CHARISMATIC LEADERSHIP:
EFFECTS OF LEADERSHIP STYLE AND GROUP PRODUCTIVITY
ON INDIVIDUAL ADJUSTMENT AND PERFORMANCE

By

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We accept this thesis as conforming
to the required standard

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The present study examined the effects of three leadership styles (charismatic, structuring, and considerate) and two levels of group productivity (high and low) on individuals' adjustment to and performance on an ambiguous decision making task.

One hundred and forty-four Commerce undergraduates participated in a simulated organization (The Mackenzie Institute) which was ostensibly designed to assess their practical business skills. They completed an in-basket exercise directed by a manager (an experimental confederate) who portrayed a charismatic, structuring, or considerate leadership style. Participants individually worked on the exercise in the presence of two other Commerce students (also experimental confederates) who advocated to them either high or low productivity on the task. The participants subsequently completed a questionnaire measuring their adjustment to the task, the manager, and the two student confederates.

Univariate analyses of variance generally indicated that individuals with charismatic leaders had significantly higher task performance, task adjustment, and adjustment to the leader when compared to individuals with considerate or structuring leaders.

The group productivity data indicated that individuals in the high productivity group reported a significantly greater task satisfaction, lower role conflict and higher adjustment to the group than individuals in the low productivity group. Group productivity norms had no significant effect on individual task performance.
The interaction between leadership style and group productivity revealed that charismatic leadership, regardless of the directionality of group productivity norms, produced high individual task performance, task adjustment, and adjustment to the leader and to the group. In contrast, the impact of structuring leadership on individuals' task adjustment was modified by group productivity norms: individuals who worked with a structuring leader and in a high productivity group reported higher task satisfaction and lower role conflict than individuals who worked with a structuring leader and in a low productivity group. Individuals with a considerate leader and in a high productivity group had significantly higher task satisfaction than those with a considerate leader and in a low productivity group.

Multivariate analyses of the data revealed a similar pattern of results.

Explanations and implications of the results are discussed and directions for future research are presented.
To CAMERON, for his continual support
and encouragement.
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CHAPTER 1

SCOPE OF THE STUDY AND LITERATURE REVIEW

Introduction

Charismatic and transformational leadership have recently emerged as potentially important concepts among organizational leadership scholars. James MacGregor Burns (1978), for example, distinguishes between exchange oriented transactional leaders who reward followers for reaching established objectives and transformational leaders who inspire followers to transcend their interests for superordinate goals. In their best selling book, *In Search of Excellence*, Peters and Waterman (1982) observe that at some point in their history successfully managed companies have had transformational leaders at the helm to instill purpose, shape values, and engender excitement. Trice and Beyer (1984) present a rich description of the institutionalization of charisma in two social movement organizations: Alcoholics Anonymous and the National Council on Alcoholism. An in-depth exploration of the evolution of charismatic political leaders in the twentieth century is provided by Willner (1984). Finally, Bass (1985), in his recent book *Leadership and Performance Beyond Expectations*, argues that transformational leadership is necessary to promote follower performance beyond the ordinary limits.

The pursuit of empirical knowledge regarding the nature and effects of charismatic leadership in organizations may be justified on several
grounds. First, there is an increased recognition of the critical need for organizational change and scholars need to explore all possible mechanisms to produce this change (Kanter, 1983; Tichy & Ulrich, 1984; Trice & Beyer, 1984). Drawing on the writings of Max Weber (1947), charismatic authority represents a potent mechanism for change. In fact, some contemporary theorists contend that organizations and organizational leaders who are able to capture the charismatic loyalty and devotion of their members and followers would appear to have a strong advantage in the attainment of organizational success (e.g., Bennis, 1982; Bennis & Nanus, 1985; Oberg, 1972; Zaleznik, 1983).

Second, charisma may be regarded as a facet of the expressive and cultural components of organizational life (Trice & Beyer, 1984). By creating new sets of meanings, values, and beliefs for their followers, charismatic leaders may construct and shape new cultures (e.g., Moore & Beck, 1984; Peters & Waterman, 1982; Pettigrew, 1979; Sashkin & Fulmer, 1985; Schein, 1985; Selznick, 1957; Smircich & Morgan, 1982; Tichy & Ulrich, 1984; Trice & Beyer, 1984).

Finally, charismatic leaders have received widespread attention in the academic literature and popular press. They have been founders of social movement organizations promoting radical, large scale societal change (e.g., Mahatma Ghandi, Martin Luther King) and have emerged in political arenas (e.g., Franklin Delano Roosevelt, Fidel Castro), in religious spheres (e.g., Jim Jones), in military settings (e.g., General George Patton), in educational institutions (e.g., President Morgan of Antioch College), and in business organizations (e.g., Lee Iacocca, Mary Kay Ash, John DeLorean) (e.g., Bass, 1985; Trice & Beyer, 1984).
Despite the apparent potency and pervasiveness of the charismatic phenomenon in social life, it has remained a largely unexplored concept empirically. Although there has been some debate as to whether charismatic effects could be captured operationally and reproduced in the laboratory or in a simulation, several researchers have argued that we should be able to distill and study some of the elements in the dynamic interaction of such leaders with their followers (Bass, 1981; House, 1977; H. Weiss, personal communication, March 16, 1984). Accordingly, the present study attempted to assess the impact of charismatic leadership, relative to the traditionally researched dimensions of considerate and structuring leader behaviours, on individuals' adjustment and performance in a new work setting.

Leadership does not occur in a social vacuum; interdependence exists between leaders and members of groups (Schriesheim, Mowday, & Stogdill, 1979, p.107). "The group's definition of its task, goals, and paths to its goals strongly affects what a leader can accomplish in the group. In turn, the leader often has an impact on group outcomes by influencing the group's norms and goals" (Bass, 1981, p.429). Therefore, the social context of leader-group relations needs to be recognized in analyses of leadership effectiveness.

Recent leadership literature has investigated several dimensions of leader-group relations including cohesiveness, drive, arousal, and performance (Greene & Schriesheim, 1980; Podsakoff & Todor, 1985; Schriesheim, 1980). However, the normative structure of groups and its influence on members' attitudes and performance within the leader-group context remains to be explored.
A particularly critical role of the group is to act as a normative referent for appropriate types of work behaviour, especially the level of productivity. Groups can act in concert with a leader's aims and objectives by advocating high work productivity or against these aims and objectives by encouraging low work productivity. Further, group effects on member performance may be augmented, weakened, or unchanged by the leader's impact. Thus the interactive influence of leadership style and group productivity norms on individuals' adjustment and performance was also examined in this study.

Finally, one outcome that is typically examined in leadership research is individual performance. In both laboratory and field studies of leader-subordinate interactions, researchers have focused on both the quantitative and qualitative aspects of job performance (e.g., Gilmore, Beehr & Richter, 1979; Greene, 1979; Katz, 1977; Lowin, Hrapchak, & Kavanagh, 1969; Schriesheim, Mowday, & Stogdill, 1979). An equally important outcome is individuals' adjustment to the demands of a new role. Given the high levels of labour mobility, technological change, organizational retrenchments, and mergers and acquisitions, work role transitions have become a prevalent and important aspect of life in modern organizations (e.g., Louis, 1980a; Nicholson, 1984). Therefore, it was considered necessary and appropriate to examine both individual adjustment and performance outcomes in this investigation of leader and group behaviour.
Overview of the Present Study

The purpose of the present study was to examine the effects of three leadership styles (i.e., charismatic, structuring, and considerate) and two levels of group productivity (i.e., low group productivity and high group productivity) on participants' adjustment to and performance on an ambiguous decision making task. Specifically, this study addressed the following question:

How do leadership style and group productivity norms facilitate individuals' adjustment to and performance in a new organizational setting?

The significance of this question is threefold. First, the present study represents a pioneering attempt to investigate the phenomenon of charismatic leadership in a laboratory setting. Second, the social context of leader-follower relations is recognized by including group members. Finally, both task and interpersonal adjustment, understudied aspects of organizational life, are examined in addition to performance.

In the present study, Commerce and Business Administration undergraduates were recruited to participate in a project assessing their practical business skills. The participants completed an in-basket exercise under the direction of the project manager (an experimental confederate) who portrayed a charismatic, structuring, or considerate leadership style. The participants worked on the exercise in the presence of two other students (also experimental confederates) who advocated either low or high productivity on the task. At the conclusion of the exercise, the
participants rated their adjustment to the task, the manager, and the other students.

Organization of the Dissertation

The organization of this dissertation is as follows. The remainder of Chapter I is composed of six sections. The first section reviews the literature relevant to charismatic, structuring, and considerate leadership styles. The group productivity dimension – low group productivity and high group productivity – is subsequently examined. The third section outlines the use of qualitative and quantitative task performance as outcome measures. In the fourth section, two components of adjustment – task and interpersonal – are described. The fifth section presents definitions of the terms used in the study. In the sixth section, hypotheses concerning leadership style and group productivity are deduced from the previously reviewed theories and empirical research.

Chapter II outlines the experimental design and procedure. Findings of the study are described in Chapter III. Chapter IV discusses the results in light of previous research. Implications and speculations regarding the study’s findings, validity issues, and directions for future research are presented in Chapter V.
A LITERATURE REVIEW OF LEADERSHIP STYLE

Overview

The study of organizational leadership has evolved over many years (Bass, 1981; Chemers, 1984; Hunt, 1984; Yukl, 1981). In order to provide a contextual understanding of the leader behaviours examined in this study, the evolution of organizational leadership approaches is briefly traced.

The earliest leadership approach focused on traits. It was primarily concerned with the identification of traits that discriminated between leaders and nonleaders, effective leaders and ineffective leaders, or leaders at high echelons in the organization as compared to those at lower echelons (Chemers, 1984; House & Baetz, 1979; Stogdill, 1948, 1974). While major reviews of trait research failed to substantiate the premise that certain salient leader characteristics were essential for effective leadership (e.g., Gibb, 1969; Mann, 1959; Stogdill, 1948, 1974), House and Baetz (1979, p.349) observed that several traits showed consistently high associations with leadership including intelligence, dominance, self confidence, energy, and task relevant knowledge. More recent writings have recognized that the variability of group situations necessitates different leadership approaches (Kenny & Zaccaro, 1983; Schneider, 1985). Thus leaders' ability to accurately perceive variations in group situations and to adjust their behaviour accordingly may be more important than traditional personality traits in producing leader effectiveness (Kenny & Zaccaro, 1983).
When it became evident that no stable and situationally invariant personality characteristics identified leaders, researchers explored the behavioural correlates of effective leadership. Studies conducted by the leadership group at Ohio State University identified two dimensions of leader behaviour: consideration which reflected interpersonal warmth, concern for feelings of subordinates, and use of participative two-way communication and initiation of structure which reflected directives, goal facilitation, and task related feedback (e.g., Fleishman & Peters, 1962). In a widely cited review of studies investigating the relationship between these leader behaviour patterns and group outcomes such as productivity and satisfaction, mixed results were reported (Korman, 1966).

As an outgrowth of dissatisfaction with the behavioural approach, contingency leadership models were developed. These models suggest that desired subordinate behaviour can be elicited by adopting the appropriate leadership style or by altering contingencies in the work environment to make them compatible with a particular leadership style. Fiedler's (1967) contingency theory, House's (1971) path-goal theory, Vroom and Yetton's (1973) normative decision theory, Hersey and Blanchard's (1977) situational leadership theory, and Yukl's (1981) multiple linkage model of leadership effectiveness are representative of current contingency models.

The contingency paradigm has been the dominant approach among leadership researchers since the late 1960s (Hunt, 1984, p.114). In recent years, however, researchers have increasingly questioned the adequacy of this paradigm. Some argue that the paradigm is reductionistic, static, and sterile; it is an incomplete representation of the numerous other
components of the leadership process (McCall & Lombardo, 1978). As Mintzberg (1973), Weick (1978) and others (e.g., Mitroff, 1978; Vaill, 1978) have observed, the task of leadership is characterized by variety, complexity, and fragmentation. Moreover, leaders' actions are influenced by the wider environmental context within which they operate, including the economy, technology, labour unions and so on, as well as by the myths and traditions which permeate the organization (McCall & Lombardo, 1978). Other criticisms of the contingency model concern its variable predictive accuracy in terms of group and individual outcomes (Hunt, 1984).

In response to these criticisms, alternative approaches to studying organizational leadership have been proposed. For example, there is increasing recognition that leadership is a reciprocal influence process involving oscillating cycles of interaction between leaders and followers (e.g., Fulk & Cummings, 1984; Wofford & Srinivasan, 1983; Zahn & Wolf, 1981). The vertical dyad linkage theory developed by George Graen and his associates (e.g., Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975) is illustrative. This theory suggests that leaders develop different types of exchange relationships with different subordinates. This reciprocal exchange notion of leadership is further reflected in operant conditioning theories of leadership (e.g., Mawhinney & Ford, 1977; Scott, 1977; Sims, 1977). These theories propose that the leader structures reinforcement contingencies in the work environment such that subordinates engage in appropriate responses to stimuli in order to elicit desired consequences or avoid undesirable consequences (Hunt, 1984). Subordinates' responses subsequently influence the leader's alteration of reinforcement contingencies (Sims, 1977).
Other researchers have recognized the need to extend the focus from the leader-follower dyad to the social network of peers, superiors, and subordinates within which the leader is embedded (e.g., Gast, 1984; Salancik, Calder, Rowland, Leblebici, & Conway, 1975; Stewart, 1982; Tsui, 1984). For instance, the work of Tsui (1984) suggests that in order to gain reputational effectiveness, the leader needs to be responsive to multiple constituencies' role expectations. Similarly, Gast (1984) argues while discretionary actions enable leaders to mobilize their authority and personal power to influence others, such actions are restricted by social and political processes, organizational policies, structural limitations, resource constraints and so on.

Another group of leadership scholars has focused on expanding the contingencies considered in leadership models (e.g., Hunt & Osborn, 1982; Tosi, 1982). These "second generation" contingency models incorporate both macro and micro environmental variables that jointly affect superior-subordinate performance (Hunt, 1984). For example, Hunt and Osborn's (1982) multiple influence model of leadership asserts that environmental, contextual (size and technology), and structural complexity affects required and discretionary leader behaviours and operates in combination with such behaviours to influence work unit performance and satisfaction related outcomes.

Despite these suggested refinements and extensions of the current contingency leadership paradigm, some scholars contend that we are overlooking the essence of the leadership phenomenon and have called for a radically different perspective, in Hunt's (1984) terms, for a paradigm
shift. One controversial perspective, based on attribution theory, suggests that leadership is essentially a perceptual construct; it is an inference based on observed behaviour accepted as evidence of leadership (e.g., Calder, 1977; Lord & Smith, 1983; McElroy, 1982; Meindl, Ehrlich, & Dukerich, 1985; Pfeffer, 1977). For example, Meindl and his colleagues (1985) have recently argued that due to biased preferences to understand important but causally indeterminant and ambiguous organizational events and outcomes, individuals have a tendency to ascribe excessively high levels of control and influence to leaders. Accordingly, a highly romanticized, heroic view of leadership has evolved. However, Meindl et al.'s (1985) views need to be reconciled with convincing empirical evidence suggesting that leaders can have substantive effects on organizational outcomes (e.g., Smith, Carson, & Alexander, 1984; Weiner & Mahoney, 1981). Specifically, Weiner and Mahoney (1981), in their study of 193 manufacturing organizations over a 19 year period, reported that leadership accounted for more variance in organizational performance than did several environmental or organizational factors. More recently, Smith and his associates (1984) presented longitudinal data supportive of the hypothesis that effective leaders have a positive impact on organizational performance.

The symbolic aspects of leadership are illustrative of the other recent thrust in organizational leadership. This perspective suggests that the import of leadership lies in the ability to shape meanings and interpretations of organizational events and activities. Through the use of language, rituals, drama, stories, myths, and other symbolic forms, leaders develop social consensus around the activities being undertaken.
and produce organized collective action (e.g., Pettigrew, 1979; Pfeffer, 1981; Pondy, 1978; Pondy, Frost, Morgan, & Dandridge, 1983; Siehl & Martin, 1984; Smircich & Morgan, 1982). In particular, charismatic leaders are especially skilled in creating and managing meanings in organizations through their use of evocative imagery, compelling visions, expressive language, and dramaturgical skills.

To conclude, the traditional contingency approach, which often incorporates the dimensions of consideration and initiating structure or their analogues, has become a recognized and entrenched view of organizational leadership and offers a point of comparison for newer perspectives such as charisma. Accordingly, in the present study, charismatic leadership was examined in the context of the traditionally researched dimensions of considerate and structuring leader behaviour.

The following sections review the theoretical literature and empirical research related to charismatic, structuring, and considerate leadership styles and their effects on individual performance in and adjustment to a new work setting.

Theory and Research Related to Charismatic Leadership

Overview

A recent and often repeated theme in the leadership literature is that researchers have focused on the more mundane, readily observable leader-
subordinate relations and have ignored the profound aspects of leadership to be seen in the charismatic movers and shakers of our time (e.g., Avolio & Bass, 1985; Bass, 1981, p. 609, 1985; Dubin, 1979; McCall & Lombardo, 1978; Tosi, 1982). Certainly one finds copious references in both the academic literature and popular press to the pervasive influence of charismatic leaders in formal organizations and in society. To date, however, no scholarly consensus has emerged on the precise application of the concept of charisma (Tucker, 1970). Moreover the term charisma has been indiscriminantly applied to any individual who is immensely popular or who possesses personal charm. Such erroneous application of the term serves to dilute its potential, to obscure its meaning, and to debase its powerful effects (Apter, 1968). In addition, there is a paucity of integrated theoretical work and empirical studies on charismatic leadership. Charisma has been examined as a significant factor in historical and social change; its function in religious and political spheres has been explored; and its psychological dimensions and psychoanalytic origins have been discussed.

Despite the definitional ambiguity and fractionated inquiries, insights into the nature of charisma can be gleaned from existing theoretical and empirical literature from several different disciplines. The thrust of this dissertation is the examination of the behaviour and effects of intra-organizational charismatic leaders from a psychological perspective. However, in order to provide the appropriate background and context for the discussion of the psychological view, it is necessary to review the relevant theoretical and empirical literature from the disciplines of political science and sociology. A fruitful beginning for this review is Max Weber's seminal ideas on charismatic authority. Accordingly, these ideas are
presented and evaluated below. Subsequently, an examination of the relevant literatures will be conducted.

**Weber's Conceptualization of Charismatic Authority**

Max Weber's conceptualization of charisma serves as the starting point for most writers concerned with charismatic leadership. In his classic writing, *The Theory of Social and Economic Organization*, Weber postulated three ideal types of legitimate authority: traditional, rational or legal, and charismatic. Traditional authority is derived from "an established belief in the sanctity of immemorial traditions and the legitimacy of the status of those exercising authority under them" (Weber, 1947, p.328). Rational or legal authority is based on an established "belief in the 'legality' of patterns of normative rules and the right of those elevated to authority under such rules to issue commands" (Weber, 1947, p.328). Thus authority flows from traditional custom or occupancy of an office; it is impersonal and stable. In contrast, charismatic authority breaks with tradition or rational norms; it is personal, dynamic, and revolutionary. Specifically, in charismatic authority, individuals are followed and obeyed because of a special trust they induce, their special powers, and their unique qualities. These individuals claim their authority not through enacted position or traditional dignity, but owing to gifts of grace (Tucker, 1970). According to Weber (1947, pp.358-359), charisma is:

> a certain quality of an individual personality by virtue of which he is set apart from ordinary men and treated as endowed with supernatural, superhuman, or at least specifically exceptional powers or qualities. These are such as are not accessible to the
ordinary person, but are regarded as of divine origin or as exemplary, and on the basis of them the individual concerned is treated as a leader.

Weber believed that the rise of charismatic leaders was most apparent at times of crisis in which the basic values, institutions, and legitimacy of the society were in question. A major breakdown in social and political order increases the likelihood that people will feel helpless, disturbed, and fragmented and will therefore eagerly accept the authority of leaders who appear to be uniquely qualified to lead them out of their acute distress. This potential for salvation from distress creates the special emotional intensity of the charismatic response.... Followers respond to the charismatic leader with passionate loyalty because the salvation, or promise of it, that he appears to embody represents the fulfillment of urgently felt needs (Tucker, 1970, p.81).

In particular, by espousing a transcendent goal, inspirational mission, or "explosively novel" innovation (Shils, 1965, p.199) as possible solutions for overcoming distressful conditions, charismatic leaders come to be regarded as saviours.

While charisma may be partially attributed to the extraordinary qualities of individuals and to the context of their mission, it is also necessary for these individuals to be acknowledged as exceptional by a following.

What is alone important is how the individual is actually regarded by those subject to charismatic authority, by his 'followers' or 'disciples'. ... It is the recognition on the part of those subject to authority which is decisive for the validity of charisma (Weber, 1947, p.359).
Consequently the sole source of legitimate authority for charismatic leaders lies in the regard of their followers. Thus charisma is defined in terms of followers' perceptions of and responses to such leaders (e.g., Rustow, 1970; Tucker, 1970; Willner, 1984). Indeed, the maintenance of their leadership is dependent upon fulfilling, in a relevant and acceptable manner, the expectations of their followers. Thus there is a continual need for charismatic leaders to prove that they are the chosen ones.

In summary, according to Weber's conception, charisma consists of several interrelated components including extraordinary personal qualities of leaders; a social crisis or situation of distress; a transcendent course of action or inspirational mission which offers the hope of salvation from the crisis; followers who, out of love, passionate devotion and enthusiasm, willingly subscribe to charismatic leaders and their missions; and leaders' repeated demonstration of their charismatic powers in order to maintain their followers' devotion. In addition, Weber stresses that the crucial test of charisma is the response and perceptions of the followers (Tucker, 1970). It is not what the leader is but what the followers perceive the leader to be that is essential in fostering the charismatic relationship (Willner, 1984).

Weber (1947, p.364) acknowledges that "if [charisma] is not to remain a purely transitory phenomenon, but to take on the character of a permanent relationship forming a stable community...it is necessary for the character of charismatic authority to become radically changed". Thus, through the process of routinization, charisma becomes modified and attributed to an office, lineage, or clan. Charisma is no longer pure
charisma in the original sense discussed above; it is transformed from an extraordinary and purely personal relationship into an established authority structure that is no longer necessarily dependent upon personal charismatic qualities in the incumbent leader (Tucker, 1970, p.91). Thus the routinization of charisma "provides the basis and legitimacy for newly established traditional or rational-legal hierarchies and systems of domination, which, in the process of routinization, become conservative" (Bensman & Givant, 1975, p.580).

An Evaluation of Weber's Conceptualization of Charismatic Authority

Weber's writings on charismatic authority have stimulated considerable discussion in the political science, religious, sociological, psychological, and organizational literatures. According to Tucker (1970), some scholars are impressed with its power or potentiality as a device for analyzing historical leadership situations. Others, however, have questioned the relevance of charisma to contemporary social life (e.g., Friedrich, 1961; Lowenstein, cited in Tucker, 1970). For example, Friedrich (1961) has argued for a restrictive interpretation of charisma. Since the term originally meant leadership based on a transcendent call by a divine being, Friedrich (1961) contends that Weber's broadening of the term to include secular and nontranscendent types of callings is inappropriate. However, Tucker (1970) has persuasively argued for the secularization of the concept of charisma citing its great explanatory power in analyzing political and social situations.
Other critics of Weber's conceptualization of charisma point to the lack of clarity of the term and the difficulty in operationalizing and applying it in practice (e.g., Madsen & Snow, 1983; Tucker, 1970; Willner, 1984). Two closely related criticisms are of particular importance. First, on the basis of Weber's various formulations, it is difficult to differentiate between leaders who really are charismatic and leaders who are not (Ratnam, 1964; Tucker, 1970). Second, critics have observed that Weber provided no clear statement of the personal qualities in charismatic leaders which create the special emotional bond with their followers (Ratnam, 1964; Tucker, 1970, p.732). Thus the Weberian conceptualization of charisma leaves some doubt as to which leaders are charismatic, how they become so designated, and what it is exactly that makes them so.

Another key criticism of the contemporary application of the concept of charisma to modern society is the conditions under which charisma may arise. Several scholars (e.g., Apter, 1968; Blau, 1963; Dow, 1969; Friedland, 1964; Willner, 1984) have argued that Weber did not adequately specify the elements fostering the genesis of charismatic authority. For example, Blau (1963, p.309) states that Weber's theory of charisma "encompasses only the historical processes that lead from charismatic movements to increasing rationalization and does not include an analysis of the historical conditions that give rise to charismatic eruptions in the social structure."

A further and very fundamental criticism concerns Weber's proposition that charismatic authority ultimately becomes "either traditionalized or rationalized, or a combination of both" (Weber, 1947, p.364). Many
contemporary sociologists, psychologists, and organizational behaviourists argue that charismatic leadership can and does exist in formal complex organizations (e.g., Dow, 1969; Etzioni, 1961; House, 1977; Katz & Kahn, 1978; Oberg, 1972; Parsons, 1937; Shils, 1965; Tucker, 1970). In particular, Edward Shils attempts to refocus the discussion of charisma by emphasizing the elements in charisma that link it to established orders. Concerning Weber, he argues:

He did not consider the more widely dispersed, unintense operation of the charismatic element in corporate bodies governed by the rational-legal type of authority....Weber had a pronounced tendency to segregate the object of attributed charisma, to see it almost exclusively in its most concentrated and intense forms, and to disregard the possibility of its dispersed and attenuated existence. He tended indeed to deny the possibility that charisma can become an integral element in the process of secular institutionalization (Shils, 1965, p.202).

Thus Shils suggests that charisma is not confined to charismatic organizations but may in fact emerge in any type of organizational setting. This contention has been supported by empirical evidence demonstrating that charismatic authority exists in bureaucratic organizations (e.g., Avolio & Bass, 1985; Roberts, 1984; Scott, 1978).

Since Weber's initial writings, scholars from several disciplines have refined, elaborated, modified and, in some cases, challenged his views on charismatic authority. In the following sections three different bodies of literature - political science, sociology, and psychology - which have theoretically and empirically examined the charismatic phenomenon will be reviewed.
Political Science Views of Charisma

The investigation of the charismatic phenomenon from a political science perspective has proceeded in several different directions. For example, the concept of charisma has been fruitfully applied in examinations of post-colonial and totalitarian regimes. Specifically, Weber's notion of charisma has been invoked in analyses of modernization and political development in ex-colonial new states (e.g., Apter, 1968; Rustow, 1970; Willner & Willner, 1965). The thrust of these analyses is the historical tracing of the critical role of charismatic leaders during the transition from colonial ruled traditional society to politically independent modern society. In addition, the concept of charisma has been applied in analyses of totalitarian regimes as illustrated in Tucker's (1970) study of Lenin as founder and leader of the Bolshevik revolutionary movement. More recently, Schweitzer (1984) has sought to explain the causes and consequences of successful charismatic leadership under two different political systems - democracy and dictatorship.

