emphasis on task accomplishment. Therefore, Demand Reconciliation and Integration have been considered conceptually as reflecting the people oriented dimension and Production Emphasis the task oriented dimension.

Subjects used this forty item Supervisory Behavior Description Questionnaire (Appendix C) to describe the leader behavior of the supervisor in the case study. They indicated their response to each item by using a five alternative frequency-of-occurrence scale: Always, Often, Occasionally, Seldom, Never.

The reliability and validity of the Leader Behavior Description Questionnaire has been examined by a number of researchers in different populations (Stogdill and Coons, 1957; Stogdill, 1963; Stogdill, Good and Day, 1964; Stogdill, 1965; Stogdill, 1969; Dawson, Messe and Phillips, 1972). They generally report reliability data in the area of .80 (modified Kuder-Richardson) and support the validity of the major subscales.

ii) Evaluation of Leadership Style

This dependent variable was operationally defined by two separate indices viz. the perceived efficacy and perceived attractiveness of the supervisor in the case study. Subjects indicated their perception of the efficacy of the supervisor by responding to the Supervisory Behavior Evaluation Questionnaire (Appendix C), a ten item evaluative check list modeled after Osgood's semantic differential (Osgood, Suci, and Tannenbaum, 1957). The total score on the ten 7-point rating scales formed the operational

definition of this dimension. This format was determined empirically as quite appropriate by the analysis of an inter-item correlation matrix (Appendix E). To quantify the perceived attractiveness of the supervisor in the case study, subjects were asked to indicate their desire to work for such a supervisor by responding to a 5-point rating scale (Appendix C). This response formed the operational definition of the attractiveness dimension.

Procedure

Subjects were tested in groups of ten to thirty in their employee organizations' facilities. The experimenter told them that they were participating in a study of "how people who differ from each other in terms of a number of occupational and personal characteristics viewed supervisory behavior". They were asked to read an organizational case study and then fill out two short questionnaires. One was described as assessing how the subject thought the supervisor would usually behave while the second considered how good or bad the subject viewed this behavior. The anonymity of their responses was assured, both in terms of their personal identity and the relating of their group responses to their particular work situation. The subjects were then asked to read the instructions in their

booklets carefully and not to disturb the other members of the group. When completed they were to remain quietly in their seats and wait for the experimenter to conclude the study (Appendix C). The experimental material was then randomly distributed, with each subject receiving one of the twelve versions. The experimenter circulated around the room answering individually any questions regarding the instructions. Thus, each subject was confronted with one situation involving one supervisor (male for some subjects and female for others) and one type of work group (male for some subjects, female for some and mixed for others). From the subjects' perspective the task was to describe and evaluate the supervisor's behavior. The experimenter's interest in the sex variable was not apparent to the subjects. Following the total group's completion of the booklet, the subjects were given an explanation of the purpose of the study, promised a summary of the results and asked not to discuss it with fellow employees.

This procedure was developed as a result of two pretests. One involved an Organizational Psychology class at the University of Manitoba and the other a group of City of Winnipeg employees drawn from the same population which was to be utilized in the study itself. As a result of this process, of the 242 subjects who participated in the study

only two indicated on the post-experimental questionnaire that they were aware of the true purpose of the study. These two booklets were eliminated from the analysis.

CHAPTER III

RESULTS AND DISCUSSION

Description of Sample

The data obtained on individual subject characteristics was initially examined to provide a detailed description of the particular sample used in this study. For the purpose of this analysis, the relevant subject variables were dichotomized as follows:

Age	Young (35 and under)*
	Old (36 and over)
Sex	Female
	Male
Status	Supervisor (directly** supervise at least one other employee)
	Subordinate (do not directly supervise any other employees)
Identification	Identify with supervisor
	Identify with subordinates

*this breaking point was based on the desire for equal numbers in each age grouping to reduce approximation errors in the ANOVA.

**with face to face, frequent contact

The frequency distribution of these four variables is presented in Table 1. These variables were then examined in a series of 2x2 chi-square tests of independence, the summary of which is presented in Table 2. Sex, age, and

TABLE 1

Frequency Distribution of Subject Variables: Sex, Age, Status, and Identification (N=180)

	Male		Female		Totals
	Supervisor	Subordinate	Supervisor	Subordinate	
Young Identify-Sup. Identify-Sub.	8	11	5	27	51
Young Identify-Sup. Identify-Sub.	13	6	10	20	49
Old Identify-Sup. Identify-Sub.	17	9	6	6	38
Old Identify-Sup. Identify-Sub.	24	2	7	9	42
Totals	62	28	28	62	180

TABLE 2

Summary of the 2x2 Chi-Square Tests of Independence for the Subject Variables: Sex, Age, Status, & Identification

	Sex	Age	Status	Identification
Sex	-			
Age	x^2=13.0**	-		
Status	x^2=25.7**	x^2=17.6**	-	
Identification	x^2 = .02	x^2 = .22	x^2=6.4*	-

*p < .05
**p < .001

status were significantly ($p < .001$) related to each other with a tendency for the male subjects to be older and in supervisory positions and for the female subjects to be younger and in non supervisory positions. This finding is congruent with the generally accepted view of supervision as a male sex typed occupation and thus adds further support to Schein's (1972) classification of "the managerial job as a masculine occupation." The demonstrated relationship ($p < .05$) between a subject's occupational status (supervisor or subordinate) and his/her tendency to identify with the same status individual in the case study is not unexpected. However, when this relationship was further examined, by systematically controlling for the sex of the supervisor in the case study, the sex of the subject, and the age of the subject, a somewhat puzzling pattern emerged. The relationship between subject status and tendency to identify with the same status individual in the case study was independent of subjects' sex but was maintained only for young subjects and only when the subject was responding to a case study with a female supervisor. It may be suggested that the older subjects, as a result of their experience have developed greater sophistication in responding to organizational

behavior and therefore are more prepared to identify with and relate to individuals in positions other than their own. However, the influence of the sex of supervisor on the relationship between the subject's status and pattern of identification is presently somewhat more difficult to interpret. Younger subjects in supervisory positions, irrespective of their own sex, have exhibited a tendency to identify with the supervisor in the case study, but only when the supervisor is female. It may be that this pattern is related to the content of this specific case study or perhaps one may speculate that younger subjects, being more sensitive to the issues raised by the Womens Movement would be particularly interested in and inclined to identify with the supervisory role when it is occupied by a female.

Main Analysis

The present study involved a series of 2x3x2 factorial designs. The independent variables consisted of two treatment variables - sex of supervisor and sex of subordinates, and one classification variable. The sex, age, status, and identification of the subject were sequentially examined with each of seven dependent variables yielding twenty-eight separate analyses. It would have been

most appropriate to examine these subject variables in one overall ANOVA rather than conducting multiple analyses on the same data. However, the sampling problem presented in such a design was beyond the scope of the present investigation. For purposes of interpretation, these dependent variables were grouped as presented in Table 3, in accordance with the theoretical framework of the study.

Sex of supervisor. The only dependent variable on which the sex of supervisor manipulation had a significant effect was Demand Reconciliation ($F = 4.40$; $df = 1,168$; $p < .05$). The mean perceived Demand Reconciliation for the female supervisor condition was 17.66 and for the male supervisor condition 16.31. The summary of the analysis is presented in Table 4 with the sex of the subject as the particular subject characteristic examined. A similar pattern was obtained when age, status and identification were substituted for sex. The female supervisor was thus viewed as demonstrating more ability to: "reconcile conflicting demands and reduce disorder to system" than the corresponding male supervisor. This finding supports Merton's (1970) assertion regarding the saliency of the sex status of the minority sex in sex-typed occupations, as it indicates that the female supervisor was viewed as more

TABLE 3

Description of Dependent Variables

Dependent Variable	Components	Operational Definition
Perception of Leadership Style	People Orientation	Ohio State L.B.D.Q. Consideration (10 items) Demand Reconciliation (5 items) Integration (5 items)
	Task Orientation	Ohio State L.B.D.Q. Structure (10 items) Production Emphasis (10 items)
Evaluation of Leadership Style	Efficacy	Sum on 10-item adjective check list
	Attractiveness	Score on 5-point rating scale

TABLE 4

Summary of the 2x3x2 (Sex of Subject)
Analysis of Variance for
Demand Reconciliation

Source	df	MS	F
Sex of Supervisor (A)	1	81.33	4.40*
Sex of Subordinates (B)	2	.20	.01
Sex of Subject (C)	1	464.01	25.10**
A x B	2	17.16	.93
A x C	1	22.05	1.19
B x C	2	40.02	2.16
A x B x C	2	5.40	.29
Within Cells	168	18.49	

* $p < .05$

** $p < .001$

people oriented than the corresponding male supervisor. A recent correlational study by Roussell (1974) provides additional data consistent with this finding. In examining the relationship between sex of high school department heads and department climate, she observed that the female heads were viewed by subordinates as person-oriented and the male heads as task-oriented. However, this tendency is far from conclusive as the female supervisor-people orientation association emerged with only one of the three relevant dependent variables and not with Consideration, the major measure of people orientation in the study. The absence of any signficiant differences between the female and male supervisor conditions for the remaining perception of leadership style variables supports Friedland, Crockett and Laird's (1973) emphasis on the importance of role, not sex on the perception of others.

In regards to the two evaluation of leadership style measures (Efficacy and Attractiveness), the lack of a significant effect for the sex of supervisor manipulation is in contradiction with the majority of the sex-role stereotype literature which would predict that the male supervisor would be perceived as more effective and attractive than the corresponding female supervisor. However, the results do support the work of Pheterson, Kiesler and Goldberg (1971) who suggested that: "women who are attempting to accomplish

are judged less favorably than men, but that women who have successfully accomplished work are evaluated as favorably as are men." (p. 114) The present study demonstrated that a male and a female occupying the identical role of an established office manager were evaluated in a similar fashion.

