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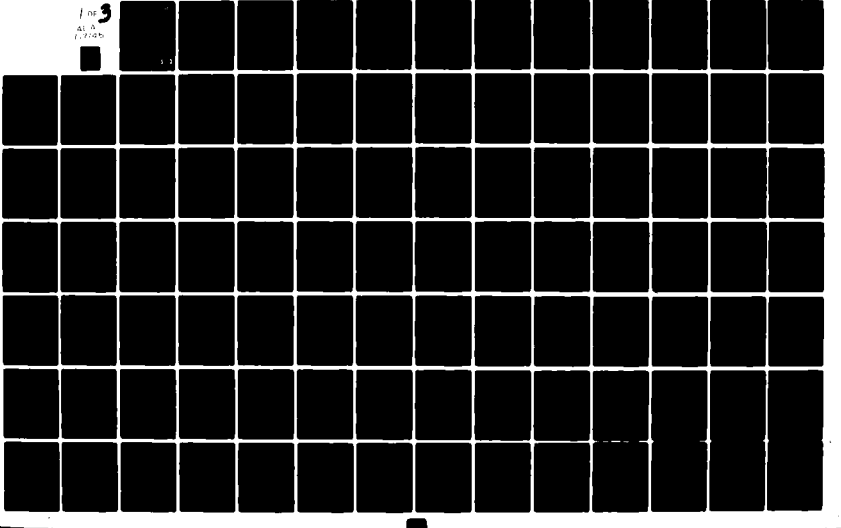

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SUBORDINATE PERCEPTION AND EVALUATION OF LEADERS WHO DIFFER ON A PERSONAL CHARACTERISTIC: ARE LEADERS INTERCHANGEABLE?

by

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ABSTRACT

SUBORDINATE PERCEPTION AND EVALUATION OF LEADERS WHO DIFFER ON A PERSONAL CHARACTERISTIC: ARE LEADERS INTERCHANGEABLE?

Jack Hays Cage

This study was designed to investigate the assumption of contingency leadership theory that leaders are interchangeable: subordinates use the same criteria for evaluating leaders' effectiveness irrespective of the leaders' personal characteristics.

Paper-and-pencil instruments based on previous work on leadership by Vroom were created. Each story described a leader, the subject's immediate superior, in a decision-making situation. Every subject was exposed to one story in which the leader was either male or female and the context was masculine or feminine. Subjects were asked to take the subordinate's viewpoint, evaluate the decision-making process, offer prognosis about the outcomes, and assess the leader.

The data indicated that the hypotheses received little support. Two hypotheses suggested that the leader will be viewed as most effective when following the prescription of Vroom's model when his/her gender and the context were

congruent. The data demonstrated that the appropriately participative leader was rated as more effective than the inappropriately autocratic leader. Two other hypotheses suggested that the leader will be viewed as most effective when behaving stereotypically (women participatively and men autocratically) when the leader's gender and the context were incongruent. The data showed minor support for the condition with female leaders.

Subsequent analyses demonstrated three trends indicating that subjects: (a) preferred appropriately participative leaders; (b) evaluated participative leaders as especially competent when the leader's gender was incongruent with the context; and (c) evaluated leaders differently in masculine and feminine contexts.

Further analyses established differences between subjects who accepted the prescription of Vroom's model and those who did not; subjects who were comparatively less successful were also those who followed the prescription of contingency theory. These findings, when compared with the results of an initial study, suggest that three groups who differ in their expectations for leaders' behaviors have been studied.

The results of this investigation cannot be used to refute the assumption of interchangeability. Possible causes for the lack of gender effect were explored. The

rejection of autocratic leaders, the changing preferences with prescription and context, and subpopulation differences were discussed. Implications for contingency leadership theory were outlined.

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Acknowledgements

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Chapter I

INTRODUCTION

This study is an inquiry into the perception of leaders by subordinates, and specifically, whether subordinates view leaders as interchangeable. Subordinates' reactions to a leader's behavior may not be due solely to the constraints of a situation as suggested by recent contingent leadership theories. Because people hold expectations about different types of individuals, the personal characteristics of a leader may interact with contextual issues and affect the perceptions of the leader as well as evaluations of his/her subsequent behavior. Consequently, even when the conditions surrounding a leader's behavior are unchanged, one leader's behavior may be perceived quite differently by subordinates from the behavior of a second leader with different personal characteristics. The effects of different personal characteristics upon the perception of a leader's effectiveness is the basis for this investigation.

Perception of Leaders by Subordinates

Recognizing the link between a leader's effectiveness and subordinates' responses, psychologists in this century have investigated the crucial role that subordinates play in the leadership process. "Not only is it the follower who

accepts or rejects leadership but it is the follower who perceives the leader and the situation and who reacts in terms of what he perceives" (Sanford, 1950, p.4). Hollander and Julian (1969) suggest that the study of leadership is a process of discovering the importance of the entire system's elements, a portion of which includes the subordinate:

> In studying the effectiveness of the leader, more emphasis should be placed on the outcomes for the total system, including the fulfillment of expectations held by subordinates....Not irrelevantly, the perception of the leader held by followers...needs closer scrutiny. In this way, one may approach a recognition of stylistic elements allowing given persons to be effective leaders (p.395).

As Hollander and Julian (1969) suggest, the investigation of subordinate perceptions of leaders could contribute substantially to explaining why some leaders are effective while others are not. One major attempt to investigate the effects of leaders upon subordinates' perceptions developed as a consequence of Kurt Lewin's (Lewin, Lippit, and White, 1939) investigation of 'social climates' created by authoritarian, democratic, and laissez-faire leadership styles. In time, two dimensions of leadership evolved. These dimensions were initiating

structure and consideration (Stogdill, 1963, 1969; Schriesheim and Kerr, 1974). The result was a series of studies on effective leadership using an instrument called the Leadership Behavior Description Questionnaire (LBDQ). It was aimed at identifying the behavioral correlates of both successful and unsuccessful leader behavior. The approach has a strong appeal. Conceivably, researchers could identify those behaviors that successful leaders exhibit and suggest that other leaders engage in similar behaviors. If valid, the specification would have tremendous effect on leadership training: leadership trainers could insure success by training their charges to behave in certain manners. More importantly, the students would be guaranteed success.

Unfortunately, the implications of the research on the effective leader dimensions have been unclear. No consistent findings appear in the literature concerning scores on the LBDQ (measures of initiating structure and consideration) and either subsequent performance or satisfaction. Instead, the literature on the consideration and initiating structure dimensions demonstrates wide differences between correlations of the criteria of effectiveness and ratings of the concepts; +.68 to -.19 for initiating structure and +.84 to -.52 for consideration (Korman, 1966).

In an effort to explain these findings, several authors (Korman, 1966; Sales, 1966) have noted that the effective leader dimensions do not account for changing situational contingencies. The outcomes which occur as a result of a leader's behavior vary with changing situational contingencies, a result not accounted for in correlational studies of the initiating structure/consideration dimensions. Accompanying these critiques was the growth of contingent leadership theories which assume that a leader's behavior interacts with the situational contingencies to affect a range of organizational outcomes. Korman (1966) concluded:

> There is a great need for experimental research and predictive studies oriented toward determining the predictive significance of variation in Leader "Consideration" and "Initiating Structure" before they are utilized further as dependent variables (p.355).

Fred Fiedler, one member of the school of contingent theorists, initiated a long and very extensive line of research in order to determine the results of interaction among leaders and specific situational contingencies. He (1964, 1967, 1971) assumes that a leader's effectiveness is determined by the interaction of his/her personality (measured by Least Preferred Co-Worker, or LPC) and

situational favorableness (measured by three indicators: the quality of leader-member relations, the degree of task structure, and the power available to the leader).

LPC is considered to be a measure of the leader's general orientation. A leader is asked to consider the person with whom s/he 'could work least well,' and then respond to 18 bipolar adjectives in an attempt to describe that person. A LPC score is developed by computing the individual scale scores. A low LPC score suggests that a leader is task oriented indicating a low regard for the least preferred co-worker. A high LPC score suggests the opposite: that the leader is relationship oriented and differentiates between the co-worker's task performance and his/her personal worth.

Along with LPC, the evaluation of situational favorableness is a key component to Fiedler's model. Favorableness is measured by rating of (a) the quality of leader-member relations, (b) the structure of the task, and (c) the leader's position power. The relationships among the leader and the subordinates is determined by the latter's acceptance of the leader. The task structure is measured by the availability of clear goals, the number of feasible solutions, the ways to accomplish the task, and the criteria for success. The leader's position power is determined by the ability of the leader to either reward or

punish subordinates. Fiedler evaluates the degree to which the three situational constraints favor the leader based on ratings of the three criteria. For example, Fiedler suggests that a situation is most favorable for a leader when the quality of leader-member relations is good, the tasks are structured, and the leader controls the means to reward and punish subordinates.

Fiedler suggests that task-oriented leaders (demonstrated by their LPC scores) tend to perform most effectively when the situation is either very favorable or very unfavorable. On the other hand, relationship-oriented leaders (again, determined by their LPC scores) tend to be most effective in moderately favorable situations.

The results of validation studies performed on Fiedler's model are in substantial disagreement. On the one hand, considerable support exists for the model's validity (Fiedler, 1971; Fiedler and Chemers, 1974; Mitchell, Biglan, Oncken, and Fiedler, 1970), especially in field settings (Fiedler, 1978). On the other hand, Graen, Alvares, Orris, and Martella (1970) analyzed Fiedler's data and questioned the results. Subsequently, Graen, Orris, and Alvares (1971) were unable to replicate Fiedler's predictions.

Fiedler's model is not without flaws. First, the concept of LPC is poorly defined. Fiedler and Chemers (1974) acknowledge that LPC fails to meaningfully correlate with the measures of other personality traits or scores of behavioral measures. Second, and more troubling, is the practical utility of the Fiedler model. The concepts of 'organizational engineering' (Fiedler, 1967) and 'leader-match' (Fiedler, Chemers, and Mahar, 1976) suggest that leaders should be placed into situations that are favorable in terms of their LPC and then rotated as the situation changes. Ideally, leaders can be placed into positions that are rated as favorably matching their LPC. The leader should be immediately changed when the favorable match no longer exists. Practically, such an approach is often difficult if not impossible to carry out.

Victor Vroom, a second major proponent of the contingent school of leadership, disagrees with Fiedler. Vroom accepts several assumptions that are inherently different from those made by Fiedler. First, Vroom focuses on the specific problem faced by the leader instead of the generalized favorableness of the situation. Second, the leader's behavior, not personality, is assumed to affect his/her success. Vroom suggests that his model of leadership is of greater practical value since the leader's behavior may be altered by training instead of continual

rotation. The next section describes Vroom's model.

Vroom's Model of Leadership

Vroom and Yetton's (1973) approach to contingency theory focuses on the problem of including subordinates in the decision-making process to achieve highly accepted, high quality decisions. The deductive model synthesizes the pertinent findings in the leadership literature, particularly those studies in which researchers described the effect of participation on subordinate acceptance and decision quality. Vroom hypothesizes that the leader's behavior and the specific situational factors that s/he faces interact to affect the leader's success. Vroom and Yetton assume that successful leaders alter their behavior depending on specific situational contingencies, or 'problem attributes.'

Vroom, as well as other contingency theorists, implicitly accept five potentially troublesome assumptions about subordinates (Heilman and Hornstein, 1981). The five assumptions are:

(a) The Assumption of an Implicit Theory. Subordinates have an implicit theory of leadership that guides their evaluation of the leader;

(b) The Assumption of Ahistorical Posture.

Subordinates assume an orthogonal independence between the leader's responses in different situations;

(c) The Assumption of Complete Information. Subordinates are assumed to have the same information as the leader and process it the same way;

(d) The Assumption that Leaders are Interchangeable. Subordinates are assumed to use the same criteria for evaluating all leaders regardless of personal characteristics;

(e) The Assumption of Interchangeable Context. Subordinates apply the same rules to leader behavior uninfluenced by the organizational context surrounding the encounter.

No researchers to date have investigated the validity of these assumptions about subordinates.

Vroom's model deals with the degree of participation that a leader/manager allows his or her subordinates. Vroom provides clear prescriptions for the leader's behavior in various situations. The model contains three components: (a) problem attributes, (b) a decision tree, and (c) a taxonomy of decision processes.

First, Vroom identifies seven problem attributes that serve as criteria for selecting the appropriate decision process. The selected process should provide for the

highest probability of achieving a quality decision and subordinate acceptance. The problem attributes, in question form, are:

1. Does the problem possess a quality requirement?
2. Do I have sufficient information to make a high quality decision?
3. Is the problem structured?
4. Is acceptance of the decision by subordinates important for effective implementation?
5. If I were to make the decision by myself, am I reasonably certain that it would be accepted by my subordinates?
6. Do subordinates share the organizational goals to be attained in solving this problem?
7. Is conflict among subordinates likely in preferred solutions?

Second, Vroom developed a decision tree (1973) to guide users through the seven problem attributes that are arranged along the top of the tree. The leader's answers to the seven questions ('Yes' or 'No') direct him/her along the branches of the tree to a list of decision processes. The tree's branches are constructed based upon a set of rules (Vroom and Yetton, 1973, pp.32-37) that insures the conditions of the problem attributes are met. The rules

omit decision processes that have the greatest potential for a poorly accepted, low quality outcome. The resulting decisions are defined as the 'feasible set'--the methods that remain after rule-violating processes are eliminated. The feasible set includes only the processes that will potentially result in highly accepted, high quality decisions.

Third, Vroom identifies a series of decision processes that vary in the degree to which subordinates participate in decision-making. Vroom's group decision processes are listed in Appendix E.

Research on Vroom's Model

Vroom specifies the procedures that a leader should take when faced with a certain set of situational contingencies. The capability to accurately prescribe specific behaviors that will have a high probability of success in any given situation is appealing. Leaders and managers would have the ability to determine the appropriate decision process they should use in every situation. The research on Vroom's model, however, is conflicting. A number of authors (Hill and Schmidt, 1977; Jago and Vroom, 1978; Margerison and Glube, 1979; Vroom 1976a, 1976b; Vroom and Yetton, 1973) provide support for the model. Vroom and Yetton (1973), for example, used a process of

validation called 'recalled problem.' They prompted more than 500 managers to write descriptions of a recently encountered problem, and also to answer questions that paralleled the model's problem attributes. Though differences between the model and the leader's behaviors abound, the processes that the managers used approximated the feasible set two-thirds of the time.

Vroom and his colleagues have developed several sets of research, diagnostic and training materials that parallel the model. One type of material consist of problem sets--sets of stories or cases that each describe one leader, described as the respondent, in a decision-making situation. The cases evolved from over 600 written descriptions provided by managers. Eighty cases were selected and edited by Vroom and Yetton. Trained observers then blindly scored the problem attributes of each case. If all raters coded the attributes of a story in the same manner, the case was retained. The process continued until all judges were unanimous in their evaluation of every case's attributes. Every case's feasible set was determined from the model. When using the problem set, the respondent is asked to circle the letter referring to the decision-making process that s/he would use in the described situation. Each story has one or more theoretically correct responses, the feasible set, and the respondent is evaluated

based on his/her responses to either 30 or 54 stories. Many of these cases have been standardized through carefully developed procedures (Vroom and Yetton, 1973).

Jago and Vroom (1978), in a study using the standardized cases to determine the validity of the model, reasoned that a response to a problem presented in a standardized case would be similar to the subject's behavior in a structurally-similar actual problem (p.716). The results demonstrated that the correlation between statements of the respondents' 'successful' actual behavior and their behavioral intent on the problem sets was moderately positive ($r = .37$, $p < .01$) while 'unsuccessful' actual behavior and behavioral intent was insignificant ($r = .13$). The model, based on these results, appears to be a good predictor and guide for decision-making in organizational settings.

Vroom's model as well as validation studies used to support the model, however, are not without fault. First, the model is incomplete since it merely deals with decision-making procedure, and not with interpersonal style and behavior. Interestingly, Maier (1963), from whom Vroom and Yetton draw heavily, concerned his work with not only decision-making but also the skills necessary to carry them out in an organization. Second, the attempts to validate the model are flawed by concurrent subjective validation.

In both the earlier and later attempts to validate the model, Vroom and others required subjects to self-report problems, attributes, the process used, as well as the outcomes of the decision--effectiveness, quality, and acceptance. It is possible that respondents bias the cases by selection (choosing a successful, well received decision process) and by their description of the actual situation and outcome. Third, the research is potentially biased by a social desirability effect. It is conceivable that managers report that they use more participative processes than they actually apply in a work setting. This effect could be caused by the current emphasis on participative leadership. The results would, in part, verify a model that was participatively biased. Fourth, the use of standardized cases, though convenient for Vroom, is troublesome in terms of the results. The cases were carefully developed to preclude ambiguity in their description of the situation facing a leader. The extreme clarity has little to do with the ambiguity of management in organizations and thus undermines the ability to generalize the results.

Implicit Theory of Leadership

The assumptions of contingent leadership outlined above served as the initial focus for a study investigating the perception of leaders by subordinates. Specifically, an

initial study (Hornstein, Heilman, and Cage, in preparation) was conducted to examine the assumption that subordinates have an implicit theory of leadership. Vroom's standardized cases are interesting for his purposes but also stand as useful instruments to investigate subordinates' perceptions of leaders. Vroom's cases were modified to describe the manager as the subject's immediate superior.

Each of twenty-five subjects read six cases. These cases were divided into two groups; the autocratic (AI) decision-making process was theoretically prescribed for three stories while the participative (GII) process was prescribed for the other three. The manager described in each case used one of three decision-making processes (AI, CII, or GII) for e ch of the two types of prescribed processes (autocratic and participative). The design is depicted in Figure 1.

The procedure provides two cells in which the prescribed and actual behaviors co-occur: cells 1 and 6, both marked 'congruence' in Figure 1. In other words, the leaders described in the first column are presented with certain situations that would theoretically require an autocratic decision process (AI) from the leader. Thus, a 3 X 2 within-subjects design presented the prescribed behavior (either AI or GII) and the leader's actual behavior (AI, CII, or GII) as the independent variables. In presenting

FIGURE 1

Experimental Conditions--Initial Study

		PRESCRIBED BEHAVIOR	
		AUTOCRATIC (AI)	PARTICIPATIVE (GII)
ACTUAL BEHAVIOR	AI	CELL 1 Congruence	CELL 4
	CII	CELL 2	CELL 5
	GII	CELL 3	CELL 6 Congruence

the stories to subjects, prescribed and 'actual' behaviors were completely counterbalanced to preclude ordering effects.

The dependent variables in the study were measured by a series of twenty-one, nine-point bipolar adjective scales. These were created to assess several different issues. The success of this effort was confirmed using a reliability analysis program which determined that five of the scales formed a dependent measure (alpha = .935) reflecting the subjects' evaluation of the decision process in response to the request: "Indicate your judgments of the decision-making procedure this manager is using." A sixth scale measured the subjects' evaluation of the process' effects on subordinate morale in response to the same request. Three separate scales measured the subjects' prognostication of the outcome in response to the question "When all is said and done, what is your guess about the decision that will be made?" The three dimensions were: (a) low quality/high quality, (b) accepted/rejected by most, and (c) good for the organization/bad for the organization. The final group of scales measured three personal dimensions of the leader based on the request "Characterize the manager in the story using the following scales." The three dimensions were: (a) likeability (alpha = .736), (b) drive/activity (alpha = .860), and (c) competence (alpha =

.870). If Vroom and others are correct in terms of leader effectiveness, the cells with the convergent behavior should be rated more positively than those with divergent behavior. In other words, the respondents should evaluate the fit between the situational contingencies and the leadership process more positively when it matched Vroom's prescription--an autocratic leader behavior in an autocratic situation and a participative behavior in a participative situation.

The affective dimensions (morale, resistance/acceptance of the decision, and the leader's likeability) were not expected to demonstrate the same pattern. The results were expected to demonstrate a main effect for the leader's behavior. The affective dimensions about the process or the leader should be dependent entirely upon the behavior exhibited rather than the interaction of situational factors with exhibited behavior. Managers using an authoritarian style should be liked less, seen as more driving, and more likely to produce resistance than those using a participative style. The participative leader, then, was expected to be viewed as developing the highest morale, causing the least resistance, and being highly liked by subordinates; the opposite effect was expected for the autocratic leader.

The results of the study supported the expectations. On the effective dimensions--evaluations of the decision process, prognostication of outcome, and the leader's competence and activity/potency--subjects responded most favorably when prescribed and actual behaviors jointly occurred (cells one and six) and least favorably when the behaviors were diametrically opposed (cells three and four). On the affective dimensions (morale, resistance to the process, and the leader's likeability), subjects responded most favorably to the participative leader, followed by the consulative and autocratic leaders, respectively. A significant main effect for the leader's behavior was demonstrated for the three affective dimensions.

In the study, only the first of Vroom's assumptions was investigated: subordinates hold an implicit theory of leadership. The results provide excellent support in these data. The validity of the assumption, however, can not be closed. The procedure that was used precludes making more definitive statements. Furthermore, the nature and procedure of the first study precluded investigation of Vroom's other assumptions: all subjects had the same information as the described leaders (information assumption); different leaders were described in each case (ahistorical assumption); the contexts were not controlled (interchangeable context assumption; the leaders were not

described in terms of personal characteristics (interchangeability assumption). The last assumption of leader interchangeability is the principle concern of this investigation. Subordinate perceptions of leaders with different personal characteristics conceivably affect the appropriateness of the leader's use of the Vroom model. People may hold expectations about people with certain personal characteristics--men, women, blacks, and so on. The expectations may cause the same behavior, performed under the same conditions, to be perceived and evaluated differently when performed by leaders with different personal characteristics.

Leader Interchangeability

In the study outlined above, the leader's behavior and its match with the situation are the subjects' primary sources of information about the actor. In other words, the cases describe the context and the individual's behavior. The research in person perception (Schneider, Hasdorf, and Ellsworth, 1979), however, suggests that context, behavior, and personal characteristics contribute to the observer's information about the actor. People have characteristics (size, shape, age, gender, etc.) that uniquely define them. Furthermore, observers develop expectations due to the actor's personal characteristics and expect to find these

attributes associated with these personal characteristics in the future. For example, a woman with bleached, blond hair is often stereotyped as a 'bimbo'--a fun-loving, but rather simple-minded soul. An observer, however, rarely makes a stereotyped judgment based solely upon the actor's personal characteristics. More typically, an observer simultaneously views an actor's personal characteristics, behavior, and the context or environment. Observers are commonly involved with making these stereotyped judgements as well as drawing inferences from the actor's behavior in the defined context (Jones and Davis, 1965; Jones et al., 1972). Thus, the addition of information about the leader's personal characteristics may alter subordinates' perceptions of the appropriateness of the leader's behavior; leaders may not be interchangeable.

If a leader's personal characteristics affected the appropriateness of his/her behavior, it would have serious theoretical and practical consequences for Vroom's model. First, subordinates reactions to a leader's behavior may be a function of the situation, the leader's behavior, as well as the leader's personal characteristics. Conceptions of how various leaders operate or typically behave may have a tremendous effect on a leader's effectiveness. This finding would greatly qualify Vroom's ability to prescribe decision processes based solely on the situational contingencies.