Other political scientists have systematically investigated specific components of Weber's formulation such as situational events and the routinization of charisma. For example, Cell (1974), using a social structural model, isolated five situational factors to account for charisma among 34 twentieth century heads of state: national social crisis, disruptive youth, denial of leader's access to following, prepower following, and nationalism and nationalistic movements. Madsen and Snow (1983) have focused on the stages in the process of routinization of charisma based on the case of Juan Peron and the Peronist movement in
Argentina. Two stages in the evolution of the bond between the charismatic leader and his/her mass following were identified:

1. The development of a structure within the movement and

2. The dispersion of a mass charismatic response across that structure and its higher level personnel.

Another thrust of political science inquiry is in-depth analyses of the charismatic phenomenon utilizing charismatic political leaders in the twentieth century as rich illustrations. Of particular interest is the work of two political scientists: James MacGregor Burns and Ann Ruth Willner. In his incisive analysis of political leadership, Burns (1978) distinguishes between two types of leaders: transactional and transformational. Transactional political leaders "approach followers with an eye to exchanging one thing for another: jobs for votes, or subsidies for campaign contributions. Such transactions comprise the bulk of the relationships among leaders and followers, especially in groups, legislatures, and parties" (Burns, 1978, p.4). Thus the relationship between transactional leaders and their followers is entrenched in a bargaining process wherein both parties to the exchange pursue their related purposes. This relationship is circumscribed; it is maintained as long as the respective needs of leader and follower can be met through a reciprocal exchange of rewards for services provided. As Burns (1978, p.20) observes, while a leadership act has occurred, it is not one that "binds leader and follower together in a mutual and continuing pursuit of a higher purpose".
In contrast to transactional leadership, Burns (1978, p.4) posits that the transformational leader "looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower. The result of transforming leadership is a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents". Therefore transformational leaders appeal to higher order values that encompass followers more fundamental and enduring needs (Burns, 1978, p.42). Accordingly, followers' goals and aspirations transcend their immediate self interests and are focused on the collective purpose.

A comprehensive and insightful analysis of the origins and development of charismatic political leadership has been recently presented by Willner (1984) in her book The Spellbinders. Using Weber's work as a point of departure, she focuses on the genesis of charismatic political leadership in the twentieth century. Seven charismatic political leaders are selected to illustrate the explanation for the charismatic phenomenon: Castro, Gandhi, Hitler, Mussolini, Roosevelt, Sukarno, and Khomeini. In contrast to Weber's formulation, it is argued that social crisis and psychic distress; doctrines, messages, or missions which restore a sense of purpose and offer a vision of the future; and followers' susceptibility to charismatic appeals and domination are neither necessary nor sufficient to catalyze charisma. Rather, the leader, through a combination of personal attributes and actions and mode of public presentation, can be an active initiator of charismatic perceptions. Four catalytic factors are outlined which foster charismatically oriented impressions.
First, charismatic political leaders fortuitously or intentionally invoke cultural myths that are "linked to its sacred figures, to its historical and legendary heroes, and to its historical and legendary ordeals and triumphs" (Willner, 1984, p.62). In so doing, charismatic leaders become associated in the hearts and minds of their followers with such illustrious cultural heroes. For example, Fidel Castro deliberately invoked the memory of Jose Marti, the long idolized and revered father of Cuban independence, through his speeches, symbols, and deeds (Willner, 1984, pp.72-74).

In agreement with Weber, the second factor precipitating the charismatic image is the performance of an extraordinary or heroic feat. Willner (1984) describes a multitude of elements which contribute to perceptions of an act as extraordinary such as the apparent risk entailed, the existence of major obstacles, and the suspense surrounding the act. Benito Mussolini, for example, gained the reputation of a "fearless champion of Italian rights and the restorer of Italian honour and prestige" by his successful handling of international affairs (Willner, 1984, p.104). To illustrate, in the long standing dispute between the Italian and Yugoslavian governments regarding the control of Fiume, an Adriatic settlement, Mussolini attained the seemingly impossible: officially incorporating Fiume into Italy as well as striking an alliance with Yugoslavia (Willner, 1984).

A third dimension of charismatic legitimation is the projection of the possession of exceptional personal attributes. Willner (1984) argues while followers' perceptions of the superhuman endowments of charismatic political leaders may arise from leaders' actual manifestation of specific
supernatural attributes, they can also arise from followers' generalized notions of such extraordinary capabilities. That is, a spillover effect may occur whereby charismatic leaders who become associated with historical or mythical heroes or who perform outstanding feats may also be credited with personal powers they do not possess or display (Willner, 1984, p.129). According to Willner (1984, p.130) Mahatma Gandhi is the best exemplar of a twentieth century leader who, through a combination of qualities, a syndrome of attributes and actions, and a style of life that closely matches cultural notions of the ideal person, generated perceptions of superhuman endowments. His prodigious personal qualities of intellect, energy, stamina, composure, and self confidence; his remarkable accomplishments; and his exemplification of some of the highest ideals of Hinduism in his lifestyle collectively contributed to followers' beliefs in his outstanding powers.

The final factor promoting charismatic perceptions is outstanding oratorical skills. The eloquent and spellbinding rhetoric employed by charismatic leaders can create incredible emotional fervour on the part of followers. According to Willner (1984), the use of figurative language, such as similes, metaphors, and analogies, and of rhetorical devices related to sound, such as rhythm, repetition, and alliteration, are strongly conducive to charismatic affect. Of particular importance for charismatic attributions is the invocation of selected cultural symbols and their associated emotions through figurative expressions. For instance, Franklin Delano Roosevelt, "in rhetorically presenting himself as the leader of a crusade of the common people against fear and want, ... employed elevated Biblical language and cadences in his major addresses" (Willner, 1984, p.154).
Overall, Willner enriches our understanding of the elements critical to the creation of charismatically oriented perceptions of political leaders. By recognizing the active role of the leader in catalyzing and shaping followers' charismatically oriented perceptions through a myriad of substantive and symbolic means, Willner's intensive analysis moves us beyond Weber's original conception of charisma. In particular, by carefully documenting her analysis with examples from the careers of noted charismatic political heads of state, the complexity of the generation of the charismatic phenomenon is further underscored.

Sociological Views of Charisma

From the sociological perspective, discussion of the charismatic phenomenon has primarily centred on two major themes: 1. the situational circumstances fostering charisma and 2. the existence and distribution of charisma within institutional structures.

Prior to reviewing these two major themes, it should be underscored that several scholars have also studied the routinization of charisma in a wide variety of settings including social movement organizations (Trice & Beyer, 1984; Zald & Ash, 1966), in liberal arts colleges (Clark, 1970), and in utopian communities (Kanter, 1968). For example, Trice and Beyer (1984), using data obtained primarily from participant observations over a 20 year period, compared the routinization of charisma in two social movement organizations: Alcoholics Anonymous and the National Council on Alcoholism. While the organizations differed markedly in their degree of
routinization, both had created an administrative structure to implement their respective missions and, in that sense, had routinized the charisma of their founders. In addition, Alcoholics Anonymous had developed elaborate rites and ceremonials to diffuse the charisma of its founder throughout the organization and strong written and oral traditions to perpetuate the charismatic's mission. Kanter (1968), in her study of nineteenth century American utopian communities, referred to the dispersion of charisma throughout the community as "institutionalized awe". In Kanter's (1968, p.514) analysis, institutionalized awe "consists of ideological systems and structural arrangements which order and give meaning to the individual's life and attach this order and meaning to the social system. These not only satisfy the individual's 'need for meaning,' ...but also provide a sense of rightness, certainty, and conviction...that promotes a moral evaluative commitment and surrender to collective authority".

Since investigations into the routinization of charisma are not directly relevant to the present discussion of charisma, the remainder of this section will address the two major themes occurring in the sociological literature.

Situational Circumstances Fostering Charisma

In accordance with Weber's conception, some scholars have reported that charismatic leaders have typically emerged during a period of social upheaval which causes distress and agitation among a group of people (e.g., Barnes, 1978; Tucker, 1970). For example, Barnes (1978), in a historical study of charismatic religious leaders, found they existed during
an era of radical social change in which a new formulation of religious beliefs was possible.

In contrast to this position, others have argued while the roots of charisma are oriented towards social situations, the presence of crisis is not necessarily part of the situation (e.g., Berger, 1963; Clark, 1970; Dow, 1969; Eisenstadt, 1968; Friedland, 1964; Geertz, 1977; Shils, 1965). For example, based on empirical data of the founding of political and trade unions in Tanganyika, Friedland (1964, p.25) observed:

In any social situation there can be found incipient charismatics. Before incipient charismatics can emerge as genuine, the social situation must exist within which their message is relevant and meaningful to people.

More specifically, he suggests that:

Charisma appears in situations where (a) leaders formulate inchoate sentiments deeply held by masses; (b) the expression of such sentiments is seen as hazardous; (c) success...is registered (Friedland, 1964, p.18).

Therefore, according to Friedland's (1964) investigation, appropriate social circumstances are necessary for potentially charismatic leaders to be recognized and heeded.

In an historical analysis of three distinctive liberal arts colleges - Antioch, Reed, and Swarthmore - Clark (1970, p.241) describes the conditions which "cause high and low probabilities of the occurrence of both intense and concentrated charisma as well as its attenuated and
dispersed expressions." According to him, the occurrence of charisma in organizations is partially controlled by choice. That is, individuals who appear strongly charismatic may be judged as too unsettling and therefore inappropriate for the stability and continuity of the existing structure. Hence, they are not selected for positions within the organization (Clark, 1970).

Consistent with Weber's formulation, Clark (1970) also argues that charisma can be controlled by followers' denial of the exceptional personal qualities of the charismatic leader. If charisma is not attributed to the leader, then in that context, the leader does not have it (Clark, 1970).

Clark (1970) further outlines three conditions which facilitate the occurrence of charisma. First, in accordance with Weber's view, crisis precipitates charisma. Charismatic leaders, by virtue of their extraordinary personal qualities and inspirational sense of mission, can infuse renewed purpose into the organization and mobilize collective effort and resources.

The second condition fostering the emergence of charisma is the creation of a new organization (Clark, 1970). In the initial establishment phase, a charismatic leader may be selected for the top administrative position in order to build and shape the character, purpose, and image of the new organization (Clark, 1970).

The final situation conducive to the development of charisma entails "a set of evolving conditions in which the charismatic figure picks up
support, gains in power, sets the direction of change, and extends the leeway for personal influence on policy and events" (Clark, 1970, p.244). Clark (1970, pp.244-245) concludes:

Thus new organization is open to charisma, and crisis helps to create it, but neither is a necessary condition. Potentially charismatic men can enter successful and relatively stable organizations and encourage the conditions that realize their charisma. What is initially required is an opening for leadership, usually manifested by a willingness to improve. The potentially charismatic figure who works without the benefit of new organization or organizational crisis is usually forced to string out his break with tradition. His charisma is shielded by patience. However, that his impact is more evolutionary need not diminish the magnitude of the change or the effect upon others and upon the initiation of a legend.

In summary, recent conceptual and empirical work has advanced our thinking regarding the situational circumstances facilitating the expression of charisma. In contrast to the restrictive view of charisma as grounded in crisis, it is argued that charisma can emerge in a wide range of social contexts (e.g., Clark, 1970; Dow, 1969; Eisenstadt, 1968; Shils, 1965; Trice & Beyer, 1984). In Geertz's (1977, p.152) words, charisma "does not appear only in extravagant forms and fleeting moments, but in an abiding, if combustible, aspect of social life that occasionally bursts into open flame." Moreover, consistent with Willner's (1984) view, contemporary sociologists also recognize that a confluence of forces spawns the development of charisma including the social context, the exceptional individual, and the ideas s/he espouses (e.g., Dow, 1969; Geertz, 1977; Trice & Beyer, 1984).
The Existence and Distribution of Charisma in Organizations

As discussed earlier, many sociologists have challenged Weber's contention that charisma is a force which must exist outside of institutional structures (e.g., Barnes, 1978; Berger, 1963; Blau & Scott, 1962; Dow, 1969; Etzioni, 1961; Parsons, 1937; Shils, 1965; Tucker, 1970). They argue that within bureaucratic or rational-legal structures the potential for personal charismatic expression exists. By virtue of their personal and exemplary qualities, charismatic leaders can create a further legitimacy for actions extending beyond their stipulated offices (Dow, 1969, p.311). Thus, in Shils' (1965, p. 202) words, "charisma can become an integral element in the process of secular institutionalization."

Based on the premise that charisma exists within complex institutional structures, several scholars have sought to explicate its distribution within organizations. While some argue that charisma primarily exists in the top echelons of an organization (e.g., Katz & Kahn, 1978), others, notably Etzioni (1961), suggest that charisma may be functionally required and actually developed in a large variety of organizational positions, not just the top ones. According to Etzioni (1961, p.203), charisma is the "ability of an actor to exercise diffuse and intense influence over the normative orientations of other actors." In his analysis, there are three major forms of distribution of charisma within organizations: at the top only, in all line positions, or in one or more ranks other than the top. This distribution is related to the compliance structure of the organization: coercive organizations have no charismatic organizational positions; utilitarian organizations tend to have charisma concentrated in top positions only; pure normative organizations are likely to have a line concentration and
social normative have a rank concentration (Etzioni, 1961, pp.208-209). Etzioni (1961) further suggests that there are three central determinants of the distribution of charisma in these organizational structures: (1) the nature of the involvement required (moral versus calculative or coercive), (2) the distribution of means-ends decisions among various organizational positions, and (3) the distribution of control over instrumental and expressive activities among various organizational positions. "Positions in which decisions about ends are made, expressive performances are controlled, and moral involvement of subordinates is necessary, requires charismatics. For positions in which decisions about means are made, from which instrumental activities are controlled and in which moral involvement of subordinates is not necessary, charismatics are not required for effective performance: their presence may even be dysfunctional" (Etzioni, 1961, p.211). Therefore, in contrast to Weber's theorem, Etzioni's (1961) analysis suggests that charisma may originate in a wide range of organizational positions and is compatible with established organizational structures.

To date, the discussion of charisma has focused on the political and sociological spheres of inquiry. These perspectives have provided valuable insights into the nature and effects of charisma in large scale political or social movements. Moreover, the sociological view has discussed the existence and distribution of charisma in organizational settings. To fully appreciate, however, the phenomenon of charisma within organizations, the focal point of this dissertation, a psychological focus is necessary. It is to this perspective that we now turn.
Psychological Views of Charisma

The psychological perspective has primarily focused on the personality characteristics of charismatic leaders, their behaviours, and their effects on followers within organizational settings. For example, the personality structure and dynamics of charismatic leaders have been described from multiple perspectives (e.g., McClelland, 1975; McIntosh, 1970; Redl, 1942; Rutan & Rice, 1981; Zaleznik, 1974). From a psychoanalytic viewpoint, charisma designates "the force of the externalized unconscious, that is, unconscious tendencies which slip into awareness in the guise of an external force. The aura of magic springs from the resonance between what is perceived to be the external reality and the unconscious thought which is the real source of the experience" (McIntosh, 1970, p.902). In his examination of leadership traits, Zaleznik (1974) distinguishes between the inner directed personality of charismatic leaders who establish strong emotional bonds with their followers and the outer directed personality of consensus leaders who negotiate among diverse interest groups to reach satisfactory agreements. Finally, based on his work on the power motive, McClelland (1975) has distinguished between the personalized and socialized faces of charisma. Personalized charismatic leaders, through their overwhelming authority and personal dominance, evoke feelings of obedience and loyal submission in their followers (McClelland, 1975, p.259). In contrast, socialized charismatic leaders, by vividly expressing meaningful goals and expressing confidence in followers' abilities to attain these goals, strengthen and inspirit their followers.
Other researchers have conducted in-depth explorations of charismatic leader behaviours in diverse organizational settings and roles. For example, Day (1980) described the development of a radically new social service program by a director of a maternity home. Roberts (1984) studied a school district superintendent who was a catalyst in introducing innovations to the district and was instrumental in developing a supportive climate for change and innovation. Finally, Conger (1985) conducted an exploratory field study of three highly charismatic, three moderately charismatic, and two noncharismatic American business executives. Despite the wide range of organizational contexts and positions examined, these studies revealed high convergence among the charismatic leader behaviours reported. In sum, the distinguishing behaviours of the charismatic leaders were the creation and articulation of a meaningful vision; active campaigning for the vision; unconventional or countercultural behaviours and practices; captivating speaking style; the ability to excite others; and high energy and dynamism.

Further insights into charismatic leader behaviours are offered by Bennis and Nanus (1985) in their study of 80 chief executive officers and 10 in-depth interviews with successful innovative leaders. According to their results, "the capacity to relate a compelling image of a desired state of affairs" which involves and empowers followers is a fundamental component of charismatic or transformative power (Bennis & Nanus, 1985, p.33). Moreover, through the use of metaphors, symbols, ceremonies and insignia, the chief executive officers transmitted their vision and fostered subordinates' commitment to this vision. In addition, these leaders could communicate their vision to induce the commitment of their multiple
constituencies. Persistence and consistency in maintaining the organization's course, especially in adverse circumstances, were further competencies of these leaders. Yet they also had the capacity to change the organization and its members when faced with new conditions.

An interesting analysis of the relationship between types of leadership and the emotional tone of the organization is proposed by Berlew (1974). He argues that just as leadership theory has advanced beyond the custodial mode that generates neutrality to the management mode that generates satisfaction, it should now move to the charismatic mode that creates excitement. Three components of charismatic leader behaviour are outlined. First, charismatic leaders develop a common vision related to values shared by organizational members. Second, they discover or create value related opportunities and activities within the framework of the mission and goals of the organization. Focal values include self-reliance, community, excellence, service, and citizenship. Finally, charismatic leaders make organizational members feel stronger and more in control of their own destinies, both individually and collectively, by communicating high expectations, rewarding effective performance, encouraging collaboration, creating success experiences, and providing assistance when requested.

A more encompassing examination of the development and maintenance of a charismatic association within organizational settings is presented by Oberg (1972). He proposes five sets of conditions for the institutionalization of charisma in operating large organizations, both public and private, in contemporary Western society. First, four personal qualities
that are indispensible for charismatic leaders are described including: (1) the prestige of demonstrated achievement, (2) the ability to empathize with, and communicate their understanding of, the needs of their followers, (3) the ability to look and act the part, and (4) the possession of personality traits which permit them to accept the charismatic attachment of others. The second set of requirements for the development of institutionalized charisma involves organizational members' willingness to follow their conscious or unconscious desire for charismatic attachment and dependency. A third set of conditions relates to the nature of the decisions the leader is called on to make and/or execute. Decisions involving either unclear goals or unclear means or both are the likeliest candidate for charismatic leadership. A fourth set of conditions for the institutionalization of charisma involves four kinds of deliberate myth making or charisma building efforts including: (1) charisma facilitating policies and practices, (2) the use of symbols of prestige and status, (3) the use of ritual, and (4) the use of executive dramaturgy. Finally, the corporate charter, creed, or ideology can contribute to charisma. Oberg (1972) concludes that organizations which are able to develop and sustain the charismatic loyalty and devotion of their members would appear to have a strong advantage in the struggle for organizational survival.

Further insights into intraorganizational charisma can be gleaned by reviewing two theories of charismatic leadership: House's (1977) theory of charismatic leadership and Bass' (1985) theory of transformational leadership. These theories represent a major contribution to our understanding of charismatic leadership within an organizational setting. Accordingly, these theories and the accompanying research evidence are examined in detail below.
House's Theory of Charismatic Leadership

An Overview of the Theory

Drawing on the political science, sociological, and social psychological literatures, House (1977) has advanced a theory of charismatic leadership within organizations. He describes and advances numerous propositions regarding the personal characteristics of charismatic leaders, their behaviour, their effects on followers, and situational factors associated with the emergence and effectiveness of charismatic leaders. With regard to personal characteristics, charismatic leaders have exceedingly high levels of self confidence, dominance, need for influence, and strong conviction in the moral righteousness of their beliefs (House, 1977, pp.193-194). On the basis of Sashkin's (1977) commentary on his theory, House also acknowledges that charismatic leaders possess intellectual fortitude, integrity of character, and speech fluency (Sashkin, 1977, p.214).

The behaviour of charismatic leaders encompasses the articulation of a transcendent goal in order to provide meaning and to generate excitement; the communication of high performance expectations for followers and the exhibition of confidence in their ability to meet such expectations; the conveyance of messages that arouse motives especially relevant to mission accomplishment; the role modelling of values and beliefs; and the engagement in image building to create the impression of competence and success. These behaviours are linked to charismatic leaders' effects on followers including followers' trust in the correctness of the leader's beliefs, similarity of followers' beliefs to those of the leader, unquestioning
acceptance of the leader, loyalty to and affection for the leader, willing obedience to the leader, identification with and emulation of the leader, emotional involvement of followers in the mission, heightened goals of the followers, and the feeling on the part of the followers that they are able to accomplish or contribute to the accomplishment of the mission (House, 1977, p.191). Finally, stressful circumstances and work roles that are conducive to ideological value orientation are situational factors facilitating followers' receptivity to ideological appeals.

Research Evidence

To date, three studies have been conducted which bear on House's (1977) theory of charismatic leadership. For example, Smith (1982) tested House's (1977) proposition that charismatic leaders can be differentiated from noncharismatic leaders on the basis of scaled subordinate responses. Using a broad based nomination strategy, 30 charismatic and 30 noncharismatic leaders were identified from a wide range of formal work organizations. Specifically, the researcher asked full-time employed evening students to provide names of leaders they knew personally and considered highly charismatic. In addition, the same students identified a second leader, who held a similar position as the nominated charismatic leader, whom they considered to be effective but not charismatic. The immediate subordinate of each nominated leader in the sample completed a questionnaire measuring 18 different constructs derived from the theory.

Discriminant analysis of the questionnaire responses indicated that charismatic leaders could be distinguished from noncharismatic leaders on the following dimensions: leader dynamism, self esteem of subordinates,
experienced meaningfulness of work, felt back-up from the leader, self
disclosure to the leader, work week length and performance ratings of
subordinates. This study demonstrates a high degree of correspondence
between the constructs articulated in House's (1977) theory and the above
empirically identified dimensions. That is, in accordance with House's
(1977) theoretical proposition, reputedly charismatic leaders do have
effects on followers' performance, motivation, trust, and self esteem.
Thus, on the basis of Smith's (1982) findings, it can be concluded that
the charismatic phenomenon exists and can be reliably measured with
respect to intraorganizational leaders.

Further empirical evidence pertaining to the effects of charismatic
leadership is presented by Yukl and Van Fleet (1982). They conducted
four studies investigating the relationship between the extent to which
leaders engaged in specific types of leader behaviour and leader
effectiveness in combat, simulated combat, and two noncombat situations.
Two studies used a questionnaire - correlational methodology and two used
content analysis of critical incidents (Yukl & Van Fleet, 1982). Of
particular relevance to the present discussion is Yukl and Van Fleet's
measure of "inspirational leadership" which was partially derived from
House's (1977) charismatic theory (House, 1984). According to their
formulation, leader behaviours reflective of inspiration include instilling
pride in individuals; using pep talks to build morale; setting a personal
example by his/her own behaviour; providing personal encouragement to a
subordinate to build his/her confidence; and making cadets feel proud of
their unit by complimenting good performance (Yukl & Van Fleet, 1982,
p.98). The results indicated that in both combat and noncombat situa-
tions, inspiration, performance emphasis, role clarification, and criticism-discipline leader behaviours were related to group performance. With regard to inspiration, under combat conditions effective inspirational leader behaviour that appeals to subordinates' values and ideals, promotes identification with the group and its purpose, and builds subordinates' self confidence, motivated subordinates to expend the extra effort needed to succeed against formidable odds (Yukl & Van Fleet, 1982, p.101). In noncombat situations, inspirational leadership increased subordinates' motivation to perform monotonous drill routines and "built strong commitment to a military career that involves substantial personal and economic sacrifices" (Yukl & Van Fleet, 1982, p.101). Thus the findings of Yukl and Van Fleet (1982) lend support to House's (1977) proposition that inspirational or charismatic leader behaviour can enhance subordinate effort. Moreover, the results of this study are especially significant given the use of multiple methods and situations.

More recently, House (1985a) has tested his charismatic theory of leadership via biographical analysis of Canadian and American heads of state. Based on both popular political history literature and prominent political historians' judgements, heads of state were classified as charismatic, noncharismatic, or equivocal. On the basis of these judgements, a sample of unequivocally charismatic and noncharismatic leaders was selected. The behaviour of these leaders and their effects on subordinates were examined utilizing biographies from selected cabinet members. Specifically, the domain of observation for these relations was a particular issue that arose during the term of each leader and cabinet member pairing. A content analysis of the relevant literature (i.e.,
autobiographies, collections of personal papers, diaries, official biographies) pertaining to this issue and to the leader-member relationship was performed to determine the presence or absence of charismatic or noncharismatic effects and behaviours.

The preliminary results suggest that in comparison to noncharismatic leaders, charismatic leaders exhibited greater self confidence, higher performance expectations, and more positive consideration. With regard to leader effects, in comparison to followers of noncharismatic leaders, followers of charismatic leaders had higher obedience, acceptance, and trust in their leader; made more positive statements about the mission and no negative statements about the mission; had more positive feelings about the situation; and were more positive and self confident. A particularly intriguing finding is that followers of charismatic leaders exhibited greater positive and negative affect toward the leader than followers of noncharismatic leaders. Several explanations may be posited for this finding. For example, charismatic leaders may polarize followers; commanding allegiance, reverence and loyalty among supporters and generating hatred, animosity, and fear among opponents. An alternative explanation advanced by House (1985a) is that leaders may be selectively charismatic. That is, drawing on Graen and Cashman's (1975) in-group and out-group distinction, leaders may be charismatic towards "entrusted lieutenants" thereby generating positive affect and noncharismatic towards "outcasts" thereby generating neutral or negative affect. While the data are still being analyzed, it may be tentatively concluded that House's (1977) charismatic theory has received empirical support thus far, with respect to the effects and behaviours of charismatic political heads of state.
Bass' Theory of Transformational Leadership

An Overview of the Theory

Drawing on the penetrating analysis of transactional and transformational leadership proposed by Burns (1978), Bass (1985) has recently developed a model of transformational leadership in organizational settings. He argues that the current leadership literature has heavily emphasized transactional models of leadership (e.g., path-goal, vertical dyad linkage, and operant conditioning theories of leadership). In these models, leadership is conceived of an exchange process in which subordinates receive rewards for reaching established objectives. Specifically, transactional leaders, by clarifying task requirements contribute to subordinates' confidence that with some degree of effort they can succeed in accomplishing their assignments. Transactional leaders also recognize subordinates' needs and clarify how these needs can be met if they exert the necessary effort. In essence, this process reflects leadership by contingent reinforcement (Avolio & Bass, 1985). According to Bass (1985), transactional leadership results in expected effort and performance on the part of followers.