Sex of Subordinates. The major reason for including this factor in the analyses was to examine the generalizability of the sex of supervisor main effect across various subordinate sex composition conditions. The relevant statistic in this regard is the sex of supervisor x sex of subordinate interaction of which none achieved significance with any of the seven dependent variables. However, sex of subordinates did have a significant main effect on one dependent variable viz. Attractiveness ($F = 3.54$; $df = 2,168$; $p < .05$). A summary of this analysis is presented in Table 5. Sex of subject is the subject characteristic examined with a similar pattern of results obtained for the three other subject variables: age, status, and identification. The mean perceived supervisor Attractiveness was 3.30 for the male subordinate unit, 2.90 for the mixed subordinate condition, and 2.70 for the female subordinate unit. Tukey's HSD test (Kirk, 1968)

TABLE 5

Summary of the 2x3x2 (Sex of Subject) Analysis of Variance for Attractiveness

Source	df	MS	F
Sex of Supervisor (A)	1	1.80	1.14
Sex of Subordinate (B)	2	5.60	3.54*
Sex of Subject(C)	1	18.70	11.82**
A x B	2	2.60	1.64
A x C	1	.02	.01
B x C	2	3.5	2.20
A x B x C	2	.09	.06
Within Cells	168	1.6	

* $p < .05$

** $p < .001$

revealed that the difference between the all male and all female subordinate conditions was the source of the significant variation. Thus, the supervisor, regardless of sex, was viewed as more attractive (in terms of "desirability to work for such a supervisor" on a 5-point rating scale) when the subordinates in the work unit were male than when they were female. This finding may be interpreted with reference to the generally higher value which our society places on masculine behavior in an organizational context. The supervisor who is responsible for the all male work unit may have been viewed as occupying a more demanding and/or important position than the supervisor of the female unit. This factor may subsequently have influenced the perceived attractiveness of the supervisor.

Subject characteristics. A summary of the main effects of the subject variables: sex, age and status is presented in Table 6 through Table 8. The sex of subject had a significant effect on all dependent variables, with the exception of Production Emphasis. In each case, female subjects rated the supervisor, regardless of sex, as higher on the dependent variable in question. A similar pattern emerges when the effects of the age and status of the subject are examined. The younger subjects

TABLE 6

Summary of the Sex of Subject Main Effects

Dependent Variable	Mean	df	F	Significant Level
Consideration	female $\bar{x}$=37.93 male $\bar{x}$=32.43	1,168	24.17	<.001
Demand Reconciliation	female $\bar{x}$=18.59 male $\bar{x}$=15.38	1,168	25.10	<.001
Integration	female $\bar{x}$=19.01 male $\bar{x}$=16.54	1,168	11.92	<.001
Structure	female $\bar{x}$=39.17 male $\bar{x}$=34.33	1,168	18.42	<.001
Production Emphasis	female $\bar{x}$=36.89 male $\bar{x}$=35.79	1,168	1.44	n.s.
Efficacy	female $\bar{x}$=52.76 male $\bar{x}$=43.58	1,168	26.37	<.001
Attractiveness	female $\bar{x}$= 3.29 male $\bar{x}$= 2.64	1,168	11.82	<.001

TABLE 7

Summary of the Age of Subject Main Effects

Dependent Variable	Mean	df	F	Significant Level
Consideration	Young $\bar{x}$=36.13 Old $\bar{x}$=34.02	1,168	3.05	n.s.
Demand Reconciliation	Young $\bar{x}$=17.90 Old $\bar{x}$=15.86	1,168	7.94	<.01
Integration	Young $\bar{x}$=18.27 Old $\bar{x}$=17.19	1,168	1.96	n.s.
Structure	Young $\bar{x}$=38.60 Old $\bar{x}$=34.49	1,168	11.79	<.001
Production Emphasis	Young $\bar{x}$=37.07 Old $\bar{x}$=35.44	1,168	2.54	n.s.
Efficacy	Young $\bar{x}$=49.89 Old $\bar{x}$=46.06	1,168	3.89	n.s.
Attractiveness	Young $\bar{x}$= 3.12 Old $\bar{x}$= 2.78	1,168	3.09	n.s.

TABLE 8

Summary of the Status of Subject Main Effects

Dependent Variable	Mean	df	F	Significant Level
Consideration	sub. $\bar{x}$=36.38 sup. $\bar{x}$=34.01	1,168	4.14	<.05
Demand Reconciliation	sub. $\bar{x}$=18.08 sup. $\bar{x}$=15.91	1,168	10.37	<.01
Integration	sub. $\bar{x}$=18.67 sup. $\bar{x}$=16.90	1,168	6.10	<.01
Structure	sub. $\bar{x}$=38.29 sup. $\bar{x}$=35.24	1,168	6.93	<.01
Production Emphasis	sub. $\bar{x}$=36.99 sup. $\bar{x}$=35.70	1,168	1.82	n.s.
Efficacy	sub. $\bar{x}$=51.84 sup. $\bar{x}$=44.57	1,168	16.22	<.001
Attractiveness	sub. $\bar{x}$= 3.11 sup. $\bar{x}$= 2.82	1,168	2.16	n.s.

perceived the supervisor as significantly higher on Demand Reconciliation and Structure than did the older subjects. For five of the seven dependent variables, subordinates rated the supervisor in the case study significantly higher than supervisors did. This somewhat unexpected tendency may have important implications for future research. However, it is first necessary to clarify what variable or combination of variables is responsible for this pattern. As Edwards (1968), in his discussion of organismic variables as factors, has emphasized, the absence of randomization militates against precise cause-effect interpretations. In this regard, it has already been demonstrated in the preceding discussion of the sample description, that sex, age and status are significantly related to each other. Thus, it is a difficult task to clearly identify which of these variables, or other variables with which they are significantly related but which are not measured at this time, is the major or exclusive source of variation. In spite of these limitations, some clarification of this point was achieved by selectively comparing the concommitant effects of these subject variables with their individual effects. This procedure was selected rather than a covariance analysis by reference to Meyers'(1966) comparison of the covariance and treatment x blocks designs.

The major factors thus considered were: the experimental rather than statistical interest in the subject variables; the estimated low correlation between the subject and dependent variables; and the relative complexity of the covariance design in terms of the restrictive assumptions of its underlying statistical model.

An initial examination of the number and strength of the significant relationships in Tables 6, 7, and 8 suggests that the sex of subject was the most salient subject characteristics with the variation due to status and age a spurious product of their relationship with sex. This possibility is elaborated and clarified in Table 9 and Table 10 which summarize the 2x3x2x2 analyses of variance with subject's sex and status and then subject's sex and age included in the same design.

In first focusing on the sex and status analysis (Table 9), it can be seen that in comparison with their independent analysis (Table 6 and Table 8), the significant main effect of sex was maintained with all dependent variables. The significant main effect of status appeared in only one of the five previously significant relationships *viz*. Efficacy. This suggests that the variation in the data was due to the effect of sex and not status as when the two main effects were considered simultaneously

TABLE 9

Summary of the 2x3x2x2 Analyses of Variance for the Subject Variables: Sex and Status

Dependent Variable	Sex	Status	Sex x Status
Consideration	F=22.56 df=1,156 p <.001	F = .10 df=1,156 n.s.	F = .95 df=1,156 n.s.
Demand Reconciliation	F=19.50 df=1,156 p <.001	F= 2.78 df=1,156 n.s.	F= 1.29 df=1,156 n.s.
Integration	F= 9.52 df=1,156 p < .01	F= 1.62 df=1,156 n.s.	F= 1.04 df=1,156 n.s.
Structure	F=13.89 df=1,156 p <.001	F= 1.73 df=1,156 n.s.	F = .04 df=1,156 n.s.
Production Emphasis	F = .33 df=1,156 n.s.	F= 1.44 df=1,156 n.s.	F= 8.93 df=1,156 p < .01
Efficacy	F=18.24 df=1,156 p <.001	F= 5.82 df=1,156 p < .05	F= 1.36 df=1,156 n.s.
Attractiveness	F=10.39 df=1,156 p < .01	F = .01 df=1,156 n.s.	F = .16 df=1,156 n.s.

TABLE 10
Summary of the 2x3x2x2 Analyses of Variance for the Subject Variables: Sex and Age

Dependent Variable	Sex	Age	Sex x Age
Consideration	F=20.17 df=1,156 p < .001	F = .20 df=1,156 n.s.	F= 1.04 df=1,156 n.s.
Demand Reconciliation	F=17.85 df=1,156 p < .001	F= 2.37 df=1,156 n.s.	F= 3.57 df=1,156 n.s.
Integration	F= 8.79 df=1,156 p < .01	F = .11 df=1,156 n.s.	F= 2.99 df=1,156 n.s.
Structure	F=10.87 df-1,156 p < .01	F= 7.56 df=1,156 p < .01	F= 3.21 df=1,156 n.s.
Production Emphasis	F = .22 df=1,156 n.s.	F= 3.15 df=1,156 n.s.	F = .08 df=1,156 n.s.
Efficacy	F=23.59 df=1,156 p < .001	F = .51 df-1,156 n.s.	F = .56 df=1,156 n.s.
Attractiveness	F=12.18 df=1,156 p < .001	F = .77 df=1,156 n.s.	F = .40 df=1,156 n.s.

(Table 9) the variation due to each was removed from the effect of the other. Thus, when sex was considered with the effect due to status removed, it was still highly significant. However, when status was examined in isolation from the effect of sex, it no longer had a significant effect in four of five previously significant sex x status interaction effects (apart from Production Emphasis which presents a somewhat unique pattern of results throughout the analysis) indicated that the effect due to sex was independent of status.

An examination of the sex and age analysis (Table 10) reveals a similar pattern which supports the assertion that sex of subjects was the major source of variation in the data. The significant main effect of sex was maintained for all previously significant relationships. The significant main effect of age appeared in one of the two previously significant relationship viz. Structure. There were no significant sex x age interactions.