Second, managers may be required to limit their behavioral range due to subordinates' expectations for their behavior. Managers, for example, with certain personal characteristics may be unable to effectively behave autocratically.

So far, we have hypothesized the effects of describing leader characteristics in conjunction with the context and his/her behavior. The prescriptive value of Vroom's model was outlined; it specifies the best decision process to use when confronted with specific contingencies to insure decision quality and acceptance. What happens when a leader behaves in line with Vroom's prescription but contrary to the expectations generated by the context and the leader's personal characteristics? The psychological process that mediates the subordinate's perception and evaluation of a leader is the subject of the next section.

Model of Leader Interchangeability

The first elements of the model of interchangeability are stereotypes and stereotyped expectations. Stereotypes are sets of characteristics implicitly assumed to fit a group of people. Observers place actors into categories based on some easily perceived characteristic such as age, gender, ethnicity, and so on (Tagiuri, 1968). Stereotypes about categories of people, to include leaders, are implicit--they are inherent to the person based on prior

experience. Stereotypes are important in person perception and appear to exist for two reasons. First, stereotypes serve to assist observers in making sense of the world. Second, observers store information into category groups. The categories serve to subdivide the sum of the available information about an actor into fewer, yet broader groups. There are, for example, stereotypes of policemen, college professors, and blacks. Furthermore, certain characteristics are attributed to the actors besides those clearly observered. A problem with the use of stereotypes is overgeneralization--'everyone with a given characteristic has a certain quality.' The use of stereotypes does not necessarily cause inaccuracy. In fact, stereotypes sometimes provide the observer with more accurate information than would otherwise be possible. Locksley et al. (1980) suggest that "social stereotypes affect judgements of individuals about whom little else is known, besides their social category" (p.830).

Implications for Subordinate Perceptions

The issue of stereotypes and their effect on subordinate perception of leaders leads to three implications. First, situations exist in which subordinates know little about a leader. For example, subordinates with a newly assigned leader with whom the group has no

experience know little about the manager but his/her social category. Until the leader and subordinates interact, the subordinates have little information. In this case, subordinates rely on stereotypes to provide them information about the new member of their organization. Second, stereotypes affect the perception of subsequent behavior by the stereotyped leader. Subordinates conceivably view a leader differently if additional information is available about him/her. A black leader may be perceived as especially active or as behaving in a stereotyped manner (Taylor et al, 1978). In other words, the available categories into which the leader can be placed often bias subsequent perceptions of the leader (Schneider, Hasdorf, and Ellsworth, 1979). Thus, the effects of stereotyping continue to occur even after leaders and subordinates meet. Third, the subsequent behavior of a distinct leader is particularly salient to a subordinate. People are selective to what they attend. Information that stands out from the environment often develops into associative relationships with other information. The young new chief executive officer of the corporation sticks out; we are surprised that he is so young and inexperienced, and we observe his actions closely. Similarly, if a subordinate is surprised (expectations are not met) to see a particular type of leader, the subordinate views the leader and his/her

behavior as particularly salient.

Context

A second critical element of the model is context--the situational or external factors that potentially affect a person. The context is important in terms of person perception since it provides crucial information to the observer. In order to operate efficiently, an observer must categorize the environment/context. Two such classification schemes are (a) physical features, and (b) cultural features. Physical features refer to any tangible condition that inhibits or fosters certain actions. Cultural features include socially imposed conditions that facilitate or inhibit certain actions or behaviors. Either physical or cultural features of the context conceivably affect the way subordinates perceive and evaluate a leader's actions. The organizational climate and the normative method of operation can alter the way a leader behaves and the way s/he is perceived. There may be certain contexts in which autocratic behavior is accepted and even endorsed. Participative behavior in this environment would be viewed as weak or vacillating irrespective of the theoretical considerations of contingent leadership models. On the other hand, the norms of certain contexts mandate participative methods. The theoretically appropriate

autocratic behavior would be rejected out of hand. In both situations, the contexts or specifically the expectations of observers in the contexts modify the theoretical appropriateness and acceptance of leaders' behavior.

Appropriateness

Physical and cultural features of the context serve to provide a person with a sense of appropriateness--what goes with what. Appropriateness, the third component in the model, refers to a match between the constraints of the context and the behavior of the actor or the context and the person's characteristic (Heider, 1958). An observer will judge the match between the context and the person's characteristic in one of two directions--inappropriate or appropriate. An inappropriate match between context and personal characteristic is unexpected. Observers normally expect a person to operate in the context that is physically and culturally acceptable; an inappropriate match causes the observer to ask 'why.' The personal characteristic, the salient stimuli, is further matched against the person's behavior. A match between the subordinate's expectations for a leader with the given characteristic and their behavior is perceived favorably. If, on the other hand, the behavior does not match their expectations for the leader's personal characteristic, the perception is negative. An

appropriate match between personal characteristic and context results in the situation becoming the salient stimulus instead of the person's characteristic. The effect of this match would be similar to the outcomes of the initial study outlined above: observers evaluate the fit between the situation and the leader's/actor's behavior. If the leader's behavior matches the subordinate's implicit theory of leadership, the subsequent evaluation of the leader will be favorable; the reverse applies as well.

Thus far, the concepts of stereotypes and contexts have been described in general terms. The components of the model apply to any personal characteristic that engenders a stereotype. Clearly, several types of categories exist in which specifics can be generated e.g., age, ethnicity, or gender. For the purposes of this study, however, gender will be used as the vehicle to propel the discussion and investigation.

Gender Difference

In this study, gender, a personal characteristic, and Vroom's model of leadership are used to investigate whether or not subordinates implicitly view leaders as interchangeable. The selection of gender is not made arbitrarily. First, the literature on gender differences is well developed. Several researchers (Anastasi and Foley,

1949; Fernberger, 1948; Komarovsky, 1950; Maccoby, 1966; McKee and Sherriffs, 1957; Seward, 1946; Wylie, 1961) have studied gender stereotypes. Others have investigated masculine and feminine contexts through sex-typed jobs (Cohen and Bunker, 1976; Epstein, 1970; Touhey, 1974a, 1974b). Second, the topic of gender differences and leadership is currently of pragmatic importance in organizational life. Third, studies (Abramowitz, Abramowitz, Jackson, and Gomes, 1973; Garrett, Ein, and Tremaine, 1977; Nowacki and Poe, 1973) suggest that the aforementioned stereotypes of men and women are pervasive throughout our culture. The last point is crucial to this investigation: I assume that gender stereotypes exist in the target population and that they affect the perception of a leader's effectiveness.

The model presented above outlined the way that personal characteristics and context interact to differentially affect an observer's perception of an actor. This interaction between context and personal characteristic is the focus in the investigation of leader interchangeability. In other words, subordinates evaluate the match between a leader's personal characteristic and the context <u>prior</u> to evaluating the leader's subsequent behavior. The model of leader interchangeability used broad definitions of personal characteristics and contexts. For

the purpose of this study, gender is used as the critical personal characteristic while sex-typed jobs serve as the related contexts. Each of these concepts--gender stereotypes and sex-typed jobs--is reviewed.

Gender Stereotypes

Stereotypes about woman and men have a long history. Throughout the history of Western civilization, women have been viewed in one of two ways: (a) inferior to men, or (b) frail and in need of protection (Hunter, 1976). Heilman (forthcoming) suggests that the myth of feminine inferiority has its roots in both Greek and early Judeo-Christian roots. Greeks excluded women from political and social activities. Judeo-Christian teachings, to include the Bible, describe women as property--either of their fathers or husbands. The second view--women as frail--draws its roots from France of the seventeenth century. "A woman now became man's inspiration to excellence and his duty to protect. Instead of being regarded as lowly, she was put on a pedestal" (Heilman, forthcoming, pp.3-4). The pedestal was, in reality, a curse: it underscored a perceived weakness in women and assured their continued 'second sex' status.

One is not surprised to find that the research on gender stereotypes demonstrates that men and women are viewed differently. Women, for example, are assumed: (a)

to lack career orientation, (b) to lack leadership potential, (c) undependable, (d) emotionally less stable than men, (e) less aggressive, and (f) dependent (Bass, Krusell, and Alexander, 1971; Broverman, Vogel, Broverman, Clarkson, and Rosenkrantz, 1972). On the other hand, men are expected to demonstrate the opposite traits; observers are surprised when they do not. Yet the stereotyped feminine attributes are viewed as less desirable than masculine attributes (Rosenkrantz, Vogel, Bee, Broverman, and Broverman, 1968). Male attributes that are associated with industry and competition, especially in the work place, are perceived as more valuable than feminine attributes that include interpersonal skills and nurturance.

Much of the work on feminine stereotypes and particularly those concerning women leaders was conducted in the 1960s. Granted, much has occurred in the 1970s to alter perceptions of women: the Equal Rights Amendment, the Womens' Liberation Movement, the growth of women's studies in colleges and universities, and concern about sexist children's literature. Several researchers cite evidence that traditional stereotypes are changing. Kravetz (1976) demonstrated that women are less likely to accept traditional feminine stereotypes than in the past.

Sex-Typed Jobs

Feminine and masculine stereotypes affect the way that observers perceive and evaluate people. More specifically, sex-typed jobs affect the perception of the job and the actor in that occupation. For example, an observer expects to see a male rather than a female infantryman climbing out of a foxhole. In this case, the physical and cultural features of the context suggest that a male's strength, endurance, and lesser degree of personal risk better fit the requirements. Women are, however, expected to be housewives or to select and occupy traditional 'feminine' occupations that do not require long training periods and allow them breaks in continuity while caring for children at home (Safilios-Rothschild, 1979, p.43). Some of these traditional occupations include nursing, elementary education, and library science (Schlossberg and Goodman, 1972). These positions also are assumed to require the skills and attributes commonly attributed to women (Heilman, forthcoming, p.6). 'Feminine' sex-typed jobs normally bring with them lower pay and occupational prestige. The more powerful, prestigious, and better paying jobs, such as management positions, are often assumed to be beyond a woman's capabilities.

As with feminine stereotypes, perceptions of appropriate jobs for male and females are changing. Thornton and Freedman (1979) found that over 75% of young women in the United States reject the notion that some work is meant for men while some is meant solely for women. women. Another indication is the fact that in the period from 1971 to 1976 the number of women in MBA programs in American universities tripled (Werner, 1979). Yet the majority of all women managers remain in lower level management positions (Baron, 1977).

One would expect that the traditional feminine stereotypes are incompatible with the concept of management--a masculine sex-typed job. The feminine stereotype centers on women's greater interpersonal affiliation and lower levels of competence; these attributes do not match those expected to be exhibited by managers. In an attempt to explore this issue, scores of studies were conducted to investigate gender differences in management (Bass, 1981; Riger and Galligan, 1980; Terborg, 1977). Schein (1973, 1975) found that the attributes associated with management or leadership were considered masculine rather than feminine. O'Leary (1974) and McClelland (1965) determined that women described themselves as possessing traits substantially different from those associated with successful management. Bowman, Worthy, and

Greyser (1965), in survey design research, discovered that women were perceived as making inferior leaders. More recently, Frantzve (1979) found a positive relationship between scores on the Bem Sex-Role Inventory and subsequent emergence as a leader in leaderless groups. As with other stereotypes, observers react toward an actor partially due to personal characteristics and partially as a result of the actor's behavior. Similarly, Baynes and Newton (1978) report that subordinates respond to a woman leader in part because of feminine stereotypes and partially due to her behavior. Women leaders face a dilemma: they must behave in ways that are stereotyped as appropriate for women and for managers/leaders. If the two conflict, the subordinate views the conflict and resolves the dilemma personally. The female leader is expected to act in a manner that is effective interpersonally but not stereotyped as masculine i.e., directive, aggressive, etc.

Stereotypes appear to make a difference in subordinate perceptions of women leaders. Several researchers, however, suggest that the situation or context within which the female leader operates serves to mediate the effects of feminine stereotypes. As with other authors (Locksley et al, 1980), Terborg and Ilgen (1975) found that subordinate attitudes toward female leaders were related to the leader's subsequent behaviors only when subordinates had no other

information about the leader. "Knowledge of stereotypes will only be useful when relevant situational conditions that facilitate and minimize the expression of stereotypes are specified" (Terborg, 1977, pp.649-650). One important dimension to explore in terms of subordinate perceptions of female leaders is the effect of job related information: the female leader's behavior in the occupational context. One theme in management literature focuses on the congruence between the perception of female stereotypes and behavior in masculine sex-typed jobs (Terborg, 1977). In general, women are perceived to behave incongruently when adopting a threatening (Rosen and Jerdee, 1975) or highly structured approach (Bartol and Butterfield, 1976) in a masculine sex-typed job.

In the latter study, the researchers asked college students to evaluate the behavior of four leaders each demonstrating one of the following behavioral patterns: (a) initiating structure, (b) consideration, (c) production emphasis, and (d) tolerance for freedom. Both male and female leaders were depicted. The results demonstrated that the leader's gender affected how the different leadership styles were perceived and evaluated. In the study, men were viewed as more effective when adopting a structured approach and women when adopting a considerate approach. In this study, the stereotype--male or female description--and job

related information--the leader's behavior in the managerial (masculine) context--provided the bases for the subordinates' evaluation of the leader. The findings suggest that subordinates' perceptions of effective leadership behavior in a managerial context differ with the leader's gender.

In the Bartol and Butterfield (1976) study, the managerial positions described appear to reflect masculine sex-typed occupations. The results can be viewed as the perceptions of male and female leaders operating in a masculine context. If, for example, the context within which a female leader operates is perceived as feminine, the leader's personal characteristic and job would be perceived as congruent--both are stereotyped feminine. The model of leader interchangeability suggests that the interaction of a personal characteristic and a context in which the match is perceived as appropriate will result in the <u>situation</u> becoming salient. A woman working in a dental clinic would be perceived as congruent in terms of personal characteristic and context. In this situation, the situational contingencies become salient, not the leader's gender. A subordinate's evaluation of her effectiveness would depend upon the match between the situational contingencies and her behavior. If, however, the interaction of gender and context is perceived as

inappropriate, the person's gender becomes salient. For example, a woman manager in a steel mill may be viewed as operating in an inappropriate context; the leader's gender becomes salient for observers. Her behavior will be evaluated in terms of its match with the subordinate's stereotyped expectations for a woman. The results would probably parallel those obtained by Bartol and Butterfield (1976): male leaders evaluated as most effective when directive and female leaders viewed as most effective when considerate.

Purpose

The purpose of this study is to investigate the effects of a leader's personal characteristic in different contexts on subordinates' evaluations of the leader's effectiveness; do subordinates perceive leaders as interchangeable? The primary measures will consist of subjects' differential ratings of the described male and female leaders' effectiveness in masculine and feminine contexts. Subjects will evaluate a manager's personal characteristics in context and then the leader's behavior matched with either: (a) the leader's personal characteristic, or (b) the situational contingencies. The results of the two evaluation processes conceivably affect the subordinate's perception of the leader and his/her effectiveness.

Hypotheses

Hypothesis 1

The model suggests that leaders will be viewed as most effective when the leader's: (a) personal characteristic matches the subordinate's expectations in the context, and (b) the leader's behavior matches the prescription of Vroom's model. Furthermore, leaders will be evaluated as less effective when the leader's (a) personal characteristic matches the subordinate's expectations in that context, and (b) behavior fails to match Vroom's model.

Hypothesis 1a. Male managers/leaders in a masculine context will be rated positively when they behave as prescribed by Vroom's model. The subjects will demonstrate higher scores in the theoretically appropriate cells (AI-AI/GII-GII) than in the theoretically inappropriate cells (AI-GII/GII-AI).

Hypothesis 1b. Female managers/leaders in a feminine context will be rated positively when they behave as prescribed by Vroom's model. The subjects will demonstrate higher scores in the theoretically appropriate cells (AI-AI/GII-GII) than in the theoretically inappropriate cells (AI-GII/GII-AI).

Hypothesis 2

The model suggests that leaders will be evaluated as most effective when the leader's (a) personal characteristic does not match the subordinate's expectations in the context, and (b) behavior matches the subordinate's expectations of the leader's personal characteristics. Leaders will be viewed as less effective when a mismatch occurs between both the leader's: (a) personal characteristic and the context, and (b) personal characteristic and behavior.

Hypothesis 2a. Female managers/leaders in a masculine context will be rated as more effective when they behave in a stereotyped manner (participative) than when they behave contingently--as prescribed by Vroom. The subjects will demonstrate higher scores in the participative behavior (GII) conditions than in the autocratic (AI) conditions.

Hypothesis 2b. Male managers/leaders in a feminine context will be rated as more effective when they behave in a stereotyped manner (autocratic) than when they behave as prescribed by Vroom. The subjects will demonstrate higher scores in the autocratic behavior conditions (AI) than in the participative (GII) conditions.

Chapter II

METHOD OF INVESTIGATION

Overview of the Procedure

Each subject was exposed to one experimental condition in a questionnaire format. Each condition described a leader, the respondent's immediate superior, in a decision-making situation. Four independent variables were manipulated in a 2 X 2 X 2 X 2 factorial design: (a) the context within which the situation occurred (masculine or feminine), (b) the leader's gender (male or female), (c) the situational contingencies requiring autocratic or participative behavior, and (d) the leader's behavior in response to the situation (autocratic or participative). The dependent measures were subject ratings on bipolar adjective scales designed to assess the effectiveness of decision-making processes as well as affective responses to the leader him/herself.

Subjects

368 male students in MBA programs participated in the experiment. They were approached in their classes and the research was described as an investigation about "behavior in the workplace." Subjects were told that the

questionnaire would take approximately six minutes to complete and that their participation was strictly voluntary. Payment was neither offered nor rendered.

The subjects seemed resonably well distributed on a number of dimensions: (a) the mean age of the subjects was 33.0 (range: 21-58); (b) the mean income was $34,696 (range: $3000-$100,000); (c) the modal educational level was that of a bachelors degree (66.1% held bachelors degrees while 33.9% held graduate degrees); (d) 86.2% of the respondents were white, 1.7% were hispanic, .3% were Puerto Rican, 4.0% were Oriental, .3% were Mexican-Chicano, and 3.7% were black; (e) the mean number of actual subordinates per subject was 7.02 (range: 0 to 100); (f) the mean rating on occupational prestige was 53.9 (range: 24 to 78) using the NORC (Siegel, 1971) Occupational Prestige Scale. The subject were affiliated with the following business schools: (a) Mercy College-Dobbs Ferry (33); (b) Fairley-Dickinson (279); (c) New York University (30); and (d) Columbia University (26). No obvious differences in responses emerged among these groups and they were collapsed into one for purposes of analysis.

Procedure

The experiment was conducted in approximately 30 sessions in a two week period with group size averaging 15 subjects. Scheduling was arranged with individual professors at each university. In each classroom, the subjects were briefed about the researcher and his affiliation with Columbia University. The subjects were told that the purpose of the study was to investigate behavior in the workplace and that the present study was the second in a series. They were then clearly informed that participation was strictly voluntary and had no relationship to their course work.

The instruments/questionnaires were randomly arranged prior to entering the class. The questionnaires were then distributed and the subjects were given no further instructions by the experimenter until the experiment ended. All necessary instructions were provided on the first two pages of the instrument.

Fifteen potential subjects refused to participate in the experiment. Their instruments were collected and used in another class.

The experiment ended when all subjects in each class completed the demographic sheet at the last page of the questionnaire. All subjects were then debriefed on the

purpose of the study and asked not to discuss the content of the stories with other classmates.

Research Design

The experimental design was a 2 X 2 X 2 X 2 between-subjects factorial. Four independent variables were each manipulated in two ways: (a) context (masculine/feminine), (b) leader gender (male/female), (c) prescribed behavior or the situation (autocratic/participative), and (d) the leader's behavior (autocratic/participative). Eight dependent measures were used to rate the subject's perceptions about: (a) the decision process, (b) the decision's quality, (c) the potential benefit to the organization, (d) the leader's activity/potency, (e) the leader's competence, (f) the leader's likeability, (g) the effect on morale, and (h) potential resistance to the decision.

Experimental Manipulations

Context

In this study, context is defined by the occupation of the described leader. Three issues were investigated to determine the masculine and feminine sex-typed jobs or occupations to be used: (a) what jobs are dominated by males and females, (b) what do people believe about the

'masculinity' or 'femininity' of these jobs, and (c) what degree of occupational prestige is associated with each job or occupation.

The first issue focuses on the distribution of males and females in certain occupations. A list of sex-typed jobs was developed from a review of the literature (Cohen and Bunker, 1976; Heilman, forthcoming; Touhey, 1974a, 1974b). Using Table 221 in the 1970 census (U.S. Bureau of the Census, 1973), the percentage of each gender in four different occupations was developed--two masculine and two feminine. A job was deemed predominantly masculine, for example, if over 75% of the members holding that job were men (Garrett, Ein, and Tremain, 1977). The four occupations and the percentage of males and females, respectively, holding the jobs are: (a) agricultural scientist (92%) and systems analyst (89%), and (b) kindergarten teacher (98%) and dental hygienist (94%). Thus, males predominantly hold positions as agricultural scientist and systems analysts while women usually hold positions as kindergarten teachers and dental hygienists.

The second issue concerns the way people think about certain jobs/occupations in terms of masculinity and femininity. A brief questionnaire similar to the one used by Cash, Gillen, and Burns (1977) was developed: three bipolar adjectives scales were used to determine the

subjects' beliefs about the four aforementioned occupations. The three bipolar, nine-point scales were: (a) masculine-feminine, (b) low prestige-high prestige, and (c) skilled-unskilled. In all, three groups of 20 male graduate students enrolled at Columbia's Business School were queried. The group of business students was selected to closely match the target population--graduate business students. The mean scores on the masculine-feminine scale from the final group of 20 subjects are shown in Table 1. As demonstrated, the subjects perceived the four occupations as either masculine or feminine.

The final issue focuses on the occupational prestige ratings of the occupations. Major differences in prestige between the masculine and feminine contexts could confound the results. For example, subjects may respond quite differently to a male lawyer with a prestige rating of seventy-eight than to a female secretary with a prestige rating of forty-one. The difference, however, may not be because of the gender difference alone but also because of different levels of prestige. Values from the National Opinion Research Center's (Siegel, 1971) prestige scales were used. The scores for the two masculine and two feminine occupations, respectively, are: (a) agricultural scientist (56.0) and systems analyst (51.0), and (b) kindergarten teacher (60.0) and dental hygienist (61.0).

TABLE 1

Mean Ratings of the Occupations in Terms of Masculine-Feminine Dimension: Pilot Study

MASCULINE		FEMININE	
Agricultural Scientist	3.35	Dental Hygienist	7.30
Systems Analyst	4.05	Kindergarten Teacher	7.84

Notes: 1. N = 20.

2. Lower scores refer to the masculine dimension while higher scores refer to the feminine dimension.

In summary, the four occupational titles that operationally define masculine and feminine contexts are: (a) held predominately (89% or more) by either men or women based upon data from the 1970 census, (b) perceived as masculine or feminine by subjects who are similar to the target population, and (c) balanced in terms of occupational prestige.

The manager's/leader's occupation is listed at the top left corner of each story and is also described throughout each story (Appendix C).

Manager's Gender

The name of each manager is listed in the top left corner of each story. The name use for the male and female leaders are parallel in construction and are unambiguous: Paul/Paula Jackson; Michael/Michelle Linden; Mark/Marcia Palmer; Carl/Carol Miller (Heilman and Guzzo, 1978).