Consistent with Burns' (1978) paradigm, Bass (1985, p.11) posits that transformational leaders motivate followers to strive for transcendent goals and for higher order self actualization needs rather than focusing on their immediate self interests. In comparison to transactional leaders, transformational leaders are more likely to obtain higher levels of effort from subordinates who receive self reinforcement from performing a task rather than from external rewards (Avolio & Bass, 1985, p.7).
Therefore, through transformational leadership, followers are inspired to exert extraordinary effort. In addition to heightened motivation, followers also form a deep emotional attachment to their leader.

Based on both qualitative and quantitative procedures, Bass (1985) sought to determine the behaviours and effects of transformational leaders. Adopting Burns' (1978) definition of transformational leadership, Bass (1985) surveyed 70 male senior executives to describe transformational leaders they had encountered during their career. Based on this survey and on a comprehensive review of the leadership literature, 142 items describing transformational and transactional leaders were generated. Eleven graduate students, using detailed definitions of transactional and transformational leadership, assigned each item to one of three categories: transactional, transformational, or can't say. Items which raters could reliably categorize were selected for inclusion in a questionnaire (The Multifactor Leadership Questionnaire – MLQ) administered to 176 military officers who rated their immediate superiors with respect to how frequently they exhibited each leadership characteristic. Results of a principal component factor analysis with a varimax rotation of the 73 final items yielded five leadership factors which accounted for approximately 90% of the total variance. Identical factors have emerged in an independent factor analysis of 360 managers' questionnaire responses (Avolio & Bass, 1985).

Two leadership factors, labelled as transactional, were contingent reward and management-by-exception. Contingent reward (accounting for 6.3% of the variance) refers to the leader instructing subordinates what
to do to attain a desired reward for their efforts. Management-by-
exception (accounting for 3% of the variance) entails the leader avoiding
providing direction if customary ways are working and permitting
subordinates to continue doing their job as long as performance goals are
met.

Three transformational factors - charisma, intellectual stimulation, and
individualized consideration - were identified. Charisma (accounting for
65% of the variance) refers to the leader's ability to effectively articulate a
captivating vision; to inspire and encourage higher order effort on the
part of followers; and to instill respect, faith, loyalty, and trust in
him/herself. Intellectual stimulation (accounting for 6% of the variance)
encompasses the leader's ability to suggest creative, novel ideas which
result in a discrete leap in followers' conceptualization, comprehension, and
discernment of the nature of problems and their solutions (Bass, 1985).
Individualized consideration (accounting for 6% of the variance) refers to
the leader's developmental and individualistic orientation towards followers.
The leader provides examples and assigns tasks to followers on an
individual basis to help them significantly alter their abilities and
motivation (Bass, 1985).

In Bass' (1985) view, leadership is conceived as a five factor profile.
While transactional and transformational leadership are conceptually
distinct, Bass (1985) argues that these two leadership styles can be
exhibited by the same individual to different degrees. According to his
model, "transformational leadership will contribute in an incremental way to
extra effort, effectiveness, and satisfaction with the leader as well as to
appraised subordinate performance beyond expectations that are attributable to transactional leadership" (Bass, 1985, p.229). Therefore, transformational leadership augments transactional leadership.

It is informative to compare and contrast the theoretical formulations proposed by House (1977) and by Bass (1985). As stated by Bass (1985, p.54), House's (1977) theory focuses on the more observable, rational aspects of charisma. In order to capture the full flavour of charisma, Bass (1985) contends that the emotional components need to be emphasized. Specifically, by using vivid, colourful, persuasive language, by employing meaningful symbols and imagery, and by generating a sense of excitement and adventure surrounding the mission, charismatic leaders appeal to the feelings, sentiments, and emotions of their followers.

Bass (1985) further expands House's (1977) model by recognizing that charisma represents one component of the transformational process. According to Avolio and Bass (1985, p.16), the process of charismatic and transformational leadership differs in that:

The transformational leader excites subordinates, but goes further in coaching them to think on their own and to develop new ventures which will further the group's goals while also developing the subordinate in his/her own right. Although the outcomes may be identical in the short term, it is the transformational leader who builds within the subordinate the willingness and motivation to question future systems and rules that the transformational leader never dreamed of in his/her original vision.
Research Evidence

Bass and his associates (Avolio & Bass, 1985; Bass, 1985; Waldman, Bass, & Einstein, 1985) have conducted a series of studies examining the effects of transformational and transactional leadership on individual, group, and organizational effectiveness. As reported in Bass (1985), results from surveys of 256 business managers, 23 education administrators, 45 professionals, and 176 senior army officers consistently revealed that the three transformational factors were more highly correlated with perceived unit effectiveness and subordinate satisfaction with the leader than the two transactional factors.

The incremental effect of transformational leadership over transactional leadership in predicting individual work effort and performance was recently investigated by Waldman, Bass and Einstein (1985). In this study, 256 managers from a manufacturing firm and 261 officers from the military rated the behaviour of their current immediate supervisors on the MLQ. An index of individual performance effectiveness and measure of extra effort were developed and completed by the participants. For the manufacturing sample, the participants' performance appraisal score based on evaluations by superiors approximately six months prior to the questionnaire administration constituted the index of performance effectiveness. While the problem of common method variance threatens the validity of this study, the results revealed that transformational leadership factors were more highly correlated with followers' effort and job and work group performance than were transactional leadership factors. The results further indicated that transformational leadership factors predicted unique variance in followers' effort and performance beyond that of transactional
leadership factors. Thus, in accordance with Bass' (1985) model, transformational leadership augmented the motivational effects of transactional leadership rather than substituting for it.

Avolio, Waldman, Einstein, and Bass (1985) (cited in Avolio & Bass, 1985) have further investigated the effect of transformational leadership on group performance. At the beginning of a school semester, 162 Master of Business Administration students were randomly assigned to nine member teams to participate in a management simulation game. A peer nomination procedure was used to select the leader for each team. At the end of the semester, each group member rated the leader on the MLQ, satisfaction with the leader, and leader effectiveness in managing the group. Performance data consisted of a variety of financial indicators measured over eight full quarters of performance. The findings revealed that teams with leaders having higher ratings of transformational leadership had significantly higher performance, higher levels of satisfaction with their leader, and greater effectiveness as leaders. However, as Avolio and Bass (1985) point out, since the leader ratings occurred at the end of the semester, it is possible that by virtue of their successful performance, team members erroneously attributed transformational qualities to their leaders. Attempts to resolve this issue through post hoc analyses of the relationship between leader ratings and team performance during the initial and latter parts of the semester have led to conflicting results.

While a definitive test of Bass' (1985) transformational leadership theory remains to be conducted, the research evidence discussed above provides support for two postulations. First, transformational leadership
can significantly contribute to subordinate performance above and beyond transactional leadership. Second, transformational leadership has a positive impact on individual and group performance and satisfaction in a variety of organizational settings.

To conclude, the foregoing review of the political science, sociological, and psychological literatures has underscored the complex, multifaceted nature of charismatic leadership. As Dow (1969, p.315) succinctly summarizes:

There is no single charismatic temperament or personality type, but there is a charismatic phenomenon which can be theoretically and empirically isolated as an independent form of authority. Basically, it involves a distinct social relationship between leader and follower, in which the leader presents a revolutionary idea, a transcendent image or ideal which goes beyond the immediate, the proximate, or the reasonable; while the follower accepts this course of action not because of its rational likelihood of success...but because of an affective belief in the extraordinary qualities of the leader. Thus the leader appeals neither to intellectually calculable rules, nor to tradition, but to the revolutionary image and his own exemplary qualities with which the follower may identify. If such identification occurs, that is, if these reciprocal role expectations are met, the relationship is charismatic. This applies in small group dynamics as well as in large-scale social movements.

In particular, viewing charisma from a psychological perspective focuses our attention on the personality characteristics of charismatic leaders, their behaviours, and their effects on followers within organizations which are modernized, bureaucratic, and conventional. Moreover, the current theoretical and empirical literature suggests that intraorganizational charismatic leaders can profoundly influence followers' effort, performance and affective responses towards such leaders. Therefore the study of the behaviours and effects of charismatic
leaders within organizational settings would appear to be a worthwhile endeavour.

Theory and Research Related to Structuring and Considerate Leadership Styles

This section reviews the literature related to structuring and considerate leadership styles and their effects on subordinate performance on and adjustment to an ambiguous task. Three major areas of leadership research are discussed: (1) the behavioural approach, (2) the contingency approach, and (3) leadership under conditions of stress.

The Behavioural Approach

The behavioural approach has focused on identifying the behavioural correlates of effective leadership. This approach was based on the assumption that "knowledge of the behaviour patterns which characterize effective leaders would provide a rational basis for the design of programs to instill these behaviour patterns in actual or potential leaders" (Vroom, 1976, p.1530). This section reviews experimental findings concerned with task oriented and socioemotional leadership and field studies associated with initiating structure and consideration.
Task Oriented and Socioemotional Oriented Leadership

Based on observational studies of role differentiation in small experimental discussion groups, Bales and his colleagues (e.g., Borgatta, Bales & Couch, 1954; Bales & Slater, 1955; Bales, 1958) identified two specialized leadership roles: (1) achievement of a specific group task by directing, summarizing, and providing ideas (task oriented) and (2) maintenance or strengthening of the group's social relations by alleviating frustrations and disappointments (socioemotional oriented). Subsequent research has examined the conditions under which task oriented and socioemotional oriented leaders influence group performance and satisfaction (e.g., Burke, 1967; Gustafson, 1968; Gustafson & Harrell, 1970).

Under conditions where tasks were intrinsically satisfying to group members or members were highly committed to task accomplishment, the task oriented leader was deemed as critical to group success and there was less need for socioemotional leadership (House & Baetz, 1979, p.358). In contrast, where tasks were intrinsically dissatisfying to group members or members had low commitment to the task, the socioemotional leader was necessary to provide social satisfaction (Gustafson, 1968; Verba, 1961). Apparently, the task oriented leader under such conditions was likely to be resented and therefore socioemotional leadership was needed to compensate for this resentment. A study by Bales (1958) bears directly on this issue. He found that for task oriented leaders who permitted members to give feedback and to raise objections, qualifications, questions, and counter suggestions, there was no relationship between task orientation and liking. However, for those task oriented leaders who did not allow such feedback, the relationship between task orientation and liking was negative.
In summary, the above findings suggest the following empirical generalizations:

1. Task oriented leadership is necessary for effective performance in all work groups.

2. Acceptance of task oriented leadership requires that such leaders permit group members to respond by giving feedback, making objections, and questioning the leader.

3. Socioemotional oriented leadership is required in addition to task oriented leadership when groups are not performing satisfying or ego involving tasks (House & Baetz, 1979, p.359).

Initiating Structure and Consideration

Initiated in the late 1940s, the program of leadership research at the Ohio State University began by attempting to identify through factor analysis the dimensions needed to characterize differences in leader behaviour. Two dimensions were identified: consideration and initiating structure. Consideration reflects "the extent to which an individual is likely to have job relationships characterized by mutual trust, respect for subordinates' ideas, and consideration of their feelings" while initiating structure reflects "the extent to which an individual is likely to define and structure his role and those of his subordinates toward goal attainment" (Fleishman & Peters, 1962, pp.43-44). These dimensions are conceptually related to those labelled by Bales (1958) as socioemotional oriented and task oriented.

Over 50 published studies have assessed the relationship between leader initiating structure and consideration behaviour and various criteria of leader effectiveness including subordinates' satisfaction with their leader
and their job, performance, turnover, grievances, absenteeism and morale (House & Baetz, 1979, p.360). While the findings have been mixed, two major conclusions may be drawn. First, leaders who are high on consideration tend to have subordinates with fewer absences (e.g., Fleishman, Harris, & Burtt, 1955), lower turnover and grievance rates (e.g., Fleishman & Harris, 1962) and greater satisfaction with their job and their leader (e.g., Anderson, 1966; Fleishman, 1973; Halpin & Winer, 1957; Lowin et al., 1969; Stogdill, 1974) than those low on consideration. In addition, consistent with the findings on socioemotional leadership, a multitude of field studies have found that leader consideration is positively related to the satisfaction of subordinates who work on stressful, frustrating, or dissatisfying tasks (e.g., Downey, Sheridan, & Slocum, 1975; House, 1971; House & Dessler, 1974; Stinson & Johnson, 1975). However, there is an absence of association between leader consideration and subordinate performance under dissatisfying task conditions (House & Baetz, 1979).

The second major conclusion to be drawn is that correlations between leader initiating structure and subordinate satisfaction and performance show considerable variability with numerous reports of positive, zero, or negative relationships (e.g., Anderson, 1966; Chemers, 1984; Fleishman, Harris, & Burtt, 1955; Gilmore et al., 1979; Korman, 1966).

The lack of stronger, more consistent results with respect to the correlates of initiating structure has been traced to the particular scales used to measure this dimension. According to Schriesheim, House, and Kerr (1976), the Leader Behaviour Description Questionnaire (LBDQ) forms
are comprised mainly of items describing a leader who actively communicates with subordinates, facilitates information exchange, designs and structures the work of his/her subordinates and relationships among subordinates in their performance of work. In contrast, the Supervisory Behaviour Description Questionnaire (SBDQ) is comprised primarily of items describing a highly production oriented leader who is autocratic and punitive.

Schriesheim and his colleagues (1976) reviewed studies pertaining to initiating structure and examined the results obtained from each version of this scale independently. Consequently, apparent inconsistencies in the findings were decreased and three empirical generalizations were drawn. First, when measured by the SBDQ, leader initiating structure, while negatively related to satisfaction of the supervisor's subordinates, is generally positively related to performance ratings by superiors of manufacturing first-level supervisors and to ratings of their work group's performance. These findings were further supported with regard to noncommissioned infantry officers and air force officers. A consistent, yet considerably weaker, pattern of relationships was found for non-manufacturing supervisors of clerical workers performing routine tasks. Second, when measured by the revised LBDQ, initiating structure behaviour exhibited by first-level supervisors of nonmanufacturing employees performing routine tasks has a very weak positive relationship with subordinate satisfaction. Finally, high occupational level employees engaged in nonroutine, creative, or analytic work consistently react more favourably to leader initiating structure irrespective of the instrument used (Schriesheim et al., 1976, pp.301-302). Thus, as House
and Baetz (1979, p. 362) conclude, the findings from most field studies of leader initiating structure are congruent with those of small group research regarding task oriented leadership.

**The Contingency Approach**

There are several contingency theories of leadership which postulate that leader effectiveness is contingent upon the interaction of certain leader attributes with the specific parameters of the group, task, and environment (Chemers & Rice, 1974). Two contingency theories are especially relevant to the present study; (1) Fiedler's (1967) contingency theory and (2) House's (1971) path-goal theory.

**Fiedler's Contingency Theory of Leadership**

Based on extensive research on personality variables and group characteristics, Fiedler (1967) and Fiedler and Chemers (1974) proposed a contingency theory of leadership which postulates that leader motivation structure and situational favourability interact to predict effective and ineffective leaders.

The leader's motive hierarchy is measured by the Least Preferred Co-worker (LPC) scale. Leaders who describe their least preferred co-worker in positive terms (high LPC leaders) are assumed to be relationship motivated and those who describe their least preferred co-worker in negative terms (low LPC leaders) are assumed to be task motivated. An extensive body of literature indicates that the relationship
motivated leader is more attentive and responsive to interpersonal
dynamics, more concerned with avoiding conflict and maintaining high
morale, and more likely to behave in a participative and considerate
manner. In contrast, the task motivated leader is more focused on the
task aspects of the situation, more concerned with task success, and is
inclined to behave in a structuring, directive, and somewhat autocratic
manner (e.g., Chemers, 1984; Fiedler, 1967; Fiedler & Chemers, 1974;

Situational favourability is defined as the extent to which the
situation enables the leader to exert influence over subordinate
performance (Fiedler, 1967). It is a combination of three variables: (1)
the quality of leader-member relations (the degree of trust and support
which followers give the leader), (2) task structure (the degree to which
goals and procedures for accomplishing the group's task are clearly
specified), and (3) position power (the degree to which the leader has the
formal authority to reward and punish followers) (Fiedler, 1967). By
dichotomizing each of these situation variables, Fiedler (1967) derived
eight distinct combinations of leadership situations which defined eight
octants. According to the theory, situational favourability is highest when
leader-member relations are good, the task is highly structured, and the
leader has substantial position power (Octant 1). Alternatively, situational
favourability is lowest when leader-member relations are poor, the task is
unstructured, and the leader has little position power (Octant 8) (Fiedler,
1967). The theory postulates that in situations of high (Octants 1, 2, and
3) or low favourability (Octant 8) the task motivated leader is most
effective; in situations of moderate favourability (Octants 4, 5, 6 and 7),
the relationship motivated leader is more effective.
The contingency theory of leadership has generated intense debate (e.g., Ashour, 1973; Graen, Orris, & Alvares, 1971; Shiflett, 1973). Controversy has surrounded the basic validity of the contingency model, the conceptual meaning of the LPC measure, and the specification of the situational favourableness dimension (e.g., Ashour, 1973; Chemers & Rice, 1974; Graen, Alvares, Orris, & Martella, 1970; Green & Nebecker, 1977; House & Baetz, 1979; Schriesheim & Kerr, 1977; Shiflett, 1973; Singh, 1983). Fiedler (1971a, 1971b, 1973, 1977) has replied to most of the criticisms and the debate over his model continues.

Through the years a large number of studies have assessed the hypothesized relationships for various octants and have found both supporting (e.g., Fiedler, 1967, 1972; Fielder, O'Brien, & Ilgen, 1969; Green & Nebecker, 1977; Hunt, 1967, 1971; Ilgen & O'Brien, 1974; Rice & Chemers, 1973, 1975) and non-supporting (e.g., Shiflett & Nealey, 1972) evidence for the contingency model. At present, there are only three published complete tests of the theory (House & Baetz, 1979). While the findings of Chemers and Skrzypek (1972) supported the model in seven of the eight octants, studies by Graen, Orris, and Alvares (1971) and Vecchio (1977) failed to support the model. However, Fiedler (1978) attributed these failures to methodological manipulations inadequate to test the theory. House and Baetz (1979, p.381) have concluded, given the multitude of partial tests that support the theoretical predictions for various octants, that the theory has some predictive power.

More recent investigations of the contingency theory of leader effectiveness have applied meta-analytic techniques to various Fiedler
based studies. For instance, Strube and Garcia (1981), in their meta-analysis of the contingency model, found all but octants three and seven were fully supported by data from both laboratory and field studies. However, Vecchio (1983) has criticized this study for a variety of biases in selection of studies and interpretation of results. In a more rigorous meta-analysis of 38 Fiedler based studies testing individual octants of the model, Crehan (1984) found that the majority of studies only partially supported the theory. She concluded that the conflicting evidence may not be a function of the model itself but rather the substantial amount of inconsistency in its testing and recommended some ways in which the testing procedure should be standardized in order to accurately assess the model's validity.

**House's Path-Goal Theory of Leadership**

The path-goal theory of leadership focuses on how leader behaviour affects the motivation and satisfaction of subordinates. Based on the theoretical formulations of Evans (1970), the theory has been extended by House and his associates (House, 1971; House & Dessler, 1974; House & Mitchell, 1974).

The theory consists of two basic propositions. First, "leader behaviour is acceptable and satisfying to subordinates to the extent that they see it as either an immediate source of satisfaction or as instrumental to future satisfaction" (Filley, House, & Kerr, 1976, p.254). Second, "leader behaviour will be motivational to the extent that (1) it makes satisfaction of subordinate needs contingent on effective performance and (2) it complements the environment of subordinates by providing the
coaching, guidance, support, and rewards which are necessary for effective performance and which may otherwise be lacking in subordinates or in their environment" (Filley, House, & Kerr, 1976, p. 254). According to House (1971, p. 324), the leader's motivational functions are to increase personal payoffs to subordinates for goal attainment, to make the path to those payoffs easier to travel by clarifying it and reducing barriers, and to increase opportunities for personal satisfaction.

Path-goal theory is composed of three interactive components which influence subordinate motivation and satisfaction: leader behaviour, subordinate perceptions, and situational variables. Each of these components is briefly discussed below.

Leader behaviour. Although the initial statement of path-goal theory utilized the two dimensions of initiating structure and consideration as representative of the leader's behaviour (House, 1971), the current version of the theory (House & Mitchell, 1974) includes four categories of leader behaviour: supportive, directive, participative, and achievement-oriented. According to the theory, each of these leadership styles will lead to task motivation and subordinate satisfaction under different task structures.

Subordinate perceptions. Serving as the intervening variables in path-goal theory, subordinate perceptions consist of effort-to-performance expectancy, performance-to-reward expectancy, and valence. That is, in choosing between maximal work effort and minimal work effort, subordinates assess the probability that a given level of effort will lead to
successful task completion and attainment of task goals (effort-performance expectancy), the probability that successful task completion will lead to desirable outcomes and undesirable outcomes (performance-reward expectancy), and the desirability of each outcome (valence) (Yukl, 1981, p.145). The theory proposes that if the leader can increase valence perceptions and clarify and increase expectancy probabilities, greater effort and higher satisfaction will result.

Situational variables. Two situational factors are hypothesized to moderate the relationship between the effects of leader behaviour and the satisfaction and motivation of subordinates. These are: (1) the personal characteristics of the subordinate and (2) the work environment and task demands with which the subordinate must cope to accomplish work goals and to satisfy their needs (Filley, House, & Kerr, 1976; Schriesheim & Kerr, 1977). Subordinate characteristics include needs (e.g., needs for achievement, affiliation, and extrinsic rewards), ability to perform the task (e.g., job skills, knowledge, and experience) and personality traits (e.g., locus of control, self esteem).

The environment includes factors not within subordinates' control, but which nevertheless affect their ability to perform effectively and to satisfy their needs (House & Dessler, 1974). Three important contingency factors in the environment are the task structure, the formal authority system of the organization, and the primary work group.

In essence, path-goal theory suggests that leader behaviour, modified by the characteristics of subordinates and the work environment,
influences subordinate perceptions of valence and expectancies, which then can result in higher motivation and satisfaction. Based on this theory, several hypotheses have been advanced.

The preponderance of studies have focused on testing two hypotheses derived from the theory. The first hypothesis proposes that the lower the task structure the more positive the relationship between instrumental (task oriented, structuring) leader behaviour and subordinate task satisfaction and expectancies. That is, when tasks are nonrepetitive, complex, and ambiguous, instrumental leadership would help subordinates to clarify path-goal relationships, thereby increasing their job satisfaction and expectancies. This hypothesis has received mixed support (e.g., Downey, Sheridan, & Slocum, 1975; Greene, 1979; House & Dessler, 1974; Schriesheim & Kerr, 1977; Schriesheim & Murphy, 1976; Schriesheim & Schriesheim, 1980; Sims & Szilagyi, 1975; Stinson & Johnson, 1975). However, it should be noted that several studies provide support for the postulation that under ambiguous task conditions there is an absence of a relationship between considerate leadership and individual task satisfaction and performance (e.g., Greene, 1979; House, 1971; House & Dessler, 1974).

The theory further proposes that, when tasks are highly structured, subordinates are likely to resent their supervisors' attempts to initiate more structure (House & Dessler, 1974). Further task structure may be viewed as being excessively directive and restrictive, resulting in lower satisfaction to the subordinate and lower expectancy that his/her performance leads to rewards (House & Dessler, 1974). This leads to the
second hypothesis: under highly structured tasks, supportive (socio-emotional oriented, considerate) leadership is hypothesized to be more positively related to subordinate satisfaction and expectancies than under structured tasks. This hypothesis has been supported in several studies (e.g., Downey, Sheridan & Slocum, 1975; House & Dessler, 1974; Sheridan, Downey, & Slocum, 1975; Sims & Szilagyi, 1975; Stinson & Johnson, 1975; Szilagyi & Sims, 1974).

The conflicting findings regarding the moderating effects of task structure on the relationship between structuring leader behaviour and satisfaction and expectancies may be due to the inadequacies and differences in operationalizations of the theory's leader behaviour variables (Schriesheim & Von Glinow, 1977). In an examination of the effects of different operationalizations of path-goal theory's leader behaviour constructs, Schriesheim and Von Glinow (1977) found that the SBDQ structure scale and its derivatives were poorer operationalizations of the theory's constructs than the other scales, the LBDQ and the LBDQ-XII. They concluded that better designed and adequately operationalized research is needed in order to satisfactorily evaluate the merits of the path-goal theory of leadership. Subsequent research utilizing appropriate operationalizations of the theory's independent, dependent, and moderator variables have yielded both supportive (Greene, 1979; Johns, 1978) and nonsupportive (Schriesheim & Schriesheim, 1980) results.

More recent studies investigating a broader range of task dimensions (task feedback, task variety, opportunity to deal with others) (Schriesheim & DeNisi, 1981) and of leader behaviours (upward influencing, achievement
oriented, contingent approval, arbitrary and punitive)(Fulk & Wendler, 1982) have yielded results strongly supportive of the underlying premises of path-goal theory. Accordingly, Schriesheim and DeNisi (1981, p.595) concluded that "the basic logic of the theory seems to have substantial merit and usefulness in predicting and explaining leadership phenomena."