Although the preceding discussion strongly suggests that the sex of the subject is the major subject variable, it is not possible within the limits of the present design to fully assess the validity of this assertion. The pattern which emerges is tentative rather than precise and directly quantifiable. In addition, there has been no

attempt to assess the possible effects of other subject characteristics (such as education, marital status, experience in other settings, or contact with female supervisors) which may be related to sex and which may account for all or part of the observed variation. Thus, the rather marked and consistent subject effect on the perception and evaluation of leadership style observed in this study becomes a question for further research.

In regard to the effect of the subject's identification with the supervisor or with the subordinates, it can be seen in Table 11 that, with the exception of Production Emphasis, those subjects who indicated that they identified with the supervisor rated the supervisor significantly higher on each of the remaining six dependent variables. One could reasonably assumed that when a subject indicates an identification with a supervisor, that supervisor is being perceived in a positive manner. This assumption is supported empirically by the significantly higher Efficacy and Attractiveness ratings ($F = 53.63$; df 1,168; $p < .001$ and $F = 59.67$; $df = 1,168$; $p < .001$) for those subjects who identified with the supervisor. This relationship between identification and evaluation of leadership style would thus also suggest that Consideration, Demand Reconciliation, Integration and Structure

TABLE 11

Summary of the Identification of Subject Main Effects

Dependent Variable	Mean	df	F	Significance Level
Consideration	Id. sup. $\bar{x}$ =38.50 Id. sub. $\bar{x}$ =31.72	1,168	39.36	.001
Demand Reconciliation	Id. sup. $\bar{x}$ =18.53 Id. sub. $\bar{x}$ =15.36	1,168	24.04	.001
Integration	Id. sup. $\bar{x}$ =19.40 Id. sub. $\bar{x}$ =16.08	1,168	24.15	.01
Structure	Id. sup. $\bar{x}$ =38.16 Id. sub. $\bar{x}$ =35.37	1,168	7.32	.01
Production Emphasis	Id. sup. $\bar{x}$ =35.10 Id. sub. $\bar{x}$ =37.57	1,168	5.91	.05
Efficacy	Id. sup. $\bar{x}$ =54.23 Id. sub. $\bar{x}$ =41.77	1,168	53.63	.001
Attractiveness	Id. sup. $\bar{x}$ = 3.63 Id. sub. $\bar{x}$ = 2.27	1,168	59.67	.001

are all perceived as positive attributes.

The only significant interaction between a treatment variable (sex of supervisor and sex of subordinates) and a classification variable (sex, age, status and identification of subject) was sex of subordinates x status of subject for the attractiveness dependent variable ($F = 5.73$; $df = 2,168$; $p < .05$). A summary of the analysis is presented in Table 12 and a plot of the interaction in Figure 3. Inspection of Figure 3 reveals that subordinates viewed the supervisor of the all male unit as more attractive than the supervisor of the female unit. However, supervisors did not make this distinction, viewing the attractiveness of the supervisor of the male and female unit in a similar manner. This finding suggests that supervisors may be less influenced by the effects of sex-role stereotypes than are subordinates as the supervisors did not make a distinction in evaluating a supervisor on the basis of the subordinate unit sex composition.

Perception of Leadership Style and Evaluation of Supervisor Behavior

Of secondary interest in the present study was the relationship between the perception and evaluation of leadership style. The inter-correlation between each of the seven dependent variables was computed for the total sample

TABLE 12

Summary of the 2x3x2 (Status of Subject) Analysis of Variance for Attractiveness

Source	df	MS	F
Sex of Supervisor (A)	1	1.96	1.26
Sex of Subordinates (B)	2	5.92	3.80*
Status of Subject (C)	1	3.36	2.16
A x B	2	2.73	1.75
A x C	1	1.60	1.03
B x C	2	8.93	5.73*
A x B x C	2	3.52	2.26
Within Cells	168	1.56	

* $p < .05$

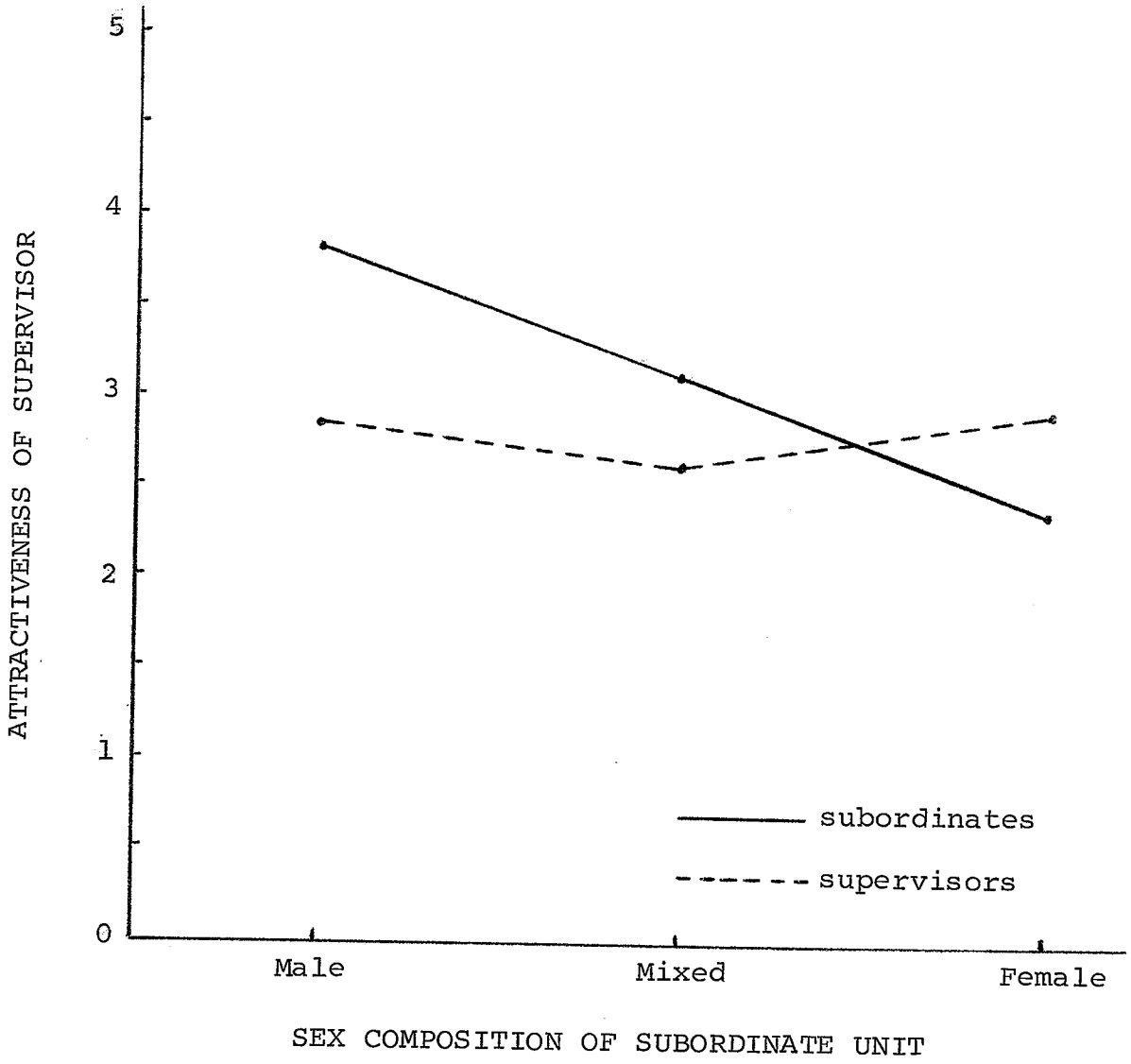

Figure 3 Plot of the Sex of Subordinates x Status of Subject Interaction for Attractiveness.

and is presented in Table 13. The data were then examined to compare the effects of the sex of supervisor and the subjects' sex on these relationships. There were no significant differences in this regard. However, the pattern of results contained in Table 13 does provide empirical support for many of this study's basic assumptions as explored below.

Consideration (regards the comfort, well being, status and contributions of followers), Integration (maintains a closely knit organization; reduces intermember conflicts) and Demand Reconciliation (reconciles conflicting demands and reduces disorder to system) have been viewed as being positively related to one another as they are all concerned with the 'group maintenance' or 'process' functions of leadership. This pattern was supported by the data, as these three variables were all significantly $p < .01$ positively correlated with one another ($r_{C-I} = .81$, $r_{C-D} = .72$, $r_{I-D} = .81$). These correlation coefficients tend to be larger than the correlations with the other variables in the study. Initiation of structure (clearly defines own role, and lets followers know what is expected) and Production Emphasis (applied pressure for productive output) were considered positively related to each other as they both were concerned with the 'goal achievement'

TABLE 13

Correlation Matrix for Dependent Variables (N=180)

	Cons.	Integ.	Demand	Struct.	Prod.	Eff.	Att.
Cons.	-						
Integ.	r=.81	-					
Demand	r=.72*	r=.81	-				
Struct.	r=.54*	r=.73*	r=.77	-			
Prod.	r=.15	r=.07	r=.06	r=.30*	-		
Eff.	r=.68*	r=.68*	r=.74*	r=.59*	r=.03	-	
Att.	r=.64*	r=.63*	r=.66*	r=.48*	r=.09	r=.79*	-

* $p < .01$

functions of leadership. They have proven to be significantly ($p < .05$) positively correlated $r_{s-p} = .30$. Although this is not a particularly high correlation coefficient, it is important to note that Structure is the only variable in this study which correlates significantly with Production Emphasis. Thus, it is seen that the theoretical grouping of the various leadership behavior description variables as presented in Table 3 was demonstrated empirically in the data.