Prescribed Behavior

The prescribed behavior or situation, autocratic or participative, is introduced by stories that are constructed to parallel the problem attributes of the Vroom-Yetton model of leadership (1973). In this investigation, two of Vroom's stories are used. The 'autocratic' story was taken from Vroom's Combined Problem Set (1974). The solution to the problem can include any group process except the

participative (GII) response. In the Interpretation Manual that accompanies the problem set, Vroom provided data from 430 managers who responded to the story. The managers used the autocratic processes (AI or AII) 59 percent of the time; the modal response was AI with 34 percent of the subjects choosing this process. In other words, Vroom's data suggest that 59 percent of the individuals responding to the story used an autocratic decision process. The story was an adequate choice for an autocratic story.

The participative story was taken from Vroom's Problem Set #5 (1976). The solution to the story, the feasible set, included only the participative (GII) process. In the Interpretation Manual that accompanies the problem set, Vroom provided data from 1,829 subjects who responded to the story. Twenty-five percent of the subjects chose the participative solution; the modal response, however, was the consultative (CII) process. The second (participative) story appeared to be an adequate instrument to describe a participative situation.

Both of the stories described above were used in the initial study (Hornstein, Heilman, and Cage, in preparation). In the earlier investigation, subjects were expected to rate leaders as most effective when using decision processes that matched the dictates of the situation--an autocratic response to an autocratic situation

and a participative response in a participative situation. Table 2 demonstrates that subjects who read the selected autocratic story in which the leader behaved autocratically rated the leader as effective. Table 3 shows that subjects who read the selected participative story when the leader behaved participatively rated the leader as effective. Both stories, then, produced the desired effects.

Prior to conducting the major portion of the present study, a pilot investigation was conducted to ensure that the desired effects would be obtained using the experimental instruments. Thirty-two male students at the Columbia University Graduate School of Business each responded to a single story, each with a male leader. Four conditions were provided: an autocratic situation with (a) an autocratic leader behavior, and (b) a participative leader behavior, and a participative situation with (c) an autocratic leader behavior, and (d) a participative leader behavior. Both the autocratic and participative stories were each matched with the different endings/leader behaviors to create the four experimental manipulations.

The results indicated that the subjects differentiated between each story when it had different (autocratic versus participative) endings. In general, subjects rated the leaders as most effective when the s/he responded as prescribed by Vroom. The results were evaluated in terms of

TABLE 2

Means and Standard Deviations for Ratings of the Autocratic Story with an Autocratic Leader Behavior: Effectiveness Measures

Dependent Measure	M	sd
Decision Process	6.875	1.575
Decision Quality	6.500	2.330
Benefit to the Organization	7.000	1.414
Leader Competence	6.250	1.640

Notes: 1. N = 8.

2. Ratings were on a nine-point scale.

3. Scores were recoded so that higher scores indicate more favorable ratings.

TABLE 3

Means and Standard Deviations for Ratings of the Participative Story with a Participative Leader Behavior: Effectiveness Measures

Dependent Measure	M	sd
Decision Process	6.110	2.702
Decision Quality	6.333	2.646
Benefit to the Organization	5.222	3.232
Leader Competence	6.519	1.529

Notes: 1. N = 9.

2. Ratings were on a nine-point scale.

3. Scores were recoded so that higher scores indicate more favorable ratings.

the dependent measures used in the initial study: (a) evaluation of the decision process (Table 4a), (b) evaluation of the decision's quality (Table 4b), (c) evaluation of the benefit to the organization (Table 4c), and (d) evaluation of the leader's competence (Table 4d).

The results from Vroom's investigations, the initial study, as well as the pilot study for this investigation all suggest that the two stories--one autocratic and the other participative--adequately provide the desired manipulation.

Described Behavior

The leader's described behavior, autocratic or participative, consists of a description of the leader's decision process. The description parallels Vroom's taxonomy of decision-making proceses and those used in the first study.

Dependent Variables

After each story, subjects responded to 21 nine-point bipolar adjective scales interspersed around three questions. The first question was concerned with participant's evaluations of the procedures used for decision-making and was followed by six adjective. The second question was concerned with prognostication about the leader's decision and was followed by three questions. The

TABLE 4a

Means and Standard Deviations for Ratings of the Decision Process: Pilot Study

		SITUATION	
		A	G
BEHAVIOR	A	5.857	5.080
		(2.196)	(1.241)
	G	4.743	6.275
		(2.410)	(1.792)

NOTES: 1. N = 8

2. Standard Deviations are in parentheses.

TABLE 4b

Means and Standard Deviations for Ratings of the Decision Quality: Pilot Study

		SITUATION	
		A	G
BEHAVIOR	A	5.375	5.400
		(1.981)	(1.140)
	G	4.750	6.875
		(2.380)	(1.642)

NOTES: 1. N = 8

2. Standard Deviations are in parentheses.

TABLE 4c

Means and Standard Deviations for Ratings of the Potential Benefit for the Organization: Pilot Study

		SITUATION	
		A	G
	A	4.125	5.600
BEHAVIOR		(2.375)	(1.942)
	G	4.375	6.625
		(2.351)	(1.768)

NOTES: 1. N = 8

2. Standard Deviations are in parentheses.

TABLE 4d

Means and Standard Deviations for Ratings of the Leader's Competence: Pilot Study

		SITUATION	
		A	G
BEHAVIOR	A	5.458 (1.511)	5.267 (1.700)
	G	5.042 (1.704)	5.833 (1.127)

NOTES: 1. N = 8

2. Standard Deviations are in parentheses.

last question was concerned with subjects' evaluations about the described leader; eleven bipolar adjective scales followed the question (Appendix D).

The three questions formed a conceptual basis for measurement, the same basis used in the initial study (Hornstein, Heilman, and Cage, in preparation) and the pilot work for this study. In the initial study, the dependent measures evaluating effectiveness were: decision process, decision quality, benefit for the organization, and leader competence. The measures evaluating affective dimensions were: morale, resistance to the decision, leader activity, and leader competence. The leader potency scales included five scales: "strong-weak," "passive-active," "indecisive-decisive," "tough-soft," and "lazy-hard working." The leader likeability factor included four scales: "likeable-not likeable," "cold-warm," "flexible-inflexible," and "uncollaborative-collaborative." The decision process evaluation factor included five scales: "good-bad," "ineffective-effective," "appropriate-inappropriate," "uses time poorly-uses time well," and "wise-foolish." The leader competence measure included three scales: "bad leader-good leader," "intelligent-unintelligent," and "competent-incompetent." Four scales were used singularly to measure four dimensions: "likely to lower morale-likely to raise morale," "accepted

by most-resisted by most," "low quality-high quality," and "good for the organization-bad for the organization."

A reliability analysis program was used to evaluate the internal reliability of the four factors that combined independent scales. Measures of Cronbach's alpha (Cronbach, 1951) demonstrate the similarity and internal reliability of combined scales. The two evaluative factors, evaluation of the process and leader competence, demonstrated values of .8359 and .7233, respectively. The two affective factors, leader likeability and activity, demonstrated values of .8350 and .8057, respectively. The results of the reliability analysis demonstrates that the dependent measures used in the initial and present studies are reliably measuring the underlying dimensions.

Although the responses to the three questions formed a conceptual basis for measurement, a factor analysis of these bipolar scales was conducted to verify the measures used in the initial and present studies. Three factors emerged which corresponded, with minor differences, to the dimensions used in the initial study. The factors were leader likeability, decision process, and leader activity/potency. Leader likeability was composed of the following scales: "lower morale-raise morale," "likeable-not likeable," "cold-warm," "flexible-inflexible," and "uncollaborative-collaborative." The difference between

this measure and the leader likeability measure in the initial study was the addition of the scale "lower morale-raise morale." The resulting reliability alpha with the morale scale was .8617 instead of .8350. The second factor, decision process, was composed of: "good-bad," "ineffective-effective," "appropriate-inappropriate," "wise-foolish," "low quality-high quality," "accepted-rejected," and "good for the organization-bad for the organization." The difference between this measure of decision process and the initial one was the addition of the three scales: "low quality-high quality," "accepted rejected," and "good for the organization-bad for the organization," and the deletion of "uses time poorly-uses time well." The resulting reliability alpha with the additional three scales was .8736 instead of .8359. The third factor was leader activity/potency and was composed of: "uses time poorly-uses time well," "poor leader-good leader," "strong-weak," "passive-active," "intelligent-unintelligent," "indecisive-decisive," "competent- incompetent," "tough-soft," and "lazy-hard working." The difference between this measure of activity/potency and the initial one was the addition of the three scales that measured leader competence, and "uses time poorly- uses time well." The resulting reliability alpha with the four additional scales was .8384 versus .8057 for

the initial activity/potency measure and .7233 for the initial leader competence measure.

A decision to use the dependent measures as they were used in the previous study, rather than in terms of these three factors, was based on the following reasons. First, the conceptual clarity of the measures are somewhat obscured when measures are composed of bipolar scales drawn from across the three prefixes (questions) of the instrument. The intent of the first question, for example, was to determine subjects' evaluations of the decision that the leader used in the story, not characteristics of the leader. The second question, similarly, queried the subjects' evaluations of the potential outcome of the decision. To combine these into a single measure disregards an important distinction in respondent perspective. Second, the change in reliability alphas was marginal, and the reliability of the initial set of measures was more than satisfactory. Third, the factor loadings for many of the scales was not overly compelling. Finally, comparisons are valuable in terms of the present investigation with the results of the initial investigation (Hornstein, Heilman, and Cage, in preparation) and the pilot investigation. The results of these other studies can prove important upon subsequent analysis.

Chapter III

RESULTS

The purpose of the analysis was to examine the data to determine if support was provided for the stated hypotheses. The principal means to determine the results was through the use of four-factor analyses of variance, a priori contrasts, and simple effects analyses. After determining support or non-support for the hypotheses, data were explored for trends. Lastly, analyses were performed to explore an effect of the first study that was not replicated in the present investigation.

A four-factor analysis of variance was conducted on eight dependent measures; four of them concerned with the leader's effectiveness and the remainder concerned with affective aspects of the situation. The four effectiveness measures evaluated subjects' perceptions of: (a) the decision process used (Tables 1a & 1b), (b) the leader's competence (Tables 2a & 2b), (c) the decision's quality (Tables 3a & 3b), and (d) the potential benefit for the organization (Tables 4a & 4b). The affective measures evaluated: (a) the leader's activity level (Tables 5a & 5b), (b) the leader's likeability (Tables 6a & 6b), the decision's effect on (c) subordinates' morale (Tables 7a & 7b), and (d) their acceptance of the decision (Tables 8a &

TABLE 1a

Means and Standard Deviations for Ratings of the Decision Process

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	5.365 (1.267) 23	4.727 (1.091) 22	5.309 (1.885) 22	4.548 (.940) 23	5.417 (1.565) 23	4.600 (1.515) 23	4.961 (1.937) 23	4.836 (1.580) 22
G	5.554 (2.538) 22	5.452 (1.857) 23	5.791 (1.612) 22	5.530 (1.655) 23	5.882 (1.764) 22	6.139 (1.809) 23	5.817 (1.895) 23	6.619 (1.622) 21

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

3. Higher scores indicate more favorable ratings for all measures.

4. Numbers below the standard deviations reflect the number of subjects per condition.

TABLE 1b

Analysis of Variance of Mean Ratings for the Evaluation of the Decision Process

Source of variation				Sum of Squares	df	Mean Square	F	
Main effects				65.375	4	16.344	5.879	
CONTEXT				0.154	1	0.154	0.255	
GENDER				1.257	1	1.257	0.452	
PRESC				3.742	1	3.742	1.346	
BEHAV				60.860	1	60.860	21.891	***
2-way interactions				41.279	6	6.880	2.475	
CONTEXT	GENDER			0.253	1	0.253	0.091	
CONTEXT	PRESC			14.018	1	14.018	5.042	*
CONTEXT	BEHAV			2.457	1	2.457	0.884	
GENDER	PRESC			7.282	1	7.282	2.619	
GENDER	BEHAV			0.166	1	0.166	0.060	
PRESC	BEHAV			17.279	1	17.279	6.215	*
3-way interactions				15.318	4	3.830	1.377	
CONTEXT	GENDER	PRESC		6.911	1	6.911	2.486	
CONTEXT	GENDER	BEHAV		0.336	1	0.336	0.121	
CONTEXT	PRESC	BEHAV		6.801	1	6.801	2.446	
GENDER	PRESC	BEHAV		1.201	1	1.201	0.432	
4-way interactions				0.136	1	0.136	0.049	
CONTEXT	GENDER	PRESC	BEHAV	0.136	1	0.136	0.049	
Explained				122.109	15	8.141	2.928	*
Residual				920.230	331	2.780		
Total				1042.339	346	3.013		

* p < .05 ** p < .01 *** p < .001

TABLE 2a

Means and Standard Deviations for Ratings of

the Leader's Competence

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	5.986 (1.550) 23	5.855 (1.096) 23	5.349 (1.527) 22	4.957 (.873) 23	5.768 (1.412) 23	4.638 (.926) 23	5.435 (1.739) 23	5.507 (1.298) 23
G	5.449 (2.249) 23	5.551 (1.696) 23	5.986 (1.049) 22	5.725 (1.536) 23	5.638 (1.583) 23	6.145 (1.789) 23	5.394 (1.683) 23	6.377 (1.724) 23

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 2b

Analysis of Variance of Mean Ratings

of the Leader's Competence

Source of variation			Sum of Squares	df	Mean Square	F	
Main effects			17.048	4	4.262	1.891	
CONTEXT			0.505	1	0.505	0.224	
GENDER			1.082	1	1.082	0.480	
PRESC			1.235	1	1.235	0.548	
BEHAV			14.506	1	14.506	6.435	*
2-way interactions			21.249	6	3.541	1.571	
CONTEXT	GENDER		4.210	1	4.210	1.868	
CONTEXT	PRESC		3.621	1	3.621	1.606	
CONTEXT	BEHAV		1.735	1	1.735	0.769	
GENDER	PRESC		2.928	1	2.928	1.299	
GENDER	BEHAV		2.622	1	2.622	1.163	
PRESC	BEHAV		6.184	1	6.184	2.743	
3-way interactions			26.367	4	6.592	2.924	
CONTEXT	GENDER	PRESC	2.811	1	2.811	1.247	
CONTEXT	GENDER	BEHAV	9.069	1	9.069	4.023	*
CONTEXT	PRESC	BEHAV	13.936	1	13.936	6.182	*
GENDER	PRESC	BEHAV	0.376	1	0.376	0.167	
4-way interactions			2.460	1	2.460	1.091	
CONTEXT	GENDER	PRESC BEHAV	2.460	1	2.460	1.091	
Explained			67.124	15	4.475	1.985	*
Residual			746.192	331	2.254		
Total			813.315	346	2.351		

*p < .05

TABLE 3a

Means and Standard Deviations for Ratings of Decision Quality

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	5.478 (1.904) 23	5.261 (2.137) 23	5.348 (1.668) 23	4.826 (1.669) 23	5.739 (1.453) 23	4.409 (1.593) 22	5.087 (2.151) 23	4.478 (2.086) 23
G	5.318 (2.784) 22	5.810 (2.804) 23	5.783 (1.623) 23	5.609 (2.017) 23	5.364 (2.194) 23	6.136 (1.726) 22	5.000 (2.045) 23	5.955 (2.476) 22

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 3b

Analysis of Variance of Mean Ratings of Decision Quality

Source of variation			Sum of Squares	df	Mean Square	F	
Main effects			42.736	4	10.684	2.641	
CONTEXT			6.253	1	6.253	1.546	
GENDER			8.100	1	8.100	2.002	
PRESC			1.285	1	1.285	0.318	
BEHAV			28.026	1	28.026	6.928	**
2-way interactions			24.222	6	4.037	0.998	
CONTEXT	GENDER		0.065	1	0.065	0.016	
CONTEXT	PRESC		0.087	1	0.087	0.022	
CONTEXT	BEHAV		1.226	1	1.226	0.303	
GENDER	PRESC		0.188	1	0.188	0.047	
GENDER	BEHAV		0.160	1	0.160	0.040	
PRESC	BEHAV		22.678	1	22.678	5.606	*
3-way interactions			19.101	4	4.775	1.180	
CONTEXT	GENDER	PRESC	2.129	1	2.129	0.526	
CONTEXT	GENDER	BEHAV	0.050	1	0.050	0.012	
CONTEXT	PRESC	BEHAV	16.737	1	16.737	4.137	*
GENDER	PRESC	BEHAV	0.000	1	0.000	0.000	
4-way interactions			0.891	1	0.891	0.220	
CONTEXT	GENDER BEHAV	PRESC	0.891	1	0.891	0.220	
Explained			86.950	15	5.797	1.433	
Residual			1339.073	331	4.046		
Total			1426.023	346	4.121		

* $p < .05$ ** $p < .01$

TABLE 4a

Means and Standard Deviations for Ratings of the Benefit for the Organization

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	5.304 (2.010) 23	4.957 (2.121) 23	5.304 (2.055) 23	4.391 (1.948) 23	5.044 (2.345) 23	4.273 (1.609) 22	4.913 (2.314) 23	4.913 (2.132) 23
G	5.727 (2.947) 22	5.826 (2.229) 23	5.696 (1.941) 23	5.739 (2.137) 23	5.909 (2.348) 22	5.739 (2.281) 23	4.435 (2.150) 23	5.826 (2.229) 23

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 4b

Analysis of Variance of Mean Ratings of the Benefit for the Organization

Source of variation			Sum of Squares	df	Mean Square	F	
Main effects			77.111	4	19.278	4.241	
CONTEXT			10.179	1	10.179	2.239	
GENDER			6.930	1	6.930	1.525	
PRESC			2.441	1	2.441	0.537	
BEHAV			58.873	1	58.873	12.953	***
2-way interactions			25.421	6	4.237	0.932	
CONTEXT	GENDER		0.047	1	0.047	0.010	
CONTEXT	PRESC		6.990	1	6.990	1.538	
CONTEXT	BEHAV		0.027	1	0.027	0.006	
GENDER	PRESC		5.387	1	5.387	1.185	
GENDER	BEHAV		2.379	1	2.379	0.523	
PRESC	BEHAV		10.779	1	10.779	2.371	
3-way interactions			29.332	4	7.333	1.613	
CONTEXT	GENDER	PRESC	7.029	1	7.029	1.547	
CONTEXT	GENDER	BEHAV	5.536	1	5.536	1.218	
CONTEXT	PRESC	BEHAV	8.503	1	8.503	1.871	
GENDER	PRESC	BEHAV	8.253	1	8.253	1.816	
4-way interactions			0.000	1	0.000	0.000	
CONTEXT	GENDER BEHAV	PRESC	0.000	1	0.000	0.000	
Explained			131.864	15	8.791	1.934	*
Residual			1504.458	331	4.545		
Total			1636.323	346	4.729		

* $p < .05$ *** $p < .001$

TABLE 5a

Means and Standard Deviations for Ratings of the Leader's Activity

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	6.478 (1.294) 23	5.835 (.964) 23	6.455 (1.294) 22	5.536 (1.093) 22	6.591 (1.158) 23	5.583 (1.065) 23	7.044 (.836) 23	5.900 (1.058) 22
G	5.280 (1.419) 20	4.809 (1.575) 23	5.200 (1.893) 23	5.565 (1.438) 23	4.870 (1.207) 23	5.530 (1.669) 23	4.857 (1.530) 21	5.618 (1.627) 22

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 5b

Analysis of Variance of Mean Ratings of the Evaluation for the Leader's Activity

Source of variation			Sum of Squares	df	Mean Square	F	
Main effects			3.884	4	30.971	18.324	
CONTEXT			6.459	1	6.459	3.821	
GENDER			0.281	1	0.281	0.166	
PRESC			5.219	1	15.219	9.004	**
BEHAV			0.397	1	100.397	59.399	***
2-way interactions			2.216	6	5.369	3.177	
CONTEXT	GENDER		3.517	1	3.517	2.081	
CONTEXT	PRESC		6.013	1	6.013	3.557	
CONTEXT	BEHAV		0.004	1	0.004	0.002	
GENDER	PRESC		0.090	1	0.090	0.053	
GENDER	BEHAV		0.432	1	0.432	0.256	
PRESC	BEHAV		22.053	1	22.053	13.047	***
3-way interactions			13.798	4	3.449	2.041	
CONTEXT	GENDER	PRESC	0.260	1	0.260	0.154	
CONTEXT	GENDER	BEHAV	0.427	1	0.427	0.253	
CONTEXT	PRESC	BEHAV	13.008	1	13.008	7.696	**
GENDER	PRESC	BEHAV	0.062	1	0.062	0.037	
4-way interactions			0.335	1	0.335	0.198	
CONTEXT	GENDER BEHAV	PRESC	0.335	1	0.335	0.198	
Explained			170.233	15	11.349	6.714	***
Residual			559.465	331	1.690		
Total			729.699	346	2.109		

** p < .01 *** p < .001

TABLE 6a

Means and Standard Deviations for Ratings of the Leader's Likeability

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	4.239 (.861) 23	4.489 (1.561) 22	4.046 (1.162) 22	4.291 (1.333) 23	2.946 (1.187) 23	4.207 (.823) 23	3.830 (1.364) 22	4.467 (1.001) 23
G	6.679 (1.186) 21	5.693 (1.656) 22	6.902 (.982) 23	6.228 (1.511) 23	6.913 (.961) 23	6.098 (1.283) 23	6.432 (1.468) 22	6.217 (1.952) 23

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 6b

Analysis of Variance of Mean Ratings of Leader Likeability

Source of variation	Sum of Squares	df	Mean Square	F	
Main effects	433.486	4	108.372	63.744	
CONTEXT	0.601	1	0.601	0.353	
GENDER	0.133	1	0.133	0.078	
PRESC	2.575	1	2.575	1.515	
BEHAV	430.796	1	430.796	253.395	***
2-way interactions	32.153	6	5.359	3.152	
CONTEXT GENDER	0.591	1	0.591	0.348	
CONTEXT PRESC	1.583	1	1.583	0.931	
CONTEXT BEHAV	1.123	1	1.123	0.661	
GENDER PRESC	3.369	1	3.369	1.982	
GENDER BEHAV	0.378	1	0.378	0.222	
PRESC BEHAV	25.599	1	25.599	15.057	***
3-way interactions	4.562	4	1.140	0.671	
CONTEXT GENDER PRESC	0.246	1	0.246	0.144	
CONTEXT GENDER BEHAV	3.461	1	3.461	2.036	
CONTEXT PRESC BEHAV	0.415	1	0.415	0.244	
GENDER PRESC BEHAV	0.468	1	0.468	0.275	
4-way interactions	0.049	1	0.049	0.029	
CONTEXT GENDER PRESC BEHAV	0.049	1	0.049	0.029	
Explained	470.250	15	31.350	18.440	***
Residual	578.032	340	1.700		
Total	1048.281	355	2.953		