Leadership Under Conditions of Stress

Job stress in the form of role conflict and role ambiguity has been linked to job dissatisfaction, job related tension and anxiety, reduced performance effectiveness and a greater likelihood of leaving the organization (e.g., House & Rizzo, 1972; Johnson & Stinson, 1975; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Miles, 1976; Rizzo, House, & Lirtzman, 1970). Considerable research has focused on discovering the appropriate leadership styles that might buffer or alleviate the negative effects of job stress. For example, Schriesheim and Murphy (1976) reported that when people feel anxious about their job situation, task direction correlates positively with performance. In a study of role conflict and role ambiguity among 3725 United States Navy personnel, LaRocco and Jones (1978) concluded that leader support, defined as helping subordinates to achieve work goals, was positively correlated with greater job satisfaction, higher self esteem, and a greater tendency to remain in the organization. Finally, Katz (1977) found when affective conflict was present, leader structuring behaviour in university departments was directly related to department effectiveness. These findings were confirmed in a subsequent laboratory experiment in which
students were hired to perform coding tasks under structuring or considerate leaders and under high or low affective conflict conditions. Under high affective conflict conditions, leader structuring was positively related to task performance. The hypothesis that affective conflict would be positively related to the desire for increased leader consideration was not supported in either the field or laboratory study.

Considerable empirical research has found that considerate leader behaviour serves as a source of social satisfaction and support for the employee (e.g., House, 1981; Katz & Kahn, 1966; Sheridan & Vrendenburgh, 1979; Szilagyi & Sims, 1974). For example, Seers and his colleagues (1983) found under conditions of role ambiguity and role conflict in a large federal government agency that subordinates' satisfaction with their supervisor increased when the supervisor exhibited considerate behaviour. A similar study of 89 middle-lower managerial personnel in a large, heavy equipment manufacturing firm in the Midwest found individuals working with high consideration supervisors and experiencing a high level of role conflict or role ambiguity were more intrinsically satisfied than those with low consideration leaders while it was positive for those with high consideration leaders. As Abdel-Halim (1982) observed, while leader support tended to act as a buffer against deterioration in intrinsic job satisfaction associated with role conflict or role ambiguity, it failed to mitigate the heightened feelings of anxiety associated with role conflict.

The organizational socialization literature also suggests that leaders who exhibit considerate behaviour may facilitate newcomers' integration into their new work environment. Hall and Nougaim (1968), for example, found
that the primary concern among young AT&T managers during their first year of employment was getting established within and accepted by the organization. Katz (1978) has also shown that in the initial socialization stage of job longevity, employees appear highly receptive to role features that help establish and solidify feelings of personal acceptance, reassurance, and contribution within their new job environments. Thus during the initial stage of the organizational socialization process, supervisory coaching, psychological support, and positive interpersonal feedback helps newcomers to establish a sense of contribution and worth, to feel more secure and acceptable, and to find their overall niche in the scheme of things (Hall, 1976; Katz, 1980; Van Maanen, 1976). Hence the organizational assimilation process should proceed more smoothly when the leadership climate displays a high degree of consideration (Van Maanen, 1976, p.96).

In summary, the literature suggests that structuring leader behaviour can facilitate individuals' task adjustment and performance by defining work role expectations and alleviating anxiety associated with initially stressful job situations. Considerate leader behaviour, on the other hand, has no effect on individuals' task adjustment and performance under ambiguous task conditions. The literature further suggests that structuring leader behaviour has no effect on individuals' interpersonal adjustment. In contrast, considerate leader behaviour enhances the interpersonal adjustment of subordinates as evidenced in their establishment of positive relations between superior and subordinate under stressful conditions (e.g., Abdel-Halim, 1982; Seers et al., 1983).
A LITERATURE REVIEW OF GROUP PRODUCTIVITY

Overview

According to Schriesheim and his associates (1979, p.107):

Substantial progress in research on leadership and management can be facilitated by greater attention to the role of leadership in the context of small groups and a greater appreciation of the interdependence which exists between leaders and members of groups.

They persuasively argue that the relationship between leaders and groups is important to understand for several reasons. First, leaders emerge from groups or are appointed to manage them and therefore require an understanding of group processes in order to be effective. Second, leaders play a critical role in determining the structure, direction, and goals of the groups they manage and in establishing and maintaining productive social relationships within those groups. Finally, leaders are influenced by the groups they lead and to the extent they understand the nature of this influence process, the better equipped they will be to modify their own behaviour accordingly (Schriesheim, Mowday, & Stogdill, 1979, p.107).

Despite these compelling reasons for including groups in studies of leadership effectiveness, recent leadership research has predominantly focussed on the leader-subordinate dyad rather than the work group (Hunt, Osborn, & Schriesheim, 1978; Stogdill, 1974). One unfortunate consequence of this focus has been the separation of leader-subordinate relations from their social context, despite well established evidence of the
importance of group factors in interpersonal behaviour (e.g., Hare, 1976; Shaw, 1976). While some leadership theories consider the primary work group as an important factor (e.g., House's (1971) path-goal theory, Graen and Cashman's (1975) vertical dyad linkage theory, and Fiedler's (1967) contingency theory), only a few recent studies have examined group variables (e.g., Greene & Schriesheim, 1980; Podsakoff & Todor, 1985; Schriesheim, 1980). The present study extends the examination of group variables by investigating the role of group productivity norms in the leader-subordinate context.

The research literature on groups is vast. A comprehensive review of this literature in the present study would fill a volume in itself. Accordingly, only the group literature that pertains directly to the present topic is reviewed. Specifically, this section initially discusses the potent influence of the work group on organizational newcomers. Next, the concept of group norms and the determinants of conformity to production norms will be explicated. Finally, empirical research related to low and high performance norms in industrial work groups will be described.

The Influence of the Work Group on Newcomers' Adjustment to the Organization

Several researchers have observed that the work group has a major influence on newcomers' adaptation to their new organizational environment (Burns, 1955; Chadwick-Jones, 1964; Dubin et al., 1976; Evan, 1963; Hall, 1976; Hackman, 1976; Katz, 1980; Louis, 1980b; Van Maanen, 1976,
1978). For example, ethnographic studies of new medical students (Becker, Geer, Hughes, & Strauss, 1961) and of Coast Guard recruits (Dornbush, 1955) have vividly described how the work group can act as a defense against the extreme suppression and regimentation accompanying training and as a source of emotional support. Hall (1969) and Schein (1968) note that peer groups cushion the impact of "reality shock" accompanying the newcomer's encounter with the organization and provide role models to help the newcomer manage identity change. Thus, the work group profoundly influences the organizational socialization process by providing individuals with social support and by helping them navigate a path through the boundary passage process (Van Maanen, 1976, p.92).

As Van Maanen (1978, p.20) notes, learning during socialization "does not occur in a social vacuum strictly on the basis of official and available versions of job requirements." Newcomers turn to other members of the work group to obtain assistance in interpreting the role demands dictated by the organization, to seek information about appropriate attitudes and behaviours, and to learn the informal networks (e.g., Feldman, 1981; Graen, 1976; Hall, 1969; Louis, 1980b; Schein, 1968). Therefore, according to Feldman (1981, p.314):

The work group is a particularly important factor in determining how closely new recruits adjust to group norms and values. The group can filter out information that contradicts dominant values, so that values may be more readily accepted by newcomers. The work group can also exert some control over the amount of information new recruits get, and can advise recruits about the credibility of different sources of information.
Thus newcomers who have not yet had a chance to develop through experience their own personal maps of the organization, are heavily dependent upon members of their work groups for data about "what leads to what" and "what's good in the organization" (Hackman, 1976, p.1512).

A particularly critical role of the group is to act as a normative referent for appropriate types of work behaviour such as levels of output and quality. In their review of the research evidence on leader-group interactions, Schriesheim and his colleagues (1979, p.109) observed that "group norms are often a more potent influence on individual and group performance than are individual, managerial, or organizational factors". The following section examines the nature and determinants of group productivity norms.

**Group Norms for Productivity**

The influence of groups upon the attitudes and performance of its members is well documented in the social psychology literature (e.g., Allen, 1975; Asch, 1952; Cartwright & Zander, 1960; Newcomb, 1958, 1961; Sherif, 1936). Specifically, it has been consistently observed that "interaction among persons tends to decrease the variance in their behaviour, and, in the extreme, can produce highly standardized behaviour patterns" (Vroom, 1969, p.223). In accounting for this phenomenon, extensive use is made of the concept of group norms, informal rules that groups adopt to regulate and regularize group members' behaviour (e.g., Feldman, 1984, p.47; Hackman, 1976; Shaw, 1976;
Vroom, 1969). Norms are created and enforced by group members. That is, through interaction, group members acquire and transmit information concerning the actions which will be rewarded or punished (Vroom, 1969, p.223). Thus norms establish the basis for social control in the group. In particular they define the kind of behaviour which is necessary for or consistent with the realization of goals adopted by the group (Hare, 1976, p.19).

Group norms regarding productivity have been the primary focus within organizations (e.g., Lott & Lott, 1965; Vroom, 1969). Codes with regard to appropriate levels of production are manifest "in the outcomes of group activity, specifically, limited within-group variance in individual performance... as well as in such aspects of the group process as the fact that group members attend to the level of performance of others in their group and consistently reward those performing at appropriate levels while punishing those performing at inappropriate levels" (Vroom, 1969, p.223).

Determinants of Conformity to Productivity Norms

There are several circumstances associated with group members' adherence to performance norms. First, it is postulated that groups characterized by friendliness, cooperation, interpersonal attraction and related indications of group cohesiveness exert strong influence upon their members to behave in accordance with work norms and standards (Shaw, 1976, p.201). Since members value the interpersonal rewards available in highly cohesive groups, they are unwilling to risk losing these rewards by
violating group norms (Cummings, 1981, p.252). Some research evidence is available which suggests that highly cohesive groups are usually able to effectively control the behaviour of their members so that behaviour approximates the group norm.

For example, in a laboratory study conducted by Schacter and his colleagues (1951), conditions of high versus low cohesiveness and high versus low productivity norms were created by experimental manipulation. Specifically, in groups composed of three female undergraduates constructing cardboard checkerboards, cohesiveness was manipulated by instructions regarding the congeniality of other group members, while the direction of norms was manipulated by intercepting notes sent from one member to another and substituting prewritten sets of notes designed to influence members to increase or decrease their level of production. The results indicated that the experimentally created norms tended to have the hypothesized effects, that is, increasing production in the case of high production norms and decreasing production in the case of low production norms. However, the effect of group cohesiveness on conformity was in the same direction for both low and high productivity norms, reaching statistical significance only for the low production norm.

In a replication of the Schacter et al. experiment using male participants, a different task, and an extended production period, Berkowitz (1954) found significantly greater conformity in the high cohesive groups than in the low cohesive groups, irrespective of the direction of the productivity norm. Moreover, the results clearly indicated that the differential conformity of high and low cohesive groups persisted after the induction of norms had ended.
Similar findings regarding the effects of group cohesiveness on conformance to productivity norms were reported by Seashore (1954) using survey techniques. In a study of 228 work groups in a machinery factory, he found no relationship between cohesiveness and productivity, but, as expected, a fairly strong negative relationship between cohesiveness and the amount of variance in the productivity of group members. In comparison to workers in low cohesive groups, workers in high cohesive groups were more likely to produce at or about the same level as their co-workers. Collectively, these laboratory and field findings suggest that highly cohesive groups are effective in enforcing the performance norms adopted by groups.

In addition to group cohesiveness, the research evidence suggests that member acceptance of group-supplied performance norms is a function of four interrelated factors. First, the more ambiguous the task, the greater the tendency for the member to rely on the group as a source of information, leading to greater conformity to group norms (e.g., Asch, 1952; Blake, Helson, & Mouton, 1957; Kiesler, 1969a, 1969b; Rakestraw & Weiss, 1981). Second, the less competent a member is at the task, or the more competent the group is, the greater the conformity (e.g., Hackman, 1976; Hare, 1976; Rakestraw & Weiss, 1981; Rosenberg, 1961). Third, holding constant member self confidence, a group member will tend to accept group norms to the extent that s/he perceives the group as being a credible source of information (e.g., Hackman, 1976; Rosenberg, 1961) and/or as having a higher status (e.g., Lefkowitz, Blake, & Mouton, 1955; Raven & French, 1958). Finally, the greater the unanimity of group members' views, the more an individual will accept information provided by
the group (e.g., Allen & Levine, 1971). According to Hackman (1976), the influence of these factors on an individual's acceptance of performance goals and standards may be most pronounced early in a member's tenure in a group, before the member has had an opportunity to develop expectations through experience.

The following sections discuss the research related to the establishment and maintenance of low and high group productivity norms.

**Low Productivity Norms**

Observations of group productivity norms reported in the literature have predominantly focused on organized restriction of output (e.g., Lott & Lott, 1965; Roethlisberger & Dickson, 1939; Roy, 1952; Whyte, 1955). The classic and perhaps first quantitative demonstration of this phenomenon was provided by Roethlisberger and Dickson (1939) in the course of their experiments at Western Electric. They found systematic, group determined restriction of individual productivity in the manufacture of telephone equipment, a finding that has often been corroborated in the subsequent research literature (e.g., Argyris, 1957; Coch & French, 1948; Dubin, 1958; French & Zander, 1949; Roy, 1952; Viteles, 1953; Whyte, 1955). Coch and French (1948), for example, describe how a group of workers lowered their productivity rate and exerted strong pressure for conformity to this reduced speed following a change to a new work method which was no more difficult than the former one. Similarly, Newcomb (1958) described a case in which the group had established a production
norm of 50 units per day, but one worker wanted to exceed the norm. Her attempts to do so were so successfully quelled by her peers that her output declined below the 50 unit norm. The subsequent dissolution of the work group resulted in the employee doubling her output within a short time period.

The restriction of output and what Dubin (1958) has called "non-formal behaviour" has been consistently observed in industrial groups. Lupton (1976), in his description of shop floor behaviour, noted that work groups promote a sense of job security by controlling the work pace, provide nonwork preoccupations to relieve the strain of monotonous tasks, and through group pressures and sanctions secure from their members adherence to informal group norms. There are many detailed accounts of the various games workers play to hamper management control such as "goldbricking", "quota restriction", and "chiselling" (e.g., Burawoy, 1979; Haraszti, 1978; Roy, 1952). For instance, in the practice of chiselling:

Work groups establish and enforce conventions regarding the manner in which individuals ought to report their performance to management. The accepted practice ...is that 'windfall' gains that result from exploiting easy performance times not be reported as such. The unreported 'windfall' hours are 'saved' and reported as time spent on difficult tasks, where in fact little or nothing has actually been gained. The 'windfall' time also was used to compensate for the diminished opportunity to earn that was due to unanticipated and uncontrollable workflow inter­ruptions...[Chiselling] is defended by workers on the ground that it irons out fluctuations in their earnings and conceals from management the existence of 'slack' performance standards, thus giving the workers a degree of flexibility in setting a reasonable schedule (to them) and continuing the apparent overall relationship between effort and reward.

In order to maintain group influence over the level of individual earnings, it is necessary, as many studies have shown, that
[chiselling] be supplemented by group influence over the procedure for setting work standards on new jobs and on the procedures for allocating jobs among individuals. In short, work group influence on the reward-effort relationship has been observed to rely for its effectiveness, in many cases, on being comprehensive in its scope (Lupton, 1976, p.178).

**High Productivity Norms**

While low productivity norms have received considerable attention in the literature, it would be fallacious to assume that the social pressures exerted by co-workers consistently lead to the lowering of productivity. Informal norms can induce a higher level of performance rather than restriction of output (e.g., Coch & French, 1948; Lawrence & Smith, 1955; Maier & Hoffman, 1964). For example, as Vroom (1969, p.224) has observed:

The Hawthorne experiments in the Relay Assembly room...showed that a small group of workers placed in an isolated experimental environment achieved a high level of productivity and showed a more or less continual increase during the experimental period. While the experimental design did not permit unequivocal interpretation of this finding, the investigators attributed it, at least in part, to the development of a new set of norms regarding behaviour on the job. These norms were consistent with, rather than antithetical to, the economic objectives of the formal organization of which the group was a part.

In the years since the Hawthorne experiments, a long line of research has added to the evidence that peer influence can play a strong role in increasing performance if the group norms are congruent with the productivity goals of the system. For example, Likert (1956), in summarizing some of the findings obtained in field studies by Michigan's Survey Research Centre, accorded a highly significant role to the work group in producing lower absence rates, better interpersonal relations,
more favourable attitudes toward the job and company, and higher productivity goals. In a study of 40 agencies of a leading life insurance company, Bowers and Seashore (1966) found support, goal emphasis, and work facilitation provided by the peer group were positively correlated with various measures of employee satisfaction and organizational performance. Finally, Ouchi (1981) notes that the strong emphasis on collectivity orientations in Japanese work groups enhances individual feelings of personal worth and importance in task performance.

In summary, the literature suggests that the group can and does have a powerful impact on individual work performance. Group norms enforcing restriction of productivity can impede task performance, while group norms supporting high productivity can enhance task performance.

PERFORMANCE

Laboratory and field studies have traditionally examined the relationship between leadership style (e.g., initiating structure and consideration) and subordinates' behaviour, particularly their job performance (e.g., Greene, 1977; McCall & Lombardo, 1978). The measures of subordinate performance as an outcome of leader-subordinate interactions are diverse. Field studies have used global ratings of overall performance, objective organizational measures such as the amount of productivity, total sales, and salary increase, summary indices of work group or subunit performance (e.g., total absenteeism, number of units produced by the group, dollar value of the group's output), performance
evaluations by peers or superiors with respect to a variety of dimensions (e.g., quality and quantity of work, dependability, attendance, ability to get along with others, knowledge of work, initiative on the job), and self perceptions of effort toward quality and quantity of work (e.g., Campbell, 1977; Greene, 1979; Schriesheim, Mowday, & Stogdill, 1979; Sheridan, Downey, & Slocum, 1975; Stogdill, 1972; Szilagyi & Sims, 1974).

Measures of subordinate performance in laboratory studies are typically based on individuals' performance on an experimental task (e.g., Hunt, 1971; Katz, 1977; Vecchio, 1979). For example, for an experimental task involving cleaning, filing, and adjustment of spark plugs according to specification sheets, Lowin, Hrapchak, and Kavanagh (1969) measured both quantitative (i.e., the number of plugs processed in 1 hour) and qualitative (i.e., the number of plugs whose settings deviated from the specifications) task performance. Similarly, Gilmore and his associates (1979), for an experimental task involving the coding of interactions in videotaped leaderless group discussions using Bales (1950) category system, measured two dimensions of task performance: (1) the total number of interactions coded for all 12 Bales categories (quantity) and (2) the absolute difference between the participant's coding and the consensus of three judges who determined the correct codes (quality). Thus, in laboratory studies of leadership, both qualitative and quantitative dimensions of task performance are typically measured.

In addition to subordinate performance, there are other aspects of subordinate behaviour which have been largely ignored and yet which may have considerable bearing on leader-subordinate relationships (Greene,
1977). Hence we now turn to a discussion of subordinate adjustment to new role demands.

**ADJUSTMENT**

According to Super (1957), general adjustment is a synthesis of specific adjustments. McGrath (1976, p.1384), in his discussion of role stress, states that behaviour in organizations is contingent not only upon the task activities undertaken and the behavioural settings in which these activities are performed, but also upon the patterns of interpersonal relations within which those behaviours occur. This implies that organizational newcomers, at a minimum, need to adapt to both the task and interpersonal demands in their new role.

**Task Adjustment**

Discussions by Lofquist and Dawis (1969), Bhagat (1983), and Graen (1976) are directly related to the task adjustment component. Lofquist and Dawis (1969) developed a theory of work adjustment which is based on the concept of correspondence between an individual and his/her environment. According to this theory, correspondence between an individual and his/her environment implies conditions which can be described as a "harmonious relationship between the individual and the environment" (Lofquist & Dawis, 1969, p.45). This harmonious relationship is characterized as being reciprocally suitable, that is, the individual is
judged suitable by his/her environment and the environment is judged suitable by the individual.

A basic assumption made by Lofquist and Dawis (1969) is that each individual seeks to achieve and maintain correspondence: when an individual enters a work environment for the first time, his/her behaviour is directed towards fulfilling its requirements. S/he also experiences the rewards of the work environment. If s/he finds a correspondent relationship between him/herself and the environment, s/he seeks to maintain it. If s/he does not, s/he seeks to establish correspondence, or failing in this, to leave the work environment. Thus Lofquist and Dawis suggest that in monitoring newcomers' work adjustment we should focus on their satisfaction with their role and the organization's satisfaction with their performance.

A similar conceptualization of task adjustment has been formulated by Bhagat (1983) in his model of the effects of stressful life events on individual effectiveness within the work setting. He postulates that the experience of stressful life events leads to reduced levels of job involvement, job performance effectiveness, job satisfaction and other work related behaviour outcomes.

In contrast to Lofquist and Dawis' (1969) and Bhagat's (1983) focus on outcome-oriented variables, George Graen (1976) has discussed task adjustment in terms of process oriented variables. According to his role making model, the jobs which new employees fill are partial or incomplete programs which must be completed over time by the organization's
participants. Moreover, the definition of the job is subject to negotiation and develops through the modification and accommodation of the new employee's role expectations and those of other organizational participants. The participants who hold expectations concerning the newcomer's behaviour and play a part in defining his/her new role are those with a vested interest in his/her performance. Thus the newcomer, his/her immediate supervisor, and peers are involved in the role definition process. These individuals constitute what has been termed the role set (Katz & Kahn, 1966).

This model postulates that role ambiguity and role conflict are crucial variables which may impede the role definition process. From the newcomer's perspective, role ambiguity is a lack of knowledge concerning the expectations held by the other members of the role set. More specifically, role ambiguity refers to the extent to which the newcomer accurately perceives the expectations held by those in his/her role set. Role conflict refers to the extent to which the expectations of the various members of the role set are divergent. Thus Graen's (1976) model views task adjustment as the process by which a newcomer's role is defined and focusses on the effects of role ambiguity and role conflict on this process.

Interpersonal Adjustment

According to McGrath (1976, p.1385), "a person's behaviour on a given task, at a given time and place, is affected by his continuing relations with others involved in that task, with others present in that
place, and indeed with others (e.g., his superior) not necessarily present at all but 'relevant' to the setting and/or the task". Thus a crucial component of the newcomer's adjustment to his/her new organizational environment is the establishment of interpersonal relationships with his/her supervisor or co-workers. As Katz (1980) has pointed out, newcomers absorb the subtleties of organizational reality - and in particular their own role identities - through symbolic interactions with other individuals; peers as well as superiors. Van Maanen (1978, p.20) states that "any person crossing organizational boundaries is looking for clues on how to proceed. Thus colleagues, superiors, subordinates, clients, and other work associates can and most often do support, guide, hinder, confuse, or push the individual who is learning a new role." Experienced members are seen as a potentially rich source of assistance to newcomers in acquiring context specific interpretation schemes (e.g., Louis, 1980b; Van Maanen, 1977), in learning norms, values, assumptions, and behaviours (e.g., Feldman, 1976, 1981), in providing solutions for work problems (e.g., Dornbush, 1955), and in providing psychological support and positive interpersonal feedback (e.g., House, 1981). This assistance helps newcomers to establish a sense of contribution and worth, to feel more secure and acceptable, and to find their overall niche in the scheme of things (Hall, 1976; Katz, 1980; Van Maanen, 1976). Thus, by serving as primary associates and informal socializing agents, insiders have a major influence on the newcomer's adjustment to his/her new organizational role (e.g., Dubin et al., 1976; Hall, 1976; Louis, 1980b; Van Maanen, 1976).

Empirical evidence further suggests that newcomers' initial perceptions and behaviours are significantly shaped by their conceptual schemes of the
work environment acquired through social interaction. Evan (1963), for example, demonstrated that unstructured interaction time with peers can assist newcomers to rapidly acquire the necessary and appropriate behaviour and attitudes towards their new jobs. Similarly, Feldman and Brett (1983) found that getting help and seeking out information and reassurance from others in the organization were the most favoured coping strategies of new employees.

In summary, the distinction between these various components of adjustment recognizes the multifaceted nature of this concept and provides the basis for more accurate and precise formulation of the experimental hypotheses.

DEFINITION OF TERMS

Based on the preceding literature review, the following terms are defined for the purposes of the present study.

The charismatic leadership style is complex. It encompasses several dimensions including the leader's ability to vividly articulate an ideological goal, to communicate high performance expectations and express confidence in followers' abilities to meet these expectations, and to empathize and communicate his/her understanding of his/her follower's needs (e.g., Bass, 1985; House, 1977; Oberg, 1972). The charismatic leader's effects on followers include inspiring heightened goals and involvement in the task and generating commitment to the leader (e.g., House, 1977).
The considerate leadership style is characterized by leader behaviour that emphasizes concern, understanding, and warmth towards his/her group members, strong consideration of their feelings and needs, and participative, two-way communication (Chemers, 1984; Chemers & Rice, 1974; Fleishman & Peters, 1962).

The structuring leadership style is characterized by leader behaviour that emphasizes task assignments within the group, goal definition, and establishment of work procedures and standards (Chemers, 1984; Chemers & Rice, 1974; Fleishman & Peters, 1962).

The considerate and structuring dimensions are conceptually related to the behaviour categories of employee centred and job centred developed at the University of Michigan (Katz & Kahn, 1966), to the concepts labelled by Bales (1958) as "task facilitative" and "socioemotional", and to the behaviours described by House and Mitchell (1974) as "instrumental" and "supportive".

Group productivity norms refer to general standards or rules of conduct adhered to by the group which are intended to regulate and regularize group members' level of effort expended on a task (Festinger, Schachter, & Back, 1950; Hackman, 1976; Homans, 1950; Kiesler, 1969a, 1969b; Thibaut & Kelley, 1959; Vroom, 1969).

Adjustment is the degree to which the individual copes with and adapts to the task and social demands of his/her environment (Matarazzo, 1972). It has two components: task and interpersonal. Task adjustment
refers to the individual's capacity to deal with his/her new task demands and the associated outcomes (i.e., job satisfaction, job related tension, role conflict, and role ambiguity) (Graen, 1976; Lofquist & Dawis, 1969; McGrath, 1976). Interpersonal adjustment refers to the individual's quality of interpersonal relations with his/her superior and co-workers (e.g., Feldman, 1976, 1981; Katz, 1980; Louis, 1980b).

EXPERIMENTAL HYPOTHESES

A brief recapitulation of the major themes from the research literature on leadership style and group productivity reviewed earlier are presented below, followed by the hypotheses derived from this literature that are tested in this study.

It should be noted that some of the hypotheses are posed in a "null hypothesis" format. This is, in some cases, no differences between treatment groups are expected. While the statement of certain hypotheses in a null format might be considered inappropriate, it needs to be recognized that the hypotheses are formulated in this manner for conceptual as opposed to statistical purposes. More specifically, I have chosen to present these hypotheses following the logic of the literature rather than to state them in statistical terms.