The particular case study utilized in this study was specifically designed to portray a leadership style with an equivalent amount of people oriented and task oriented behavior. Therefore, the people oriented and task oriented variables would be expected to be positively correlated with one another. The data generally supported this assertion, with the major task oriented variable (Structure) significantly ($p < .01$) positively correlated with each of the people oriented variables ($r_{S-C} = .54$, $r_{S-I} = .73$, $r_{S-D} = .77$). However, Production Emphasis was not significantly correlated with any of the people oriented variables. In fact, apart from the predicted positive correlation with Structure, Production Emphasis seems to have functioned in a rather unique fashion throughout the analysis. For example, it was the only dependent variable in which there

was no significant main effect for the sex, age and status of the subject, while the significant main effect of identification was opposite in direction from that found with each of the other dependent variables.

Efficacy and Attractiveness are both evaluative dimensions. Therefore a strong positive relationship would be predicted to exist between them. The data confirmed this prediction with a significant ($p < .01$) correlation coefficient of .79.

The final aspect of the study which is considered in Table 13 is the relationship between the people and task oriented variables and the perceived Efficacy and Attractiveness of the supervisor. All three of the people oriented variables were significantly ($p < .01$) positively correlated with each of the two evaluative variables. The coefficients ranged from .63 to .74 with a mean of .67. This is consistent with the overall findings in the literature of a positive correlation between a people orientation or style and measures of effectiveness (Fleishman, Harris and Burtt, 1955; Fleishman and Harris, 1962). Structure demonstrated a similar pattern as did the people oriented variables with significantly ($p < .05$) positive correlations of .59 and .48 with Efficacy and Attractiveness respectively. Production Emphasis, once again, had

a unique pattern with no significant correlation with either of these evaluative variables. These results were also consistent with the general trend in the literature for the leader of a successful group to be high on both people and task oriented dimensions (Fleishman and Simmons, 1970; Yukl, 1971).

Limitations of the Present Study

Any generalizations from the present study must be made with an understanding of some basic limitations of the design. The sampling procedure restricts the data to employees of public organizations. The case study itself describes one supervisor dealing with a specific situation and thus further confines the generalizability of the findings. Because of the multiple analyses performed on the same data (four separate ANOVAs for each dependent variable) the results must be cautiously interpreted. The subject charactersitics sex, age, status and identification have been shown to be related to one another, but no overall analysis of their interaction effects has been conducted as within the limits of the present sample size, there would be too few subjects in many of the cells of such a design. Therefore, the .05 alpha level of each separate analysis does not represent the true level of alpha and is

actually a liberal estimate of it.

These limitations could be dealt with in an appropriately planned follow-up study. A new case study should be drafted which would maintain the structure of the present version but would include different content. The sample should be drawn from organizations other than the public type as used in the current study (for example, private and/or service organizations). In addition, the sample should be large enough to allow for the inclusion of all relevant subject characteristics in the same overall ANOVA.

CHAPTER IV

SUMMARY AND CONCLUSIONS

This study examined the effects of three variables, namely: sex of supervisor; sex of subordinates; subject characteristics (sex, age, status and identification) on the subject's perception and evaluation of supervisory leadership style. One hundred and eighty volunteer subjects sampled from eleven different government agencies were randomly placed in one of the twelve cells of a 2x3x2 factorial design. They were told that the study was examining "how people who differ from each other in terms of a number of occupational and personal characteristics viewed supervisory behavior." They were then asked to read an organizational case study and fill out two short questionnaires dealing with their perception and evaluation of the leadership style of the supervisor in the case study. The sex of the supervisor and the sex of the subordinates in the case study were manipulated by means of masculine and feminine given names. Each subject responded to only one version of the case study and was unaware of the sex manipulation. The dependent variables were: (1) the perception of leadership style,

operationally defined by selected subscales of the Ohio State Leadership studies' Leader Behavior Description Questionnaire - Form XII (Stogdill, 1963); and (2) the evaluation of leadership style, operationally defined by a 10-item adjective check list and a 5-point attractiveness rating scale.

The sex of supervisor had a significant main effect on only one of the five perception of leadership style variables viz. Demand Reconciliation. This significant relationship supports the research which has stressed the importance of the sex status of the minority sex in sex-typed occupations as the female supervisor was perceived as more people oriented than the corresponding male supervisor. However, this female supervisor-people orientation association must be viewed as most tentative as it did not appear with any of the remaining perception of leadership style dependent variables. This absence of a significant effect is consistent with a recent study by Friedland, Crockett and Laird (1973) which emphasized the importance of role, not sex on the perception of others. Therefore, it must be concluded that the effect of the sex of supervisor on the perception by others of the supervisor's leadership style has not been firmly established. Further

research is required in which role and sex are both manipulated in order to assess more fully the effect of the sex variable on the perveption of leadership style.

The sex of supervisor manipulation had no significant effect on either of the two evaluative dependent variables. This finding is supported by the work of Pheterson, Kiesler and Goldberg (1971) who found that women who are attempting to succeed at a task are judged less favorably than men, but that women who have successfully accomplished a task are evaluated as favorably as men. However, the lack of significance does conflict with the extensive sex-role stereotype literature which would predict a more positive evaluation of the male supervisor. Some clarification of this point could be acieved in a future study which would manipulate the supervisor's success and experience in addition to the sex variable.

The sex of subordinate manipulation was included in the design to examine the generalizability of any sex of supervisor main effects across various subordinate sex composition conditions. There were no significant sex of supervisor x sex of subordinate interactions and therefore the data on the sex of supervisor can be viewed as generalizable across all subordinate sex composition conditions. Sex of subordinates did have a noteworthy significant main effect on one of the evaluative dependent variables <u>viz</u>.

Attractiveness. The supervisor regardless of sex, was viewed as more attractive when the subordinates in the work unit were male than when they were female. Because of prevailing sex-role stereotypes, the supervisor of an all male work unit may have been perceived as occupying a more demanding and/or important position than the supervisor of the female unit. This association may account for the observed differences in perceived attractiveness. A test of this hypothesis would involve the experimental manipulation of the importance of the supervisor's role along with the sex composition of the subordinate unit.

The relationship between the perception and evaluation of leadership styles was examined to identify the possible effect of the sex of the supervisor on this association. Although there were no significant sex differences, this analysis did provide empirical support for many of this study's basic theoretical assumptions.

A somewhat unexpected finding of the study was the rather pervasive influence of the subject variables: sex, age, status and identification on the perception and evaluation of leadership style. Secondary analysis of these factors suggested that the sex of the subject was the variable most responsible for these effects. The

general trend was towards female subjects viewing the supervisor (regardless of sex) as higher on the dependent variable in question. This tendency may be related to the question of the relative compliance of the sexes. Further research is required to precisely identify the source of this variation and relate it to a meaningful theoretical framework.

An additional unanticipated finding was the rather unique fashion in which the Ohio State factor of Production Emphasis seems to have operated. This pattern suggests that further empirical examination of the reliability and validity of this dimension is required before any attempt to fully integrate the data as presented in this particular study.

This exploratory study of the effect of the sex variable on the perception and evaluation of leadership style has raised a number of questions regarding the influence of various situational factors. Further clarification of the issue will be achieved when variables such as: occupational role (task oriented setting such as engineering vs. people oriented setting such as social work), success and experience of supervisor, importance of supervisory behavior and personality characteristics of the subjects are included in the design of a follow-up study.

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APPENDIX A

SAMPLED ORGANIZATIONS

The sample utilized in this study consisted of employees of the following organizations in Winnipeg, Manitoba:

Red River Community College

Manitoba Hydro

Information Canada

Parks Canada

Department of National Health and Welfare - Family Allowance and Old Age Security

Manitoba Department of Agriculture

Department of National Health and Welfare - Medical Services

Manitoba Department of Mines and Natural Resources

National Revenue

Manitoba Health Services Commission

Federal Department of Communication

City of Winnipeg

APPENDIX B

LETTER OF ENDORSEMENT

The University of Manitoba
Faculty of Arts

Office of the Dean
Fletcher Argue Building

Winnipeg, Manitoba
Canada R3T 2N2

May 9, 1974

Dear Sir or Madam:

I would like to request your cooperation and participation in a research project being conducted by a graduate student, under my supervision, in the Masters of Arts program at the University of Manitoba. The focus of the study is on how people who differ from each other, in terms of a number of occupational and personal characteristics, view supervisory behavior. This study will be based on the responses of people who work in large organizations and hence you, along with other people in the community, are being approached.

I would like to assure you that your personal identity will be kept completely anonymous and that there will be no attempt, whatsoever, to relate your responses to your specific work situation. At the conclusion of the study, the results will be made available to you.

As I consider this to be a sound and worthwhile project, I ask you to consider the request and, if possible, make yourself available for the required one hour. Thank you.

Sincerely yours,

D.J. Lawless,
Associate Dean,
Faculty of Arts.

/lk

APPENDIX C

EXPERIMENTAL MATERIAL VERBAL INSTRUCTIONS AND 'SUPERVISORY BEHAVIOR' BOOKLET

I would like to thank you for agreeing to participate in this study. I am interested in how people who differ from each other in terms of a number of occupational and personal characteristics view supervisory behavior. In order to examine this relationship, you will be asked to read an organizational case study and then fill out two short questionnaires. The first is designed to measure how you feel the supervisor in the case study would usually behave, while the second considers how good or bad you believe this particular type of behavior to be. You are to put yourself in the position of an outside observer of the group and base your responses on you personal reaction to the supervisory behavior demonstrated in the case study. I should add that my interest is in overall group trends and not in any particular individuals response. Therefore, your personal identity is not asked for and there will be no attempt whatsoever to relate any of your responses to your specific work situation.

When I ask you to begin, please read the instructions in your booklet carefully and follow them in the proper order. To ensure consistent and individual results, it is very important that you remain seated and do not in any way disturb other members of the group. I will answer, individually, any questions you may have regarding the written instructions. So, raise your hand to get my attention if there is something you don't understand. I will not answer any other types of questions as this would interfere with the scientific requirements of uniform questionnaire administration.