*** $p < .001$

TABLE 7a

Means and Standard Deviations for Ratings of the Process' Effect on Morale

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	3.013 (1.807) 23	3.304 (1.495) 23	3.435 (1.830) 23	3.652 (1.874) 23	3.044 (1.492) 23	3.261 (1.573) 23	3.261 (1.815) 23	3.227 (1.307) 22
G	6.826 (1.614) 23	6.783 (2.276) 23	7.130 (1.660) 23	6.304 (2.512) 23	7.136 (2.122) 22	6.870 (1.914) 23	6.682 (1.524) 22	5.870 (2.546) 23

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 7b

Analysis of Variance of Mean Ratings of the Evaluation of the Process's Effect on Morale

Source of variation			Sum of Squares	df	Mean Square	F	
Main effects			992.019	4	248.005	66.449	
CONTEXT			7.134	1	7.134	1.969	
GENDER			4.434	1	4.434	1.224	
PRESC			5.817	1	5.817	1.606	
BEHAV			980.046	1	980.046	270.491	***
2-way interactions			13.033	6	2.172	0.600	
CONTEXT	GENDER		1.249	1	1.249	0.345	
CONTEXT	PRESC		0.307	1	0.307	0.085	
CONTEXT	BEHAV		1.716	1	1.716	0.474	
GENDER	PRESC		0.769	1	0.769	0.212	
GENDER	BEHAV		3.682	1	3.682	1.016	
PRESC	BEHAV		5.061	1	5.061	1.397	
3-way interactions			9.676	4	2.419	0.668	
CONTEXT	GENDER	PRESC	0.677	1	0.677	0.187	
CONTEXT	GENDER	BEHAV	3.065	1	3.065	0.846	
CONTEXT	PRESC	BEHAV	0.945	1	0.945	0.261	
GENDER	PRESC	BEHAV	4.943	1	4.943	1.364	
4-way interactions			1.904	1	1.904	0.526	
CONTEXT	GENDER	PRESC BEHAV	1.904	1	1.904	0.526	
Explained			1016.632	15	67.775	18.706	***
Residual			1231.893	340	3.623		
Total			2248.525	355	6.334		

*** p < .001

TABLE 8a

Means and Standard Deviations for Ratings of the Acceptance of the Decision

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	5.565 (2.063) 23	5.348 (1.921) 23	5.263 (2.374) 22	4.261 (1.764) 23	4.522 (2.313) 23	4.636 (2.060) 22	4.435 (2.171) 23	4.957 (2.256) 23
G	7.546 (1.262) 22	6.136 (2.783) 22	6.565 (2.085) 23	6.652 (2.014) 23	7.044 (1.609) 23	6.174 (2.229) 23	6.435 (2.371) 23	6.609 (2.291) 23

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 8b

Analysis of Variance of Mean Ratings of the Acceptance of the Decision

Source of variation			Sum of Squares	df	Mean Square	F	
Main effects			302.250	4	75.562	17.130	
CONTEXT			9.687	1	9.687	2.196	
GENDER			4.065	1	4.065	0.921	
PRESC			10.754	1	10.754	2.438	
BEHAV			281.283	1	281.283	63.765	***
2-way interactions			30.476	6	5.079	1.151	
CONTEXT	GENDER		7.344	1	7.344	1.665	
CONTEXT	PRESC		8.277	1	8.277	1.876	
CONTEXT	BEHAV		3.319	1	3.319	0.752	
GENDER	PRESC		5.218	1	5.218	1.183	
GENDER	BEHAV		1.443	1	1.443	0.327	
PRESC	BEHAV		4.967	1	4.967	1.126	
3-way interactions			16.391	4	4.098	0.929	
CONTEXT	GENDER	PRESC	0.137	1	0.137	0.031	
CONTEXT	GENDER	BEHAV	1.701	1	1.701	0.386	
CONTEXT	PRESC	BEHAV	1.164	1	1.164	0.264	
GENDER	PRESC	BEHAV	13.222	1	13.222	2.997	
4-way interactions			7.773	1	7.773	1.762	
CONTEXT	GENDER BEHAV	PRESC	7.773	1	7.773	1.762	
Explained			356.890	15	23.793	5.394	***
Residual			1499.815	340	4.411		
Total			1856.705	355	5.230		

*** $p < .001$

8b).

The hypotheses were grounded on the assumption that the interaction of gender and context as well as prescription and behavior would contribute to the subjects' evaluations of the leader. The hypotheses were tested with a priori contrasts using t-statistics. The four effectiveness measures alone were investigated since the hypotheses were developed in terms of expected subject evaluations of the leaders' effectiveness rather than their activity and likeability, or the effects of the decisions on morale or resistance. The contrasts provide only limited support for the hypotheses.

A Priori Contrasts

Hypothesis 1a

Hypothesis 1a specified that male managers in a masculine context are rated more positively when they behave as prescribed by Vroom's model. The model prescribes autocratic behavior (AI) in an autocratic situation and participative behavior (GII) in a participative situation.

A priori contrasts were performed to evaluate the expected differences between cell means. Hypothesis 1a suggests that the autocratic prescription and behavior as well as the participative prescription and behavior matches would be evaluated more positively than the mismatched cells

TABLE 9a

Mean Ratings of The Decision Process:

Masculine Context and Male Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.3652	23	5.5545	22	.357
Participative	4.7273	22	5.4522	23	1.365

TABLE 9b

Mean Ratings of the Leader's Competence:

Masculine Context and Male Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.9855	23	5.4493	23	1.071
Participative	5.8551	23	5.5507	23	.608

TABLE 9c

Mean Ratings of the Decision Quality:

Masculine Context and Male Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.4783	23	5.3182	22	.221
Participative	5.2609	23	5.8095	21	.749

TABLE 9d

Mean Ratings of the Decision's Benefit for the Organization:

Masculine Context and Male Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.3043	23	5.7273	22	.604
Participative	4.9565	23	5.8261	23	1.256

on effective measures. Based on observation and the contrasts, the hypothesis was not supported. In the autocratic prescription, the ratings for autocratic and participative behaviors were statistically not different in terms of the decision process that the leader used (Table 9a), the leader's competence (Table 9b), the decision's quality (Table 9c), and the potential benefit to the organization (Table 9d). In the participative prescription, there was a slight, though non-significant preference for the participative leader.

Hypothesis 1b

Hypothesis 1b specified that female managers in a feminine context are rated more positively when they behave as prescribed by Vroom's model. A priori contrasts were performed to evaluate the expected differences between cell means. Hypothesis 1b suggests that the autocratic prescription and behavior match as well as the participative prescription and behavior match would be evaluated more positively on effective measures than a mismatch. Hypothesis 1b was partially supported. In the autocratic prescription, subjects rated participative and autocratic behaviors equally on all effectiveness measures. In the participative prescription, however, subjects rated the participative behavior as more effective than autocratic behavior in terms of the decision process used (Table 10a)

TABLE 10a

Mean Ratings of The Decision Process:

Feminine Context and Female Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	4.8609	23	5.0174	23	.300
Participative	4.8364	22	6.6095	21	3.282 **

** p < .01

TABLE 10b

Mean Ratings of the Leader's Competence:

Feminine Context and Female Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.4348	23	5.3939	23	.085
Participative	5.5072	23	6.3768	23	1.820

TABLE 10c

Mean Ratings of Decision Quality:

Feminine Context and Female Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.0870	23	5.0000	23	.893
Participative	4.4783	23	5.9545	22	2.257 *

* $p < .05$

TABLE 10d

Mean Ratings of the Decision's Benefit for the Organization:

Feminine Context and Female Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	4.9130	23	4.4348	23	.735
Participative	4.9130	23	5.8261	23	1.403

and its quality (Table 10c). These same effects failed to occur on the measures evaluating the leader's competence (Table 10b) and the benefit for the organization (Table 10d).

Both Hypotheses 1a and 1b dealt with conditions in which the leader's gender and the context were congruent; a male in a masculine context and a female in a feminine context. Hypotheses 2a and 2b, however, dealt with the expectations in mismatched or non-congruent conditions.

Hypothesis 2a

Hypothesis 2a specified that female managers in a masculine context are rated more positively when they behave participatively than when they behave contingently--as prescribed by Vroom. Based upon the results of a priori contrasts between cells, hypothesis 2a was partially supported. In the autocratic prescription, subjects rated the participative woman leader more positively than the autocratic leader, though the difference was not statistically significant. In the participative prescription, however, the participative leader was rated more positively on the measures evaluating the decision process used (Table 11a), the female manager's competence (Table 11b), and the potential benefit of the decision for the organization (Table 11d).

TABLE 11a

Mean Ratings of Decision Process:

Masculine Context and Female Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.309	22	5.791	22	1.025
Participative	4.548	23	5.530	22	2.135 *

* p < .05

TABLE 11b

Mean Ratings of Leader Competence:

Masculine Context and Female Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.348	22	5.985	23	1.66
Participative	4.956	23	5.725	23	2.02 *

* p < .05

TABLE 11c

Mean Ratings of the Decision Quality:

Masculine Context and Female Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.3478	23	5.7826	23	.842
Participative	4.8261	23	5.6087	23	1.515

TABLE 11d

Mean Ratings of Benefit for the Organization:

Masculine Context and Female Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.304	23	5.696	23	.656
Participative	4.391	23	5.739	23	2.261 *

* $p < .05$

Hypothesis 2b

Hypothesis 2b suggested that male leaders in a feminine context are rated more positively when they behave autocratically than when they behave contingently--as prescribed by Vroom. The results of a priori contrasts between cells indicate that in a feminine context the autocratic male leaders were rated rather poorly in both autocratic and participative prescriptions. The difference between the male autocratic and participative leaders was not statistically significant in the autocratically prescribed situations. Participative leaders, however, were rated slightly more positively in both situations (Tables 11a to 11d). In the participative prescription, the differences were significant on all four effective measures: (a) the decision process (Table 12a), (b) the leader's competence (Table 12b), (c) the decision quality (Table 12c), and (d) the benefit to the organization (Table 12d). Thus, no support was provided for Hypothesis 2b. Interestingly, the results were similar to those in which the context and the leader's gender do not match (Hypothesis 2a). That is, the leader's participative behavior was evaluated as more effective especially in participatively prescribed situations.

TABLE 12a

Mean Ratings of The Decision Process:

Feminine Context and Male Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.4174	23	5.8618	22	.931
Participative	4.6000	23	6.1391	23	3.121 *

* p < .01

TABLE 12b

Mean Ratings of The Leader's Competence:

Feminine Context and Male Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.7681	23	5.6377	23	.302
Participative	4.6377	23	6.1449	23	3.495 *

* p < .001

TABLE 12c

Mean Rating of the Decision Quality:

Feminine Context and Male Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.7391	23	5.3636	23	.715
Participative	4.4091	22	6.1364	22	3.254 *

* p < .01

TABLE 12d

Mean Rating of the Benefit to the Organization:

Feminine Context and Male Leader

Prescribed Situation	Behavior: Autocratic	n	Participative	n	t
Autocratic	5.0435	23	5.9091	22	1.337
Participative	4.2727	22	5.7391	23	2.264 *

* p < .05

The results of the experiment provide little support for the hypotheses as stated. In the masculine context/male leader condition, there appeared to be little difference between the subjects' evaluations of the leaders' behavior in either autocratic or participative situations. There was, however, a slight preference for the leader who behaved participatively regardless of situational requirements as prescribed by Vroom. In the other congruent condition, feminine context/female leader, subjects preferred the leader who behaved contingently--as prescribed by Vroom--for two of four measures. This preference, however, surfaced in the participative prescription alone.

Results that were somewhat more in line with the hypotheses surfaced in the two non-congruent conditions. Subjects in the female manager/masculine context condition clearly preferred the participative leader in the participative prescription on three of four <u>effectiveness</u> measures. This response to contingent behavior, however, failed to surface in the autocratic prescription where subjects showed no preference either for the autocratic leader, who behaved theoretically correctly, or for the participative leader. Parallel effects are revealed in the results of the second non-congruent condition--feminine context and male leader. Here, higher ratings occurred for participative behavior in the participative prescription on

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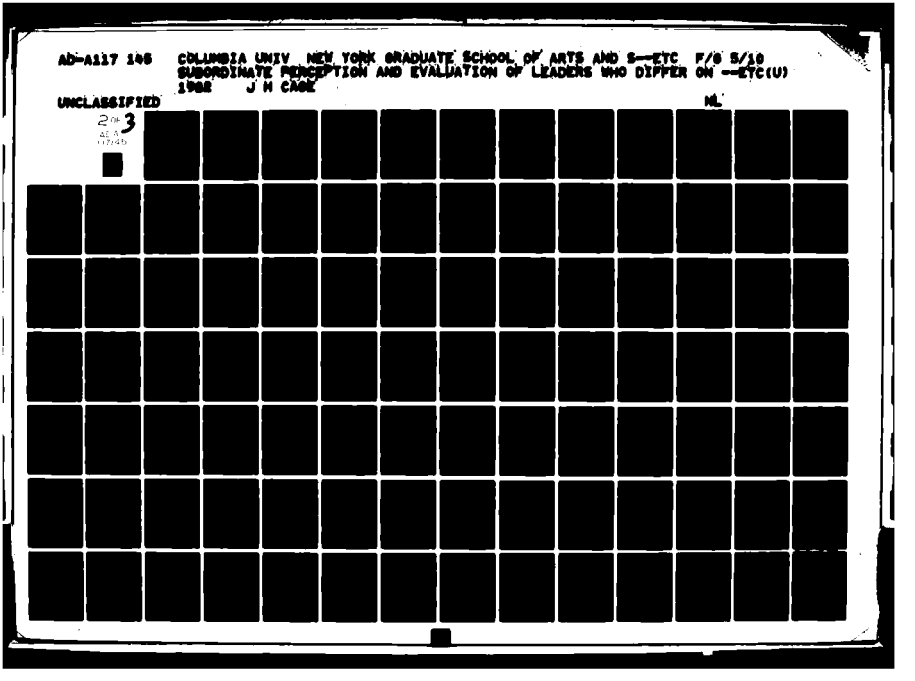


all four measures--decision process, leader competence, decision quality, and benefit to the organization.

What might seem to be a slight contingent effect--a preference for behavior prescribed by Vroom--occurred in participative prescriptions when the leader's gender and the context were congruent. But the effect is minor; it occurred only in the feminine context/female leader condition for two of four effectiveness measures. In essence, there is no compelling evidence that subjects prefer contingent leadership behavior. The absence of preference for theoretically prescribed leader behavior is troubling. The initial study (Hornstein, Heilman, and Cage, in preparation) unambiguously demonstrated a preference for leadership behavior that was consistent with theoretical prescription, specifically, the prescription of Vroom's model. The investigation of this surprising absence will be discussed in a later section of this chapter ("Subsequent Analysis").

Thus, there is very little evidence to support the hypotheses or the findings of a previous study which showed that subjects taking the role of subordinates rated their leader's correctly contingent behavior as more effective than non-contingent behavior. The data, however, suggest that several other unexpected consistent trends exist. Building on the analyses of variance, and performing simple

effects analyses when useful, an attempt was made to explicate these trends. Results of analyses of both affective and effective measures are presented.

Additional Analyses

Affective Measures

The hypotheses were framed in terms of effectiveness measures alone. Simple effects analyses were performed on affective measures to further explore the data and to determine if the results parallel those of an earlier study. The findings of the analyses of variance, shown in Tables 6b to 8b, reveal a main effect for behavior for each of the three affective measures. This main effect was the sole significant effect for the ratings of the likely acceptance of the decision, $F(1,355) = 63.765$, $p < .001$, and its probable consequence on morale, $F(1,355) = 270.491$ $p < .001$. In contrast, in the leader likeability ratings, the main effect for behavior, $F(1,355) = 253.395$ $p < .001$, was accompanied by an interaction between behavior and prescription. Simple effects analyses demonstrated, however, that the simple main effect for behavior held both when participative and autocratic behavior were prescribed (Table 13 and Figure 1). The results therefore indicate that participative leadership behavior was seen as consistently different and better than autocratic behavior

TABLE 13

Simple Main Effects of Behavior at Levels of Prescription:
Evaluations of the Leader's Likeability

Source of Variance	SS	df	MS	F
Autocratic Prescription	330.8949	1	330.8949	194.644 *
Participative Prescription	127.7816	1	127.7816	75.1656 *
Error		331	1.700	

* p < .001

TABLE 14

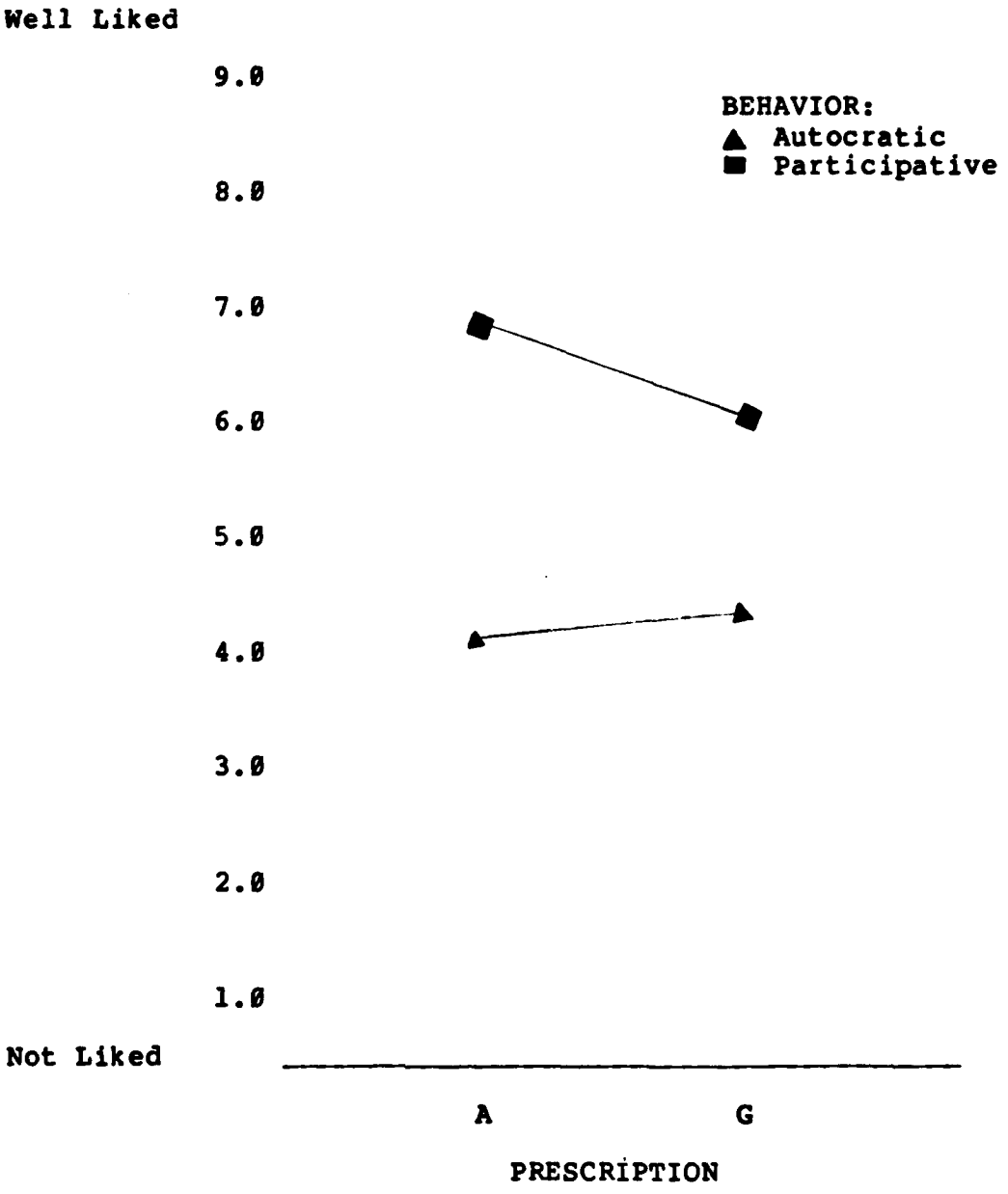
Simple Main Effect of Behavior at Levels of Prescription:
Evaluation of the Leader's Activity

Source of Variance	SS	df	MS	F
Autocratic Prescription	113.2485	1	113.2485	67.001 **
Participative Prescription	15.6476	1	15.6476	9.259 *
Error		331	1.690	

* p < .005 ** p < .001

FIGURE 1

Means of Ratings on the Leader's Likeability at Levels of Prescription



in ratings of each of the affective measures.

A somewhat different pattern emerged for the measure evaluating the leader's activity/potency (Tables 5a and 5b). Again, there was a main effect for behavior, $F(1,346) = 59.399$ $p < .001$; the autocratic leader was seen as more potent than the participative leader. A prescription by behavior interaction, $F(1,346) = 13.047$ $p < .001$, and a three-way interaction among prescription, behavior, and context, $F(1,346) = 7.696$ $p < .01$, prompted simple effects analyses for clarification. These revealed that the simple main effect of behavior was evident except when the story was prescriptively participative and was set in a feminine context. (Tables 14 & 15, and Figure 2).

Taken together, these results suggest that whether the leader was participative or autocratic determined affective reactions to him/her. Participative leaders were all liked more, seen as more facilitative of good morale and acceptance of the decision but generally viewed as less active or potent than autocratic leaders.