Furthermore, it needs to be underscored that since this dissertation was conceived during 1983, the hypotheses were formulated on the basis of the relevant literature available up to and including 1983. Therefore,
while the preceding literature review has incorporated theoretical and empirical work conducted since 1983, this work is excluded from consideration in the development and justification of the hypotheses. In particular, recent work by Willner (1984), by House (1985a), and by Bass and his associates (e.g., Avolio & Bass, 1985; Bass, 1985; Waldman et al., 1985) is omitted in the framing of the following experimental hypotheses. The relationship between these works and the empirical research in this study is discussed in Chapter IV.
MAIN EFFECTS

Leadership Style

Task Performance and Task Adjustment

Sociological and psychological treatments of charisma recognize that charismatic leaders obtain their effects by vividly articulating a transcendent goal which clarifies or specifies a mission for followers (e.g., Dow, 1969; House, 1977; Weber, 1947). Moreover, by simultaneously communicating high performance expectations and expressing confidence in followers' abilities to meet these expectations, charismatic leaders enhance followers' motivation and performance in support of the transcendent goal (e.g., House, 1977; Smith, 1982). Accordingly, charismatic leaders should facilitate followers' task performance and adjustment.

Early research on leader role emergence in small experimental discussion groups found that task oriented leadership was necessary for effective performance in work groups (Bales & Slater, 1955). The Ohio State leadership studies further indicated that employees engaged in nonroutine, creative, or analytic work reacted more favourably to leader initiating structure irrespective of the leadership questionnaire used (e.g., Schriesheim et al., 1976, p.302). Fiedler's (1967) contingency theory proposes that task oriented leadership is more effective when there is very little task structure. Similarly, path-goal theory asserts that the more ambiguous the task, the more positive the relationship between leader structuring behaviour and subordinate task satisfaction and expectancies. For subordinates with unclear role perceptions, structuring leadership
would help to clarify path-goal relationships, thereby increasing job satisfaction and expectancies (e.g., House & Dessler, 1974). Finally, in stressful or unfavourable situations, structuring leader behaviour is associated with high subordinate task performance and satisfaction (e.g., Chemers & Skrzypek, 1972; Fiedler, 1967; Fleishman, Harris, & Burtt, 1955; Schriesheim & Murphy, 1976). Therefore, structuring leaders should facilitate subordinates' task performance and adjustment.

The leadership literature does not directly address the relative impact of structuring and charismatic leadership on individuals' task performance and adjustment. Therefore, as an exploratory hypothesis, it is suggested that there will be no differences between structuring and charismatic leaders on these outcome variables.

Turning to considerate leadership, the Ohio State studies have generally found an absence of association between considerate leader behaviour and subordinate performance under dissatisfying task conditions (House & Baetz, 1979). Similarly, path-goal formulations suggest that under ambiguous task conditions, considerate leaders have no effect on individuals' task performance and satisfaction (e.g., Downey, Sheridan, & Slocum, 1975; Greene, 1979; House, 1971; House & Dessler, 1974; Stinson & Johnson, 1975). Therefore, considerate leaders should have no influence on individuals' task performance and adjustment.

The body of leadership literature reviewed and discussed in this chapter suggests the following hypotheses.
Hypothesis 1. Individuals working under a charismatic leader will have higher task performance than will individuals working under a considerate leader.

Hypothesis 2. Individuals working under a charismatic leader will report higher task adjustment than will individuals working under a considerate leader.

Hypothesis 3. Individuals working under a structuring leader will have higher task performance than will individuals working under a considerate leader.

Hypothesis 4. Individuals working under a structuring leader will report higher task adjustment than will individuals working under a considerate leader.

Hypothesis 5. Individuals working under a charismatic leader will have the same level of task performance as individuals working under a structuring leader.¹

Hypothesis 6. Individuals working under a charismatic leader will report the same level of task adjustment as individuals working under a structuring leader.¹

¹As noted at the beginning of this section, these experimental hypotheses were formulated prior to the recent literature on transformational leadership presented by Bass and his associates (e.g., Bass, 1985; Waldman et al., 1985).
Adjustment to the Leader

The theoretical literature suggests that a fundamental aspect of charisma is the extraordinary, intensely personal relationship between a charismatic leader and his/her followers. According to several scholars (e.g., Bensman & Givant, 1975; Dow, 1969; House, 1977; Tucker, 1970), the initial and continuing appeal of charismatic leadership is based on emotional rather than rational grounds in that the follower is inspired to give unquestioned obedience, loyalty, commitment, affection, and devotion to the leader. Therefore, by striving to establish a strong affective bond with subordinates, charismatic leaders should facilitate subordinates' adjustment to the leader.

The theoretical and empirical literature indicates that considerate leadership appears to have its primary effects on subordinates' social or psychological maintenance and intrinsic satisfaction (House & Dessler, 1974). For example, Bales and Slater (1955) observed that socioemotional oriented leadership provided social satisfaction for group members which resulted in the reduction of frustration and stress and an increase in two-way communication between superior and subordinates. The Ohio State leadership studies reported that considerate leadership was positively associated with subordinates' satisfaction with their leader (e.g., Bass, 1981, p.382). In addition, under conditions of role stress, several researchers have reported that considerate leader behaviour serves as a source of social satisfaction and support for the employee (e.g., House, 1981; Seers et al., 1983; Sheridan & Vrendenburgh, 1979). Therefore, considerate leaders should facilitate individuals' adjustment to the leader.
The leadership literature does not directly address the relative effects of considerate and charismatic leaders on individuals' adjustment to the leader. Therefore, as an exploratory hypothesis, it is suggested that there will be no difference between considerate and charismatic leaders on this outcome variable.

Turning to structuring leadership, Smith (1982) has postulated that the levels of liking, attraction, and affection for an instrumental leader would be moderate. Subordinates are attracted to such leaders as a specific source of extrinsic rewards they value and as a facilitator of task accomplishment, rather than as a source of emotional support. Empirical evidence lends support to this postulation. Bales (1958) found no relationship between task orientation and liking for leaders who made it possible for group members to give feedback and to raise objections, qualifications and questions. Therefore, individuals with structuring leaders should have neither positive nor negative adjustment to the leader.

**Hypothesis 7.** Individuals working under a charismatic leader will report higher adjustment to the leader than will individuals working under a structuring leader.

**Hypothesis 8.** Individuals working under a considerate leader will report higher adjustment to the leader than will individuals working under a structuring leader.
Hypothesis 9. Individuals working under a charismatic leader will report the same level of adjustment to the leader as individuals working under a considerate leader.  

Group Productivity

Task Performance

As the preceding literature review suggested, in the high productivity condition, the group's role in advocating task accomplishment enhances individual task performance. In contrast, in the low productivity condition, the group's exertion of quota restricting pressures impedes individual task performance. This leads to the following hypothesis.

Hypothesis 10. Individuals in high productivity groups will have higher task performance than individuals in low productivity groups.

Adjustment to the Task and to the Group

The previously reviewed literature does not directly address the influence of group productivity norms on individuals' adjustment to the task and to the group. However, the small group literature provides some guidance in formulating hypotheses for these two outcome measures. For example, Berkowitz (1954) reported that participants liked their partners (confederates) better when the latter were supposedly proficient on a task than when they were supposedly poor. Similarly,

Again, it should be noted that this experimental hypothesis was framed prior to the work of Willner (1984) and Bass (1985).
Zander (1968) found that members of successful groups are more likely to experience satisfaction, form a favourable impression of themselves and other members of the group, and wish to continue to pursue the activity on which the group was successful. Thus to the extent individuals in high productivity groups perceive their co-workers as successfully accomplishing the task at hand, they should be more satisfied with their co-workers and with the task. In contrast, to the extent individuals in low productivity groups perceive their co-workers as exerting minimal effort on the task, they should be less satisfied with their co-workers and with the task.

In addition, laboratory studies examining the effects of social information cues about a task on individuals' assessment of task characteristics are also relevant to the framing of hypotheses for the task adjustment measures. These studies have consistently shown that in comparison to negative social cues, positive social cues provided by confederate co-workers result in higher task satisfaction and more favourable perceptions of task characteristics (e.g., Griffin, 1983; White & Mitchell, 1979). Collectively, the research evidence suggests the following hypotheses.

**Hypothesis 11.** Individuals in high productivity groups will report higher task adjustment than individuals in low productivity groups.

**Hypothesis 12.** Individuals in high productivity groups will report higher adjustment to the group than individuals in low productivity groups.
INTERACTION EFFECTS

Leader Charismatic Behaviour and Group Productivity

The theoretical literature consistently suggests that charismatic leaders, by force of their personal qualities, are capable of having profound and extraordinary effects on followers (House, 1977, p.189). As House and Baetz (1979) note, these effects include commanding loyalty and devotion to the leader, inspiring followers to accept and execute the will of the leader, and heightening followers' confidence in their abilities to reach a goal. Given the potency of the charismatic leader, the effects of high or low group productivity norms should be nullified.

Leader Structuring Behaviour and Group Productivity

Individuals exposed to a structuring leader and in a high productivity group will experience role clarity; group-sent roles and pressures to conform to these roles will be consistent with leader-sent roles. According to role theory (Kahn et al., 1964), to the extent that required role information is communicated clearly and consistently to a focal person, it will tend to induce in him/her an experience of certainty with respect to his/her role requirements, effective movement toward goals, and satisfactory job performance. In essence, both the leader and the group structure the individual's reality in mutually reinforcing ways, leading to high task performance, task adjustment, adjustment to the leader, and adjustment to the group.
Individuals exposed to a structuring leader and in a low productivity group will experience role conflict; group-sent roles and pressures to conform to these roles will diverge from leader-sent roles. Role theory states that when the behaviours expected of an individual are inconsistent s/he will experience stress, become dissatisfied, and perform less effectively than if the expectations imposed on him/her did not conflict (e.g., Graen, 1976; Kahn et al., 1964; Rizzo, House, & Lirtzman, 1970). Moreover, individuals experiencing role conflict tend to reduce their trust, liking and respect for the role senders from whom the conflict stems. Empirical evidence supports these contentions; role conflict has shown to be directly related to psychological withdrawal from the group, job induced tension, and propensity to leave the organization and inversely related to job satisfaction, job involvement, performance, organizational commitment, and attitudes toward role senders (e.g., Brief & Aldag, 1976; Greene & Organ, 1973; House & Rizzo, 1972; Johnson & Graen, 1973; Kahn et al., 1964; Miles, 1976; Van Sell, Brief, & Schuler, 1981; Yukl & Kanuk, 1981). Therefore individuals working under a structuring leader and in a low productivity group will have low task performance, task adjustment, and adjustment to the leader and to the group.

Leader Consideration Behaviour and Group Productivity

Individuals exposed to a considerate leader and in a high productivity group will experience role clarity; the considerate leader, by providing socioemotional support, and the high productivity group, by encouraging
conformance with high role expectations, act in a complimentary manner. Accordingly, individuals working under a considerate leader and in a high productivity group will have high task performance, task adjustment, and adjustment to the leader and to the group.

Individuals exposed to a considerate leader and in a low productivity group will experience role ambiguity; that is, they will lack the necessary information for effective performance in their new role. The considerate leader, by providing interpersonal concern, and the low productivity group, by advocating conformance with low performance norms, will fail to clarify individuals' role priorities. According to role theory, ambiguity should increase the probability that a person will be dissatisfied with his/her role, will experience anxiety, will distort reality, and will thus perform less effectively (Kahn et al., 1964; Rizzo et al., 1970). This argument has received empirical support. The evidence indicates that role ambiguity tends to be associated with lower job satisfaction, involvement, and performance, increased tension and anxiety, and unfavourable attitudes towards role senders (e.g., Beehr et al., 1976; Greene & Organ, 1973; Johnson & Stinson, 1975; Lyons, 1971; Rizzo et al., 1970; Van Sell et al., 1981). Therefore individuals working under a considerate leader and in a low productivity group will have low task performance, task adjustment, and adjustment to the leader and to the group.

Collectively, the theoretical literature and empirical findings lead to the following experimental hypothesis.
Hypothesis 13. It is expected that leadership style will interact with group productivity such that:

(a) Individuals exposed to a structuring leader and in a high productivity group will have

   i) higher task performance
   ii) higher task adjustment
   iii) higher adjustment to the leader and
   iv) higher adjustment to the group

   than individuals exposed to a structuring leader and in a low productivity group.

(b) Individuals exposed to a considerate leader and in a high productivity group will have

   i) higher task performance
   ii) higher task adjustment
   iii) higher adjustment to the leader and
   iv) higher adjustment to the group

   than individuals exposed to a considerate leader and in a low productivity group.

(c) Individuals exposed to a charismatic leader and in a high productivity group will have the same level of

   i) task performance
   ii) task adjustment
   iii) adjustment to the leader and
   iv) adjustment to the group

   as individuals exposed to a charismatic leader and in a low productivity group.
CHAPTER II

METHOD

This chapter consists of two sections: (1) experimental design and (2) experimental procedure. In the first section, a note on laboratory studies is followed by a description of the experimental design and of the experimental task. The operationalization of the independent, dependent, and individual difference variables is subsequently discussed.

Details on the experimental procedure are dealt with in the second section. Initially, the selection and training of the experimental confederates and validity checks on their performance are discussed. Subsequently, the experimental participants, setting, and procedure are described. Finally, the issue of demand characteristics is addressed.

EXPERIMENTAL DESIGN

A Note on Laboratory Studies

While the vast majority of leadership studies are performed in field settings (Hunt, Osborn, & Schriesheim, 1978), many researchers argue that the results are inconclusive and confusing (e.g., Gilmore, Beehr, & Richter, 1979; Sashkin & Garland, 1979). Hence there have been repeated calls in the literature for leadership scholars to return to true
experimental designs conducted in the laboratory in order to sharpen our understanding of the conditions under which leader behaviour actually causes subordinate outcomes (e.g., Hollander, 1979; Sashkin & Garland, 1979).

Many writers have examined the strengths and apparent weaknesses of the laboratory research method (e.g., Berkowitz & Donnerstein, 1982; Festinger, 1971; Fromkin & Streufert, 1976; Seashore, 1971; Weick, 1979). This method allows testing of causal hypotheses, precision and clarity in the manipulation and measurement of variables, and control of sources of variation that may be significantly related to the dependent variables of interest (Sashkin & Garland, 1979, p. 67). Properties suggested as weaknesses of the laboratory research method include artificiality of the experiment, unrealistic homogeneity of the sample, demand characteristics of the experiment, and limited external validity of the study (e.g., Adair, 1984; Campbell et al., 1970; Cronbach, 1957; Dipboye & Flanagan, 1979; Orne, 1969; Sashkin & Garland, 1979; Weick, 1979).

The validity of the experimental method for research on human behaviour has been defended on several grounds. The criticism of artificiality in laboratory experiments has been labelled a false issue (e.g., Campbell et al., 1970; Fromkin & Streufert, 1976; Sashkin & Garland, 1979; Weick, 1977, 1979). For example, according to Weick (1977, p. 124):

One of the ironies of laboratory experimentation is that presumed liabilities turn out to be conceptual assets for organizational researchers. To illustrate, research participants are apprehensive about being evaluated, but so are ambitious
employees. Laboratory tasks require limited skills, ignoring the 'rest' of what the person brings to the laboratory, but the same holds true with a division of labour and partial inclusion. Relationships between experimenter and respondent involve asymmetrical power, but the same holds true for superiors and subordinates. Participants seldom know why they are doing the things they do in laboratories but employees often operate under similar conditions of ignorance and faith. Participants in laboratory groups seldom know one another intimately, but the same is true in organizations where personnel transfers are common, where temporary problem solving units are the rule, and where impression management is abundant. People participate in experiments for a variety of reasons, but the decision to participate in an organization is similarly over-determined. Finally, people are suspicious of what happens to them in laboratories but so are employees suspicious as they become altered to the reality of hidden agendas and internal politics.

Therefore, in Weick's (1977, 1979) view, while participants need to adjust to unfamiliar laboratory tasks and settings, there is reason to believe that their response is similar to those in other work situations.

Laboratory researchers have typically utilized participants who are most readily available - college students. Although this may create a problem of generalizability, Sashkin and Garland (1979, p. 69) have observed that college students "may be more heterogeneous with respect to characteristics associated with leadership than would be a group of managers selected from within one company or industry, which is the kind of sample most often used in field studies of leadership." They further argue that "since large numbers of college students, particularly those in business schools, will one day occupy managerial positions in a wide variety of organizations, there may be greater justification for generalizing from this population to 'managers in general' than from a sample of managers studied within one 'real' organization" (Sashkin & Garland, 1979, p. 69).
Discussions in the literature regarding subject effects have failed to confirm the assumption that individuals in a laboratory setting adopt either a good subject role, seeking to confirm the experimenter's hypothesis, or a subversive subject role, attempting to sabotage the experiment (e.g., Berkowitz & Donnerstein, 1982; Kruglanski, 1975; Silverman, 1977; Weber & Cook, 1972). Instead, their concern with how they will be judged (evaluation apprehension) is more important than their concern about fulfilling the experimenter's expectancies or confirming his/her hypothesis (Berkowitz & Donnerstein, 1982; Weber & Cook, 1972). Although occasionally the participants' desire to "look good" may induce them to respond in accordance with the experimenter's expectancies, it appears more frequently that their desire to appear competent and "normal" induces them to respond naturally without being influenced by the experimenter's expectancies (Weber & Cook, 1972).

With regard to the external validity of an experiment, many scholars have argued that the generalizability of findings should be relatively narrow, restricted to a small population of participants (e.g., Dipboye & Flanagan, 1979; Sashkin & Garland, 1979; Weber & Cook, 1972). While some scholars have seriously questioned the common belief that field settings provide for more generalizability of research findings than laboratory settings do (e.g., Berkowitz & Donnerstein, 1982; Dipboye & Flanagan, 1979), it is very possible that an effect observed to be significant in the laboratory would not be sustained under conditions in which a multitude of other variables were allowed to operate simultaneously and over an extended period of time (Sashkin & Garland, 1979).
In summary, the foregoing literature review suggests that while the external validity of laboratory experimentation may be questionable, other apparent sources of weakness of this methodology have failed to be confirmed. Moreover, the laboratory research method permits the testing of causal hypotheses, precision and clarity in the manipulation and measurement of variables, and control of extraneous sources of variation. Therefore, laboratory experimentation has a justifiable place in the study of organizational leadership.

Experimental Design

This laboratory experiment examined the effects of three different leadership styles and two levels of group productivity on individuals' adjustment and performance. A 3 x 2 factorial design (Kirk, 1982) with equal cell sizes was used (see Table 1).

In order to maintain as much control as possible over the experimental conditions, each of the groups consisted of four individuals: the leader, two co-workers, and the participant. Depending upon the particular leadership treatment being implemented, the formally designated leader demonstrated a structuring, considerate, or charismatic style of leadership. To accomplish this, the leader placed in charge of the group was an experimental confederate completely instructed in her role. (See the Confederate section on p.125 for a complete explanation).

For the group productivity treatment, two co-workers either encouraged the participant to do the task (high productivity condition) or
Table 1
Experimental Design

<table>
<thead>
<tr>
<th>Leadership</th>
<th>High Productivity</th>
<th>Low Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charismatic</td>
<td>$\mu_1$*</td>
<td>$\mu_2$</td>
</tr>
<tr>
<td>Structuring</td>
<td>$\mu_3$</td>
<td>$\mu_4$</td>
</tr>
<tr>
<td>Considerate</td>
<td>$\mu_5$</td>
<td>$\mu_6$</td>
</tr>
</tbody>
</table>

*aaverage values for adjustment and performance for the participants assigned to the various treatment cells.*
discouraged the participant from doing the task (low productivity condition). Since substantial control was required to accomplish this treatment, the co-workers were also experimental confederates. (See the Confederate section on p.125 for a complete explanation.)

Thus, confederates participated in all of the treatment replications. Only the fourth group member was an experimental participant in each treatment. By allowing the group memberships to vary only in the fourth individual, more exact replications within and between the various experimental conditions were attained.

Finally, it should be noted that in designing the experiment the author was mindful of the ethical issues involved. Ethical approval for this experiment was granted by the University of British Columbia's (B.C.) Committee for Research on Human Subjects, prior to its implementation.

**Experimental Task**

In designing the experimental task, there were several essential criteria that had to be satisfied. First, to simulate adjustment to a completely new work situation, in addition to the experimental setting and the organizational members (i.e., the leader and the co-workers), the task needed to be ambiguous. Moreover, to test the hypotheses of the present study in terms of the relative influence of leadership style and group productivity norms on individuals' adjustment to and performance in a new work environment, an unstructured task was required. Second, the task had to be realistic and have high face validity in order to accurately and
meaningfully portray events encountered in a business environment. Third, in order to permit the participant to develop clear perceptions of the leadership style and co-worker productivity, the task needed to be conducive to considerable interaction among the entire experimental group - the leader, the co-workers, and the participant. In this way, the leader was able to display to the participant that her style was the same towards all members of the work group (i.e., the co-workers and the participant). Fourth, to control for participants' prior task experience, the task needed to be unfamiliar to them. Finally, to ensure the participants would think about the present work situation, the task needed to be both lengthy and involving.

Based on the above criteria, an in-basket exercise developed by Zenger Miller and Associates (1975) was selected as the experimental task (see Appendix A). The in-basket exercise is an elaborate, realistic situational test (e.g., Crooks, 1977; Frederikson, 1962; Meyer, 1970). The situation is relatively unstructured, with a multitude of possible solutions and of means to those solutions (e.g., Frederikson, 1962; Lopez, 1966). In the present study, the in-basket exercise requires the participant to think of him/herself as Rex/Rhonda Andrews, General Manager of Marketing for the Cogen Products Marketing Division. In his/her assumed role, the participant must act on separate in-basket items, including letters, reports, and memoranda, by referring, delegating, making decisions, requesting further information and, in general, exercising good administrative judgement. S/he has to record everything s/he does in writing and provide a brief statement of the reason(s) for the actions undertaken. After an item is completed, the participant is requested to place it in an out-basket.
The in-basket exercise was divided into two sections. The first section consisted of 15 memos with a time limit for completion of 45 minutes. The second section constituted an optional task which comprised a further 5 memos with a time limit for completion of 15 minutes. These time limits were established so that each participant would work on the exercise an equal amount of time and so that none of the participants would be able to complete all of the memos within the specified time periods. This was done to ensure that satisfaction ratings would be derived from the leader-subordinate and/or co-workers-subordinate interaction(s) rather than from completion of the task.

Operational Definitions of the Independent Variables

Leadership Style

The values, verbal and nonverbal behaviours, interaction style, and paralinguistic cues for each leadership style are delineated in Table 2. Each style is described below.

Charismatic Style

The operationalization of charismatic leadership was primarily derived from the psychological literature on intraorganizational charisma (e.g., Berlew, 1974; House, 1977; Oberg, 1972; Yukl & VanFleet, 1982). Based on this literature, the domain of charismatic behaviours was selectively sampled; hence a composite picture of a charismatic leader emerged. Specifically, the charismatic leadership style was operationalized as high charisma: the leader articulated an ideological goal (i.e., goal in the
Table 2
Operational Definition of Leadership Styles

<table>
<thead>
<tr>
<th>Leadership Style</th>
<th>Dimensions</th>
<th>Verbal</th>
<th>Behaviours</th>
<th>Nonverbal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Orientation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Charismatic</td>
<td>Concerned with inspiring heightened goals and involvement in the task. Generates followers' commitment and loyalty.</td>
<td>Articulates an ideological goal. Guides participants in altering their behaviours, ideas, and values in order to perform the task. Communicates high performance expectations and exhibits confidence in participants' ability to meet such expectations.</td>
<td>Alternates between pacing and sitting on the edge of her desk, leans towards participants, maintains direct eye contact, has a relaxed posture, animated facial expressions.</td>
<td></td>
</tr>
<tr>
<td>2. Considerate</td>
<td>Concerned with the social and emotional tensions and needs of the participants.</td>
<td>Engages in participative two-way conversation. Expresses concern for the personal welfare of the participants. Reassures and relaxes the participants. Emphasizes the comfort, well-being and satisfaction of the participants.</td>
<td>Sits on the edge of her desk, leans towards participants, maintains direct eye contact, has a relaxed posture, friendly facial expressions (smiling).</td>
<td></td>
</tr>
<tr>
<td>3. Structuring</td>
<td>Concerned with accomplishing the task. Results oriented.</td>
<td>Emphasizes the meeting of deadlines and quantity of work to be accomplished. Provides detailed direction and assistance to participants to get the task completed. Schedules the work to be done. Maintains definite standards of performance.</td>
<td>Sits on the edge of her desk, has periodic direct eye contact, neutral facial expressions.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 2 continued

**Operational Definition of Leadership Styles**

<table>
<thead>
<tr>
<th>Leadership Style</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interaction Style</td>
</tr>
<tr>
<td>1. Charismatic</td>
<td>Projects a powerful, dynamic, confident image. Ability to empathize with, and communicate her understanding of the needs of her followers (generates the feeling &quot;she understands me&quot;).</td>
</tr>
<tr>
<td>2. Considerate</td>
<td>Friendly, approachable, responsive to others, appreciative, willingness to listen.</td>
</tr>
</tbody>
</table>
sense of an overarching purpose for which to strive), communicated high performance expectations and exhibited confidence in subordinates' ability to meet these expectations, and empathized with the needs of his/her subordinates. The highly charismatic leader also projected a powerful, confident, and dynamic presence (e.g., House, 1977; Oberg, 1972; Sashkin, 1977; Trice & Beyer, 1984).

The operationalization of nonverbal behaviours and paralinguistic cues (i.e., volume, speech rate, intonation) was based on the communication literature (Edinger & Patterson, 1983; Friedman, Prince, Riggio, & DiMatteo, 1980; Friedman & Riggio, 1981). According to the research conducted by Friedman and his colleagues, nonverbal emotional expressiveness (i.e., the use of facial expressions, voice, gestures, and body movement to transmit emotion) is an essential characteristic of charisma, the ability to move, inspire, or captivate others. Paralinguistically, the charismatic leader was trained to have a captivating, engaging voice tone. To capture the dynamism and energy of charisma, nonverbally the charismatic leader alternated between pacing and sitting on the edge of her desk, leaned toward the participant, maintained direct eye contact, and had a relaxed posture and animated facial expressions (Edinger & Patterson, 1983; Friedman et al., 1980, 1981).