When you have fully completed the booklet, do not go back over any of your answers. Place the booklet on the floor beneath your chair so I will be able to see when everyone is through. Then please remain quietly in your seat and wait for me to conclude the study. There is not time limit, but it should take approximately a half hour to complete.

SUPERVISORY BEHAVIOR

University of Manitoba
Department of Psychology

For the purpose of this study your personal identity is completely anonymous. However, it is important for you to provide the following information which will be used to describe general trends in the analysis of the data but not to examine individual booklets. (Check the appropriate response).

Age:

under 16_____ 16 - 25 _____
26 - 35 _____ 36 - 45 _____
46 - 55 _____ over 55 _____

Sex:

male _____ female _____

Position or Occupation:

_____

How many people do you directly* supervise as part of your formal job description?

0 _____ 1 - 5 _____
6 - 10 _____ more than 10____

* face to face, frequent contact

Introduction

It has frequently been shown that people from different backgrounds, with varied experiences and personal characteristics view the world from different perspectives. The purpose of this study is to examine how differences in the type of organization an individual is employed by; the department and position within that organization; as well as personal factors such as age and sex influence how a person views supervisory behavior. This type of information is very important in the planning and updating of management training programs and in the systematic improvement of supervisor-subordinate working relationships.

Instructions

1. Read the Superior Supply Company case study found on the following page. Do not attempt to remember all the details, but try to get a general impression of how this particular work unit usually operates.

2. When you have completed reading the case, turn to the Supervisory Behavior Description Questionnaire (S.B.D.Q.) and the Supervisory Behavior Evaluation Questionnaire (S.B.E.Q.) and use them (according to their written instructions), to indicate, as an outside observer, your personal perception of the supervisory behavior in the Superior Supply Company case study. The S.B.D.Q. focuses on a pure description of the supervisor's behavior (how you feel the supervisor usually behaves) while the S.B.E.Q. is

designed to measure how you evaluate the behavior (how "good" or "bad" you feel the behavior is). It is important to keep this distinction in mind when using these questionnaires.

Case Study: Superior Supply Company

Superior Supply is a mid-sized furniture manufacturing company. The office manager, Ruth Brewster, is 42 years old, married and has had considerable experience, having been with Superior for five years. The office manager supervises four workers: Jane Carter, age 29; Mary Wood, age 36; Frank Hill, age 30; and Paul Tyler, age 25, who have been together as a unit since the office was reorganized two years ago.

Ruth Brewster had just been informed by the sales supervisor that Superior had recently finalized a very large contract with an important new customer. The initial order would arrive at the peak of Superior's busiest season and, because of the expected size of the order, would place a heavy demand on all divisions of the company. Ruth Brewster realized that this would be a particular strain on the office, as for a two week period, they could expect almost double their normal work load. The office manager quickly called a staff meeting to deal with this issue. A written transcript of that meeting follows below:

Ruth Brewster: I have some important news to talk to you people about. As you all know, from past years, we are heading into our busiest season in the next few weeks and our office will have alot of work to do. Well, I just finished speaking to the sales supervisor and have been told that the Excelsior contract we've heard so many rumors about has actually been signed. That should really put us under the gun. In fact, you people might have to do some "real" work for a change! -- I'm sure we can handle the loads, although some of our usual procedures will have to change. I'd like to manage this with as little strain and disruption as possible. So, let's talk it over and see what we

can come up with.

Frank Hill: I can't see how we can possibly take any new orders when we hardly were able to finish the work for our old customers last year. We even had to work nights during the final week of the month and came in on that Sunday to finish up.

Jane Carter: Don't those people out there know what goes on in this office? I'd like to see them handle the work we did last year, never mind an extra order!

Ruth Brewster: Listen, I know how hard you all worked last year, but don't forget about the extra holiday time and the Christmas bonuses. It is important for the company to expand and this new customer is a big buyer. If things work out and they become regular customers, we will probably make some permanent changes in the office set-up. What do the rest of you think?

Mary Wood: I don't know. I was hoping to take it a little easier this year. My niece is getting married at the end of the month and we'll have some relatives staying with us for those two busy weeks.

Ruth Brewster: Oh yes! I'm sorry, I forgot all about your situation. You did mention that to me last week. You know our office must do the work and we have to meet the deadlines, but if the rest of the group don't object, I'll try and keep your work load as light as possible under the circumstances. I know how hectic having house guests can be.

Paul Tyler: It doesn't make too much difference to me. But, I really don't know if we can handle all the work.

Ruth Brewster: I didn't expect you people to be overjoyed with this news, but I have already committed our office to complete the job. What we have to do now is figure out the best way of going about it. I'm not too sure of the details, but I think we have to consider putting in some extra time each day rather than having to panic the last week and stay so late like last year. I know this might upset some of you, but I think it is necessary.

Paul Tyler: I'd prefer to come in earlier in the morning and maybe cut down on our lunch break rather than staying after 5:30. I can get a lift home then and I don't want to miss it.

Jane Carter: I can come early in the morning or stay after

work. But I don't see the point! I'm sure we will end up working really late that last week and still not finish!

Ruth Brewster: Come on now, just hold on for a minute. I'm not so happy with these changes myself. I think you all know how I feel about overtime. But I have got a job to do and so do you. Our office has always performed well and met its deadlines and its my responsibility to make sure that things continue that way. Our work load is not this heavy all the year through and we'll just have to put up with it for these two weeks. If anybody else has personal reasons that make this kind of arrangement difficult speak to me privately and I'll see what can be done. Otherwise, I think we should go ahead with the plan for daily overtime.

Mary Wood: I'm sure I can only come in earlier in the morning. I will have alot to do at home after work.

Frank Hill: I have enough trouble getting up in the morning as it is, so I guess I'd like to stay after 5:30.

Ruth Brewster: Hmm, it looks like we've got a problem. I want you all in at the same time.

Paul Tyler: Why can't each of us put in the extra time when we want to? There certainly should be enough work that can be done individually during that time each day.

Ruth Brewster: Well, -- I guess that might work out O.K. Let's start by having each of you put in an extra hour each day, when you want it, for two weeks starting on the fifteenth of the month. If I see any problem with this, I will expect to have you all in at the same time each day. I don't care if that's in the morning or evening, so I'll leave that decision up to you. When we're through with this meeting, would each of you fill out a T-72 form with your schedule changes and put them on my desk. Now, are there any other problems?

Frank Hill: Do you think we will have to change any of our regular job assignments?

Ruth Brewster: The only thing which may give us trouble will be the preparation of the invoices. I don't think our present set up will be able to handle the additional work. Actually, now that you mentioned it, I think we need some part-time assistance. Why don't those of you involved with the invoices get together and work out exactly what you think we need and speak to Personnel about it. Just be sure to check with me before you put it through.

I will be very busy preparing for the annual audits and stock-taking and won't have much time to assist with any of the work. But with the extra help on the invoices, I think you all will manage alright.

What's the matter Carter? -- Is something bothering you?

Jane Carter: I guess I'm still not convinced we can handle it. Especially the amount of extra work I will have to do to keep the books up to date. -- I just don't know.

Ruth Brewster: Well, I don't really anticipate that to be a major problem. You will just have to keep on top of things and not let yourself get behind. You certainly have always been able to handle heavy loads before.

Paul Tyler: I think I can take care of the filing and time sheets well enough. But perhaps I can help with the books. I have been taking bookkeeping at night and would like to try.

Ruth Brewster: I didn't know you were going to night school. That's a very smart idea. With your hard work and good head, that should really help you move along. But, you know, I don't think I want to have a beginner helping out right now. There will be alot of pressure on everybody and I don't want you starting out in that kind of atmosphere. It would be unfair to put you in that situation. I want to talk to you about your courses and find out exactly what kind of work you are being trained to do, but it better wait till we get through this month.

Are there any other questions or comments? -- Alright, I know that all of you will do your best and we'll come out of this in good shape. Why don't we plan on going out for lunch or something at the end of the month when the work lets up. We never seem to have any time to relax with each other and I think it would be nice. Well, that is all I wanted to cover this morning. Oh, its coffee time already! Well, who's buying this morning?

Turn to the Supervisory Behavior Description Questionnaire and the Supervisory Behavior Evaluation Questionnaire and use them to describe the behavior of the office manager in the Superior Supply case study.

SUPERVISORY BEHAVIOR DESCRIPTION QUESTIONNAIRE

Purpose of the Questionnaire

On the following pages is a list of items that may be used to describe supervisory behavior. Each item describes a specific kind of behavior but does not ask you to judge whether the behavior is desirable or undesirable. Although some items may appear similar, they express differences that are important in the description of supervisory behavior. Each item should be considered as a separate description. This is not a test of your ability or your consistency in making answers. Its only purpose is to make it possible to describe, as accurately as is attainable, the behavior of supervisors. Do not refer back to the written text of the case study which you have just read, but base your responses on your personal judgement of how you feel the supervisor described in the case, would usually behave.

Note: The term "group" as employed in the following items refers to a department, division or other unit of an organization that is supervised by the person being described.

The term "members" refers to all the people in the unit of organization that is supervised by the person being described.

DIRECTIONS:

a. READ each item carefully.

b. As an outside observer of this group's behavior, THINK about how frequently you believe the supervisor, described in the case study, would engage in the behavior described by the item.

c. DECIDE whether you think the supervisor would (A) always, (B) often, (C) occasionally, (D) seldom, or (E) never act as described by the item.

d. DRAW A CIRCLE around one of the five letters (A B C D E) following the item to show the answer you have selected.

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

e. MARK your answers as shown in the examples below.