Effective Measures

A different pattern emerged in analyses regarding the four effectiveness measures (Tables 1b to 4b). Although a main effect for behavior resulted from analyses of subjects' ratings of the benefit for the organization, $F(1,346) = 12.953$ $p < .001$, a number of patterns emerging in the

TABLE 15
Simple Main Effect of Behavior at Levels of Context and Prescription: Evaluation of the Leader's Activity

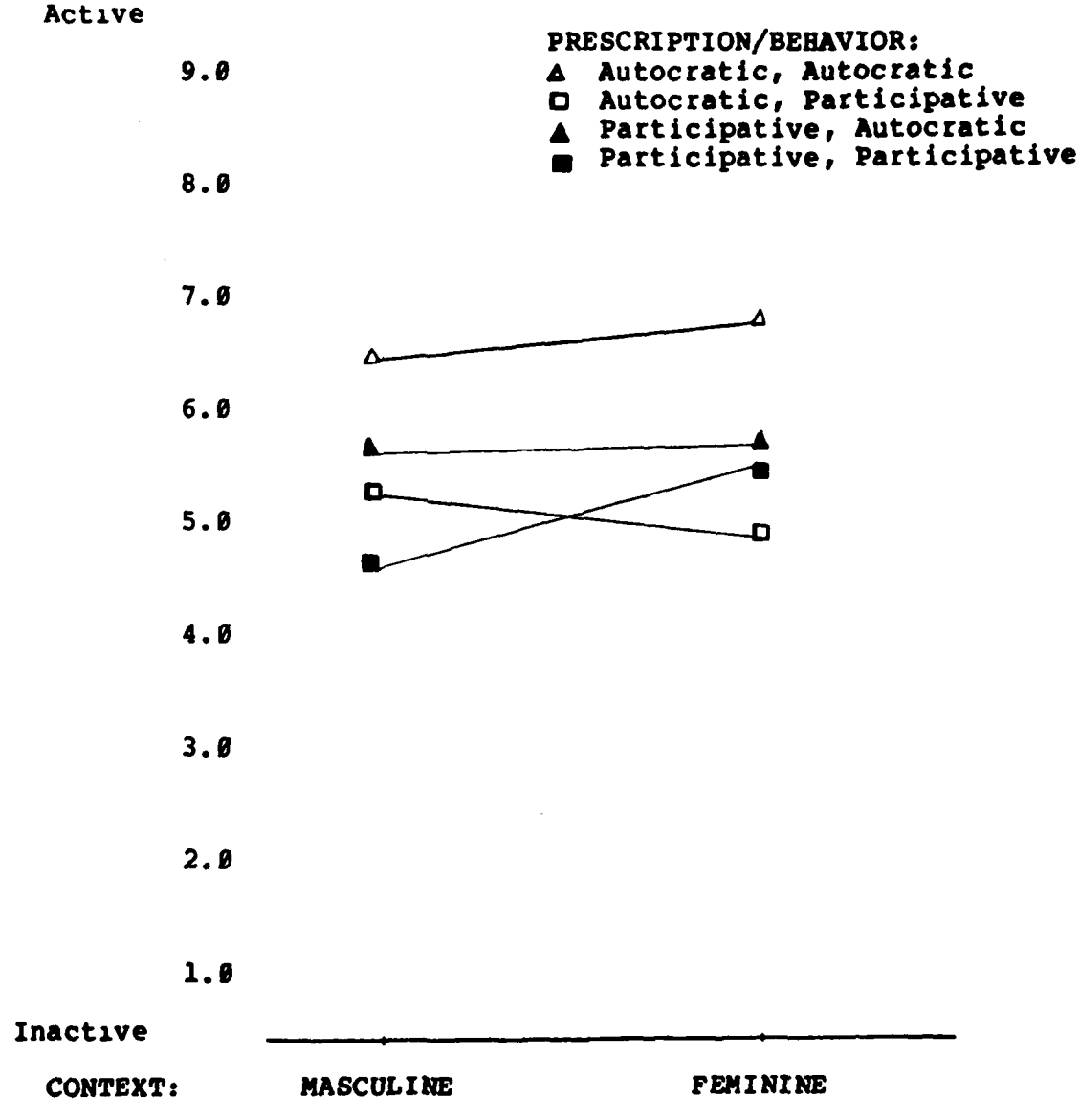
Source of Variance	SS	df	MS	F
Masculine Context, Autocratic Prescription	36.4670	1	36.4670	21.5781 *
Masculine Context, Participative Prescription	24.1899	1	24.1899	14.3136 *
Feminine Context, Autocratic Prescription	85.8437	1	85.8437	50.7951 *
Feminine Context, Participative Prescription	.6084	1	.6084	.3600
Error		331	1.6900	

* $p < .001$

FIGURE 2

Means of Ratings of the Leader's Activity/Potency

at Levels of Context and Prescription



analyses of the other three measures suggested that the effects of behavior were not unequivocal. The analysis of variance for ratings of the decision process demonstrated a two-way interaction between prescription and behavior, $F(1,346) = 6.215$ $p < .05$. A simple main effects analysis (Table 16) demonstrated that subjects preferred participative behavior when participation was prescribed. Figure 3 plots the interaction graphically. Thus, unlike the affective measures, subjects differentiated between the leader's behavior at levels of prescription--in different situations--in ratings of the decision process.

This pattern followed for the measure evaluating decision quality (Table 3a and b). A main effect for behavior, $F(1,346) = 6.928$ $p < .01$, and an interaction between prescription and behavior, $F(1,346) = 5.606$ $p < .05$, were evident in the analysis of variance. Again, the results of the simple effects analyses demonstrated that subjects preferred participative leadership behavior only in participatively prescribed situations (Table 17). But also, an interaction among context, prescription, and behavior was evident, $F(1,346) = 4.137$ $p < .05$. Additional simple effects analyses (Table 18) revealed that the preference for participative behavior in participatively prescribed conditions was evident only in <u>feminine</u> contexts. Figure 4 plots the three-way interaction.

TABLE 16

Simple Main Effects for Behavior at Levels of Prescription: Evaluation of the Decision Process

Source of Variance	SS	df	MS	F
Autocratic Prescription	4.5412	1	4.5412	1.6335
Participative Prescription	69.4400	1	69.4400	24.9784 *
Error		331	2.7800	

* p < .001

TABLE 17

Simple Main Effects for Behavior at Levels of Prescription: Decision Quality

Source of Variance	SS	df	MS	F
Autocratic Prescription	.8978	1	.8978	.8242
Participative Prescription	56.8977	1	56.8977	14.8627 *
Error		331	4.846	

* p < .001

FIGURE 3

Means of Ratings on the Decision Process at Levels of Prescription

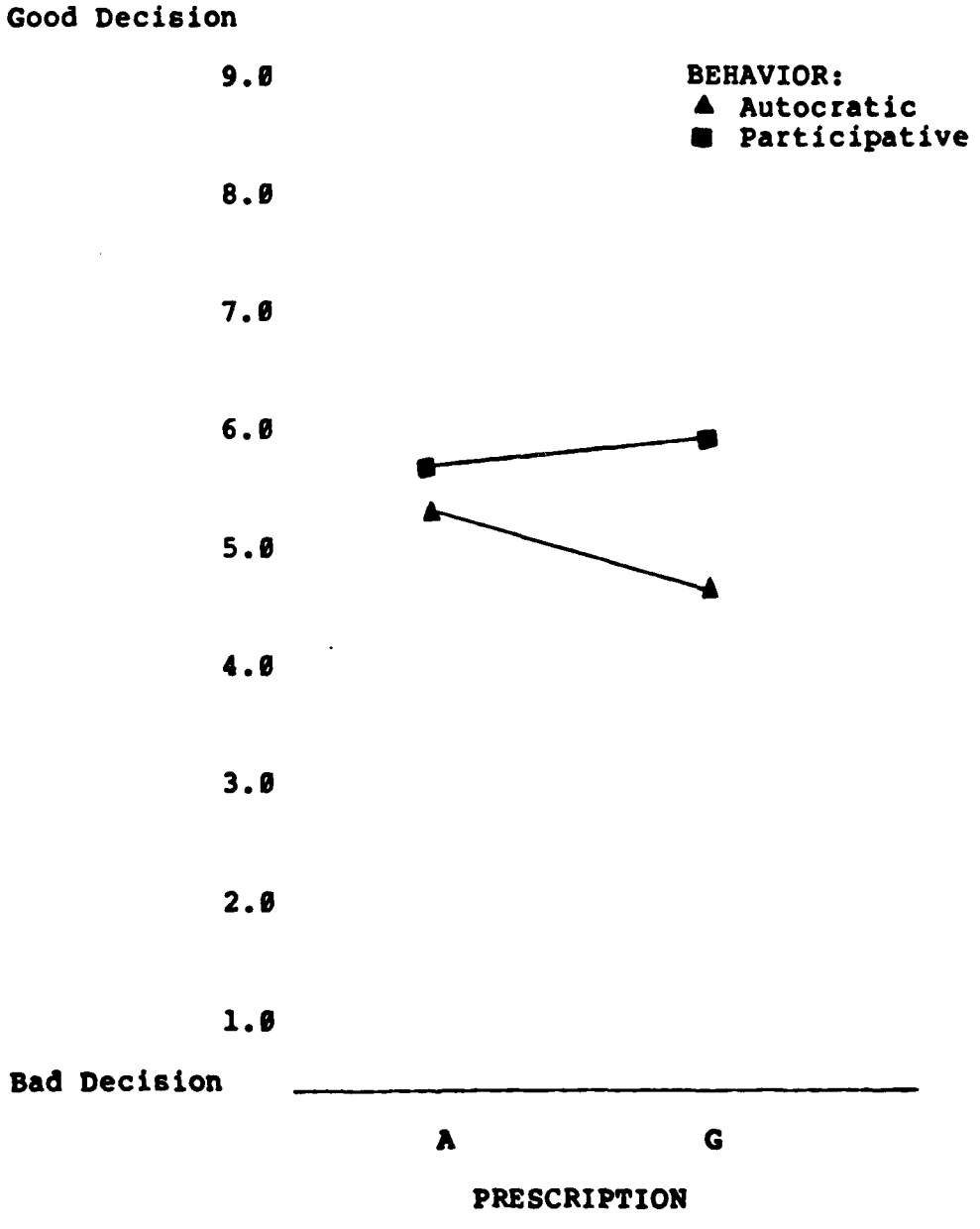


TABLE 18

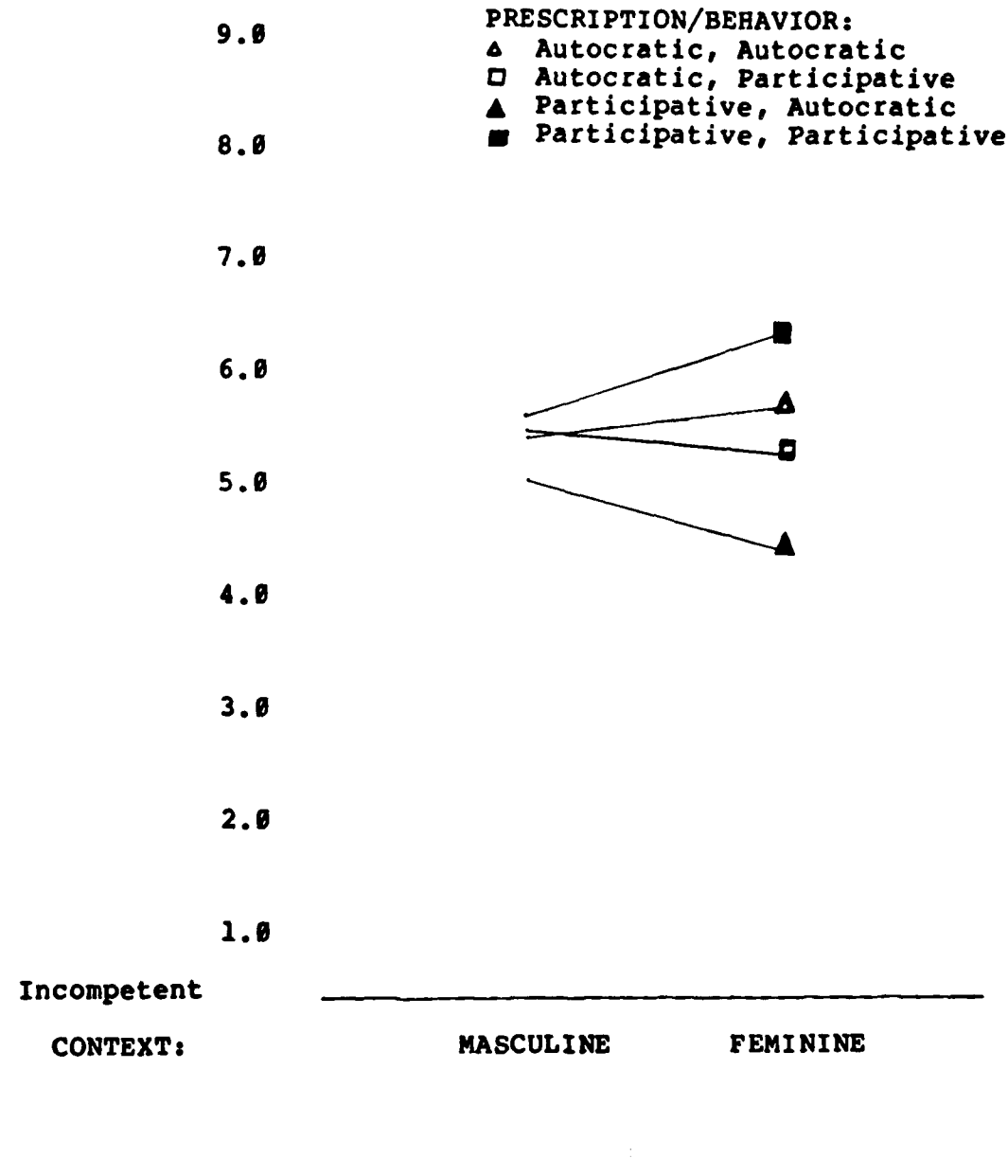
Simple Main Effects of Behavior at Levels of Context and Prescription: Evaluation of the Decision Quality

Source of Variance	SS	df	MS	F
Masculine Context, Autocratic Prescription	.4619	1	.4619	.1142
Masculine Context, Participative Prescription	9.8278	1	9.8278	2.4290
Feminine Context, Autocratic Prescription	1.2590	1	1.2550	.3111
Feminine Context, Participative Prescription	57.0247	1	57.0247	14.0941 *
Error		331	4.046	

* $p < .001$

FIGURE 4

Means of Ratings of the Decision Quality at Levels of Context and Prescription



A similar pattern emerged with measures of the leader's competence (Table 2a and b). A main effect for behavior, $F(1,346) = 6.435$ $p < .05$, and a three-way interactions among context, prescription, and behavior, $F(1,346) = 6.182$ $p < .05$, resulted from the analysis of variance. Simple main effects analyses were performed. Table 19 and Figure 5 demonstrate that, again, participative behavior was preferred over autocratic behavior when the prescription was participative in a feminine context. An additional three-way interaction occurred in response to this measure among context, gender, and behavior, $F(1,346) = 4.023$ $p < .05$; it represents the single example of gender affecting the results. Table 20 and Figure 6 demonstrate that both gender and context affected ratings of the leader's competence when s/he behaved participatively as compared with autocratically. The results suggest that subjects evaluated leaders in non-congruent or mismatched conditions as most competent when participative.

The analysis of variance and follow-up simple main effects analyses revealed two general trends. First, subjects responded to the leader's behavior alone on the affective measures. The effects of prescription, gender, and context were not evident. These findings are not surprising; the same pattern emerged in the initial investigation (Hornstein, Heilman, and Cage, in

TABLE 19

Simple Main Effects of Behavior at Levels of Context and Prescription: Evaluation of the Leader's Competence

Source of Variance	SS	df	MS	F
Masculine Context, Autocratic Prescription	.0426	1	.0426	.0189
Masculine Context, Participative Prescription	1.2366	1	1.2366	.5486
Feminine Context, Autocratic Prescription	.1564	1	.1564	.0694
Feminine Context, Participative Prescription	32.4831	1	32.4831	14.4113 *
Error		331	2.254	

* $p < .001$

FIGURE 5

Means of Ratings of the Leader's Competence at Levels of Context and Prescription

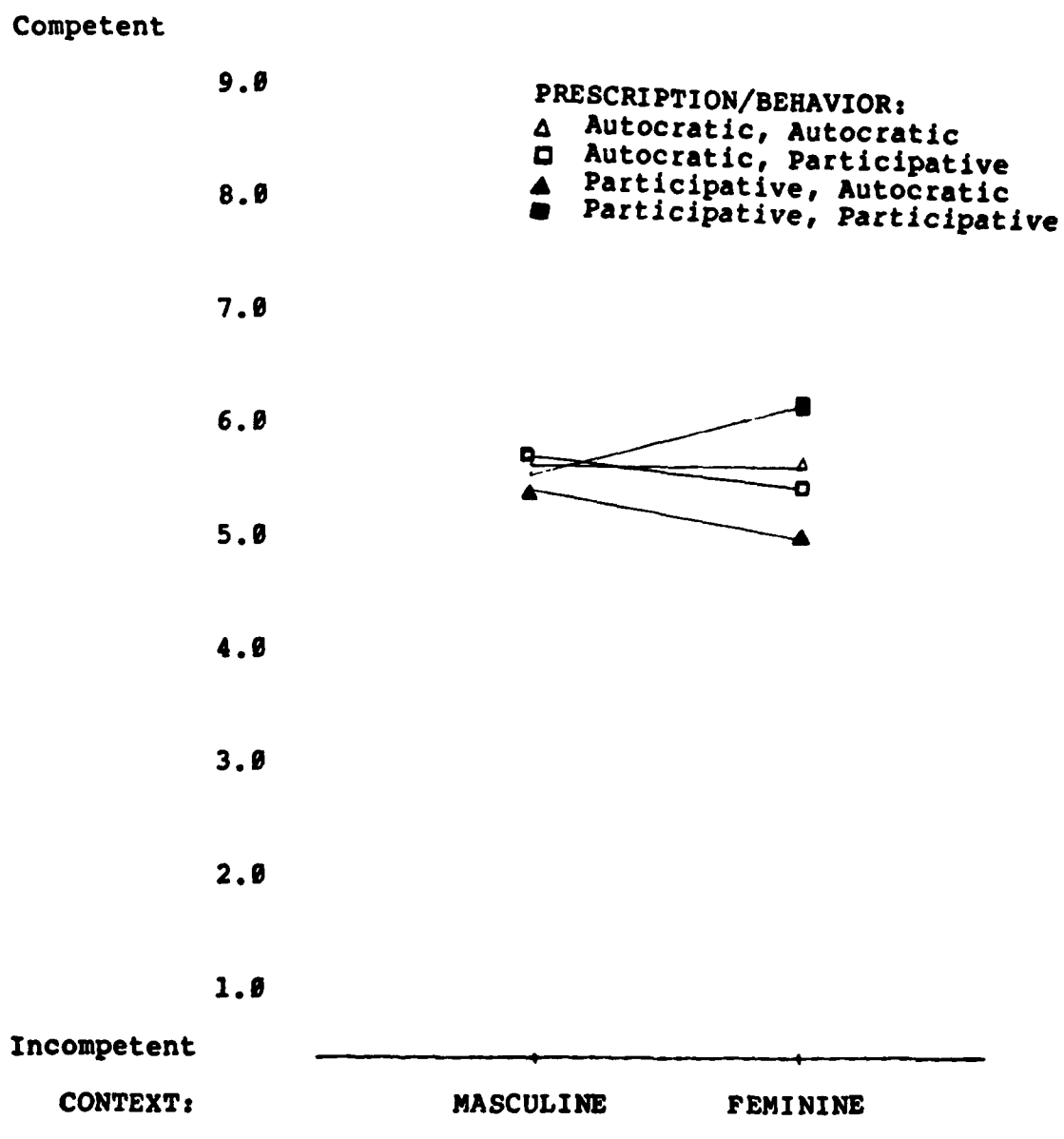


TABLE 20

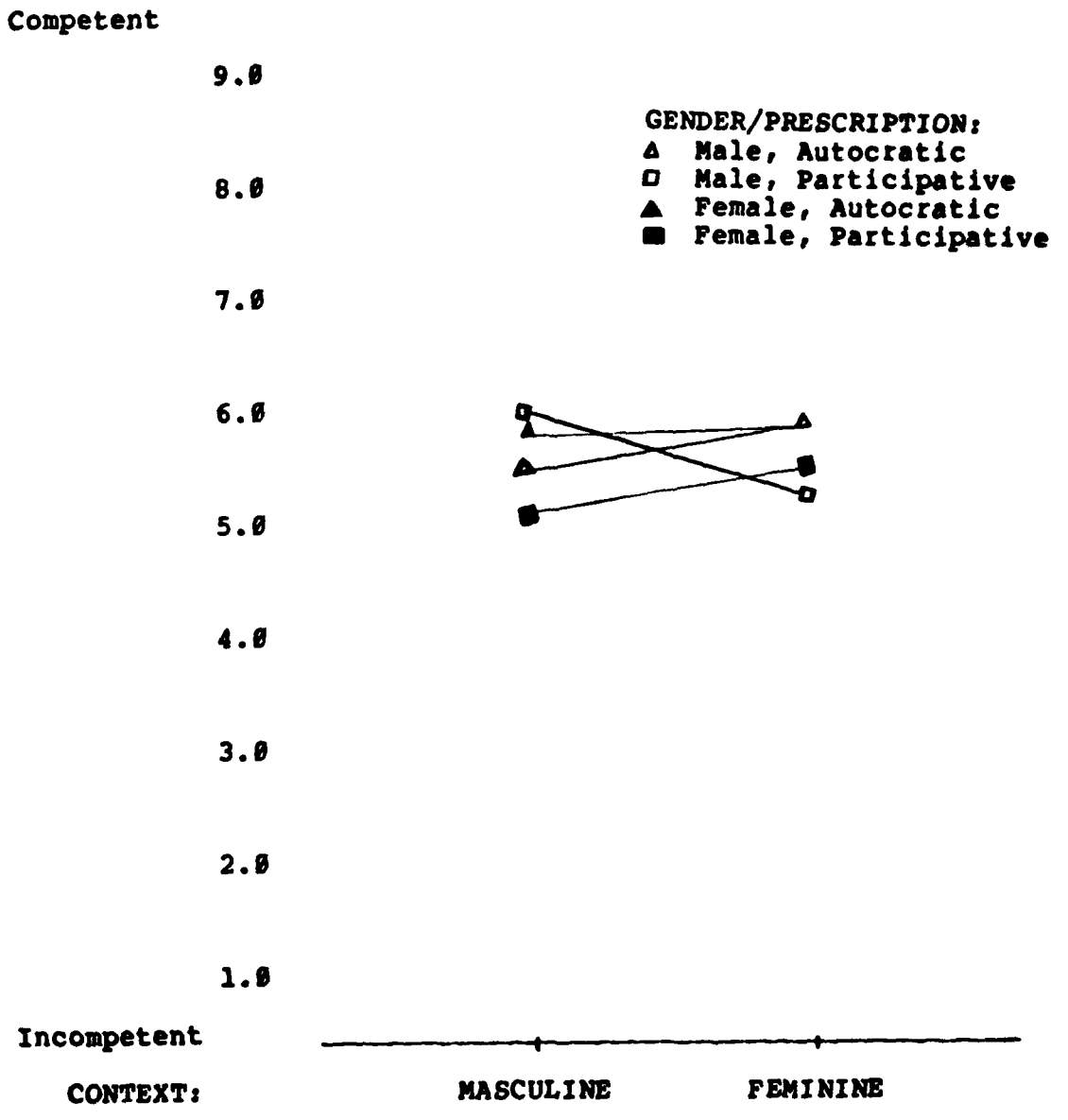
Simple Main Effects of Behavior at Levels of Context and Gender: Evaluation of the Leader's Competence

Source of Variance	SS	df	MS	F
Masculine Context,				
Male Leader	7.3647	1	7.3647	3.2673
Masculine Context,				
Female Leader	11.3677	1	11.3677	5.0433 *
Feminine Context,				
Male Leader	10.8966	1	10.8966	4.8343 *
Feminine Context,				
Female Leader	4.1141	1	4.1141	1.8252
Error		331	2.254	

* $p < .05$

FIGURE 6

Means of Ratings of the Leader's Competence at Levels of Context and Gender



preparation). Second, the subjects' responses on effectiveness measures indicated that their responses were modified by prescription, gender, and context. Respondents viewed participative leadership behavior as resulting in the most effective decision process in participatively but not autocratically prescribed situations. Also, participative leaders, irrespective of prescription, were viewed as competent when their gender failed to match the context. In this case, the interaction of gender and context appeared to affect the subjects' perceptions. Lastly, in the case of decision quality and judgements of leader competence, theoretically correct participative leaders were viewed as most effective only in feminine contexts. Thus, it is clear from these data that ratings of effectiveness were not based solely on the behavior the leader emitted, rather, responses were moderated by other elements of the situation. Failure to replicate acceptance of autocratic leadership behavior is the focus for the following section.