It should be underscored that charismatic leadership is a qualitatively different phenomenon than a high structure-high consideration (in Blake and Mouton's (1964) terms, a 9,9 style) style of leadership. While charisma contains some elements of consideration, that is, an ability to empathize and communicate with subordinates, it also encompasses several
other leader behaviours such as articulating a compelling vision of a desired future state of affairs, building a confident and dynamic image and so on. Moreover, charisma has minimal overlap with structuring leader behaviours. The structuring leader focusses strictly on the task, organizing and defining the way work is to be done. In contrast, the charismatic leader does not explicitly define the task, rather s/he provides an overarching goal to strive for and expresses confidence and excitement in the subordinate's ability to reach that goal.

Considerate Style

The operationalization of considerate leadership was based on definitions of consideration (Bass, 1981; Stogdill, 1974), items in the SBDQ (Fleishman, 1957), LBDQ (Hemphill & Coons, 1957), and LBDQ-XII (Stogdill, 1963), and prior operationalizations of considerate leader behaviour in experiments using confederates as leaders (e.g., Katz, 1977; Lowin, Hrapchak, & Kavanagh, 1969; Tjosvold, 1984). The considerate style was operationalized as high consideration: the leader exhibited concern for the personal welfare of the participant, engaged in participative two-way conversations, emphasized the comfort, well-being, and satisfaction of the participant, and was friendly and approachable. Rather than actually structuring the task for the participant, the considerate leader focussed on the interpersonal aspects of the task by expressing reassurance and support, making the participant feel at ease, and stressing the importance of high morale. Thus the considerate leader focussed on the social and emotional tensions and needs of the participant in the work situation.
The operationalization of paralinguistic cues and nonverbal behaviours was based on the communication and counselling literatures (e.g., Edinger & Patterson, 1983; LaCrosse, 1975; Mehrabian, 1972; Truax & Carkhuff, 1967). Paralinguistically, the considerate leader was trained to have a warm voice tone. Nonverbally, the considerate leader sat on the edge of her desk, leaned toward participants, maintained direct eye contact, and had a relaxed posture and friendly facial expressions (i.e., smiling, positive head nods).

Structuring Style

The operationalization of structuring leadership was based on definitions of initiating structure (Bass, 1981; Stogdill, 1974), items in the SBDQ (with the exception of punitive and autocratic items) (Fleishman, 1957), LBDQ (Hemphill & Coons, 1957) and LBDQ-XII (Stogdill, 1963), and prior operationalizations of structuring leader behaviour in experiments using confederates as leaders (e.g., Katz, 1977; Lowin, Hrapchak & Kavanagh, 1969; Tjosvold, 1984). The structuring style was operationalized as high structure: the leader explained the nature of the task, decided in detail what should be done and how it should be done, emphasized the quantity of work to be accomplished within the specified time period, and maintained definite standards of work performance. The structuring leader also answered any task related questions. Thus the structuring leader focussed on defining and organizing the way work was to be done.

A notable limitation of the leadership literature is the failure to specify the interaction style of structuring leaders. There are few linkages between the personality traits of structuring leaders and the behaviours
they display. Thus it is unclear whether structuring leaders are cool and aloof, warm and friendly, and so on. In the present study, structuring leaders acted in neutral fashion towards people: they were neither warm nor cold. Neutrality in the structuring leader's interaction style was achieved both verbally and nonverbally. Verbally, the leader factually provided background information on the project, read the instructions aloud, explained the task, and, in general, acted in a businesslike manner. Paralinguistically, the structuring leader was trained to have a moderate level of speech intonation. Nonverbally, the structuring leader sat on the edge of her desk, maintained intermittent eye contact, and had neutral facial expressions (i.e., absence of smiling and positive head nods) (Edinger & Patterson, 1983; LaCrosse, 1975).

To ensure that any differences that were detected could be attributed to the manipulation of the leadership style variables in accordance with the operational definitions described above, attempts were made to minimize any sources of extraneous variation. One possible source of variation was the leader's attire. Accordingly, for all leadership styles, the leaders wore identical attire. Specifically, since the participants expected to encounter a professional business manager, the leaders wore dark coloured conservative business suits.

**Group Productivity**

The values, verbal and nonverbal behaviours, interaction style, and paralinguistic cues for the group productivity conditions are outlined in Table 3. The operationalization of group productivity was based on prior
Table 3
Operational Definition of Group Productivity

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Group Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Productivity</td>
</tr>
<tr>
<td>1. Orientation</td>
<td>1. To encourage the participant to do the exercise. Advocate high task productivity.</td>
</tr>
<tr>
<td></td>
<td>2. a) Expresses considerable interest in and enthusiasm about the exercise. Has a serious attitude about the project.</td>
</tr>
<tr>
<td>2. Behaviours</td>
<td>2. b) Displays intense involvement in the exercise: reads in a concentrated manner; writes steadily.</td>
</tr>
<tr>
<td>a) verbal</td>
<td></td>
</tr>
<tr>
<td>b) nonverbal</td>
<td></td>
</tr>
<tr>
<td>3. Interaction Style</td>
<td>3. Friendly, approachable, interested in the participant.</td>
</tr>
</tbody>
</table>
Experimental operationalizations in which positive or negative task performance cues were provided by confederate co-workers (e.g., White, Mitchell, & Bell, 1977; White & Mitchell, 1979). In essence, the co-workers served as models for appropriate work behaviour by exhibiting either highly productive or minimally productive behaviour. The co-workers were seated in the same room as the participant and worked on their own tasks which involved analyzing business cases. In both conditions the co-workers appeared friendly towards and interested in the participant. The operationalization of each condition is described below.

**High Productivity Condition**

In the high productivity condition, the co-workers advocated high task productivity to the participant. That is, following White and his colleagues (1977, 1979), the co-workers made positive comments about the task itself and completed the task activity. Verbally, they expressed interest in and enthusiasm about the nature and relevance of the task. To further facilitate the participant's involvement in the task, they made positive and encouraging statements about doing the exercise. In essence, the co-workers attempted to build the participant's motivation to do the task. Nonverbally, the co-workers exhibited intense involvement in the task by reading in a concentrated manner and writing steadily. Moreover, when the leader asked the participant and each co-worker to perform an optional task, the co-workers further demonstrated their keen interest by willingly complying with the leader's request.
Low Productivity Condition

In the low productivity condition, the co-workers advocated low task productivity to the participant. That is, following White and his associates (1977, 1979), the co-workers made negative comments about the task and did not complete the task activity. Verbally, they expressed disinterest in and boredom with the task and made negative remarks about the usefulness and relevance of the exercise. In essence, the co-workers attempted to reduce the participant's motivation to do the exercise. Nonverbally, the co-workers displayed a lack of involvement in and commitment to the task by leaning back in their chairs, looking out of the window, sighing occasionally, and playing with their pens. Moreover, their disinterest in the task was further reflected in their refusal to perform an optional task when the leader requested this of them.

As discussed in Chapter I, there are several group characteristics which enhance member acceptance of group supplied performance norms such as having high status, acting as credible, competent sources of information, and sharing identical views of work (Hackman, 1976). The co-worker roles were developed accordingly: (a) to enhance their status, co-workers portrayed third and fourth year commerce students; (b) to appear credible, the co-workers claimed to have already done the in-basket exercise; and (c) to ensure unanimous views, both co-workers espoused either high task productivity or low task productivity, depending on the experimental treatment being implemented.

There was opposite sex pairing of co-workers (i.e., one co-worker was male, the other was female). One co-worker acted as a fourth year
commerce student, reported to the secretary's office 10 minutes prior to the participant's scheduled arrival time, initiated conversation with the participant, and left first after the optional task. (See the Experimental Procedure section on p.137 for complete details.) The other co-worker portrayed a third year commerce student and reported to the secretary's office 5 minutes after the participant's scheduled arrival time. (See the Experimental Procedure section on p.137 for complete details.) The assignment of these roles to the male and female co-workers was counterbalanced within each experimental condition. The co-workers wore typical commerce student attire: the male co-workers wore jeans or corduroy slacks and casual shirts and carried either a briefcase or a knapsack; the female co-workers wore slacks or skirts and sweaters.

**Experimental Scripts**

To maximize the consistency in portrayal of a leader role or a co-worker role, the leader and co-worker comments were made according to prescribed scripts (see Appendix B). For the leader roles and for the co-worker roles, the scripts are identical in content (except for the manipulation of the independent variables) and are approximately the same length.

**Manipulation Checks**

As discussed above, leaders and co-workers behaved in a pre-specified manner. To determine whether the participants correctly perceived the intended treatment, a number of post-experimental manipulation checks were made.
For the leadership style manipulation checks, 31 statements, 10 pertaining to the considerate style, 10 pertaining to the structuring style, and 11 referring to the charismatic style, were rated on 5-point Likert type scales (see Appendix C). The group productivity manipulation checks consisted of three items on the post-experimental questionnaire: two bipolar items on the group atmosphere scale (enthusiastic - unenthusiastic; productive - nonproductive) and one item on the role conflict scale (I received incompatible requests from my manager and the other students).

Operational Definitions of the Dependent Variables

Task Performance

Task performance was measured in two ways. First, since self perceived task competence is an important outcome of successful adjustment to a new job (e.g., Feldman, 1977; Fisher, 1983), participants rated their individual performance on the in-basket exercise using a modification of Mott's (1972) 8-item measure of unit performance (see Appendix D). Supportive validity and reliability data for this measure are reported by Mott (1972). In addition, studies which have modified this measure to have participants provide self-ratings of their individual performance have reported a reliability coefficient alpha of .84 for this measure (e.g., Fulk & Wendler, 1982; C. Schriesheim, 1979; J. Schriesheim, 1980).

Task performance was also measured by scoring the in-basket exercise according to dimensions derived from the empirical literature (e.g., Bentz, 1981; Frederiksen, 1962; Hemphill et al., 1962; Lopez, 1966; Meyer, 1970; Thornton & Byham, 1982) as well as discussions with experts
in the area of assessment centres (Bentz, personal communication, January 9, 1984; Dunnette, personal communication, January 9, 1984). To measure the participant's quantitative performance on the in-basket exercise, the number of in-basket items attempted within the 45 minute time period and within the 15 minute time period was summated.

The overall quality of the participant's performance on the in-basket exercise was also measured. This measure was a subjective judgement based on raters' impressions of the managerial skills demonstrated in handling the in-basket items (Meyer, 1970). It was not solely concerned with the number of items addressed by the participants; an individual could handle all of the in-basket items and still receive a low score for quality if the items were disposed of in "inappropriate" ways. By the same token, one might ignore or otherwise fail to handle many items, and this would also result in a poor quality score. Therefore, a high quality score reflects the ability to deal with the in-basket items in a qualitatively excellent way and a general willingness to tackle at least the majority of the items.

Quality of the in-basket performance was rated on a 5-point Likert type scale. A rating of one designated poor managerial performance whereas a rating of five designated excellent managerial performance. The scale included five dimensions of the quality of managerial task performance:

1. The establishment of priorities;
2. The relation to other items or background information in handling the items;
3. The systematic organization of the items by definitely scheduling work and setting up a calendar;

4. The demonstration of administrative skills such as appropriate use of delegation, obtaining more information, discussing with others, or handling directly; and

5. The provision of a rationale for the decisions.

Three rating points on the scale were operationally defined. A rating of one indicated that the participant did not establish priorities, ignored background information in tackling the items, made indefinite plans (e.g., see me; let's discuss), primarily handled all items him/herself with minimal use of delegation or consultation with others, and provided no rationale for decisions. A rating of three indicated that the participant frequently established priorities, had some awareness of the interrelationships among items, definitely scheduled important meetings, demonstrated good managerial skills such as asking for more information, and provided a rationale for major decisions. A rating of five indicated that the participant consistently established priorities, interrelated items and background information when handling the items, systematically organized his/her work by using the calendar provided and by definitely scheduling meetings, demonstrated excellent administrative skills such as appropriately delegating matters to others, and provided detailed reasons for decisions.

Two managers (1 male, 1 female) with seven years and ten years of business experience respectively, were trained to rate the quality of in-basket performance. The entire training procedure required approximately 20 hours. Further, since the rating of the in-basket exercise was conducted over a 3 week period, prior to each rating session, the judges were retested on pilot data in an attempt to maintain the consistency and reliability of their ratings.
The judges' training for rating the quality of in-basket performance consisted of three components: (1) doing the in-basket exercise, (2) discussing the quality rating scale, and (3) practicing rating the quality of performance on pilot data until a 90% accuracy criterion level was met.

After reading an entire in-basket for a participant, the judges independently rated the overall quality of managerial performance on the exercise. After the judges had rated a randomly ordered set of 20 exercises, they compared their ratings and discussed all judgements on which they had not yet reached unanimous agreement, thus arriving at a master judgement for each in-basket.

To determine the interrater reliability on the quality rating scale, the average reliability was computed (Ebel, 1951). Consistent with previous research (e.g., Bentz, 1984; Meyer, 1970), the average interrater reliability on the quality ratings was .87. It should be noted that in Ebel's method of computing the interrater reliability, the between raters' variance is excluded from the error term. This precludes the possibility of generalizing these results to other situations. Further, Ebel's formula gives the reliability of the average rating of the two judges.

A chi-square test (Lawlis & Lu, 1972) was then conducted on the interrater agreement for the quality of performance scale. Interrater agreement was defined as identical ratings between the two judges. The interrater agreement was significant, $\chi^2(1) = 7.80, p < .01$, indicating that the observed agreement was greater than the agreement which could be expected on the basis of chance. To determine whether interrater
agreement was high, moderate, or low, the $T$ index for agreement (Tinsley & Weiss, 1975) was computed. A fairly high agreement between the two judges was obtained, $T = .78$.

In addition to quantitative and qualitative measures of task performance, the number of courses of action taken by the participants on the in-basket exercise was measured. Specifically, for each in-basket exercise, the judges counted the number of different courses of action proposed. After the judges had computed the total number of actions taken for a randomly ordered set of 20 exercises, they compared their computations and discussed all judgements on which they had not yet reached unanimous agreement, thus arriving at a master judgement for each in-basket.

According to Bentz (1981), individuals who take many courses of action are productive and tend to see a variety of implications in the items. Therefore, this measure seems to incorporate both quantitative and qualitative aspects of performance.

In summary, there were four measures of task performance: (1) self-rated performance, (2) the number of in-basket items attempted, (3) the quality of in-basket performance, and (4) the number of courses of action suggested.

Task Adjustment

The measurement of task adjustment incorporated both outcome oriented and process oriented variables. With regard to the former,
Lofquist and Dawis' (1969) research suggests that in monitoring an individual's work adjustment we should focus on his/her satisfaction with his/her role. Accordingly, based on Scarpello and Campbell's (1983) empirical evidence that global measures of job satisfaction are not equivalent to the summation of many facet responses, both general and specific job satisfaction measures were used in the present study. Two items designed to tap overall job satisfaction were adapted from Hackman and Lawler's (1971) questionnaire on employees' reactions to work (see Appendix E). To measure the degree to which participants were satisfied with particular aspects of their task, the Job Descriptive Index (JDI) (Smith, Kendall, & Hulin, 1969) satisfaction with work scale was used (see Appendix F). In this scale, the respondent is asked to check whether each item in a series of short statements and adjectives applies to the task. The participants marks Y if it does, N if it does not, and ? if s/he cannot decide. Work satisfaction is computed by summing the weights assigned to the response associated with each item (Smith et al., 1969). According to Smith and her colleagues (1969), the corrected split-half internal consistency for the satisfaction with work scale is .84. In addition, the psychometric properties, reliability, and validity of the JDI have been extensively examined, generally with highly favourable results (e.g., Dunham, Smith, & Blackburn, 1977; Gillet & Schwab, 1975; Imparato, 1972).

With regard to process oriented variables, Graen's (1976) role making model suggests that role ambiguity and role conflict are crucial variables in the role definition process. Thus, this study adapted Rizzo, House, and Lirtzman's (1970) scales of role ambiguity and role conflict (see Appendices
G and H, respectively). Role ambiguity is defined in terms of the lack of clarity of role expectations and demands and lack of predictability of behavioural outcomes. Role conflict is defined as the perception of incompatible or incongruent demands placed on the role incumbent. Participants were asked to indicate on a 7-point true-false response scale, the extent to which the items were descriptive of their task situations. Rizzo and his colleagues (1970) have reported reliability estimates ranging from 0.78 to 0.84 for these instruments. Studies of the psychometric properties (Schuler, Aldag, & Brief, 1977) and item response characteristics (House, Schuler, & Levanoni, 1983) of the role ambiguity and role conflict scales have yielded supportive results.

To assess the frequency with which the participants were bothered by feelings of role ambiguity and role conflict, work overload, inadequate performance feedback, and other stressful task conditions, Kahn, Wolfe, Quinn, and Snoek's (1964) index of job related tension was adapted (see Appendix I). A recent study by MacKinnon (1978) has empirically supported the stability of the factor structure of this index. In addition, Cronbach's alpha reliability coefficients ranging from .73 to .84 have been reported for this index (e.g., Jamal, 1984).

In summary, there were five measures of task adjustment: (1) general task satisfaction, (2) specific task satisfaction, (3) role ambiguity, (4) role conflict, and (5) work related tension.
Interpersonal Adjustment

As discussed in Chapter I, a crucial component of the newcomer's adjustment to his/her new social reality is establishing interpersonal relationships with his/her superior and co-workers. The success of this adjustment may be indicated by three different measures:

1. The quality of the participant's relationship with the leader as measured by a series of Likert scales adapted from Tjosvold (1984) (see Appendix J).

2. The quality of the participant's relationship with the co-workers was measured by the group atmosphere scale (Fiedler, 1967) (see Appendix K). According to Fiedler (1962), this scale indicates the perceived pleasantness or stressfulness of the group interaction. The items consisted of a series of bipolar adjectives using an 8-point semantic differential type format. Supportive reliability data (corrected split-half reliability is .90) and validity data are presented by Fiedler (1967). In addition, as reported by Martin and Hunt (1980), the group atmosphere items loaded on the same factor as a series of attraction to group items developed by Seashore (1954).

3. The degree to which the participant is personally committed to and motivated by the leader and/or the co-workers as measured by his/her willingness to perform a subsequent task.

It should also be noted that two other measures were utilized to further examine the participants' adjustment to their new work situation: (1) the co-workers unobtrusively recorded the participants' reactions to the task (see Appendix L) and (2) the participants noted their impressions of the Management Training Project prior to completing the post experimental questionnaire (see Appendix M). As part of the contract between the author and her committee members, these process measures were not content analyzed for this dissertation.
Operational Definitions of the Individual Difference Variables

"It is generally agreed that behaviours and attitudes tend to be a function of the interaction between the person and his or her environmental situation. As a result, employee reactions are most likely influenced by both their psychological and personality characteristics as well as by their definitions of and interactions with the overall work setting" (Katz, 1980, p.119). Therefore, as Jones (1983) and Katz (1980) argue, it is important to study how different kinds of individuals negotiate their way along the job longevity continuum. Moreover, the leadership literature suggests that follower characteristics need to be examined since individual differences moderate the relationship between leadership style and subordinate work attitudes and performance (e.g., Chemers, 1984; House & Dessler, 1974). Accordingly, this study measured several individual characteristics that may influence the individual's adjustment to his/her new work situation including need for achievement, tolerance for ambiguity, and need for affiliation.

Need for Achievement

In examining the predictors of managerial success, Hall (1976) concluded that there is some evidence to suggest that individuals with a higher need for achievement are likely to be more successful in their managerial careers. As Katz (1980, p. 119) notes, "one possible explanation ... is that such individuals are more successful because they are more adept at handling their many socialization encounters as they cycle up the managerial ladder. Rather than simply waiting for others to define for them the many aspects of their new environments, managers with the aforementioned characteristic ... may be more active in seeking
such definitions or in defining their own sense of reality, including goals and expectations." This contention has received mixed empirical support. For example, Abdel-Halim (1981) found that managers with high need for achievement who worked on enriched high scope jobs seemed to be unaffected by high levels of role ambiguity. In contrast, Johnson and Stinson (1975) reported that military officers with high need for achievement were more dissatisfied when they perceived their task assignment to be relatively ambiguous or when they received conflicting demands from their role set.

Need for achievement was measured by Jackson's (1974) Personality Research Form (PRF) need for achievement scale using forms A and B combined (see Appendix N). This scale consists of 40 dichotomous items measuring the motivation of the individual to accomplish difficult tasks, to maintain high standards, and to put forth effort to attain excellence. Jackson (1974) and Mayes and Ganster (1983) present extensive empirical evidence demonstrating highly acceptable reliability (corrected odd-even reliability is .86) and convergent and discriminant validity for this scale.

Tolerance for Ambiguity

Several researchers consider tolerance for ambiguity as essential in managing the stress imposed by an uncertain environment (e.g., Lorsch & Morse, 1974; Sarbin & Allen, 1968). For example, Kahn et al. (1964) found a significant relationship between role ambiguity and job related tension for individuals classified as high in need for cognition. No relationship was found for individuals classified as low in need for cognition. In addition, Lyons (1971), in exploring the moderating effects
of need for clarity and propensity to leave, voluntary turnover, job tension, and job satisfaction among community hospital nurses, found significantly greater relationships between role clarity and turnover for individuals classified as high in need for clarity than for individuals classified as low in need for clarity.

Tolerance for ambiguity was measured by the revised Rydell-Rosen Ambiguity Tolerance scale (Kirton, 1981) (see Appendix O). Tolerance for ambiguity is defined as an individual's relative preference for undefined, unstructured, and ambiguous settings. This 11-item scale has reasonably high internal consistency (KR-20 = .71), replicates closely on fairly large general population samples, and produces expected and consistent negative relationships with some other concepts which might be expected from theorizing including dogmatism, inflexibility, and conservatism (Kirton, 1981).

Need for Affiliation

A number of researchers have presented evidence to show that individuals high in need for affiliation are concerned about establishing and maintaining relationships with others (e.g., Jackson, 1974; McClelland, 1975). For example, such individuals tend to interact more often with work associates and therefore be influenced by them, to remain physically closer to others, to laugh more, and to engage in more reciprocal dialogue than individuals with weaker affiliative needs (e.g., Lansing & Heyns, 1959; Thomas & Griffin, 1983). Furthermore, the performance and satisfaction of individuals with high affiliative needs is enhanced by superiors who demonstrate warmth and concern for others (e.g., French,
1955; House & Dessler, 1974; McKeachie et al., 1966). Finally, as House (1977, p. 203) has observed, "when task demands require affiliative behaviour, as in the case of tasks requiring cohesiveness, team work, and peer support, the arousal of the affiliative motive becomes highly relevant to performance and satisfaction."

Need for affiliation was measured by Jackson's (1974) PRF need for affiliation scale using forms A and B combined (see Appendix P). This scale consists of 40 dichotomous items measuring the motivation of the individual to seek and maintain social relationships and to readily accept people. As reported by Jackson (1974), the corrected odd-even reliability of this scale is .88. In addition, this scale has acceptable convergent and discriminant validity (Jackson, 1974).
EXPERIMENTAL PROCEDURE

Confederates

Selection of Leaders

To accurately and realistically portray the leadership styles and group conditions of interest, professional actors and actresses were hired as experimental confederates. Recruitment posters were placed in various locations in the University of B.C.'s Theatre Department and 30 actors and actresses auditioned for the confederate positions.

The actors and actresses were auditioned in pairs by the author and her supervisor. To assess the natural leadership styles of the actors and actresses, their improvisation skills, and their competence and versatility in acting, an ambiguous exercise was designed. They were asked to enact the following situation:

One of you will assume the role of a manager in any organization of your choosing. The other will be a new employee. The role of the manager is to imagine a task you want the employee to perform. You can invent a task or draw on your own personal experiences. How would you go about getting the employee to do the task?

They were then asked to use the same job assignment, but this time to inspire the employee, to put everything on the line to get this person to do the task.

On the basis of these auditions, six actresses were initially chosen to portray the various leadership styles. To maximally control for extraneous
differences across actresses, two actresses were subsequently selected to portray all three leadership styles. The rationale for selecting these two actresses was their adeptness in portraying all three leadership styles credibly and consistently, their extensive professional acting experience, and their identical ages (27 years old) and similar physical characteristics.

The choice of actresses rather than actors for the leader roles was based purely on skill and performance. That is, those chosen to portray the leader roles were selected on the basis of their ability to fulfill the skill and performance requirements. Moreover, according to Bass (1981, p. 499), "the preponderance of available evidence is that no consistently clear pattern of differences can be discerned in the supervisory style of female as compared to male leaders, although individual studies have been able on occasion to find some positive indications, but not necessarily in the same directions." Specifically, once legitimized as a leader, women actually do not behave differently from men (Bass, 1981). Most often, only modest, if any effects of leader gender on subordinates' perceptions of the leader have been reported (e.g., Bartol & Wortman, 1975; Day & Stogdill, 1972; Donnell & Hall, 1980; Eskilson & Wiley, 1976; Osborn & Vicars, 1976; Rice, Instone, & Adams, 1984).

While there is mixed empirical evidence regarding differences between male and female subordinates' attitudes and expectations towards female leaders (e.g., Petty & Lee, 1975; Petty & Miles, 1976), a majority of studies have reported minimal differences in subordinates' satisfaction with their task or their supervisors as a function of the gender of the supervisor (e.g., Bartol, 1974; Bartol & Wortman, 1975, 1979; Osborn &
Vicars, 1976; Petty & Bruning, 1980; Trempe, Rigny, & Haccoun, 1985). Furthermore, results, primarily from laboratory studies, suggest that leader gender generally is not a consistent factor in determining group performance (e.g., Bartol, 1978).

The aforementioned studies have primarily examined leader gender within the context of the traditionally researched dimensions of considerate and structuring leader behaviour. With regard to charismatic leadership, several scholars have presented case studies of effective female charismatic leaders (e.g., Day, 1980; Roberts, 1984; Trice & Beyer, 1984). Therefore, as Trice and Beyer (1984, p. 57) have concluded, "there is no evidence that being female is an insurmountable barrier to being a successful charismatic leader."

Selection of Co-workers, Secretary, and Interviewer

To realistically reflect the workplace and the Commerce student population, six actors and six actresses were selected to assume the co-worker roles. These confederates were either graduates from or advanced students in the University of B.C.'s Theatre Department and all had extensive stage experience. The co-worker's ages ranged from 19 to 28 (M = 21.1 years, SD = 2.47).