The supervisor would:

Example: always act as described..... (A) B C D E

Example: often act as described..... A (B) C D E

Example: occasionally act as described..... A B (C) D E

Example: seldom act as described..... A B C (D) E

Example: never act as described..... A B C D (E)

Note: Answer all the questions

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

The supervisor would:

1. let group members know what is expected of them... A B C D E
2. be friendly and approachable.....A B C D E
3. handle complex problems efficiently.....A B C D E
4. encourage overtime work..... A B C D E
5. keep the group working together as a team..... A B C D E
6. encourage the use of uniform procedures..... A B C D E
7. do little things to make it pleasant to be a member of the group ..... A B C D E
8. stress being ahead of competing groups..... A B C D E
9. settle conflicts when they occur in the group.....A B C D E
10. try out own ideas in the group .....A B C D E
11. get swamped by details.....A B C D E
12. put suggestions made by the group into operation...A B C D E
13. needle members for greater effort ..... A B C D E
14. make own attitudes clear to the group ..... A B C D E
15. treat all group members as personal equals..... A B C D E
16. keep the work moving at a rapid pace.....A B C D E
17. see to it that the work of the group is co-ordinated.....A B C D E
18. get things all tangled up ..... A B C D E

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

The supervisor would:

19. decide what shall be done and how it shall be done..... A B C D E

20. give advance notice of changes..... A B C D E

21. push for increased production..... A B C D E

22. assign group members to particular tasks.....A B C D E

23. keep isolated from the group.....A B C D E

24. ask the members to work harder..... A B C D E

25. help group members settle their differences..... A B C D E

26. make sure that the supervisor's part in the group is understood by the group members.....A B C D E

27. reduce a madhouse to system and order ..... A B C D E

28. look out for the personal welfare of group members.....A B C D E

29. permit the members to take it easy in their work...A B C D E

30. schedule the work to be done.....A B C D E

31. be willing to make changes.....A B C D E

32. drive hard when there is a job to be done ..... A B C D E

33. maintain definite standards of performance..... A B C D E

34. refuse to explain actions..... A B C D E

35. urge the group to beat its previous record.....A B C D E

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

The supervisor would:

36. maintain a closely knit unit..... A B C D E

37. ask that group members follow standard rules and regulations..... A B C D E

38. get confused by too many demands..... A B C D E

39. act without consulting the group..... A B C D E

40. keep the group working up to capacity..... A B C D E

Now turn to the Supervisory Behavior Evaluation Questionnaire on the following page.

SUPERVISORY BEHAVIOR EVALUATION QUESTIONNAIRE

Purpose of the Questionnaire

On the following page you will find ten pairs of words (or scales) which are opposite in meaning such as "efficient" and "inefficient". You are asked to evaluate the supervisory behavior in the Superior Supply Company case study by placing an "X" in one of the seven spaces on the line between the two words. Each space represents how well the adjective fits, as if it were written:

Efficient _____: _____: _____: _____: _____: _____: _____Inefficient

Very Efficient	Quite	Slightly	Neutral or Irrelevant	Slightly	Quite	Very Inefficient

Although some scales may appear similar, they express differences that are important in the evaluations of supervisory behavior. Each item should be considered as a separate evaluation. This is not a test of your ability or consistency in making answers. Its only purpose is to make it possible to evaluate, as accurately as is attainable, the behavior of supervisors. Do not refer back to the written text of the case study which you have just read, but base your responses on your personal evaluation of the supervisor described in the case.

DIRECTIONS:

a. LOOK at the words at both ends of the line.

b. As an outside observer of this group's behavior, THINK about how appropriately you believe these adjectives fit the supervisory behavior in the case study.

c. DECIDE whether you think the adjectives fit very well, quite well, slightly or are neutral or irrelevant.

d. PLACE AN "X" in one of the seven spaces on the line between the two words.

e. MARK your answers as shown in the examples below.

1. If very efficient is most appropriate place your check-mark as follows:

Efficient __X__: _____: _____: _____: _____: _____: _____ Inefficient

or if very inefficient:

Efficient _____: _____: _____: _____: _____: _____: __X__ Inefficient

2. If quite efficient is most appropriate then check-mark as follows:

Efficient _____: __X__: _____: _____: _____: _____: _____ Inefficient

or if quite inefficient:

Efficient _____: _____: _____: _____: _____: __X__: _____ Inefficient

3. If slightly efficient is most appropriate then:

Efficient _____: _____: __X__: _____: _____: _____: _____ Inefficient

or if slightly inefficient

Efficient _____: _____: _____: _____: __X__: _____: _____ Inefficient

The direction toward which you check depends upon which of the two ends of the scale seem more characteristic of the supervisor.

4. If you feel that a particular scale is neutral in terms of this particular supervisor, both sides being equally prevalent or if the scale is completely irrelevant, unrelated to your perception of the supervisor, then you should place your check-mark in the middle space:

Efficient _____: _____: _____: __X__: _____: _____: _____ Inefficient

Important: 1) Place your check-mark in the middle of spaces, not on the boundaries:

_____: __X__: _____: _____: ____X: _____: _____
This not this

2) Be sure to mark every scale.

3) Never put more than one check-mark on a single scale.

4) Please remember that there are no right or wrong answers. Work rapidly; your first answer is likely to be the best.

Ruth Brewster

1. Bad	_____:	_____:	_____:	_____:	_____:	_____:	_____	Good
2. Pleasant	_____:	_____:	_____:	_____:	_____:	_____:	_____	Unpleasant
3. Sincere	_____:	_____:	_____:	_____:	_____:	_____:	_____	Insincere
4. Ineffective	_____:	_____:	_____:	_____:	_____:	_____:	_____	Effective
5. Helpful	_____:	_____:	_____:	_____:	_____:	_____:	_____	Frustrating
6. Inconsistent	_____:	_____:	_____:	_____:	_____:	_____:	_____	Consistent
7. Fair	_____:	_____:	_____:	_____:	_____:	_____:	_____	Unfair
8. Successful	_____:	_____:	_____:	_____:	_____:	_____:	_____	Unsuccessful
9. Incompetent	_____:	_____:	_____:	_____:	_____:	_____:	_____	Competent
10. Wise	_____:	_____:	_____:	_____:	_____:	_____:	_____	Foolish

1. Would you like to work for a supervisor like Ruth Brewster?

(Circle the appropriate number)

1	2	3	4	5
Definitely would not	Probably would not	Unsure	Probably would	Definitely would

2. When filling out the Supervisory Behavior Description and Evaluation Questionnaires, with whom did you most strongly identify or feel closer to? (Check the appropriate response)

Supervisor _____ Subordinate _____

Please turn to the next page for final instructions.

On the following pages are questions regarding the study in which you have just participated. The questions are intended to obtain your thoughts, feelings and understanding about different aspects of the study so that in the future we may plan our work in a more scientific manner.

Please answer each of the questions frankly and honestly. Answer each question in numerical order and do not look back to your previous answers. Your answer may be as brief or elaborate as you feel necessary to fully express yourself.

1. What do you think this study was all about?

2. Were there any features of this study that you were curious about or puzzled you?

3. A researcher usually conducts a study expecting certain results.

a) What do you think we were looking for or trying to prove?

b) Exactly how do you think you were expected to respond?

Please place your completed booklet on the floor beneath your chair and wait for the study to be concluded by the questionnaire administrator.

APPENDIX D

PRE-TEST RATING OF CASE STUDY FOR TASK AND PEOPLE ORIENTATION

Instructions:

On the following pages you will find a case study of a common organizational interaction. Read the case carefully and then go back over the material and rate the behavior of the supervisor, R. Brewster, according to the following classification system.
NOTE: The sentences have been numbered to assist in this process.

The behavior of any supervisor may be viewed as consisting of the following dimensions or orientations:

Task Orientation - includes behavior in which the supervisor organizes and defines group activities and his relation to the group. Thus he defines the role he expects each member to assume, assigns tasks, plans ahead, establishes ways of getting things done, and pushes for production. This dimension seems to emphasize overt attempts to achieve organization goals.

People Orientation - includes behavior indicating mutual trust, respect, and a certain warmth and rapport between the supervisor and his group. This does not mean that this dimension reflects a superficial "pat-on-the-back", first name calling" kind of human relations behavior. This dimension appears to emphasize a deeper concern for group members' needs and includes such behavior as allowing subordinates more participation in decision making and encouraging more two-way communication.

Please indicate, by circling the appropriate letter, your personal assessment of which dimensions each sentence in R. Brewster's conversation reflects. An ambiguous category has been included for those sentences which you cannot classify as either task or people oriented. You may classify any one sentence as both task and people oriented if you feel it clearly reflects both dimensions. Record your answers on the form below:

Case Study: Superior Supply Company

Superior Supply is a mid-sized furniture manufacturing company. The office manager R. Brewster is 42 years old, married and has had considerable experience, having been with Superior for five years. The office manager supervises four workers: J. Carter, age 29; M. Wood, age 36; F. Hill, age 30; and P Tyler, age 25, who have been together as a unit since the office was reorganized two years ago. R. Brewster is generally considered by superiors and subordinates to be a very good supervisor.

R. Brewster had just been informed by the sales supervisor that Superior had recently finalized a very large contract with an important new customer. The initial order would arrive at the peak of Superior's busiest season and, because of the expected size of the order, would place a heavy demand on all divisions of the company. R, Brewster realized that this would be a particular strain on the office as, for a two week period, they could expect almost double their normal work load. The office manager quickly called a staff meeting to deal with this issue. A written transcript of that meeting follows below:

R. Brewster: I have some important news to talk to you people about.[1] As you all know, from past years, we are heading into our busiest season in the next few weeks and our office will have alot of work to do.[2] Well, I just finished speaking to the sales supervisor and have been told that the Excelsior contract we've heard so many rumors about has actually been signed.[3] That should really put us under the gun.[4] In fact, you people might have to do some "real" work for a change![5]-- I'm sure we can handle the load, although some of our usual procedures will have to change.[6] I'd like to manage this with as little strain and disruption as possible.[7] So, let's talk it over and see what we can come up with.[8]

F. Hill: I can't see how we can possibly take any new orders when we hardly were able to finish the work of our old customers last year. We even had to work nights during the final week of the month and came in on that Sunday to finish up.