Subsequent Analysis

The results of the analysis conducted thus far, though different from expectations, are compelling. It turns out that subjects in the study, when evaluating the decision process used, discriminated between leaders' participative

and autocratic behavior in participatively prescribed situations. The same effect, however, failed to occur in autocratic situations; there were no differences on effectiveness measures between subordinates' reactions to autocratic and participative leaders when Vroom's model prescribed autocratic behavior. A second finding, one that is consistent with the general preference for participation, suggests that a mismatch between a leader's gender and the context affects subordinates' perceptions of the leader's competence. The non-congruence appears to 'send up a red flag' and to highlight participative behavior in participative situation. The third finding demonstrates a difference between subordinates' reactions to leaders in masculine and feminine contexts. The results suggest that the effect of being correctly contingent in a participative situation is more robust in feminine than masculine contexts.

Preference for the theoretically correct leader behavior, demonstrated in the first study, was not replicated. Leaders, for example, were not evaluated as particularly effective when autocratic in situations that Vroom prescribed as autocratic. The absence of the subjects' preference for autocratic leaders in autocratic situations, demonstrated in the initial study, is the focus of the following section.

Why were the results of the initial study (Hornstein, Heilman, and Cage, in preparation) not replicated in the present study? In the initial investigation, subjects responded in line with Vroom's prescriptions in both autocratic and participative situations. It would be valuable to determine how the subjects who responded as expected in this investigation differed from subjects who did not, and how they differed from the subjects in the initial study.

One of the purposes of the following analyses was to determine whether some subpopulation of this sample responded favorably to appropriately autocratic leader behavior and unfavorably to inappropriately participative behavior. In other words, there may be a group that can be categorized on demographic measures that evaluated the appropriately autocratic leader as effective and the inappropriately participative leader as ineffective. The 'contingent' group can then be differentiated from the 'non-contingent' group--those that diluted the anticipated effect.

The results indicate that, indeed, there were groups of subjects that responded similarly to those of the initial study--they evaluated the correctly autocratic leader as effective and the participative leader, in the same situation, as ineffective. The 'contingent' group, those

subjects that responded as anticipated, included individuals who scored above the median on effectiveness measures when the leader was autocratic in an autocratically prescribed situation (Group 1). The group also included subjects who responded at or below the median when the leader was participative in an autocratic prescription (Group 2). In all sets of analyses, the differences between the scores of the contingent groups in theoretically appropriate and inappropriate conditions were significant. Tables 21 through 24 show the comparisons conducted in the four conditions; masculine context/male leader, feminine context/female leader, masculine context/female leader, and feminine context/male leader, respectively. These results suggest that certain individuals differentially evaluated leaders' effectiveness depending upon the their behavior in autocratically prescribed situations.

What demographic characteristics, if any, differ between the subjects who behaved as precribed by Vroom and those subjects who failed to do so? If differences exist between these two groups, the results may help to suggest explanation for the failure to replicate the results of the initial study in autocratic situations.

Some differences emerged. In comparison with those who failed to abide by contingency theory predictions, subjects in the contingent group reported: (a) a lower income (Table

TABLE 21a

Evaluation of the Decision Process by Subjects

Who Were Appropriately Contingent:

Masculine Context/Male Leader

Leader Behavior	M	SD	n	t
Group 1	6.436	.557	11	
				8.83 *
Group 2	3.060	1.128	10	

* p < .001

TABLE 21b

Evaluation of the Leader's Competence by Subjects

Who Were Appropriately Contingent:

Masculine Context/Male Leader

Leader Behavior	M	SD	n	t
Group 1	7.364	.823	11	
				9.08 *
Group 2	3.455	1.167	11	

* p < .001

TABLE 21c

Evaluation of the Decision Quality by Subjects

Who Were Appropriately Contingent:

Masculine Context/Male Leader

Leader Behavior	M	SD	n	t
Group 1	6.786	.893	14	
				7.36 *
Group 2	2.909	1.700	11	

* $p < .001$

TABLE 21d

Evaluation of the Benefit to the Organization by Subjects

Who Were Appropriately Contingent:

Masculine Context/Male Leader

Leader Behavior	M	SD	n	t
Group 1	7.091	.944	11	
				6.800 *
Group 2	2.900	1.792	10	

* $p < .001$

TABLE 22a

Evaluation of the Decision Process by Subjects

Who Were Appropriately Contingent:

Feminine Context/Female Leader

Leader Behavior	M	SD	n	t
Group 1	6.700	1.034	10	
				6.79 *
Group 2	3.467	1.173	12	

* $p < .001$

TABLE 22b

Evaluation of the Leader's Competence by Subjects

Who Were Appropriately Contingent:

Feminine Context/Female Leader

Leader Behavior	M	SD	n	t
Group 1	6.909	1.126	11	
				6.96 *
Group 2	3.833	.864	10	

* $p < .001$

TABLE 22c

Evaluation of the Decision Quality by Subjects

Who Were Appropriately Contingent:

Feminine Context/Female Leader

Leader Behavior	M	SD	n	t
Group 1	6.909	1.044	11	
				6.41 *
Group 2	3.417	1.505	12	

* p < .001

TABLE 22d

Evaluation of the Benefit to the Organization by Subjects

Who Were Appropriately Contingent:

Feminine Context/Female Leader

Leader Behavior	M	SD	n	t
Group 1	6.538	1.506	13	
				8.21 *
Group 2	2.667	.651	12	

* p < .001

TABLE 23a

Evaluation of the Decision Process by Subjects

Who Were Appropriately Contingent:

Masculine Context/Female Leader

Leader Behavior	M	SD	n	t
Group 1	7.060	.895	10	6.03 *
Group 2	4.527	1.017	11	

* p < .001

TABLE 23b

Evaluation of the Leader's Competence by Subjects

Who Were Appropriately Contingent:

Masculine Context/Female Leader

Leader Behavior	M	SD	n	t
Group 1	6.576	.844	11	4.76 *
Group 2	5.091	.598	11	

* p < .001

TABLE 23c

Evaluation of the Decision Quality by Subjects

Who Were Appropriately Contingent:

Masculine Context/Female Leader

Leader Behavior	M	SD	n	t
Group 1	6.800	.919	10	
				4.48 *
Group 2	4.786	1.188	14	

* p < .001

TABLE 23d

Evaluation of the Benefit to the Organization by Subjects

Who Were Appropriately Contingent:

Masculine Context/Female Leader

Leader Behavior	M	SD	n	t
Group 1	7.100	.876	10	
				5.73 *
Group 2	4.167	1.403	12	

* p < .001

TABLE 24a

Evaluation of the Decision Process by Subjects

Who Were Appropriately Contingent:

Feminine Context/Male Leader

Leader Behavior	M	SD	n	t
Group 1	6.709	1.250	11	
				4.300 *
Group 2	4.418	1.250	11	

* p < .001

TABLE 24b

Evaluation of the Leader's Competence by Subjects

Who Were Appropriately Contingent:

Feminine Context/Male Leader

Leader Behavior	M	SD	n	t
Group 1	5.970	1.027	11	
				7.60 *
Group 2	4.273	.574	11	

* p < .001

TABLE 24c

Evaluation of the Decision Quality by Subjects

Who Were Appropriately Contingent:

Feminine Context/Male Leader

Leader Behavior	M	SD	n	t
Group 1	6.917	.669	12	
				9.05 *
Group 2	3.455	1.128	11	

* p < .001

TABLE 24d

Evaluation of the Benefit to the Organization by Subjects

Who Were Appropriately Contingent:

Feminine Context/Male Leader

Leader Behavior	M	SD	n	t
Group 1	6.769	1.481	13	
				5.22 *
Group 2	3.818	1.250	11	

* p < .001

25a); (b) a lower age (Table 25b); (c) a greater number of subordinates (Table 25c); (d) spending less time in the organization (Table 25d); (e) a lower prestige rating (Table 25e); and (f) spending less time on the job (Table 25e). In general, subjects who were less powerful--less time on the job and the organization, lower prestige and income, as well as younger--were those who followed the prescriptions of contingency theory.

These results are surprising. The findings of the initial study suggested that individuals on the upper realm of certain demographic variables were more likely to follow the prescriptions of contingency theory. The results just cited, on the other hand, suggest that those on the lower end of these same demographic variables were more likely to follow Vroom's prescriptions for leader behavior. It is conceivable that the two groups of subjects used in the initial and present studies were significantly different from one another. Furthermore, the subjects in the contingent group of this investigation may be similar to those subjects who responded favorably to theoretically contingent leaders in the initial study (Hornstein, Heilman, and Cage, in preparation). In other words, the subjects who were rated above the median on certain demographic variables in the first study may be similar to those subjects of this investigation that were rated lower on the same variables.

TABLE 25a

Demographic Characteristics of the Contingent and Non-Contingent Subjects in the Present Study Who Evaluate Decision Quality: Masculine Context and Male Leader

Demographic Variable	Contingent		Non-Contingent		t
Prestige	54.625	24	54.895	19	.09
Time in the Organization	62.120	25	65.895	19	.22
Time on the Job	21.240	25	44.789	19	1.67
Subordinates	2.120	25	7.737	19	1.63
Income	28.435	23	38.278	18	2.58 *
Age	31.625	24	34.350	20	1.36

* $p < .05$

TABLE 25b

Demographic Characteristics of the Contingent and Non-Contingent Subjects in the Present Study Who Evaluated the Process: Feminine Context and Female Leader

Demographic Variable	Contingent		Non-Contingent		t
Prestige	53.625	16	52.318	22	.56
Time in the Organization	62.667	15	71.455	22	.47
Time on the Job	41.625	16	38.091	22	.27
Subordinates	8.933	15	3.682	22	1.74
Income	31.846	13	36.818	22	1.15
Age	30.857	21	35.609	23	2.05 *

* $p < .05$

TABLE 25c

Demographic Characteristics of the Contingent and Non-Contingent Subjects in the Present Study Who Evaluated Leader Competence: Feminine Context and Female Leader

Demographic Variable	Contingent		Non-Contingent		t
Prestige	53.250	16	52.591	22	.28
Time in the Organization	58.667	15	79.636	22	1.61
Time on the Job	37.000	16	41.455	22	.35
Subordinates	10.333	15	2.727	22	2.65 *
Income	32.000	14	36.952	21	1.16
Age	31.091	22	35.591	22	1.93

* $p < .05$

TABLE 25d

Demographic Characteristics of the Contingent and Non-Contingent Subjects in the Present Study Who Evaluated Decision Quality: Masculine Context and Female Leader

Demographic Variable	Contingent		Non-Contingent		t
Prestige	50.105	19	51.737	19	.87
Time in the Organization	44.263	19	108.706	17	2.47 *
Time on the Job	38.529	17	40.750	16	.76
Subordinates	3.263	19	5.176	17	1.24
Income	32.722	18	35.071	14	.47
Age	38.136	22	33.684	19	1.55

* $p < .05$

TABLE 25e

Demographic Characteristics of the Contingent and Non-Contingent Subjects in the Present Study Who Evaluated the Benefit for the Organization: Masculine Context and Female Leader

Demographic Variable	Contingent		Non-Contingent		t
Prestige	46.869	18	52.750	20	2.15 *
Time in the Organization	51.056	18	98.333	18	1.74
Time on the Job	21.000	17	50.875	16	2.46 *
Subordinates	2.944	18	5.389	18	1.61
Income	32.529	17	35.133	15	.52
Age	32.700	20	33.809	21	.91

* $p < .05$

Both groups, it should be remembered, followed the prescriptions of contingency theory.

Analyses were conducted to determine the differences that existed between subjects in the first and present studies. The results of Table 26 show that several differences occur. First, subjects in the initial study score significantly lower on ratings of prestige than subjects in this study. Second, subjects in the initial study reported supervising fewer subordinates than those of the present investigation. Lastly, the income of subjects in the first study was lower than the income of those in this investigation.

Another major difference between the sample employed in the first and the present studies was that half of those in the first study were female while all in the second study were male. Women were more positive in their evaluation of correctly contingent leaders, to include autocratic leaders in autocratic situations. It would be very interesting to investigate the evaluations of female subjects. Fortunately, this analysis was possible. While collecting data from male subjects in classrooms, women MBA students were encountered. In all, 82 women responded to the instruments. The demographic data presented in Table 27 describe the women. The adjacent column lists comparable data from the males in the present study. It is interesting

TABLE 26

Demographic Characteristics of the Subjects

in Study #1 and Study #2

Variable	Study #1		Study #2		t
Prestige	40.727	22	53.875	321	6.39 **
Time in the Organization	61.800	25	67.345	319	.40
Time on the Job	29.391	23	33.322	317	.49
Subordinates	.292	24	7.019	320	2.32 *
Income	22.273	22	34.696	299	3.93 *
Age	32.652	23	32.994	344	.21

* p < .05 ** p < .001

TABLE 27

Demographic Characteristics of the Subjects

in the Present Study: Male and Female

Variable		Female		Male		t
Prestige	M	52.864	66	53.863	322	.90
	sd	6.046		8.59		
Time in the Organization	M	45.31	66	67.209	320	2.63 **
	sd	33.896		65.690		
Time on the Job	M	22.374	64	33.293	318	2.31 *
	sd	16.521		37.169		
Subordinates	M	5.721	61	7.041	321	.67
	sd	14.338		14.138		
Income	M	24.969	65	34.747	300	5.42 ***
	sd	8.328		14.012		
Age	M	31.421	76	32.980	344	1.61
	sd	7.827		7.583		

* p < .05 ** p < .01 *** p < .001

to note that the women were of the same age as the males. The amount of time they spent in their organizations and on the job were less than the comparable males. Most striking, however, is the difference in mean income.

Tables 1 through 4 of Appendix B provide the results of the female subjects' responses on the effectiveness measures. The data, though insufficient for statistical analysis between cells, suggest that women were somewhat more willing to accept the appropriately autocratic leader. Another procedure, specifically the one used with the data from male subjects above, was used to evaluate the differences between the contingent and non-contingent groups.

Because of the small sample size, none of the comparisons was significantly different. However, one trend is demonstrated. As suggested before with the differences between the contingent and non-contingent groups, younger women with lower prestige ratings were more favorable in their evaluation of the correctly contingent leader than other women.

In general, subjects in this study who rated effective leaders as those following the prescriptions of Vroom's model were more <u>similar</u> to the subjects in the initial study. The individuals in the initial study, in should be recalled, also rated appropriately contingent leaders as

most effective. These findings are seductive. They suggest that three groups of subjects have been tapped in the initial and present studies: (a) a group in the initial study who had lower ratings on certain demographic variables and preferred participative leadership; (b) a group in the initial and present studies who scored higher on demographic variables and preferred correctly contingent leaders; and (c) a group in this study who scored higher than the other two in terms of demographic measures but who preferred correctly participative leadership.

Summary

Four hypotheses were developed about the ways in which subordinates evaluate the effectiveness of different leaders. The key elements to the model include the context within which the activity occurs, the leader's personal characteristic, the situational contingencies as described by Vroom, and the leader's behavior. A match between the context and the leader's personal characteristic will be of little interest to the observer. In this case, the situational contingencies confronting the leader will be salient. The leader will be evaluated based upon the match between his/her behavior and the prescription in terms of the observers implicit or naive theory of leadership. If on the other hand, the leader's personal characteristic fails

to match the context, a different type of evaluation occurs. The leader's characteristic and behavior are evaluated for congruence in terms of the observer's stereotyped judgements. A match between the leader's characteristic and behavior produces a favorable evaluation while a mismatch incurs a negative evaluation.

Both hypotheses 1a and 1b dealt with conditions in which the leader's gender and the context were congruent or matching. Hypothesis 1a stated that a male manager in a masculine context will be rated more positively when he behaves as prescribed by Vroom's model. Hypothesis 1a was not supported. On four effectiveness measures, subjects failed to discriminate between theoretically appropriate and inappropriate behavior.

Hypothesis 1b asserted that a female leader in a feminine context will be rated as effective when she behaves as prescribed by Vroom's model. The hypothesis was partially supported. Subjects failed to discriminate between leaders' behavior, autocratic and participative, in autocratically prescribed situations. However, subjects rated the correctly participative leader as more effective than the incorrectly autocratic leader on two of four measures of effectiveness.

Both hypotheses 1a and 1b dealt with conditions in which the leader's gender and the context were congruent. Hypotheses 2a and 2b, however, dealt with the expectations in mismatched or non-congruent conditions. Hypothesis 2a articulated that female managers in a masculine context will be rated more positively when they behave participatively than when contingent--as prescribed by Vroom. As with hypothesis 1b, the hypothesis is partially supported. Subjects did not evaluate the correctly autocratic leader as more effective than the incorrectly participative leader in an autocratically prescribed situation, but viewed the correctly participative leader as more effective on three of four effectiveness measures.

Hypothesis 2b stated that the male leader in a feminine context will be rated as more effective when he behaves autocratically than when behaving contingently. No support was provided for the hypothesis. Subjects rated the autocratic leader in an autocratically prescribed situation as no more effective than a participative leader, yet rated the correctly participative leader as more effective than the autocratic leader on all four measures of effectiveness.

Several significant interactions and main effects occurred for the four factors. The data were explored using simple main effects analyses. Three themes were consistent in the results. First, subjects in this study evaluated the

correctly participative leader as using the most effective decision process. The simple effects analysis of the decision process ratings demonstrated that the interaction of prescription and behavior was caused by the evaluation of the correctly participative leader. Additionally, there is some evidence that the subjects saw participative leaders as more competent than autocratic leaders when the leader's gender was incongruent with the context. The incongruence occurred, for example, when a male leader operated in a feminine context. This effect was the lone finding that appeared to be related to gender. Finally, the subjects in this study evaluated leaders' behavior as vastly different in masculine and feminine contexts. The correctly participative leader in a feminine context, irrespective of gender, was evaluated as especially competent and using the best decision process.

Subsequent to the main analysis, several findings of note were discovered. Subjects in the four sets of autocratic situations were separated into contingent and non-contingent groups. The contingent group evaluated the correctly autocratic leader as effective and the incorrectly participative leader as ineffective; the non-contingent group responded in the opposite manner. An analysis of the two groups revealed six differences. In comparison with those who failed to abide by contingency theory predictions,

subjects in the contingent group reported: (a) a lower income; (b) a lower age; (c) a greater number of subordinates; (d) spending less time in the organization; (e) a lower prestige rating; and (f) spending less time on the job. In general, subjects who were less powerful--less time on the job and the organization, lower prestige and income, as well as younger--were those who followed the prescriptions of contingency theory. Further analyses revealed that, in general, subjects in this study who rated effective leaders as those following the prescriptions of contingency theory were similar to the subjects in the initial study, individuals who also rated appropriately contingent leaders as most effective. The results of analyses suggest that three groups of subjects have been tapped in the initial and present studies: (a) a group in the initial study who had lower ratings on certain demographic variables and preferred participative leadership; (b) a group in the initial and present studies who scored higher on demographic variables and preferred correctly contingent leaders; and (c) a group in this study who scored higher than the other two in terms of demographic measures but who preferred participative correctly participative leadership.

Chapter IV

DISCUSSION

The hypotheses in this investigation received little support. The results, however, have important implications for the assumptions of contingency theory (Heilman and Hornstein, 1981). Therefore, this discussion will first consider the anticipated results that failed to occur, and then the findings in this investigation that are important for future work on contingency theories of leadership.

Effect of Gender

Except for the effect that occurred between gender, behavior, and context assessing the leader's competence, the leader's gender seemed to have no effect on people's responses. Such effects were predicted and would have provided a basis for refuting the assumption of interchangeability. Had they occurred, it would have demonstrated that in the case of gender difference, subordinates react and evaluate leaders with differing personal characteristics in different ways. Contrary to prediction, however, the results of this investigation cannot be used to refute the assumption of interchangeability.

At least two possible causes for the lack of gender difference exist. First, the results may be a valid picture for the subjects of this study. These MBA students may, in fact, view male and female leaders as identical in terms of their potential effectiveness. Other factors, such as their behavior and its match with the situations encountered on the job, may contribute much more to explaining why a leader is evaluated as effective than any personal characteristic to include gender.

Some studies support this conclusion i.e., that gender has little effect on subordinate evaluation of leaders (Bartol, 1974, 1975, 1978; Osborn and Vicars, 1976; Taylor and Ilgen, 1979). Bass (1981) also recently suggested that although gender is important, it is confounded with other factors in senior-subordinate relations. In addition, several studies demonstrate that sex-role stereotypes for both men and women are changing and are less robust than only a few years ago (Kravetz, 1976; Tavris, 1977). Indeed, Bass (1981) prefaces his remarks about gender differences and leadership by stating that society is in transition, and he suggests that the topic of women, and how they differ from males in terms of leadership, was of transitory consequence (p.492). Conceivably, this group of MBA students consists of members on the 'leading edge' of the transition. They may, in fact, attend little to gender

as an important distinction among leaders. The results would then follow as accurate and valid findings.

A methodological artifact is the second possible explanation for the lack of gender effect. Two causes are suggested: (a) the experimental design, and (b) the particular stories used. First, the design may have limited subjects' attention to leader's gender. Because the design was a between-subjects factorial with sixteen conditions, each subject read only one, single-page story. It is conceivable that the single exposure reduced the salience of gender by eliminating any experimentally provided comparison. In the closed context of the experiment, subjects may have artificially but obediently eliminated real life comparisons from their minds. This possibility highlights the advantages of repeated-measures designs. It is interesting to note that the initial investigation (Hornstein, Heilman, and Cage, in preparation) used a within-subjects design with excellent results.

A second methodological artifact that potentially affected the outcomes for gender is the operational definition and manipulation of gender. Quite simply, the manipulation may have been buried in a mound of other information. The gender difference in every story was provided by the leader's name and referents--he, she, himself, herself, etc. It is entirely plausible that the

subjects were so actively engaged in locating and analyzing the situational contingencies that they either failed to pay attention to the leader's gender or forgot it while responding to dependent variable measures. Normal interactions between leaders and subordinates are face-to-face interactions--a person backs up a name. To more closely simulate actual interactions, it may be useful to make the leader's gender unmistakable and remarkable. A picture of a male or female can be placed in the experimental instrument to show the acting subordinate his/her 'leader.' The picture would clearly point to the permanent personal characteristics--male or female--and help to create a gender effect. Of course, this tactic may produce artifacts as a consequence of experimental demands. It may create an effect for an especially salient stimulus introduced by the experimenter, while the same result may fail to occur in a field setting (Osborn and Vicars, 1976).

Reaction to Autocratic Leaders

A consistent, yet thoroughly unanticipated finding of the study was a lack of preference for autocratic leaders. The appropriately autocratic leader was not viewed as more effective than an inappropriately participative leader on all effectiveness measures. These results are surprising; appropriately autocratic leaders were favored in the initial

study (Hornstein, Heilman, and Cage, in preparation).

Two potential causes for the assessments of appropriately autocratic leaders appear evident: (a) the between-subjects design, and (b) the particular subjects in this study. The effects of the stories may have been affected by the between-subjects design. That is, the serial exposure to autocratic and participative stories in the initial study provided a more informed basis for evaluating autocratic and participative leader behavior. Subjects would read stories in which autocratic behavior was theoretically preferable to participation, and vica versa.

On the other hand, this possibility seems unlikely because the stories themselves appeared to produce the desired result in Vroom's studies, the initial study, and the pilot (see the data provided in Chapter II). The strongest argument against believing that the single exposure to the stories induced a rejection of autocratic leaders comes from the subsequent analysis. Some subgroups did, in fact, respond as anticipated. These results and their implications are discussed below.