For the secretary role, an individual was needed to greet the participant and request him/her to complete demographic and individual difference measures and to greet and direct the co-workers to the leader's office. An additional role responsibility was to accurately time the experimental procedure. Due to the extensive time demands of the
secretary role, two actresses were chosen to enact this role. They were 29 and 38 years old, respectively.

For the interviewer role, an individual was required to act as a Research Associate from the University of B.C.'s Faculty of Commerce. The interviewer was responsible for administering the experimental questionnaire and for skillfully and tactfully questioning the participants regarding their reactions to the task, the leader, and the co-workers. A University of B.C. Commerce graduate with considerable theatre training and stage experience was selected to portray the interviewer role. He was 27 years old.

Training

Leader roles. For the leader roles, the confederates received 30 hours of training including an in-depth description of their roles and a demonstration of the behaviours, emotional states, body language, facial expressions, and paralinguistic cues to be emitted by viewing videotapes of actual managers portraying the different leadership styles (Kotter, 1979, 1980). The actresses also engaged in extensive practice reading of the scripts and in role plays which were videotaped. They received extensive feedback on their taped performances. In addition to scheduled training time, the actresses rehearsed together to maximize their similarities in portraying the leader roles. [Copies of the videotapes are housed in the Business School Libraries of the University of Western Ontario and U.B.C.]

Co-worker roles. The confederates received 20 hours of training for their roles as third and fourth year commerce students. This training included studying the commerce programme and its options, reviewing
course descriptions and outlines, familiarization with the various commerce faculty members through the faculty brochure, attending third and fourth year commerce courses and skimming the textbooks, becoming aware of opportunities in industry, reading the commerce student newspaper, The Cavalier, and, in general, learning about the commerce student culture. The confederates also received a detailed description of their roles, rehearsed their scripts thoroughly, and performed role plays which were videotaped and subsequently reviewed. Particular attention in training the confederates was paid to appropriately handling any inputs to the conversation by the experimental participant. The confederates were instructed to acknowledge any comment by the participant and then to proceed with the script.

The co-workers were also responsible for recording the participants' reactions during the experiment. Hence they were also trained to unobtrusively observe the participant and accurately record their observations on a questionnaire. To conceal the questionnaire from the participant's view, it was embedded in the package of case materials placed in each co-worker's in-basket.

Secretary role. For the secretary role, the actresses had 5 hours of training including a description of their role, practice reading of the script, and rehearsing responses to possible questions. They also became very familiar with the organization of the office and its filing system. The actresses wore appropriate secretarial attire (i.e., a tailored dress or a skirt and blouse).
Interviewer role. For the interviewer role, the actor had 5 hours of training which involved a description of his role, practice reading of the script, and rehearsing answers to anticipated questions. He wore slacks and a sweater.

None of the confederates were aware of the purpose and hypotheses of the study. This was verified when they were asked after the study was completed to describe their interpretations of the study, its purpose, and its research questions. Interpretations varied widely and included one held by some confederates that the author might be studying them. The actual purpose of the study was not given as an interpretation by any of the confederates at this debriefing.

Validity Checks on the Confederates' Performances

After training, there were several checks on the validity of the confederates' enactment of their respective roles. First, the confederates role played their scripts until judged by the author as credible, consistent, and providing performances that clearly distinguished the operational definitions of charismatic, considerate, and structuring leadership styles.

Second, a convenience sample of 20 judges viewed preliminary videotapes of each actress enacting the three leadership styles. They rated each actress on the leadership style manipulation checks (see Appendix C) and provided written and verbal feedback to the author about their impressions of the actresses' performances including verbal and nonverbal behaviours and paralinguistic cues. The judges' ratings and
impressions confirmed the operational definitions of the charismatic, structuring, and considerate leadership styles.

Third, to verify that the two actresses were accurately portraying the different leadership styles and were highly similar in these portrayals, 203 judges, naive to the study's purpose, rated videotapes of each actress enacting the three styles. The judges consisted of six classes of first year Masters in Business Administration (MBA) students at the University of B.C. Each class rated one videotape on 31 5-point Likert scales measuring considerate, structuring, and charismatic leader behaviours (see Appendix C). To test for differences between actresses in their enactment of the various leadership styles, Student's $t$ tests were computed for each actress on the aggregated leadership style manipulation checks. A summary of these results is presented in Table Q1 (see Appendix Q). Inspection of this table reveals that none of the $t$ tests were significant ($p$'s > .05). These results suggest that the actresses were very similar in their portrayal of each of the three leadership styles. That is, the behaviour of each actress on the charismatic leadership style was perceived to be the same, as was their perceived behaviour on each of the other two leadership styles. Therefore, in subsequent analyses of the pilot data, the actress variable was aggregated for each leadership style.

Fourth, to test for differences between the three leadership styles, a series of Student's $t$ tests were computed (see Table Q2 in Appendix Q). With the exception of the contrast between the considerate and charismatic styles on the considerate manipulation check, examination of Table Q2 indicates highly significant differences between the structuring,
considerate, and charismatic styles on the aggregated leadership style manipulation checks (p's < .001). These results suggest that there were clear differences in the students' perceptions of the three leadership styles.

Surprisingly, there was a lack of clear differentiation between the considerate and charismatic styles on the considerate manipulation check (p = .08). Inspection of the pilot data revealed that on the considerate manipulation check the average rating for the considerate leader was 3.43 on a 5-point scale, while the average rating for the charismatic leader was 3.59. Consistent with the operational definition of charisma, the charismatic leader was expected to demonstrate some considerate behaviour given her ability to empathize with and communicate her understanding of followers' needs. However, the considerate leader was expected to be rated substantially higher on this manipulation check. Anecdotally the MBA students reported that the conversation between the considerate leader and the student on the videotape appeared contrived. Therefore the actresses practiced conversing in a more genuine and credible manner and redid their considerate leader roles in front of the video camera. The new videotape was rated by two second year MBA classes (N = 38). Subsequent statistical analyses revealed that while there were no significant differences between the two actresses' portrayal of the considerate style, t(33) = 1.04, p > .05, there were highly significant differences between the considerate and charismatic styles on the considerate manipulation check, t(33) = 7.61, p < .00005.
Fifth, to ensure standardization within and between leaders' and co-workers' enactment of their roles and to ensure the leaders and co-workers maintained their required roles throughout the study, the means and standard deviations on the manipulation checks were reviewed on a periodic basis by the author during the experiment. The means and standard deviations on these checks remained consistent throughout the experiment.

Sixth, at the beginning of each week for the duration of the experiment, the confederates reviewed the videotapes of their previous performances.

As a final check on the confederates' competence in fulfilling their roles, a pilot test of the study was conducted. Eighteen undergraduate commerce students, three in each of the six experimental conditions, completed the experimental task. Visual inspection of the means and standard deviations on the manipulation checks, as well as post-experimental interviews with students, revealed that the students accurately perceived differences between the three leadership styles and between the group productivity conditions.

In addition to providing opportunities for the confederates to practice their roles, the pilot test also served to refine the timing of the experimental procedure, to determine the optimal length of the in-basket exercise, and to assess demand characteristics. Specifically, with regard to the timing of the procedure, the entrance and exits of the co-workers were altered to enhance the realism of the project. That is, one co-worker
reported to the secretary's office 10 minutes prior to the participant's scheduled time, while the other co-worker reported 5 minutes after the participant's arrival. The co-workers also departed from the workroom at staggered times (see the Procedure section on p.137 for complete details). To determine the optimal length of the in-basket exercise, the number of memos was varied within the 45 minute time period. In order to prevent fatigue and feelings that the task was impossible to accomplish, 15 memos were selected from a complete set of 30 memos for the exercise (see the Experimental Task section on p.100 for complete details).

Finally, with regard to demand characteristics, the students in the pilot study were suspicious of some of the post-experimental questions about the co-workers (e.g., To what extent did the other students seem to be working on their task?). These questions were subsequently omitted in the study, and the manipulation checks for high and low group productivity were embedded in the role conflict scale and the group atmosphere scale (see the Manipulation Check section on p.112 for a complete explanation).

Participants

One hundred and forty-four commerce and business administration undergraduates at the University of B.C. participated in the present study. There were 24 participants in each of the six experimental conditions. The proportion of males and females was approximately the

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3 Two participants were dropped from the experiment due to their prior exposure to the in-basket exercise as determined through post-experimental questioning.
same for all conditions. The majority of participants (91.7%) were in their second year of the commerce programme, while the remainder (8.3%) were in third year commerce. The participants, on average, had one year of part-time work experience and five months of full-time work experience. There were 89 male and 55 female participants and their average age was approximately 20 years (M = 20.56 years, SD = 1.51).

The participants were recruited from Commerce 220 (Management of Organizational Behaviour) and received an additional 3% in their course grade for their participation in the study (see Appendix R for a description of the recruitment of experimental participants). These students were considered to be an appropriate sample for the following reasons: (1) the majority had not been exposed to an in-basket exercise, the experimental task and (2) they had not yet received extensive instruction in organizational theory, especially with regard to leadership.

The participants signed up for time slots which were randomized for the six experimental conditions. To maintain consistency and accuracy in confederate performances, only two of the six experimental treatments occurred per day. It should be further noted that the actresses played each leader role (charismatic, considerate, or structuring) an approximately equal number of times. In addition, the actors and actresses played each co-worker role (high productivity or low productivity) approximately the same number of times.
Experimental Setting

The study was conducted in the Canada Employment Centre interview offices located in Brock Hall on the University of B.C. campus. The offices were physically separate from the main operation of the Canada Employment Centre and were self-contained. That is, one central entrance led into four separate offices used for the study. The offices were designed to resemble the temporary business offices of the Mackenzie Institute (see Appendix S for pictures of the offices). One room, without windows, was the secretary's office and had a desk, chairs, filing cabinet, electric typewriter, telephone, coffee machine, in- and out-baskets with correspondence, and pictures and a 1983 calendar on the wall. Another room, with windows, was the manager's office and had a large, impressive oak desk and chair, desk blotter, executive diary, teak in- and out-baskets, pen set, policy manuals, and appropriate artwork on the walls. The remaining two offices had windows and served as the workrooms. They contained two tables, three chairs, and three sets of in- and out-baskets. The seating arrangements were identical in both workrooms. To facilitate interactions between the co-workers and the participant, one co-worker sat at a table by him/herself facing the window; and the participant sat adjacent to one co-worker and facing the other co-worker.

To further establish a realistic work environment, signs on the walls and doors of the offices were used to identify the study with the Mackenzie Institute. As well, questionnaires and other materials were fictitiously identified and presented as a part of the normal work routine of the project.
Experimental Procedure

Commerce and Business Administration undergraduates at the University of B.C. were asked to participate in the Management Training Project (see Appendix R). The students were informed by the Course Co-ordinator of Commerce 220 that the University's Faculty of Commerce was co-operating with the Mackenzie Institute, a Vancouver based management consulting firm, in an important project designed to ascertain the practical business skills of Commerce students. Specifically, the purpose of the project was to ensure that the business administration curriculum and teaching methods were responsive to industry's and government's future management needs. The students were required to work with a manager and fellow students in a business simulation for 2 hours and would receive, in addition to an educational experience, a bonus of 3% in their course grade for participating. The sign-up book for the experiment was then circulated in the classes and any questions were answered by the Course Co-ordinator. Similar techniques for creating a realistic work situation in the context of a research study have been used previously (e.g., Gilmore, Beehr, & Richter, 1979; Katz, 1977; Lowin et al., 1969).

As a reminder, the participants were telephoned the evening prior to their participation in the experiment and were asked to report to the temporary campus offices of the Mackenzie Institute located in Brock Hall. The participants were tested individually.
The experiment was conducted in nine stages (see Appendix B for the complete experimental scripts). First, one co-worker reported to the secretary's office 10 minutes before the participant's scheduled time and proceeded to complete a general questionnaire not subsequently used in the study. When the participant arrived, s/he was initially greeted by the secretary and was asked to sign-in and to complete the demographic data form for the project's personnel records (see Appendix T). Meanwhile, the secretary escorted the co-worker to the leader's office. Upon her return, the secretary asked the participant to complete the consent form and the individual difference measures (see Appendices N, O, and P). While the participant was filling out these questionnaires, the other co-worker reported to the secretary's office and stated s/he was in third year commerce and was here for the second part of the project. The secretary asked him/her to sign-in and then directed him/her to the leader's office. Five minutes later the leader took the co-workers into the appropriate workroom. Thus the confederates were treated like the experimental participant – they filled out forms and questionnaires and were subject to the same work procedure as the participant.

When the participant had completed the questionnaire, the secretary informed the leader of the participant's arrival. To begin the second stage, the leader greeted the participant in the secretary's office and subsequently escorted the participant into her office.

The leader introduced the participant to the experimental task by stating that the Mackenzie Institute was attempting to ascertain the practical business skills of commerce students in selected colleges and
universities across Canada and had designed several exercises for this purpose. The exercise the participant would be working on today was an in-basket.

The participant was informed by the leader that s/he would be working with two other commerce students who were in third and fourth year and that they had done the in-basket exercise the previous week and were currently working on other tasks. The leader then escorted the participant into the office where the co-workers were working and introduced them to the participant. After seating the participant and giving him/her the exercise, the leader checked on the co-workers' progress and then exited. The participant then began the in-basket.

In stage three, five minutes after the leader had departed, the group productivity manipulation was initiated. Up until that point, there had not been any direct interaction between the co-workers and the participant. If the participant was assigned to the high productivity condition, then one co-worker started a conversation stating how s/he had already done the in-basket exercise and had found it very interesting. For the low productivity condition, one co-worker remarked how s/he had done the in-basket exercise and had found it boring. The co-workers then completed unobtrusively the first part of the process measure (see Appendix L).

In stage four, approximately 20 minutes later, the leader re-entered the workroom to check on the participant's and co-worker's progress on the task and then exited.
In stage five the group productivity manipulation was continued. Five minutes after the leader had departed (stage four) the highly productive co-workers inquired about the participant's task progress and affirmed the relevance of the exercise. In the low productivity condition, one co-worker asked the participant how much time remained and expressed complete boredom with the task. The co-workers then completed unobtrusively the second part of the process measure.

In stage six, twenty-five minutes later, that is 85 minutes into the study, the leader re-entered the workroom to collect the exercises. She then asked the participant and co-workers to perform an optional task which took 15 minutes. Regardless of their decision to comply or not comply, they were to report to the secretary's office and fill out a questionnaire. The leader subsequently left so the participant could make the decision independent of any possible further leader influence through physical presence in the room.

In stage seven, for the highly productive condition, the co-workers remained to do the optional task. One co-worker left after 12 minutes had elapsed while the other co-worker departed after 15 minutes. In the low productivity condition, one co-worker refused to do the optional task, stating that s/he had more important things to do, and left immediately. The other co-worker left 5 minutes later after clearly not attempting to do the optional task. During this stage, the participant decided whether or not to do the optional task.
In stage eight, if the participant completed the task before the time limit expired, then s/he reported to the secretary's office. S/he was subsequently introduced to the interviewer, a Research Associate from the Faculty of Commerce, who escorted the participant back into the workroom and administered the post-experimental questionnaire. If the participant was still working on the task after 15 minutes had elapsed, then the interviewer entered the workroom and administered the questionnaire. The rationale for asking the participant to complete the measures was that since the Faculty of Commerce would be participating in subsequent phases of the project, it wanted to evaluate its success to date (see Appendix B for the interviewer's script). The participant then completed the questionnaire.

The participant was interviewed by the Research Associate to determine his/her reaction to the study and to assess potential demand artifacts (Adair, 1984). Specifically, the participant was asked a series of open ended questions about his/her perceptions of the task, the manager, and the co-workers (see Appendix U). The participant was then asked not to discuss the study with other students and was thanked for participating.

Table 4 summarizes the experimental procedure and its duration in minutes.
Table 4
Experimental Procedure

<table>
<thead>
<tr>
<th>Actual Duration in Minutes</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>STAGE 1 - secretary greets the participant and asks him/her to complete the demographic data form and individual difference measures.</td>
</tr>
<tr>
<td>15</td>
<td>STAGE 2 - participant is introduced to the leader, co-workers, and experimental task; leader exits; participant begins the in-basket exercise.</td>
</tr>
<tr>
<td>20</td>
<td>STAGE 3 - group productivity manipulation begins.</td>
</tr>
<tr>
<td>5</td>
<td>STAGE 4 - leader returns and checks the participant's progress on the task; leader exits.</td>
</tr>
<tr>
<td>25</td>
<td>STAGE 5 - group productivity manipulation continues.</td>
</tr>
<tr>
<td>5</td>
<td>STAGE 6 - leader returns and asks the participant and co-workers to perform an optional task; leader exits.</td>
</tr>
<tr>
<td>1-15</td>
<td>STAGE 7 - co-workers decide to do/not to do the optional task. Participant decides to do/not to do the optional task.</td>
</tr>
<tr>
<td>15</td>
<td>STAGE 8 - participant completes the post-experimental measures.</td>
</tr>
<tr>
<td>10</td>
<td>STAGE 9 - participant is questioned by the interviewer.</td>
</tr>
</tbody>
</table>
Administration of the Dependent Measures

The dependent measures were administered in the following order. First, to ensure the individual difference measures were not biased by the experimental manipulations, they were administered in a counterbalanced order during stage one of the experimental procedure. Second, during the experiment, the co-workers completed process measures on the participants' reaction to their situation. Third, at the conclusion of the experiment, measures of task adjustment and performance and measures of interpersonal adjustment were counterbalanced in administration to minimize the likelihood of order effects.

Demand Characteristics

Several steps were taken to minimize demand characteristics in this study. First, the experimental setting was elaborately designed and the experimental confederates were well versed in their roles. Second, detailed and plausible cover stories were developed including rationales for the purpose of the study, for the experimental task, and for the post-experimental questionnaire. Third, as recommended by Orne (1969) and Rosenberg (1969), to increase the participants' candidness in answering the post-experimental questionnaire, an interviewer who was not associated with the experimental treatments administered the dependent measures. Fourth, at the end of each experimental session, participants were requested not to discuss their experience with other students in order to ensure that Commerce students' practical business skills would be accurately assessed. Post experimental questioning revealed that while
participants frequently asked their friends about the project, they had not been told what to expect.

There were several indications that the experimental situation had been successfully concealed. During the post-experimental interview, participants were asked what their perceptions were about the purpose of the project, what was expected from them, and how they were supposed to respond. None of the participants indicated suspicion of the project's purpose or of the confederates. In fact, many participants wanted to know if they should return for part two of the Management Training Project as their co-workers had done. They also inquired when the project results would be available.

Initially, only the final 18 participants, three from each of the six experimental conditions, were debriefed. During debriefing the participants expressed surprise when they learned that they had been involved in an experiment and that the purpose of the project was different. Collectively, these results suggest that the participants were unaware of the true purpose of the experiment at the time they were studied.

At the conclusion of the study, all participants received a written summary of the purpose, experimental hypotheses, and findings of the study. Specifically, with regard to the in-basket exercise, the participants received a detailed explanation of its purpose, its scoring system, and the results in terms of the qualitative and quantitative performance for different experimental groups in the study. The
participants were further informed that the study would be extended at other universities since the author will be teaching at another Canadian university next year and plans to do further research on this subject in this setting. The participants were given the author's telephone number if they wished to ask questions or offer comments.
CHAPTER III

RESULTS

Experimental analyses were conducted on the following dependent measures: (a) task performance (i.e., number of in-basket items attempted, number of courses of action suggested, quality of in-basket performance, and self-rated performance), (b) task adjustment (i.e., role conflict, role ambiguity, specific satisfaction, general satisfaction, and job related tension), and (c) interpersonal adjustment (i.e., adjustment to the leader and adjustment to the group). The statistical analyses examined the data in reference to the hypotheses outlined in Chapter I. In addition, the individual difference measures (i.e., tolerance for ambiguity, need for achievement, and need for affiliation) were statistically analyzed. Prior to presenting the results, an overview of the statistical analyses is presented.

Overview of Statistical Analyses

Initially the data were examined for accuracy of input, missing values, and outliers and for the appropriateness of assumptions to be used in the following analyses (i.e., normality, multicollinearity). Next, to explore and concisely describe the pattern of interrelationships among the leadership style manipulation checks and among the dependent measures, factor analyses were conducted using the principal factor method with multiple $R^2$ as communality estimates and the varimax method of rotation.
The reliabilities of the multiple item scales were subsequently evaluated by computing Cronbach's alpha coefficient of reliability (Nunnally, 1978). In addition, intercorrelations among the dependent variables were calculated in order to determine the extent to which the variables were related.

To ensure homogeneity of treatment groups and to eliminate competing explanations for the results, several preliminary analyses were subsequently conducted. Student's t-tests were computed to evaluate the similarity of the two actresses' portrayal of the three leadership styles. Student's t-tests were also calculated to test for differences between: (a) the fidelity of the performances of the three leadership styles across the two actresses and (b) the high and low group productivity conditions.

The continuous data consisted of four measures of task performance, five measures of task adjustment, and two measures of interpersonal adjustment. Scale scores were created by summing the items for each dependent measure. To test the hypotheses outlined in Chapter I, these data were initially submitted to 3(Leadership Style) x 2(Group Productivity) univariate analyses of variance (ANOVAs). Due to the large number of F ratios computed in these analyses, an experimentwise alpha level of .05 was used (Kirk, 1982). Specifically, the experimentwise error rate considers the probability of making one or more Type I errors in the set of comparisons under scrutiny (Keppel, 1973). Since the probability of committing Type I errors increases as the number of statistical tests increases, the significance level used to evaluate the comparisons was divided evenly among the 11 comparisons actually being made. Therefore,
the significance level was .004 per comparison. In addition, the proportion of variance accounted for by each effect was calculated using the omega squared index (Vaughn & Corballis, 1969). All significant effects were subjected to post hoc analyses using the Newman-Keuls sequential range statistic (Kirk, 1982). To reduce the possibility of spurious findings, an alpha level of .01 was selected.

To allow for simultaneous testing of the multiple dependent measures and to account for the various interrelationships among them, a 3(Leadership Style) x 2(Group Productivity) multivariate analysis of variance (MANOVA) was subsequently performed (e.g., Green, 1978; Marascuilo & Levin, 1983; Tabachnick & Fidell, 1983). This test used the Wilks' lambda multivariate test of significance and employed an alpha level of .05. The multivariate eta squared statistic (e.g., Green, 1978; Tabachnick & Fidell, 1983; Tatsuoka, 1973) was computed to determine the proportion of variance in the linear combination of dependent variables. Post hoc examination of significant MANOVA effects used discriminant function analysis in order to identify which of the multiple dependent variables contribute mostly to the differences between the groups (e.g., Huberty, 1975; Marascuilo & Levin, 1983; Pedhazur, 1982; Tatsuoka, 1970, 1971). In this analysis, both the discriminant function weights and the dependent variables were standardized. Bartlett's approximate $\chi^2$ statistic (Tatsuoka, 1971, p. 208) was used to test the significance of the discriminant functions. In addition, the discriminatory power of these functions was computed. Subsequently, group centroids were plotted on a grid defined by the discriminant functions. Confidence contours, representing one and two standard deviations, were drawn around each centroid so that group
separation and overlap could be examined visually. Interpretation of these plots was further assisted by computation of Roy-Bose confidence intervals (Marascuilo & Levin, 1983) for pairwise comparisons of the mean standardized discriminant scores. Subsequently, for each significant discriminant function, the pattern of discriminant weights was examined to determine how much each dependent variable contributed to the differentiation between groups. Only those discriminant weights whose absolute values were no less than approximately one-half of the largest discriminant weight were interpreted (Tatsuoka, 1970).

Three supplemental analyses were performed. First, a 3(Leadership Style) x 2 (Group Productivity) multivariate analysis of covariance (MANCOVA) was computed. The covariates were tolerance for ambiguity, need for achievement, and need for affiliation. Second, Student t tests were conducted to test for differences between male and female participants' perceptions of the three leadership styles. Third, the frequency with which the participants complied with the leader's request to perform the optional task of handling five additional memos was computed.

**Data Screening**

Utilizing BMDP's Detailed Data Description program, initially the data were examined for accuracy of input. Specifically, for each dependent and individual difference measure, the univariate descriptive statistics were inspected for out-of-range values and plausible means and dispersions. For the general satisfaction dependent measure, two out-of-range values were detected and were replaced with the correct values. As well, for the
need for achievement and need for affiliation measures, three out-of-range values were found for each measure and were replaced with the correct values.

The next step in data screening was to evaluate the extent and pattern of missing data using BMDP's Description and Estimation of Missing Data program. Only a few data points, randomly scattered over cases and variables with no evident patternning on the basis of group variables, were missing from the data set. Missing values were replaced by the estimated group mean.

To check for univariate outliers among the dependent and individual difference measures, the standardized scores for each variable were examined. As recommended by Tabachnick and Fidell (1983), a standardized score of ± 3.00 was used as a cut for identifying outlying cases. Inspection of these scores revealed that two dependent variables, number of items (minimum standardized score = -3.43; maximum standardized score = 1.32) and number of courses of action (minimum standardized score = -2.48; maximum standardized score = 3.10), exceeded the standardized score criterion. According to Tabachnick and Fidell (1983, p. 74), when the primary purpose of an analysis is to evaluate group differences, it is important to identify outliers for each group separately. If different treatments applied to groups are effective, they may shift scores around enough so that, with groups pooled, those most sensitive to treatment would appear to be outliers. Clearly, one would not want to throw out treatment effects by throwing out those cases.
Using BMDP's Histogram and Normal Probability Plot program, histograms and normal probability plots of the number of items and number of courses of action variables were examined separately for each treatment group. No univariate outliers were detected.

To identify within group multivariate outliers, the Mahalanobis distance between each case and other cases within its group was calculated using BMDP's Estimation of Missing Data program. Outliers were defined as cases with extreme Mahalanobis distance from their group, evaluated as $\chi^2$ with degrees of freedom equal to the number of dependent variables (Tabachnick & Fidell, 1983). At an alpha level equal to .05, no outliers were identified.

The assumption of normality was assessed by examining the skewness and kurtosis of the dependent measures and covariates. Examination of the standard error for skewness and kurtosis, using a Z value in excess of $\pm 2.58$ as the criterion for rejection of the assumption of normality, revealed no notable skewness for the majority of variables (Tabachnick & Fidell, 1983). Moderate negative skewness for the dependent measure number of items was detected. Kirk (1982, p. 75) argues, however, that "skewed populations have very little effect on either the level of significance or the power of the F test for the fixed-effects model. ... Considering the robustness of the F test to normality when the $n_j$'s are equal, the use of a transformation for this purpose will rarely be advantageous." Accordingly, this variable remained intact.
To assess multicollinearity, each dependent variable was regressed on all of the other dependent variables (Lewis-Beck, 1980). According to Lewis-Beck (1980), coefficients of determination ($R^2$) near 1.0 reveal nearly redundant variables. For this sample, $R^2$ ranged from .08 to .61, with the majority reaching .3. Therefore, multicollinearity was not a problem in this data set.