J. Carter: Don't those people out there know what goes on in this office? I'd like to see them handle the work we did last year, never mind an extra order!

R. Brewster: Listen, I know how hard you all worked last year, but don't forget about the extra holiday time and the Christmas bonuses.[9] It is important for the company to expand and this new customer is a big buyer.[10] If things work out and they become regular customers, we will probably make some permanent changes in the office set-up.[11] What do the rest of you think?[12]

M. Wood: I don't know. I was hoping to take it a little easier this year. My niece is getting married at the end of the month and we'll have some relatives staying with us for those two busy weeks.

R. Brewster: Oh yes![13] I'm sorry, I forgot all about your situation.[14] You did mention that to me last week.[15] You know our office must do the work and we have to meet deadlines, but if the rest of the group don't object I'll try and keep you work load as light as possible under the circumstances.[16] I know how hectic having house guests can be.[17]

P. Tyler: It doesn't make too much difference to me. But, I really don't know if we can handle all the work.

R. Brewster: I didn't expect you people to be overjoyed with this news, but I have already committed our office to complete the job.[18] What we have to do now is figure out the best way of going about it.[19] I'm not too sure of the details, but I think we have to consider putting in some extra time each day rather than having to panic the last week and stay so late like last year.[20] I know this might upset some of you, but I think it is necessary.[21]

P. Tyler: I'd prefer to come in earlier in the morning and maybe cut down on our lunch break rather than staying after 5:30. I can get a lift home then and I don't want to miss it.

J. Carter: I can come early in the morning or stay after work. But I don't see the point! I'm sure we will end up working really late that last week and still not finish!

R. Brewster: Come on now, just hold on for a minute.[22] I'm not so happy with these changes myself.[23] I think you all know how I feel about overtime.[24] But I have got a job to do and so do you.[25] Our office has always performed well and met its deadlines and its my responsibility to make sure that things continue that way.[26] Our work load is not this heavy all the year through and we'll just have to put up with it for these two weeks.[27] If anybody else has personal reasons that make this kind of arrangement difficult, speak to me privately and I'll see what can be done.[28] Otherwise, I think we should go ahead with the plan for daily overtime.[29]

M. Wood: I'm sure I can only come in earlier in the morning. I will have alot to do at home after work.

F. Hill: I have enough trouble getting up in the morning as it is, so I guess I'd like to stay after 5:30.

R. Brewster: Hmm, it looks like we've got a problem.[30] I want you all in at the same time.[31]

P. Tyler: Why can't each of us put in the extra time when we want to? There certainly should be enough work that can be done individually during that time each day.

R. Brewster: Well, -- I guess that might work out O.K.[32] Let's start by having each of you put in an extra hour each day, when you want it, for two weeks starting on the fifteenth of the month.[33] If I see any problem with this, I will expect to have you all in at the same time each day.[34] I don't care if that's in the morning or evening, so I ll leave that decision up to you.[35] When we're through with this meeting, would each of you fill out a T-72 form with your schedule changes and put them on my desk.[36] Now, are there any other problems?[37]

F. Hill: Do you think we will have to change any of our regular job assignments?

R. Brewster: The only thing which may give us trouble will be the preparation of the invoices.[38] I don't think our present set up will be able to handle the additional work[39] Actually, now that you mentioned it, I think we need some part-time assistance.[40] Why don't those of you involved with the invoices get together and work out exactly what you think we need and speak to Personnel about it.[41] Just be sure to check with me before you put it through.[42]

I will be very busy preparing for the annual audit and stock-taking and won't have much time to assist with any of the work.[43] But with the extra help on the invoices, I think you all will manage alright.[44]

What's the matter, Carter?[45] -- Is something bothering you?[46]

J. Carter: I guess I'm still not convinced we can handle it. Especially the amount of extra work I will have to do to keep the books up to date. -- I just don't know.

R. Brewster: Well, I don't really anticipate that to be a major problem.[47] You will just have to keep on top of things and not let yourself get behind.[48] You certainly have always been able to handle heavy loads before.[49]

P. Tyler: I think I can take care of the filing and time sheets well enough. But perhaps I can help with the books. I have been taking bookkeeping at night and would like to try.

R. Brewster: I didn't know you were going to night school.[50] That's a very smart idea.[51] With your hard work and good head, that should really help you move along.[52] But, you know, I don't think I want to have a beginner helping out right now.[53] There will be alot of pressure on everybody and I don't want you starting out in that kind of atmosphere.[54] It would be unfair to put you in that situation.[55] I want to talk to you about your courses and find out exactly what kind of work you are being trained to do, but it better wait till we get through this month.[56]

Are there any other questions or comments?[57] -- Alright, I know that all of you will do your best and we'll come out of this in good shape.[58] Why don't we plan on going out for lunch or something at the end of the month when the work lets up.[59] We never seem to have any time to relax with each other and I think it would be nice.[60] Well, that is all I wanted to cover this morning.[61] Oh, coffee time already![62] Well, who's buying this morning?[63]

	Task	People	Ambiguous
1.	T	P	A
2.	T	P	A
3.	T	P	A
4.	T	P	A
5.	T	P	A
6.	T	P	A
7.	T	P	A
8.	T	P	A
9.	T	P	A
10.	T	P	A
11.	T	P	A
12.	T	P	A
13.	T	P	A
14.	T	P	A
15.	T	P	A
16.	T	P	A
17.	T	P	A
18.	T	P	A
19.	T	P	A
20.	T	P	A
21.	T	P	A
22.	T	P	A
23.	T	P	A
24.	T	P	A
25.	T	P	A
26.	T	P	A
27.	T	P	A
28.	T	P	A
29.	T	P	A
30.	T	P	A
31.	T	P	A
32.	T	P	A
33.	T	P	A
34.	T	P	A
35.	T	P	A
36.	T	P	A
37.	T	P	A
38.	T	P	A
39.	T	P	A
40.	T	P	A
41.	T	P	A
42.	T	P	A
43.	T	P	A
44.	T	P	A
45.	T	P	A
46.	T	P	A
47.	T	P	A
48.	T	P	A
49.	T	P	A
50.	T	P	A
51.	T	P	A
52.	T	P	A
53.	T	P	A
54.	T	P	A
55.	T	P	A
56.	T	P	A
57.	T	P	A
58.	T	P	A
59.	T	P	A
60.	T	P	A
61.	T	P	A
62.	T	P	A
63.	T	P	A

APPENDIX E

CORRELATION MATRIX OF 10-ITEM EVALUATIVE CHECK LIST

TABLE 14

Correlation Matrix for 10-Item Evaluative Checklist

		1	2	3	4	5	6	7	8	9	10	11
Good	1	-										
Pleasant	2	.32**	-									
Sincere	3	.36**	.41**	-								
Effective	4	.49**	.17	.43**	-							
Helpful	5	.48**	.36**	.50**	.57**	-						
Consistent	6	.51**	.19	.48**	.61**	.59**	-					
Fair	7	.50**	.43**	.51**	.56**	.72**	.58**	-				
Successful	8	.46**	.20*	.33**	.63**	.54**	.54**	.56**	-			
Competent	9	.48**	.16	.30**	.70**	.57**	.61**	.56**	.68**	-		
Wise	10	.45**	.29**	.49**	.58**	.68**	.62**	.63**	.57**	.65**	-	
Total	11	.69**	.46**	.65**	.79**	.83**	.79**	.83**	.75**	.78**	.81**	-

*p < .05

**p < .01

APPENDIX F

SUMMARY TABLES OF NON SIGNIFICANT ANOVAS

TABLE 15

SUMMARY OF THE 2x3x2 (SEX OF SUBJECT) ANALYSIS OF VARIANCE FOR CONSIDERATION

SOURCE	df	MS	F
Sex of Supervisor (A)	1	37.21	.66
Sex of Subordinates (B)	2	7.09	.13
Sex of Subject (C)	1	1362.01	24.17**
A x B	2	13.21	.23
A x C	1	32.17	.57
B x C	2	97.41	1.73
A x B x C	2	27.30	.48
Within Cells	168	56.36	

*$p < .05$

** $p < .001$

TABLE 16

SUMMARY OF THE 2x3x2 (SEX OF SUBJECT)
ANALYSIS OF VARIANCE FOR
INTEGRATION

SOURCE	df	MS	F
Sex of Supervisor (A)	1	13.88	.60
Sex of Subordinates (B)	2	9.37	.41
Sex of Subject (C)	1	273.80	11.92**
A x B	2	13.01	.57
A x C	1	15.04	.65
B x C	2	31.55	1.37
A x B x C	2	19.99	.87
Within Cells	168	22.97	

* $p < 2.05$

** $p < .001$

TABLE 17

SUMMARY OF THE 2x3x2 (SEX OF SUBJECT) ANALYSIS OF VARIANCE FOR STRUCTURE

SOURCE	df	MS	F
Sex of Supervisor (A)	1	52.97	.93
Sex of Subordinates (B)	2	22.79	.40
Sex of Subject (C)	1	1051.93	18.52**
A x B	2	40.31	.71
A x C	1	33.93	.59
B x C	2	4.07	.07
A x B x C	2	.50	.01
Within Cells	168	57.1	

* $p < .05$

** $p < .001$

TABLE 18

SUMMARY OF THE 2x3x2 (SEX OF SUBJECT)
ANALYSIS OF VARIANCE FOR
PRODUCTION EMPHASIS

SOURCE	df	MS	F
Sex of Supervisor (A)	1	18.81	.49
Sex of Subordinates (B)	2	43.45	1.13
Sex of Subject (C)	1	55.20	1.44
A x B	2	23.67	.62
A x C	1	6.80	.18
B x C	2	31.17	.81
A x B x C	2	89.62	2.34
Within Cells	168	38.30	