The second potential cause for the rejection of autocratic leadership lies with the subjects themselves. Assuming that the stories provided are appropriate experimental manipulations, the subjects in this study may reject autocratic behavior or the theoretical conditions

that mandate its use. That is, the values of these subjects may reject autocratic behavior irrespective of the normative theoretical constraints suggested by Vroom. This effect may be caused by the subjects' experience in leader-subordinate relations.

Recall that the subjects in this study were MBA candidates in business schools. They were well educated, made very adequate salaries, and worked in an array of industrial/business settings. Their experiences may have been shaped by a so-called 'MBA ethic': a belief in others' worth and the advantages of participative, team-based decision processes. Additionally, because of their level in organizations, subjects in this group, more than the population at large, may be exposed to situations that preclude using autocratic processes. Vroom and Yetton (1973) state that time constraints, one potential justification for autocratic processes, appear to be infrequent in managerial decision-making (pp.75-6). Possibly, the nature of these subjects' day-to-day work tasks require the benefits of participation (shared information, acceptance of the decision by subordinates, etc.) more than the benefits of autocratic processes.

The failure to obtain either gender effects or comparatively high effectiveness ratings for appropriately autocratic leaders is certainly important, but it is by no

means clear that their absence is firm evidence for accepting the assumption of interchangeability. Further important findings are based on obtained results and are discussed in the following section.

Preference Changes with Prescription

Subjects responded differently in situations in which autocratic and participative decision-making processes were prescribed. The hypothesized interaction of prescription and behavior for effectiveness measures occurred in several participative but in no autocratic situations. A plausible explanation is framed in terms of these subjects' implicit theories of leadership. These subjects' experiences appear to be vastly different from the experiences of the population at large. They are well educated, well paid, and work in a wide variety of industrial settings. Their experiences have been shaped by participative, team-based processes in organizations affected by job enrichment and 'humanized' environments. These experiences probably affect these subjects' implicit expectations of leaders and their behaviors: their implicit theories of leadership. Conceivably, subordinates implicitly discriminated between those decisions that are independent of their acceptance and those that rest solely upon unrestrained cooperation and enthusiasm. They appear to accept participative

decision-making processes when the conditions favor their use. Interestingly, these subjects did not prefer the appropriately participative leader throughout all conditions. For example, the appropriately participative leader was viewed as using the most effective decision process irrespective of the context. Yet, in terms of the decision quality and the leader's competence, the correctly participative leader was viewed as effective only in feminine contexts. The change of preference with context bears discussion.

Preference Changes with Context

The results of the investigation demonstrate that subjects' evaluations of a leader behavior varied in response to changes in context. In general, subjects evaluated the leader as most competent and making the highest quality decision when correctly participative in a feminine context (Chapter III, Tables 18 and 19).

It is reasonable to believe that context formed a stereotyped or normative backdrop for assessing leaders' behavior. The contextual cues highlighted the salience of some criteria for evaluating leader behavior. Conceivably, their stereotyped previews of the organization's climate, its functions, and standard operating procedures all affected the perception of a leader's behavior in that

context. Some contexts, for example, are conducive to autocratic leadership processes and the norms of the organization adjust to favor more autocratic processes. In such an environment, a leader's participative behavior, though theoretically appropriate, will be perceived and evaluated by subordinates as 'out of place' if not bizarre. On the other hand, countless examples can be cited of organizations where autocratic procedures, though theoretically correct, are likely to be perceived as counter-normative. This explanation underscores the importance of understanding organizational climate and members' expectations on perceptions of leader behavior and has a bearing upon the assumption of interchangeable context discussed by Heilman and Hornstein (1981). Leaders may be required to alter their range of behavior as they vary their context because of changing subordinate expectations.

The interpretation of contextual effects, though critical in this investigation, must be qualified. The results may be confounded by the manner in which context was manipulated. The experimental manipulation for context consisted of two 'masculine' and two 'feminine' occupations. These occupations, however, were not fully crossed through the 2 X 2 X 2 X 2 factorial. It is conceivable, for example, that subjects responded to the particular stereotyped attributes of any one of the occupations

differently from the way they did for any other. Although the confound potentially contaminated the results, the pilot data suggested that, in the case of the four occupations that were finally used, subjects responded in line with expectations. That is, subjects in the pilot study rated the two masculine occupations as 'masculine' and the two feminine occupations as 'feminine' on nine-point scales. Moreover, the two occupations within each category, masculine and feminine, were rated equivalently. These findings offer no support for the contention that the confound, though present, affected these data.

Subpopulation Differences

While investigating the failure of subjects to endorse theoretically appropriate autocratic leaders, subpopulation differences were identified. Three different groups were differentiated among subjects who participated in the initial and present studies. The pattern suggests that two groups reject the effectiveness of any form of autocratic behavior. One of them endorses participation regardless of its appropriateness, the other only when it is appropriate. The third group said theoretically contingent leaders were effective and non-contingent leaders were not. The first group, identified in the results of the initial study, consisted of subjects who prefer participation regardless of

situational constraints. The group was characterized by its 'lower' standing on several demographic variables: income, occupational prestige, age, and number of subordinates. The second group included subjects in the present study who preferred participation in appropriate situations yet rejected autocratic behavior. The group was characterized by its 'higher' standing on demographic variables: age, time in the organization, prestige, and time on the job. The third group, identified in both studies, consisted of those subjects who rated contingent leaders behavior as most effective. This group was intermediate between the other two groups on demographic measures.

Several possible causes can explain the relationship between the subjects' responses and their standing on demographic measures. First, there is reading ability. Those in the lower demographic group who indiscriminately preferred participation may also have lower levels of reading comprehension than those in the other two groups. Instead of responding to the situational constraints as suggested by Vroom, these subjects may have responded only to the leader's final behavior. They were lost in the stories complexity, but saw and understood the last few sentences which were deliberately set off from the rest and completely capitalized. Additionally, for this group with its lower status in the work hierarchy, the preference for

participation may reflect their desire for greater satisfaction on the job, and possibly, the novelty of a participative leader.

Following this line of thought, at each of the three levels or groups, individuals may work for vastly different reasons. Members of the lower group may work merely for security; they are not 'followers'--active and willing participants--but subordinates based on a structural relationship with a superior. These people are largely minority; they achieve a measure of security with participation that they would not have with another, possibly biased leader/manager. Additionally, they are not personally linked with the goals of the organization and assume that they have little chance for promotion or advancement. Hence, their interests would be met most readily by a boss who behaved in ways that increased their satisfaction and affiliation while on the job. In other words, a participative leader would serve to increase subordinate satisfaction; the literature supports this contention (Preston and Heinz, 1949; Ziller, 1954).

The assumptions and interests of the middle group are different. The members of this 'contingent' group are more powerful than those in the first. Their own interests may be tied to the organization and its success; the members of this group, who haven't quite 'made it' to the degree that

the third group has, are aspiring 'followers.' They view the most effective processes as personally beneficial since their goals and those of the organization are linked. Theoretically, the prescription of Vroom's model is accepted since the outcomes best serve the interests of both individual and organization. Group members can tolerate an autocratic boss since to do so is in their best interests.

The same can not be said for the third or 'upper' group. Members of this cluster are firmly entrenched in the organization. They are more powerful, more creative, of higher status, and have a different set of experiences to guide their expectations. They do not expect to be led; they expect to lead or, at a minimum, participate. Autocratic leadership behavior is never perceived as effective by this group; they have crucial information and are concerned with less structured, long-range problems facilitated by participative processes. These people are not indiscriminately endorsing participative behavior, but they always disapprove of behavior that is autocratic.

The implications of the these subpopulations are clear. Subordinate characteristics must be considered by leaders in deciding upon the leadership process to employ. These characteristics appear to be associated with different expectations and implicit theories of leadership which may eventually determine the acceptance of a leader and his/her

eventual effectiveness.

Implications for Future Research

The results of the present study suggest several implications for future research on the assumptions of contingency theory. First, clear advantages exist for using repeated measures/within-subjects designs for future studies. Serial exposure to situations and leaders' behaviors provide a basis for comparison and also more closely approximate normal leader-subordinate interaction. The more powerful designs will stand a better chance, additionally, of invalidating the alternative hypothesis regarding the effects of particular stories. Second, the issue of leader interchangeability is not closed due to possible confounds. Future studies on the assumption are advised to use more potent means to operationally define the manipulated personal characteristics e.g., photographs. Also, other personal characteristics, to include race, would provide important information about the perceptions of subordinates based on leader characteristics. Third, this investigation identified the effect of contextual cues on the perception of leaders. A series of studies manipulating ranges of contextual cues can provide important information about the of interchangeable contexts. Lastly, and most importantly, the findings of this study provide support for

the contention that subordinates carry an implicit or naive theory of leadership. The results have, furthermore, suggested that these naive theories vary among individuals in ways that may be systematically associated with people's demographic characteristics. Future research should be conducted with the purpose of further identifying and specifying the apparent relationship of demographics with responses to a leader's behavior.

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APPENDIX A: Factor Analysis Table

TABLE 1

Factor Loadings of Rating Scales from Factor Analysis with Varimax Rotation

Scale	Factors		
	Likeability	Process	Potency
Good-Bad	0.23018	0.80023	0.21754
Ineffective-Effective	0.12808	0.69297	0.11448
Lower Morale-Raise Morale	0.69402	0.41630	-0.08700
Appropriate-Inappropriate	0.13507	0.69031	0.24787
Uses Time Poorly-Well	0.13273	0.39185	0.43383
Wise-Foolish	0.16906	0.77068	0.31798
Low Quality-High Quality	0.19156	0.66767	0.28852
Accepted-Rejected	0.45381	0.48706	-0.07353
Good-Bad for Organization	0.14438	0.74436	0.21410
Likeable-Not Likeable	0.78487	0.25063	0.02846
Poor Leader-Good Leader	0.33153	0.49965	0.50411
Stong-Weak	-0.19098	0.20347	0.71859
Passive-Active	-0.10293	0.17960	0.74419
Intelligent-Unintelligent	0.23730	0.35416	0.48476
Indecisive-Decisive	-0.25076	0.15895	0.71302
Cold-Warm	0.79981	0.04176	0.12539
Competent-Incompetent	0.08228	0.38600	0.59335
Tough-Soft	-0.54203	0.09399	0.54251
Lazy-Hard Working	0.10243	0.04882	0.72191
Flexible-Inflexible	0.77023	0.25585	-0.06583
Uncollaborative-Collaborative	0.62098	0.19291	-0.05765

APPENDIX B: Subsequent Analysis

TABLE 1

Means and Standard Deviations for Ratings of the Decision Process: Female Subjects

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	7.200 (1.131) 5	3.267 (1.858) 3	5.457 (2.268) 7	5.333 (1.527) 3	4.971 (2.421) 7	3.743 (1.153) 7	5.229 (1.598) 7	3.950 (2.744) 4
G	4.550 (1.449) 8	6.500 (.424) 2	5.450 (1.585) 8	6.240 (1.410) 5	5.050 (1.603) 4	5.520 (1.171) 5	4.800 (.849) 2	--- --- 0

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 2

Means and Standard Deviations for Ratings of the Leader's Competence: Female Subjects

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	6.200 (.960) 5	4.750 (1.772) 4	5.000 (2.236) 7	3.333 (.577) 3	5.833 (2.016) 8	4.333 (1.782) 8	4.905 (2.394) 7	5.063 (1.772) 4
G	4.960 (1.918) 9	7.167 (.236) 2	6.000 (2.000) 8	5.600 (2.881) 5	6.000 (1.515) 4	5.800 (.650) 5	5.500 (.707) 2	7.333 (0.) 1

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 3

Means and Standard Deviations for Ratings of Decision Quality: Female Subjects

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	6.800 (.447) 5	3.667 (2.517) 3	5.000 (2.236) 7	3.333 (.577) 3	5.750 (2.053) 8	4.375 (2.066) 8	6.000 (1.414) 7	4.500 (3.109) 4
G	4.556 (2.068) 9	7.000 (0.0) 2	6.000 (2.000) 8	5.600 (2.881) 5	6.500 (1.291) 4	6.200 (1.643) 5	4.000 (0.0) 2	9.000 (0.0) 1

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

TABLE 4

Means and Standard Deviations for Ratings of the Benefit for the Organization: Female Subjects

	MASCULINE				FEMININE			
	MALE		FEMALE		MALE		FEMALE	
	A	G	A	G	A	G	A	G
A	6.600 (1.517) 5	5.750 (2.217) 4	4.429 (2.879) 7	3.000 (1.732) 3	5.375 (1.927) 8	3.500 (2.070) 8	6.286 (1.118) 7	4.750 (.957) 4
G	5.667 (2.000) 9	7.500 (.707) 2	6.250 (1.832) 8	7.000 (1.581) 5	6.000 (1.155) 4	5.600 (2.702) 5	4.500 (2.121) 2	9.000 (0.0) 1

Notes: 1. The two rows refer to the leader's behavior, while the eight columns refer to the prescription.

2. Numbers in parentheses are standard deviations.

APPENDIX C: Instructions, Experimental Manipulations, and Demographic Data Sheet

This questionnare is part of a joint Columbia University and New York University project concerned with understanding behavior in the workplace. The questionnaire contains one story that describes a manager who has a decision to make. As you read the story, imagine that you work for this manager. Both your boss's name and job title, and your job title appear at the top of the story.

Following the story is a page of questions asking for your reactions to your boss's decision. There are no right or wrong answers. Nine-point scales are provided. Circle the one number that is closest to your answer. For example, if you were asked to rate how you feel today:

very happy 1 2 3 4 5 6 7 8 9 very unhappy

If you are very happy, you should circle "1". If you are neither very unhappy nor very happy, you should circle "5". If you are very unhappy, you should circle "9". Remember, there are no 'right' or 'wrong' answers.

Your responses to the story will be kept strictly CONFIDENTIAL. You will not be asked to give your name.

Thank you for your cooperation.

The manager in the following story has to make a decision. S/he has two options in making this decision. The manager can:

1. MAKE THE DECISION ALONE.

2. GET THE SUBORDINATES TOGETHER AND HAVE THE GROUP COME TO A DECISION.

At the end of the story, the manager's choice between these two options is presented. We are interested in your reactions to this choice and what it tells you about that manager. We recognize that you have minimal information about the manager and the situation. Nonetheless, we are interested in your BEST GUESS in response to each question. Please answer every question.

Summary Sheet for the Instruments

CASE #	CONTEXT	LDR GENDER	PRESCRIPTION	BEHAVIOR
1111	Masculine	Male	AI	AI
1112	"	"	AI	GII
1121	"	"	GII	AI
1122	"	"	GII	AI
1211	Masculine	Female	AI	AI
1212	"	"	AI	GII
1221	"	"	GII	AI
1222	"	"	GII	GII
2111	Feminine	Male	AI	AI
2112	"	"	AI	GII
2121	"	"	GII	AI
2122	"	"	GII	GII
2211	Feminine	Female	AI	AI
2212	"	"	AI	GII
2221	"	"	GII	AI
2222	"	"	GII	GII

Note: AI refers to an AUTOCRATIC prescription or behavior, while GII refers to a PARTICIPATIVE prescription or behavior.

CASE 1111

YOUR BOSS: Paul Jackson, Systems Analyst
YOUR POSITION: Assistant Systems Analyst

Your boss is the senior systems analyst in charge of an operations research section in a medium-sized manufacturing company. You are one of six assistant analysts who work for him. Your boss must now estimate your expected work rate in order to schedule the introduction of new computerized equipment to the section. The changes require the section to complete most of its work prior to the addition of the new machines.

Your boss knows the normal work rate of the section and has all the data he needs to compute the likely rate of speed in the foreseeable future. There is always some uncertainty associated with these estimates stemming from factors such as unexpected design contracts which cannot be forecast with complete accuracy. Your boss has calculated the earliest and the latest times at which he believes the bulk of the upcoming analysis projects will be completed. He must make a decision within the hour between these estimates. It is important that his estimate be as accurate as possible; an underestimate will result in incompleted analyses of assigned projects when the new equipment arrives, and an overestimate will result in idle analysts.

Your boss, you, and the other assistant analysts stand to receive a bonus if your boss's estimate is correct. Your boss knows from bitter experience that you and the other analysts often exaggerate your ability to quickly complete assigned jobs, but often complete such tasks behind schedule.

YOUR BOSS, THE SYSTEMS ANALYST, HAS CONSIDERED THE PROBLEM ON HIS OWN. HE PLANS TO MAKE A DECISION, BY HIMSELF, BASED ON THE INFORMATION THAT HE HAS.

CASE 1112

YOUR BOSS: Paul Jackson, Systems Analyst
YOUR POSITION: Assistant Systems Analyst

Your boss is the senior systems analyst in charge of an operations research section in a medium-sized manufacturing company. You are one of six assistant analysts who work for him. Your boss must now estimate your expected work rate in order to schedule the introduction of new computerized equipment to the section. The changes require the section to complete most of its work prior to the addition of the new machines.

Your boss knows the normal work rate of the section and has all the data he needs to compute the likely rate of speed in the foreseeable future. There is always some uncertainty associated with these estimates stemming from factors such as unexpected design contracts which cannot be forecast with complete accuracy. Your boss has calculated the earliest and the latest times at which he believes the bulk of the upcoming analysis projects will be completed. He must make a decision within the hour between these estimates. It is important that his estimate be as accurate as possible; an underestimate will result in incompleted analyses of assigned projects when the new equipment arrives, and an overestimate will result in idle analysts.

Your boss, you, and the other assistant analysts stand to receive a bonus if your boss's estimate is correct. Your boss knows from bitter experience that you and the other analysts often exaggerate your ability to quickly complete assigned jobs, but often complete such tasks behind schedule.

YOUR BOSS, THE SYSTEMS ANALYST, HAS DISCUSSED THE PROBLEM WITH ALL THE ANALYSTS TOGETHER AS A GROUP, ENCOURAGING THEM TO GENERATE ALTERNATIVES AND REACH AGREEMENT ON A DECISION. HE PLANS TO ACCEPT ANY DECISION WHICH HAS THE SUPPORT OF THE ENTIRE GROUP.

CASE 1121

YOUR BOSS: Mark Palmer, Agricultural Scientist
YOUR POSITION: Assistant Agricultural Scientist

Your boss is the agricultural scientist at a small southwestern agricultural research firm. He has worked there for the past 25 years. Just recently, you and your colleague were hired as assistant agricultural scientists/researchers after completing your B.A.s at a nearby university. Your boss has just learned that he will be responsible for a large research project from your principal client. The project will be divided into six equivalent sections; you, your boss, and your colleague will each undertake two sections.

It is now two months before the start of the project. Your boss has had one meeting with the members of his "team"; it was the first time that he had done more than exchange greetings with you in the hall. He was impressed by the outline for the research approach that you and your colleague both advocate. In many ways the outline differs from the approach that your boss has developed over the years, but it was clear to him that this difference was a result of your academic training rather than a lack of research experience.

Your boss was surprised by your outspoken opposition to a common research design and common evaluation criteria for all six sections. He explained that this practice is a matter of long-standing company policy with regard to research conducted for clients. You and your colleague accepted this policy but gave your boss the impression that his explanation had not affected your views on the subject.

Today your boss received a phone call from the firm's client, who wanted to know which research design would be used for the project, as the design affects his crop spraying and use of fertilizer. After telling the client that his reply will be in by the end of the week, your boss reviewed the alternatives. There are at least six research designs available, but of these, only three or four are worthy of any consideration. His previous use of each approach has left him with a fairly strong preference for one of them.

He strongly believes that it is important for the client to have a design towards which the researcher is confident and committed. This is particularly true when the scientist has little field research experience. The major factor which bothers him and prevents him from making an immediate decision is his concern over two conflicting points: (1) the firm's policy requires a common design and evaluation procedure, and (2) the two of you might be more successful if allowed to use the design of your choice.

YOUR BOSS, THE AGRICULTURAL SCIENTIST, HAS CONSIDERED PROBLEM ON HIS OWN. HE PLANS TO MAKE A DECISION, BY HIMSELF, BASED ON THE INFORMATION THAT HE HAS.

CASE 1122

YOUR BOSS: Mark Palmer, Agricultural Scientist
YOUR POSITION: Assistant Agricultural Scientist

Your boss is the agricultural scientist at a small southwestern agricultural research firm. He has worked there for the past 25 years. Just recently, you and your colleague were hired as assistant agricultural scientists/researchers after completing your B.A.s at a nearby university. Your boss has just learned that he will be responsible for a large research project from your principal client. The project will be divided into six equal sections; you, your boss, and your colleague will each undertake two sections.

It is now two months before the start of the project. Your boss has had one meeting with the members of his "team"; it was the first time that he had done more than exchange greetings with you in the hall. He was impressed by the outline for the research approach that you and your colleague both advocate. In many ways the outline differs from the approach that your boss has developed over the years, but it was clear to him that this difference was a result of your academic training rather than a lack of research experience.

Your boss was surprised by your outspoken opposition to a common research design and common evaluation criteria for all six sections. He explained that this practice is a matter of long-standing company policy with regard to research conducted for clients. You and your colleague accepted this policy but gave your boss the impression that his explanation had not affected your views on the subject.

Today your boss received a phone call from the firm's client, who wanted to know which research design would be used for the project, as the design affects his crop spraying and use of fertilizer. After telling the client that his reply will be in by the end of the week, your boss reviewed the alternatives. There are at least six research designs available, but of these, only three or four are worthy of any consideration. His previous use of each approach has left him with a fairly strong preference for one of them.

He strongly believes that it is important for the client to have a design towards which the researcher is confident and committed. This is particularly true when the scientist has little field research experience. The major factor which bothers him and prevents him from making an immediate decision is his concern over two conflicting points: (1) the firm's policy requires a common design and evaluation procedure, and (2) the two of you might be more successful if allowed to use the design of your choice.

YOUR BOSS, THE AGRICULTURAL SCIENTIST, HAS DISCUSSED THE PROBLEM WITH ALL THE ASSISTANT SCIENTISTS TOGETHER AS A GROUP, ENCOURAGING THEM TO GENERATE ALTERNATIVES AND REACH AGREEMENT ON A DECISION. HE PLANS TO ACCEPT ANY DECISION WHICH HAS THE SUPPORT OF THE ENTIRE GROUP.

CASE 1211

YOUR BOSS: Paula Jackson, Systems Analyst
YOUR POSITION: Assistant Systems Analyst

Your boss is the senior systems analyst in charge of an operations research section in a medium-sized manufacturing company. You are one of six assistant analysts who work for her. Your boss must now estimate your expected work rate in order to schedule the introduction of new computerized equipment to the section. The changes require the section to complete most of its work prior to the addition of the new machines.

Your boss knows the normal work rate of the section and has all the data she needs to compute the likely rate of speed in the foreseeable future. There is always some uncertainty associated with these estimates stemming from factors such as unexpected design contracts which cannot be forecast with complete accuracy. Your boss has calculated the earliest and the latest times at which she believes the bulk of the upcoming analysis projects will be completed. She must make a decision within the hour between these estimates. It is important that her estimate be as accurate as possible; an underestimate will result in incompleted analyses of assigned projects when the new equipment arrives, and an overestimate will result in idle analysts.

Your boss, you, and the other assistant analysts stand to receive a bonus if your boss's estimate is correct. Your boss knows from bitter experience that you and the other analysts often exaggerate your ability to quickly complete assigned jobs, but often complete such tasks behind schedule.

YOUR BOSS, THE SYSTEMS ANALYST, HAS CONSIDERED THE PROBLEM ON HER OWN. SHE PLANS TO MAKE A DECISION, BY HERSELF, BASED ON THE INFORMATION THAT SHE HAS.

CASE 1212

YOUR BOSS: Paula Jackson, Systems Analyst
YOUR POSITION: Assistant Systems Analyst

Your boss is the senior systems analyst in charge of an operations research section in a medium-sized manufacturing company. You are one of six assistant analysts who work for her. Your boss must now estimate your expected work rate in order to schedule the introduction of new computerized equipment to the section. The changes require the section to complete most of its work prior to the addition of the new machines.

Your boss knows the normal work rate of the section and has all the data she needs to compute the likely rate of speed in the foreseeable future. There is always some uncertainty associated with these estimates stemming from factors such as unexpected design contracts which cannot be forecast with complete accuracy. Your boss has calculated the earliest and the latest times at which she believes the bulk of the upcoming analysis projects will be completed. She must make a decision within the hour between these estimates. It is important that her estimate be as accurate as possible; an underestimate will result in incompleted analyses of assigned projects when the new equipment arrives, and an overestimate will result in idle analysts.

Your boss, you, and the other assistant analysts stand to receive a bonus if your boss's estimate is correct. Your boss knows from bitter experience that you and the other analysts often exaggerate your ability to quickly complete assigned jobs, but often complete such tasks behind schedule.

YOUR BOSS, THE SYSTEMS ANALYST, HAS DISCUSSED THE PROBLEM WITH ALL THE ANALYSTS TOGETHER AS A GROUP, ENCOURAGING THEM TO GENERATE ALTERNATIVES AND REACH AGREEMENT ON A DECISION. SHE PLANS TO ACCEPT ANY DECISION WHICH HAS THE SUPPORT OF THE ENTIRE GROUP.

CASE 1221

YOUR BOSS: Marcia Palmer, Agricultural Scientist
YOUR POSITION: Assistant Agricultural Scientist

Your boss is the agricultural scientist at a small southwestern agricultural research firm. She has worked there for the past 25 years. Just recently, you and your colleague were hired as assistant agricultural scientists/researchers after completing your B.A.s at a nearby university. Your boss has just learned that she will be responsible for a large research project from your principal client. The project will be divided into six equivalent sections; you, your boss, and your colleague will each undertake two sections.

It is now two months before the start of the project. Your boss has had one meeting with the members of her "team"; it was the first time that she had done more than exchange greetings with you in the hall. She was impressed by the outline for the research approach that you and your colleague both advocate. In many ways the outline differs from the approach that your boss has developed over the years, but it was clear to her that this difference was a result of your academic training rather than a lack of research experience.

Your boss was surprised by your outspoken opposition to a common research design and common evaluation criteria for all six sections. She explained that this practice is a matter of long-standing company policy with regard to research conducted for clients. You and your colleague accepted this policy but gave your boss the impression that her explanation had not affected your views on the subject.

Today your boss received a phone call from the firm's client, who wanted to know which research design would be used for the project, as the design affects his crop spraying and use of fertilizer. After telling the client that her reply will be in by the end of the week, your boss reviewed the alternatives. There are at least six research designs available, but of these, only three or four are worthy of any consideration. Her previous use of each approach has left her with a fairly strong preference for one of them.

She strongly believes that it is important for the client to have a design towards which the researcher is confident and committed. This is particularly true when the scientist has little field research experience. The major factor which bothers her and prevents her from making an immediate decision is her concern over two conflicting points: (1) the firm's policy requires a common design and evaluation procedure, and (2) the two of you might be more successful if allowed to use the design of your choice.

YOUR BOSS, THE AGRICULTURAL SCIENTIST, HAS CONSIDERED PROBLEM ON HER OWN. SHE PLANS TO MAKE A DECISION, BY HERSELF, BASED ON THE INFORMATION THAT SHE HAS.

CASE 1222

YOUR BOSS: Marcia Palmer, Agricultural Scientist
YOUR POSITION: Assistant Agricultural Scientist

Your boss is the agricultural scientist at a small southwestern agricultural research firm. She has worked there for the past 25 years. Just recently, you and your colleague were hired as assistant agricultural scientists/researchers after completing your B.A.s at a nearby university. Your boss has just learned that she will be responsible for a large research project from your principal client. The project will be divided into six equivalent sections; you, your boss, and your colleague will each undertake two sections.

It is now two months before the start of the project. Your boss has had one meeting with the members of her "team"; it was the first time that she had done more than exchange greetings with you in the hall. She was impressed by the outline for the research approach that you and your colleague both advocate. In many ways the outline differs from the approach that your boss has developed over the years, but it was clear to her that this difference was a result of your academic training rather than a lack of research experience.

Your boss was surprised by your outspoken opposition to a common research design and common evaluation criteria for all six sections. She explained that this practice is a matter of long-standing company policy with regard to research conducted for clients. You and your colleague accepted this policy but gave your boss the impression that her explanation had not affected your views on the subject.

Today your boss received a phone call from the firm's client, who wanted to know which research design would be used for the project, as the design affects his crop spraying and use of fertilizer. After telling the client that her reply will be in by the end of the week, your boss reviewed the alternatives. There are at least six research designs available, but of these, only three or four are worthy of any consideration. Her previous use of each approach has left her with a fairly strong preference for one of them.

She strongly believes that it is important for the client to have a design towards which the researcher is confident and committed. This is particularly true when the scientist has little field research experience. The major factor which bothers her and prevents her from making an immediate decision is her concern over two conflicting points: (1) the firm's policy requires a common design and evaluation procedure, and (2) the two of you might be more successful if allowed to use the design of your choice.

YOUR BOSS, THE AGRICULTURAL SCIENTIST, HAS DISCUSSED THE PROBLEM WITH ALL THE ASSISTANT SCIENTISTS TOGETHER AS A GROUP, ENCOURAGING THEM TO GENERATE ALTERNATIVES AND REACH AGREEMENT ON A DECISION. SHE PLANS TO ACCEPT ANY DECISION WHICH HAS THE SUPPORT OF THE ENTIRE GROUP.

CASE 2111

YOUR BOSS: Paul Jackson, Dental Hygienist
YOUR POSITION: Assistant Dental Hygienist

Your boss is the senior dental hygienist in charge of a large dental clinic. You are one of six assistant hygienists who work for him. Your boss must now estimate your group's expected use of dental supplies in order to schedule deliveries to the clinic.

Your boss knows the nature of the patient load and he has all of the data he needs to compute your likely usage rate. There is always some uncertainty connected with such estimates stemming from emergencies and an influx of new patients which cannot be forecast with complete accuracy. Your boss has calculated the least and the most supplies necessary for the quarter. He must make a a decision within the hour between these estimates. It is important that his estimates be as accurate as possible; an underestimate will render the clinic unable to handle the patient load, and an overestimate results in tying up expensive materials for a period of time before they are to be used.

Your boss, you, and the other assistant hygienists stand to receive a bonus if your boss's estimate is correct. Your boss knows from bitter experience that you and the other hygienists often exaggerate requirements to eliminate any possibility that you would ever be held up by a possible lack of supplies, but often fail to use these supplies.

YOUR BOSS, THE DENTAL HYGIENIST, HAS CONSIDERED THE PROBLEM ON HIS OWN. HE PLANS TO MAKE A DECISION, BY HIMSELF, BASED ON THE INFORMATION THAT HE HAS.

CASE 2112

YOUR BOSS: Paul Jackson, Dental Hygienist
YOUR POSITION: Assistant Dental Hygienist

Your boss is the senior dental hygienist in charge of a large dental clinic. You are one of six assistant hygienists who work for him. Your boss must now estimate your group's expected use of dental supplies in order to schedule deliveries to the clinic.

Your boss knows the nature of the patient load and he has all of the data he needs to compute your likely usage rate. There is always some uncertainty connected with such estimates stemming from emergencies and an influx of new patients which cannot be forecast with complete accuracy. Your boss has calculated the least and the most supplies necessary for the quarter. He must make a a decision within the hour between these estimates. It is important that his estimates be as accurate as possible; an underestimate will render the clinic unable to handle the patient load, and an overestimate results in tying up expensive materials for a period of time before they are to be used.

Your boss, you, and the other assistant hygienists stand to receive a bonus if your boss's estimate is correct. Your boss knows from bitter experience that you and the other hygienists often exaggerate requirements to eliminate any possibility that you would ever be held up by a possible lack of supplies, but often fail to use these supplies.

YOUR BOSS, THE DENTAL HYGIENIST, HAS DISCUSSED THE PROBLEM WITH ALL THE HYGIENISTS TOGETHER AS A GROUP, ENCOURAGING THEM TO GENERATE ALTERNATIVES AND REACH AGREEMENT ON A DECISION. HE PLANS TO ACCEPT ANY DECISION WHICH HAS THE SUPPORT OF THE ENTIRE GROUP.

CASE 2121

YOUR BOSS: Mark Palmer, Kindergarten Teacher
YOUR POSITION: Assistant Kindergarten Teacher

Your boss is the senior kindergarten school teacher at a large urban school. He has taught there for the past 25 years. Just recently, you and your colleague were hired as assistant kindergarten teachers after completing your B.A.s at a nearby university. Next semester, your boss will be responsible for the large kindergarten class that will be taken by about 60 children. The class will be taught in six equal sections; you, your boss, and your colleague will each teach two sections.

It is now two months before the start of the semester. Your boss has had one meeting with the members of his "team"; it was the first time that he had done more than exchange greetings with you in the hall. He was impressed by the outline for the class that you and your colleague both advocate. In many ways the outline differs from the approach that your boss has developed over the years, but it was clear to him that this difference was a result of your training rather than a lack of teaching experience.

Your boss was surprised by your outspoken opposition to a common set of educational materials for all six sections. He explained that this practice is a matter of long-standing school policy with regard to the kindergarten classes. You and your colleague accepted that this policy would apply to the course but gave your boss the impression that his explanation had not affected your views on the subject.

Today your boss received a phone call from the local bookstore wanting to know which materials to order for the class. After telling him that the order will be in by the end of the week, he reviewed the alternatives. There are at least a dozen sets of materials available, but of these, only three or four are worthy of any consideration. His previous use of each set has left him with a fairly strong preference for one of them.

He strongly believes that it is important for the instructional materials to be both good for the children and to have the confidence and commitment of the teachers. This is particularly true when the instructor has little teaching experience. The major factor which bothers him and prevents him from making an immediate decision is his concern over two conflicting points: (1) school policy requires a common set of materials, and (2) the two of you might be more successful if allowed to use the resources of your choice.

YOUR BOSS, THE KINDERGARTEN TEACHER, HAS CONSIDERED THE PROBLEM ON HIS OWN. HE PLANS TO MAKE A DECISION, BY HIMSELF, BASED ON THE INFORMATION THAT HE HAS.

CASE 2122

YOUR BOSS: Mark Palmer, Kindergarten Teacher
YOUR POSITION: Assistant Kindergarten Teacher

Your boss is the senior kindergarten school teacher at a large urban school. He has taught there for the past 25 years. Just recently, you and your colleague were hired as assistant kindergarten teachers after completing your B.A.s at a nearby university. Next semester, your boss will be responsible for the large kindergarten class that will be taken by about 60 children. The class will be taught in six equal sections; you, your boss, and your colleague will each teach two sections.

It is now two months before the start of the semester. Your boss has had one meeting with the members of his "team"; it was the first time that he had done more than exchange greetings with you in the hall. He was impressed by the outline for the class that you and your colleague both advocate. In many ways the outline differs from the approach that your boss has developed over the years, but it was clear to him that this difference was a result of your training rather than a lack of teaching experience.

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Today your boss received a phone call from the local bookstore wanting to know which materials to order for the class. After telling him that the order will be in by the end of the week, he reviewed the alternatives. There are at least a dozen sets of materials available, but of these, only three or four are worthy of any consideration. His previous use of each set has left him with a fairly strong preference for one of them.

He strongly believes that it is important for the instructional materials to be both good for the children and to have the confidence and commitment of the teachers. This is particularly true when the instructor has little teaching experience. The major factor which bothers him and prevents him from making an immediate decision is his concern over two conflicting points: (1) school policy requires a common set of materials, and (2) the two of you might be more successful if allowed to use the resources of your choice.

YOUR BOSS, THE KINDERGARTEN TEACHER, HAS CONSIDERED THE PROBLEM WITH ALL THE ASSISTANT TEACHERS TOGETHER AS A GROUP, ENCOURAGING THEM TO GENERATE ALTERNATIVES AND REACH AGREEMENT ON A DECISION. HE PLANS TO ACCEPT ANY DECISION WHICH HAS THE SUPPORT OF THE ENTIRE GROUP.

CASE 2211

YOUR BOSS: Paula Jackson, Dental Hygienist
YOUR POSITION: Assistant Dental Hygienist

Your boss is the senior dental hygienist in charge of a large dental clinic. You are one of six assistant hygienists who work for her. Your boss must now estimate your group's expected use of dental supplies in order to schedule deliveries to the clinic.

Your boss knows the nature of the patient load and she has all of the data she needs to compute your likely usage rate. There is always some uncertainty connected with such estimates stemming from emergencies and an influx of new patients which cannot be forecast with complete accuracy. Your boss has calculated the least and the most supplies necessary for the quarter. She must make a decision within the hour between these estimates. It is important that her estimates be as accurate as possible; an underestimate will render the clinic unable to handle the patient load, and an overestimate results in tying up expensive materials for a period of time before they are to be used.

Your boss, you, and the other assistant hygienists stand to receive a bonus if your boss's estimate is correct. Your boss knows from bitter experience that you and the other hygienists often exaggerate requirements to eliminate any possibility that you would ever be held up by a possible lack of supplies, but often fail to use these supplies.

YOUR BOSS, THE DENTAL HYGIENIST, HAS CONSIDERED THE PROBLEM ON HER OWN. SHE PLANS TO MAKE A DECISION, BY HERSELF, BASED ON THE INFORMATION THAT SHE HAS.

CASE 2212

YOUR BOSS: Paula Jackson, Dental Hygienist
YOUR POSITION: Assistant Dental Hygienist

Your boss is the senior dental hygienist in charge of a large dental clinic. You are one of six assistant hygienists who work for her. Your boss must now estimate your group's expected use of dental supplies in order to schedule deliveries to the clinic.

Your boss knows the nature of the patient load and she has all of the data she needs to compute your likely usage rate. There is always some uncertainty connected with such estimates stemming from emergencies and an influx of new patients which cannot be forecast with complete accuracy. Your boss has calculated the least and the most supplies necessary for the quarter. She must make a decision within the hour between these estimates. It is important that her estimates be as accurate as possible; an underestimate will render the clinic unable to handle the patient load, and an overestimate results in tying up expensive materials for a period of time before they are to be used.

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YOUR BOSS, THE DENTAL HYGIENIST, HAS DISCUSSED THE PROBLEM WITH ALL THE HYGIENISTS TOGETHER AS A GROUP, ENCOURAGING THEM TO GENERATE ALTERNATIVES AND REACH AGREEMENT ON A DECISION. SHE PLANS TO ACCEPT ANY DECISION WHICH HAS THE SUPPORT OF THE ENTIRE GROUP.

CASE 2221

YOUR BOSS: Marcia Palmer, Kindergarten Teacher
YOUR POSITION: Assistant Kindergarten Teacher

Your boss is the senior kindergarten school teacher at a large urban school. She has taught there for the past 25 years. Just recently, you and your colleague were hired as assistant kindergarten teachers after completing your B.A.s at a nearby university. Next semester, your boss will be responsible for the large kindergarten class that will be taken by about 60 children. The class will be taught in six equal sections; you, your boss, and your colleague will each teach two sections.

It is now two months before the start of the semester. Your boss has had one meeting with the members of her "team"; it was the first time that she had done more than exchange greetings with you in the hall. She was impressed by the outline for the class that you and your colleague both advocate. In many ways the outline differs from the approach that your boss has developed over the years, but it was clear to her that this difference was a result of your training rather than a lack of teaching experience.

Your boss was surprised by your outspoken opposition to a common set of educational materials for all six sections. She explained that this practice is a matter of long-standing school policy with regard to the kindergarten classes. You and your colleague accepted that this policy would apply to the course but gave your boss the impression that her explanation had not affected your views on the subject.

Today your boss received a phone call from the local bookstore wanting to know which materials to order for the class. After telling him that her order will be in by the end of the week, she reviewed the alternatives. There are at least a dozen sets of materials available, but of these, only three or four are worthy of any consideration. Her previous use of each set has left her with a fairly strong preference for one of them.

She strongly believes that it is important for the instructional materials to be both good for the children and to have the confidence and commitment of the teachers. This is particularly true when the instructor has little teaching experience. The major factor which bothers her and prevents her from making an immediate decision is her concern over two conflicting points: (1) school policy requires a common set of materials, and (2) the two of you might be more successful if allowed to use the resources of your choice.

YOUR BOSS, THE KINDERGARTEN TEACHER, HAS CONSIDERED THE PROBLEM ON HER OWN. SHE PLANS TO MAKE A DECISION, BY HERSELF, BASED ON THE INFORMATION THAT SHE HAS.

CASE 2222

YOUR BOSS: Marcia Palmer, Kindergarten Teacher
YOUR POSITION: Assistant Kindergarten Teacher

Your boss is the senior kindergarten school teacher at a large urban school. She has taught there for the past 25 years. Just recently, you and your colleague were hired as assistant kindergarten teachers after completing your B.A.s at a nearby university. Next semester, your boss will be responsible for the large kindergarten class that will be taken by about 60 children. The class will be taught in six equal sections; you, your boss, and your colleague will each teach two sections.

It is now two months before the start of the semester. Your boss has had one meeting with the members of her "team"; it was the first time that she had done more than exchange greetings with you in the hall. She was impressed by the outline for the class that you and your colleague both advocate. In many ways the outline differs from the approach that your boss has developed over the years, but it was clear to her that this difference was a result of your training rather than a lack of teaching experience.

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Today your boss received a phone call from the local bookstore wanting to know which materials to order for the class. After telling him that her order will be in by the end of the week, she reviewed the alternatives. There are at least a dozen sets of materials available, but of these, only three or four are worthy of any consideration. Her previous use of each set has left her with a fairly strong preference for one of them.

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CARD 2 (c6)
LOCATION (c7,8)

The following questions ask for biographical information. We are interested in how different groups of people react to these stories. Please answer each question. Remember, we do not have your name and all of your responses will be kept strictly confidential.

1. Where do you work and what do you do?
   a. Organization: _____
   _____.
   b. Department/Division/Unit: _____
   _____.
   c. Job Title or Position: _____
   _____.
   d. What do you do on the job? What are your duties?_____
   _____

(OCC c9,11) (PRES c12,13) (ORG c14) (MGTL c15) (MGTF c16)

2. How long have you worked in this organization? _____(c17,19)

3. How long have you worked in your current position/job? _____(c20,22

4. How many subordinates (if any) report directly to you? _____ (c23,24)

5. Sex: ___Male (0) ___Female (1) (c25)

6. What is your approximate yearly income? _____(26,28)

7. How old were you on your last birthday? _____(c29,30)

8. What is your highest educational level? (Check one) (c31)
   ___Elementary school (1)
   ___Some high school (2)
   ___Completed high school or equivalent (3)
   ___Some college (4)
   ___Associate Degree (5)
   ___Bachelors Degree (6)
   ___Graduate Degree (7)
   (Specify the degree and the area of study):
   _____
   _____.

9. How do you describe yourself? (c32)
   ___American Indian, Eskimo, or Aleut (1)
   ___Black or Afro-American (2)
   ___Mexican-American or Chicano (3)
   ___Oriental or Asian-American (4)
   ___Puerto Rican (5)
   ___Hispanic or Latin-American (6)
   ___White (7)
   ___Other (8)
   (Please specify):
   _____
   _____
   _____.

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SUBORDINATE PERCEPTION AND EVALUATION OF LEADERS WHO DIFFER ON --ETC(U)
1982 J H CAGE

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APPENDIX D: Dependent Measure Instrument

Please answer each of the items listed below.

1. Indicate your judgments of the decision-making <u>procedure</u> this manager is using.

good	1	2	3	4	5	6	7	8	9	bad	c10
ineffective	1	2	3	4	5	6	7	8	9	effective	c11
likely to lower morale	1	2	3	4	5	6	7	8	9	likely to raise morale	c12
appropriate	1	2	3	4	5	6	7	8	9	inappropriate	c13
uses time poorly	1	2	3	4	5	6	7	8	9	uses time well	c14
wise	1	2	3	4	5	6	7	8	9	foolish	c15

2. When all is said and done, what is your guess about the <u>decision</u> that will be made? It will be:

low quality	1	2	3	4	5	6	7	8	9	high quality	c16
accepted by most	1	2	3	4	5	6	7	8	9	resisted by most	c17
good for the organization	1	2	3	4	5	6	7	8	9	bad for the organization	c18

3. Characterize the <u>manager</u> in the story using the following scales.

likeable	1	2	3	4	5	6	7	8	9	not likeable	c19
poor leader	1	2	3	4	5	6	7	8	9	good leader	c20
strong	1	2	3	4	5	6	7	8	9	weak	c21
passive	1	2	3	4	5	6	7	8	9	active	c22
intelligent	1	2	3	4	5	6	7	8	9	unintelligent	c23
indecisive	1	2	3	4	5	6	7	8	9	decisive	c24
cold	1	2	3	4	5	6	7	8	9	warm	c25
competent	1	2	3	4	5	6	7	8	9	incompetent	c26
tough	1	2	3	4	5	6	7	8	9	soft	c27
lazy	1	2	3	4	5	6	7	8	9	hard-working	c28
flexible	1	2	3	4	5	6	7	8	9	inflexible	c29
uncollaborative	1	2	3	4	5	6	7	8	9	collaborative	c30

APPENDIX E: Group Decision-Making Processes

Group Decision-Making Processes

AI You solve the problem or make the decision yourself using the information available to you at the present time.

AII You obtain any necessary information from subordinates, then decide on the solution to the problem yourself. You may or may not tell subordinates the purpose of your questions or give information about the problem or decision you are working on. The input provided to them is clearly in response to your request for specific information. They do not play a role in the definition of the problem or in generating or evaluating alternative solutions.

CI You share the problem with the relevant subordinates individually, getting their ideas and suggestions without bringing them together as a group. Then you make the decision. This decision may or may not reflect your subordinates' influence.

CII You share the problem with your subordinates in a group meeting. In this meeting you obtain their ideas and suggestions. Then, you make the decision which may or may not reflect your subordinates' influence.

GII You share the problem with your subordinates as a group. Together you generate and evaluate alternatives and

attempt to reach agreement (consensus) on a solution. Your role is much like that of chairman, coordinating the discussion, keeping it focused on the problem and making sure that the critical issues are discussed. You can provide the group with information or ideas that you have but you do not try to "press" them to adopt "your" solution and are willing to accept and implement any solution which has the support of the entire group.


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