* $p < .05$

** $p < .001$

TABLE 19

SUMMARY OF THE 2x3x2 (SEX OF SUBJECT)
ANALYSIS OF VARIANCE FOR
EFFICACY

SOURCE	df	MS	F
Sex of Supervisor (A)	1	13.42	.09
Sex of Subordinates (B)	2	61.11	.43
Sex of Subject (C)	1	3791.13	26.37**
A x B	2	204.93	1.43
A x C	1	127.91	.89
B x C	2	329.41	2.29
A x B x C	2	6.53	.05
Within Cells	168	143.79	

* $p < .05$

** $p < .001$

APPENDIX G

SUMMARY TABLES OF RAW DATA

TABLE 20

SUMMARY OF CONSIDERATION RAW DATA
FOR SEX OF SUBJECT

CELL			OBSERVATIONS													
A	B	C														
1	1	1	23	32	27	31	37	46	38	28	22	19	22	25	47	44	24
1	1	2	48	38	46	43	36	39	39	37	42	33	42	40	41	38	30
2	1	1	30	24	23	40	25	31	20	24	45	42	36	39	27	36	39
2	1	2	49	31	41	33	42	45	45	44	41	41	35	37	29	35	39
1	2	1	29	22	25	21	21	23	29	43	40	29	41	31	46	28	25
1	2	2	47	37	42	49	47	37	40	36	36	38	34	27	40	27	40
2	2	1	48	34	24	20	42	26	36	26	44	40	28	45	39	40	25
2	2	2	37	27	19	34	44	39	45	44	48	39	24	42	48	47	36
1	3	1	43	27	26	28	28	34	38	37	45	33	32	32	35	24	40
1	3	2	37	40	31	27	38	23	24	44	45	50	36	45	34	29	34
2	3	1	41	38	43	34	31	40	22	25	30	31	28	36	30	27	45
2	3	2	34	25	28	28	46	42	34	48	40	40	35	31	45	38	34

A - Sex of Supervisor
B - Sex of Subordinates
C - Sex of Subject

1 - Male
2 - Female
3 - Mixed

TABLE 21

SUMMARY OF DEMAND RECONCILIATION
RAW DATA FOR SEX OF SUBJECT

CELL			OBSERVATIONS													
A	B	C														
1	1	1	12	15	11	16	18	16	15	12	10	13	11	15	23	21	9
1	1	2	20	21	21	21	18	23	19	19	20	16	24	29	22	18	9
2	1	1	12	13	10	19	12	11	10	13	23	19	19	20	11	11	19
2	1	2	22	21	21	21	21	22	16	25	20	22	19	22	7	18	16
1	2	1	15	7	13	10	7	11	19	17	21	8	24	10	23	11	18
1	2	2	24	11	24	20	19	19	21	22	18	18	18	10	15	14	20
2	2	1	23	14	16	10	23	17	15	10	19	18	14	9	21	22	15
2	2	2	20	13	16	20	20	18	22	22	22	20	10	23	21	20	17
1	3	1	18	16	12	11	14	9	13	19	18	16	14	19	15	8	13
1	3	2	21	20	7	18	18	12	12	21	23	22	18	19	20	17	10
2	3	1	16	20	24	18	18	20	20	11	19	17	9	19	19	15	25
2	3	2	20	10	16	9	25	23	17	21	18	17	21	20	22	17	18

A - Sex of Supervisor
B - Sex of Subordinates
C - Sex of Subject

1 - Male
2 - Female
3 - Mixed

TABLE 22

SUMMARY OF INTEGRATION RAW DATA
FOR SEX OF SUBJECT

CELL			OBSERVATIONS													
A	B	C														
1	1	1	10	15	12	17	20	23	20	18	9	8	14	16	24	25	6
1	1	2	25	20	23	22	15	20	17	16	20	17	25	22	22	21	12
2	1	1	11	12	10	19	14	10	12	12	24	22	21	21	10	15	21
2	1	2	20	22	20	13	20	21	23	24	19	20	18	22	10	21	19
1	2	1	18	8	10	9	11	17	19	21	21	9	24	16	25	14	16
1	2	2	24	18	22	23	23	21	22	20	17	21	17	16	23	17	19
2	2	1	25	18	15	14	21	11	19	15	25	23	12	16	22	24	12
2	2	2	24	15	9	15	21	14	21	24	20	20	10	22	25	23	17
1	3	1	19	14	12	12	13	13	13	22	25	18	14	19	16	13	21
1	3	2	21	22	8	16	21	8	10	23	24	23	18	21	18	18	5
2	3	1	17	14	25	17	12	21	18	10	19	21	11	20	19	15	25
2	3	2	18	11	20	8	20	22	15	22	23	20	21	17	24	20	22

A - Sex of Supervisor
B - Sex of Subordinates
C - Sex of Subject

1 - Male
2 - Female
3 - Mixed

TABLE 23

SUMMARY OF STRUCTURE RAW DATA
FOR SEX OF SUBJECT

CELL A	B	C	OBSERVATIONS															
1	1	1	19	35	34	44	40	39	32	26	32	18	32	42	44	46	19	
1	1	2	41	37	45	43	38	45	44	34	38	43	39	43	40	38	18	
2	1	1	25	35	22	38	37	30	33	28	42	39	38	38	22	36	46	
2	1	2	37	44	44	34	33	36	36	47	37	44	43	45	12	38	36	
1	2	1	33	22	34	29	15	40	40	45	39	13	48	28	47	34	42	
1	2	2	43	40	39	43	43	40	42	39	41	41	34	28	40	39	37	
1	3	1	42	36	32	31	35	30	27	39	33	39	36	32	22	24	32	
1	3	2	44	35	25	38	42	33	44	44	44	44	34	39	46	47	24	
2	3	1	35	33	46	40	41	33	40	27	38	34	22	37	41	33	44	
2	3	2	47	27	47	21	48	42	34	43	42	44	48	45	46	34	46	

A - Sex of Supervisor
B - Sex of Subordinates
C - Sex of Subject

1 - Male
2 - Female
3 - Mixed

TABLE 24

SUMMARY OF PRODUCTION EMPHASIS
RAW DATA FOR SEX OF SUBJECT

CELL			OBSERVATIONS													
A	B	C														
1	1	1	32	34	32	43	40	39	39	39	48	28	45	46	38	34	26
1	1	2	30	39	31	32	28	41	40	35	34	45	32	39	27	37	38
2	1	1	23	41	38	34	43	45	34	33	35	32	28	38	24	32	25
2	1	2	32	39	45	40	45	23	38	34	34	40	38	41	44	41	31
1	2	1	37	36	41	29	34	43	38	35	35	26	43	26	34	35	48
1	2	2	31	42	37	34	33	38	47	38	37	43	31	23	46	45	34
2	2	1	31	39	48	44	29	29	34	42	33	37	41	22	43	29	33
2	2	2	32	30	26	45	34	35	26	45	26	40	30	35	40	41	24
1	3	1	34	39	32	34	33	28	32	36	29	45	31	40	44	43	31
1	3	2	38	32	34	39	47	47	45	38	35	33	40	45	40	34	31
2	3	1	37	41	35	32	42	25	49	34	43	41	27	38	41	31	32
2	3	2	41	37	44	29	37	31	38	45	37	40	41	41	33	40	47

A - Sex of Supervisor
B - Sex of Subordinates
C - Sex of Subject

1 - Male
2 - Female
3 - Mixed

TABLE 25

SUMMARY OF EFFICACY RAW DATA
FOR SEX OF SUBJECT

CELL			OBSERVATIONS													
A	B	C														
1	1	1	17	42	44	45	64	56	61	37	41	32	27	52	53	61	44
1	1	2	63	64	63	64	54	63	56	62	62	43	63	50	61	54	34
2	1	1	33	37	38	59	40	39	19	23	40	36	46	54	32	50	42
2	1	2	61	46	65	40	52	61	61	68	54	66	49	68	37	50	60
1	2	1	36	24	37	25	43	35	45	60	46	36	66	34	70	44	41
1	2	2	49	34	64	62	28	47	55	56	50	42	39	56	54	37	61
2	2	1	40	37	28	32	62	34	59	25	49	59	46	29	63	67	42
2	2	2	44	47	63	54	62	51	62	56	68	53	23	65	68	55	47
1	3	1	57	49	31	35	46	29	42	53	62	55	46	50	43	26	45
1	3	2	59	65	24	40	61	30	25	66	47	67	59	60	61	45	22
2	3	1	57	46	55	49	40	53	48	31	47	32	25	49	45	39	59
2	3	2	45	33	52	29	60	62	57	66	33	59	50	51	61	56	54

A - Sex of Supervisor
B - Sex of Subordinates
C - Sex of Subject

1 - Male
2 - Female
3 - Mixed

TABLE 26

SUMMARY OF ATTRACTIVENESS RAW DATA
FOR SEX OF SUBJECT

CELL			OBSERVATIONS													
A	B	C														
1	1	1	1	4	2	2	5	4	4	2	2	2	2	2	5	4	2
1	1	2	5	4	3	4	4	4	4	4	5	2	4	4	5	5	3
2	1	1	2	2	2	4	3	2	1	1	3	3	4	4	2	4	1
2	1	2	4	4	4	2	3	5	4	5	4	4	4	5	1	4	4
1	2	1	1	1	4	1	2	1	2	4	4	1	4	1	5	2	1
1	2	2	2	1	4	5	1	3	4	4	3	1	1	3	2	1	4
2	2	1	3	2	1	1	5	1	4	2	4	4	2	1	4	5	2
2	2	2	4	2	2	2	4	3	4	4	5	2	1	5	3	4	3
1	3	1	4	2	2	2	2	2	2	4	5	2	2	2	2	2	3
1	3	2	5	5	1	3	2	1	1	4	2	5	4	3	4	3	1
2	3	1	4	4	4	2	2	4	4	2	2	1	2	2	4	2	5
2	3	2	1	2	4	2	5	4	2	4	2	4	4	4	4	4	2

A - Sex of Supervisor
B - Sex of Subordinates
C - Sex of Subject

1 - Male
2 - Female
3 - Mixed