**Preliminary Analyses**

**Instrumentation for the Independent Variables**

The leadership style manipulation checks consisted of 31 statements, 10 pertaining to the considerate style, 10 pertaining to the structuring style, and 11 referring to the charismatic style, which were rated by the participants on 5-point Likert type scales (see Appendix C). Using BMDP's Factor Analysis program, the leadership style manipulation check items were submitted to the principal factoring method of factor extraction (see Table Q3 in Appendix Q). Based on the criterion of an eigenvalue greater than one (e.g., Child, 1970; Green, 1978), two factors were extracted and orthogonally rotated using the varimax method. Loadings were considered significant if they exceeded ± .3 (e.g., Child, 1970; Green, 1978). Factor one is composed of considerate items with consistently high positive loadings and structuring items with consistently high negative loadings. This suggests a leadership style factor anchored on one end by considerate leadership and on the other end by structuring leadership. This factor is labelled "consideration-structure" and explains 61.03% of the variance. The second factor, labelled "charisma", has
consistently high positive loadings on the charismatic items and accounts for 28.95% of the variance. Therefore, the results of this factor analysis suggest that the charismatic, considerate, and structuring leadership styles are clearly distinguished.

Using Cronbach's alpha formula, the internal consistency reliabilities were .96 for the considerate and for the structuring scales and .94 for the charismatic scale. According to Nunnally (1978), the criterion for the estimated reliability of research scales is .7. Therefore, based on this criterion, the reliability coefficients for the leadership style manipulation check scales were highly satisfactory.

Instrumentation for the Dependent Variables

To investigate the integrity of the multiple item continuously scaled dependent measures, factor analyses were performed on the following measures: self-rated performance, role ambiguity, role conflict, job related tension, adjustment to the leader, and group atmosphere. In addition, to evaluate the a priori dimensionality of the three theoretical constructs - task performance, task adjustment, and interpersonal adjustment - the dependent measures comprising each construct were factor analyzed. Using BMDP's program, all factor analyses were performed

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4 The items comprising two measures of task adjustment - general task satisfaction and specific task satisfaction (JDI) - were not factor analyzed. The general task satisfaction measure consisted of only two items. The specific task satisfaction measure response format (Y, N, ?) was not appropriate for factor analysis. Therefore, these measures were excluded from individual factor analysis. However, the aggregated scores on each task satisfaction measure, together with the items comprising the remaining task adjustment measures, were submitted to a factor analysis.
using the principal method of factor extraction. Selection of the number of factors was based on the criterion of an eigenvalue greater than one (e.g., Child, 1970; Green 1978; Tabachnick & Fidell, 1983). If more than one factor was extracted, varimax rotation was employed. Loadings were considered significant if they exceeded ± .3 (e.g., Child, 1970; Tabachnick & Fidell, 1983). The results of these factors analyses are presented below.

Task Performance

Factor analysis of the self-rated performance scale revealed one important factor explaining 89.96% of the variance (see Table Q4 in Appendix Q). This factor contained all of the self-rated performance items with relatively high positive loadings.

The four measures of task performance - number of items attempted, number of courses of action suggested, quality of performance, and self-rated performance items - were subjected to a factor analysis to confirm their independent existence in this sample. As shown in Table Q5 (see Appendix Q), factor one consists of the self-rated performance items with relatively high positive loadings, accounting for 62.79% of the variance. This factor is labelled "subjective task performance". Measures loading on factor two include number of items attempted, number of courses of action suggested, and quality of performance with high positive loadings. This factor explains 30.56% of the variance and is labelled "objective task performance".
The composition of the second factor is surprising. As discussed in Chapter II, it was expected that self-rated performance, number of items, number of courses of action, and quality of performance would comprise independent operationalizations of the task performance construct. The results of this factor analysis, however, clearly suggest that there is a strong interrelationship among the objective measures of task performance. Based on these results, it would appear unnecessary to subsequently analyze each measure separately. One possible solution is to select one objective measure to serve as a proxy measure for task performance. However, based on the argument advanced in Chapter II that each objective measure represents a unique indicator of performance on the in-basket exercise (Bentz, 1981), the author decided to retain all three objective measures of task performance for subsequent analyses, recognizing that the results of such analyses need to be interpreted with caution.

Another possible solution to account for the interrelationships among the objective task performance measures is to form a linear combination of the dependent measures in subsequent analyses. This solution was adopted through the execution of a MANOVA followed by a discriminant analysis.

It should also be noted that factor two, in addition to the objective measures of task performance, contained one self-rated performance item (i.e., How much did you produce in the exercise?). This item had a low positive loading on this factor (.357). To drop this item on the basis of this evidence, particularly in light of the results presented earlier
concerning the integrity of this scale, did not seem justified (see Table Q4 in Appendix Q). Accordingly, the self-rated performance scale was retained intact.

**Task Adjustment**

Factor analysis of the role ambiguity scale items revealed one factor accounting for 96.26% of the variance (see Table Q6 in Appendix Q). This factor was comprised of all the role ambiguity items with high positive loadings.

Table Q7 (see Appendix Q) presents the factor analysis of the role conflict items. The factor extracted, explaining 73.25% of the variance, consisted of six items with moderately high positive loadings and two items with very low loadings (.192 and .231). These two items (i.e., I had to go against a rule or directive in order to carry out the exercise; I received incompatible requests from my manager and the other students) were excluded from this scale. A second factor analysis of the remaining items yielded one factor comprised of five items with high positive loadings and one item with a low loading (.284) (see Table Q8 in Appendix Q). This item (i.e., I worked with a manager and students who operated quite differently) was subsequently omitted from the scale. The next factor analysis of the retained items yielded one factor with relatively high positive factor loadings accounting for 89.97% of the variance (see Table Q9 in Appendix Q).

Factor analysis of the job related tension scale items yielded one
factor accounting for 71.83% of the variance (see Table Q10 in Appendix Q). This factor was composed of all of the tension items with relatively high positive loadings.

The five measures of task adjustment - role ambiguity items, role conflict items, job related tension items, and aggregated general task satisfaction and aggregated specific task satisfaction scales - were subjected to a factor analysis to demonstrate their independence for this sample. Three factors were extracted and rotated using the varimax method (see Table Q11 in Appendix Q). Factor one is composed of the role ambiguity items with relatively high positive loadings and one job related tension item (i.e., Being unclear on just what the scope and responsibilities of your exercise were) with a moderately low negative loading (-.402). This factor explains 51.23% of the variance and is labelled "role ambiguity". The second factor is comprised of the job related tension items with moderately high positive loadings and one role conflict item (i.e., I received an assignment without the manpower to complete it) with a relatively weak positive loading (.348). This factor is labelled "job related tension" and accounts for 20.18% of the variance. Factor three consists of the role conflict items with moderately high positive loadings and the aggregated general task satisfaction and the aggregated specific task satisfaction measures with moderately high negative loadings, and two role ambiguity items (i.e., I knew that I had divided my time properly; Explanation was clear of what had to be done) with low negative loadings (-.318 and -.309, respectively). This bipolar factor, accounting for 9.26% of the variance, was anchored on one end by role conflict and on the other end by task satisfaction. This factor is labelled "task dissatisfaction - task satisfaction".
The composition of the third factor is surprising. As discussed in Chapter II, it was expected that general task satisfaction and specific task satisfaction would comprise independent operationalizations of the task adjustment construct. However, the results of this factor analysis suggest that there is a strong interrelationship among the task satisfaction measures. Accordingly, it would be redundant to examine each measure independently. As discussed earlier in this section, a potential solution is to select one task satisfaction measure to serve as a proxy measure. However, based on Scarpello and Campbell's (1983) empirical evidence that global measures of job satisfaction are not equivalent to the summation of many facet responses, both general and specific task satisfaction measures were retained in subsequent analyses. It must be noted that the results of these analyses need to be interpreted with caution.

Another possible solution to account for the interrelationships among the task satisfaction measures is to form a linear combination of the dependent measures. This solution was adopted by conducting a MANOVA followed by a discriminant analysis.

To summarize, the results of this factor analysis indicate while the measures of general task satisfaction and specific task satisfaction were interrelated, the remaining task adjustment measures — role ambiguity, role conflict, and job related tension — were clearly distinguished. Therefore, the task adjustment construct consists of four components: role ambiguity, role conflict, job related tension, and task satisfaction.
The results of this factor analysis further indicate that only four items had relatively weak loadings on other factors (i.e., one role conflict item, one job related tension item, and two role ambiguity items). However, to drop these items on the basis of this evidence, especially in view of the results presented earlier regarding the integrity of these scales seems unwarranted (see Tables Q6, Q9, and Q10 in Appendix Q). Accordingly these scales were retained intact for this study.

Interpersonal Adjustment

Factor analysis of the adjustment to the leader scale items revealed one factor explaining 97.99% of the variance (see Table Q12 in Appendix Q). This factor consisted of all of the adjustment to the leader items with high positive loadings.

Table Q13 in Appendix Q presents the factor analysis of the group atmosphere scale items. The single factor extracted, explaining 77.08% of the variance, is composed of all of the group atmosphere items with relatively high positive loadings.

The two measures of interpersonal adjustment - adjustment to the leader scale items and group atmosphere scale items - were factor analyzed to demonstrate their independent existence in this sample. Two factors were extracted and rotated using the varimax method (see Table Q14 in Appendix Q). Factor one is composed of the group atmosphere items with relatively high positive loadings. This factor, explaining 49.68% of the variance, is labelled "adjustment to the group". The second factor is comprised of the adjustment to the leader items with high positive
loadings. Accounting for 34.96% of the variance, this factor is labelled "adjustment to the leader". Therefore, the results of this analysis demonstrate that the interpersonal adjustment construct consists of two independent components: adjustment to the group and adjustment to the leader.

Scale characteristics, means, standard deviations, and internal consistency reliabilities (Cronbach's alpha) for the multiple item scales are presented in Table 5. Inspection of table shows that the scale reliabilities reached satisfactory levels, exceeding .70 in all cases (Nunnally, 1978).

Pearson correlation coefficients among the 11 dependent variables of the study are presented in Table 6. Examination of this table reveals that the majority of correlations were significant (range = .00 to .76; p's < .05). The measures of task performance (i.e., number of items, number of courses of action, quality of performance) show the highest intercorrelations, whereas the measures of adjustment to the leader and adjustment to the group tend to be weakly correlated with the other dependent measures. The existence of some substantial intercorrelations among the dependent variables demonstrates the need for the use of a multivariate analytic procedure (MANOVA) that takes into account these linear dependencies. It should be underscored, however, that multicollinearity was not a problem in this data set. As discussed in the Data Screening section (see p.152), the assessment of the presence of multicollinearity via the method proposed by Lewis-Beck (1980) indicated that multicollinearity was not problematic.
Manipulation Checks

Actress. To evaluate the similarity of the two actresses' portrayal of the three leadership styles, Student's t tests were computed for each actress on the aggregated leadership style manipulation checks. These
Table 5

Scale Characteristics, Means, Standard Deviations and Reliabilities for the Dependent and Individual Difference Measures

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of Items</th>
<th>M</th>
<th>SD</th>
<th>Internal Consistency Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items</td>
<td>1</td>
<td>15.28</td>
<td>3.58</td>
<td>-</td>
</tr>
<tr>
<td>Number of Actions</td>
<td>1</td>
<td>20.88</td>
<td>6.81</td>
<td>-</td>
</tr>
<tr>
<td>Quality of Performance</td>
<td>1</td>
<td>2.95</td>
<td>1.03</td>
<td>-</td>
</tr>
<tr>
<td>Self-Rated Performance</td>
<td>7</td>
<td>22.13</td>
<td>4.35</td>
<td>.83</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>6</td>
<td>24.62</td>
<td>7.05</td>
<td>.90</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>5</td>
<td>18.99</td>
<td>5.48</td>
<td>.76</td>
</tr>
<tr>
<td>Specific Satisfaction</td>
<td>18</td>
<td>33.33</td>
<td>8.36</td>
<td>.94</td>
</tr>
<tr>
<td>General Satisfaction</td>
<td>2</td>
<td>9.01</td>
<td>3.05</td>
<td>.72b</td>
</tr>
<tr>
<td>Tension</td>
<td>13</td>
<td>36.59</td>
<td>7.82</td>
<td>.83</td>
</tr>
<tr>
<td>Adjustment to Leader</td>
<td>5</td>
<td>24.57</td>
<td>6.45</td>
<td>.94</td>
</tr>
<tr>
<td>Group Atmosphere</td>
<td>10</td>
<td>55.37</td>
<td>10.00</td>
<td>.86</td>
</tr>
<tr>
<td>Need for Achievement</td>
<td>40</td>
<td>28.44</td>
<td>4.39</td>
<td>.98c</td>
</tr>
<tr>
<td>Need for Affiliation</td>
<td>40</td>
<td>30.46</td>
<td>4.79</td>
<td>.98c</td>
</tr>
<tr>
<td>Tolerance for Ambiguity</td>
<td>11</td>
<td>6.41</td>
<td>2.35</td>
<td>.94</td>
</tr>
</tbody>
</table>

Note:  \( N = 144 \).

\(^a\) Internal consistency reliabilities were obtained by Cronbach's alpha formula.

\(^b\) For two items, alpha is equal to Guttman's split-half coefficient.

\(^c\) For items in dichotomous form, alpha is equivalent to the Kuder-Richardson reliability coefficient.
Table 6

Pearson Correlation Coefficients for the Dependent Measures

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number of Items</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Number of Actions</td>
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<td>1.000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Quality of Performance</td>
<td>.745</td>
<td>.760</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Self-Rated Performance</td>
<td>.248</td>
<td>.219</td>
<td>.315</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Role Ambiguity</td>
<td>.123</td>
<td>.142</td>
<td>.323</td>
<td>.379</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Role Conflict</td>
<td>-.216</td>
<td>-.278</td>
<td>-.396</td>
<td>-.403</td>
<td>-.529</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Specific Satisfaction</td>
<td>.208</td>
<td>.323</td>
<td>.375</td>
<td>.291</td>
<td>.407</td>
<td>-.565</td>
<td>1.000</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8. General Satisfaction</td>
<td>.162</td>
<td>.265</td>
<td>.349</td>
<td>.365</td>
<td>.400</td>
<td>-.611</td>
<td>.667</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Tension</td>
<td>-.051</td>
<td>-.020</td>
<td>-.063</td>
<td>-.557</td>
<td>-.305</td>
<td>.402</td>
<td>-.386</td>
<td>-.344</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Adjustment to Leader</td>
<td>-.009</td>
<td>.226</td>
<td>.091</td>
<td>-.100</td>
<td>-.179</td>
<td>-.179</td>
<td>.344</td>
<td>.234</td>
<td>.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>11. Adjustment to Group</td>
<td>.029</td>
<td>-.024</td>
<td>.011</td>
<td>.048</td>
<td>.178</td>
<td>-.134</td>
<td>.172</td>
<td>.208</td>
<td>.019</td>
<td>-.145</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Note: N = 144.

*Correlations > 0.214 and > 0.164 are significant at the .01 and .05 levels, respectively.*
results are presented in Table Q15 (see Appendix Q). Examination of this table reveals that none of the $t$ tests were significant ($p$'s > .05). These results suggest that the actresses were very similar in their portrayal of the three leadership styles. Therefore, for the analyses reported below, the actress variable was aggregated for each leadership style.

**Leadership style.** The means and standard deviations for the leadership style manipulation checks are presented in Table Q16 (see Appendix Q). To test for significant differences between the three leadership styles, a series of Student's $t$ tests were computed (see Table Q17 in Appendix Q). Inspection of Table Q17 indicates highly significant differences between the structuring, considerate, and charismatic styles on the aggregated leadership style manipulation checks ($p$'s < .0001). These results suggest that there were clear differences in the participants' perceptions of the three leadership styles.

**Group productivity.** The strength of the group productivity manipulation was assessed by examining three items on the post-experimental questionnaire. Two bipolar items on the group atmosphere scale (enthusiastic-unenthusiastic; productive-nonproductive) and one item on the role conflict scale (I received incompatible requests from my manager and the other students) served as manipulation checks. As shown in Table Q18 (see Appendix Q), there were highly significant differences in participants' perceptions of the high and low group productivity norms ($p$'s < .005). This suggests that the group productivity manipulation was successfully achieved.
Univariate ANOVAs

The group means and standard deviations and the cell means and standard deviations for the dependent measures are presented in Tables 7 and 8, respectively. Table 9 summarizes the results from 11 3(Leadership Style) x 2(Group Productivity) ANOVAs. Based on the Cochran and the Bartlett-Box tests, the hypothesis of the homogeneity of variance was accepted for these analyses (p's > .01). Inspection of Table 9 indicates highly significant effects for leadership style, group productivity, and the leadership style by group productivity interaction on role conflict, specific satisfaction, and general satisfaction (p's < .0001). Leadership style also had significant effects on the number of courses of action, the quality of task performance, role ambiguity, and adjustment to the leader, while group productivity had a significant effect on participants' adjustment to the group (p's < .0001). Omega squares, also reported in Table 9, indicate that the main effect for leadership style accounted for the major portion of the variance.

The leadership style, group productivity, and leadership style by group productivity interaction effects were not significant for three dependent variables:

1. The number of in-basket items attempted.
2. The participants' self-rated perceptions of their task performance.
3. The participants' job related tension.
<table>
<thead>
<tr>
<th>Dependent Measures</th>
<th>Leadership Style</th>
<th></th>
<th></th>
<th>Low</th>
<th></th>
<th></th>
<th>High</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Structuring</td>
<td>Considerate</td>
<td>Charismatic</td>
<td>Low</td>
<td>High</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Task Performance</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Items</td>
<td>15.35</td>
<td>3.65</td>
<td>14.77</td>
<td>3.98</td>
<td>15.71</td>
<td>2.83</td>
<td>14.69</td>
<td>3.79</td>
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<tr>
<td>Courses of Action</td>
<td>19.06</td>
<td>5.72</td>
<td>19.49</td>
<td>6.06</td>
<td>24.06</td>
<td>7.26</td>
<td>19.72</td>
<td>6.22</td>
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<tr>
<td>Quality of Performance</td>
<td>2.94</td>
<td>.95</td>
<td>2.46</td>
<td>.91</td>
<td>3.46</td>
<td>.96</td>
<td>2.85</td>
<td>.92</td>
</tr>
<tr>
<td>Self-Rated Performance</td>
<td>23.02</td>
<td>4.64</td>
<td>20.88</td>
<td>4.14</td>
<td>22.49</td>
<td>3.89</td>
<td>21.79</td>
<td>4.52</td>
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<tr>
<td>Task Adjustment</td>
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</tr>
<tr>
<td>Role Ambiguity</td>
<td>28.77</td>
<td>4.77</td>
<td>16.43</td>
<td>3.58</td>
<td>28.65</td>
<td>3.01</td>
<td>23.86</td>
<td>3.54</td>
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<tr>
<td>Role Conflict</td>
<td>19.42</td>
<td>3.60</td>
<td>22.06</td>
<td>4.43</td>
<td>15.48</td>
<td>3.21</td>
<td>20.39</td>
<td>3.42</td>
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<tr>
<td>Specific Satisfaction</td>
<td>30.83</td>
<td>6.07</td>
<td>29.73</td>
<td>6.34</td>
<td>39.44</td>
<td>5.58</td>
<td>30.24</td>
<td>5.81</td>
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<tr>
<td>General Satisfaction</td>
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<td>1.88</td>
<td>7.38</td>
<td>2.81</td>
<td>11.06</td>
<td>2.13</td>
<td>8.21</td>
<td>2.46</td>
</tr>
<tr>
<td>Tension</td>
<td>36.10</td>
<td>7.98</td>
<td>37.89</td>
<td>8.05</td>
<td>35.77</td>
<td>6.87</td>
<td>38.08</td>
<td>7.41</td>
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Table 8

Cell Means and Standard Deviations for the Dependent Measures

<table>
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<tr>
<th>Dependent Measures</th>
<th>Structuring Low Productivity</th>
<th>Structuring High Productivity</th>
<th>Considerate Low Productivity</th>
<th>Considerate High Productivity</th>
<th>Charismatic Low Productivity</th>
<th>Charismatic High Productivity</th>
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<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
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<td></td>
</tr>
<tr>
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</tr>
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Table 9
Analyses of Variance Summary Table for the Dependent Measures

<table>
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<tr>
<th>Dependent Measure</th>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>$\omega^2(%)$</th>
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<td><strong>Task Performance</strong></td>
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<tr>
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<td>-0.85</td>
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</tr>
<tr>
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Table 9 (continued)

Analyses of Variance Summary Table for the
Dependent Measures

<table>
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<tr>
<th>Dependent Measure</th>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>ω²(%)</th>
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<tr>
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<td>30.84</td>
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<tr>
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## Table 9 (continued)

Analyses of Variance Summary Table for the Dependent Measures

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<tr>
<th>Dependent Measure</th>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
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<th>$\omega^2(%)$</th>
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<td><strong>Tension</strong></td>
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<td>3.09</td>
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<tr>
<td></td>
<td>A x B</td>
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<td>96.44</td>
<td>1.64</td>
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<td>95.92</td>
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<td></td>
</tr>
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<td></td>
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<td>0.49</td>
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<td>Residual</td>
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<td>64.79</td>
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</table>

* $p < .0001.$
Inspection of these nonsignificant differences indicated that the participants attempted approximately 15 out of 20 memos and perceived their task performance as adequate (\(M = 22.13; 3.16\) on a 5-point scale). The participants also reported occasional work related tension (\(M = 36.59; 2.81\) on a 5-point scale).

**Post Hoc Analyses**

Both the significant leadership style main effect and leadership style by group productivity interaction were subjected to post hoc analyses using the Newman-Keuls test (see Tables Q19 and Q20 in Appendix Q for summaries of the post hoc analyses). Post hoc analyses of the significant group productivity main effect used the group means (see Table 7). Since a significant interaction implies that the effect of one variable changes at different levels of the second variable, the interpretation of significant main effects needs to be tempered according to the nature of this interaction (e.g., Keppel, 1973; Kirk, 1982). Therefore, with an interaction, the meaning of the main effects must be interpreted with caution.

**Leadership Style**

Post hoc analyses indicated that individuals exposed to a charismatic leader had significantly higher quality of task performance when compared to a considerate leader (\(p < .01\)). There was an absence of statistically significant differences between charismatic and structuring leaders and between structuring and considerate leaders for individuals' quality of task performance (\(p > .01\)). Analyses further indicated that individuals with a charismatic leader generated significantly more courses of action than
individuals with structuring (p < .01) and considerate leaders (p < .01). There were no significant differences between structuring and considerate leaders (p > .01).

Turning to task adjustment, post hoc analyses revealed that individuals with charismatic leaders had higher specific and general task satisfaction and lower role conflict than those with structuring (p < .01) or considerate leaders (p < .01). There were no significant differences between structuring and considerate leaders for specific and general task satisfaction (p's > .01). However, individuals with considerate leaders had higher role conflict than individuals with structuring leaders (p < .01). For role ambiguity, individuals working under considerate leaders experienced significantly greater role ambiguity than individuals working under structuring (p < .01) and charismatic leaders (p < .01). There were no significant differences between structuring and charismatic leaders (p > .01).

Finally, individuals with charismatic leaders had higher adjustment to the leader than individuals with structuring (p < .01) and considerate leaders (p < .01). Individuals with considerate leaders had significantly higher adjustment to the leader than those with structuring leaders (p < .01).

The leadership style effect was not statistically significant for the following dependent measures: number of items, self-rated performance, job related tension, and adjustment to the group.
Group Productivity

As shown in Table 7, individuals in the low productivity group, as compared to the high productivity group, had lower satisfaction with specific aspects of the task (M = 30.24; M = 36.43), lower general satisfaction with the task (M = 8.21; M = 9.82), lower adjustment to the group (M = 49.99; M = 60.75), and higher role conflict (M = 20.39; M = 17.58). The group productivity effect was not statistically significant for the following dependent measures: task performance (i.e., number of items, number of courses of action, quality of performance, and self-rated performance), role ambiguity, job related tension, and adjustment to the leader.

Leadership Style x Group Productivity

Graphs of the significant interaction effects are presented in Figures 1, 2, and 3. Examination of Figures 1 and 2 show that individuals with a structuring leader and in a low productivity group experienced substantially higher role conflict (M = 24.50) and lower general satisfaction with the task (M = 6.33) than individuals with a structuring leader and in a high productivity group (M = 14.33; M = 10.88). Results of Newman-Keuls post hoc tests indicated that these differences were significant (p's < .01). Individuals with a considerate leader and in both high and low group productivity conditions experienced relatively high levels of role conflict (M = 22.63; M = 21.50) and low levels of general satisfaction (M = 7.38; M = 7.38), however there were no significant differences between the two groups (p's > .01). In contrast, with a charismatic leader under both high and low group productivity, individuals had relatively low role conflict (M = 15.79; M = 15.17) and high general satisfaction (M = 11.21; M
Figure 1

Interaction Effect for Leadership Style and Group Productivity on Role Conflict

Legend:
- High Productivity
- Low Productivity

Means On Role Conflict

Leadership Style

Structure Considerate Charisma
Figure 2

Interaction Effect for Leadership Style and Group Productivity on General Satisfaction

Legend:
- High Productivity
- Low Productivity

Means On General Satisfaction

Leadership Style

Structure  Considerate  Charisma
Figure 3
Interaction Effect for Leadership Style and Group Productivity on Specific Satisfaction

Legend:
- High Productivity
- Low Productivity
Again, the post hoc tests revealed these differences were not significant (p's > .01).

Consistent with the results for general satisfaction, Figure 3 reveals that individuals with a structuring leader and in a low productivity group have considerably lower satisfaction with specific aspects of the task (M = 24.42) than those individuals with a structuring leader and in a high productivity group (M = 37.25). The post hoc test indicated that this difference was significant (p < .01). Individuals with a considerate leader and in a low productivity group have lower specific task satisfaction (M = 27.21) than in a high productivity group (M = 32.25) and this difference is significant (p < .01). In contrast, individuals with a charismatic leader and in both high and low group productivity conditions experienced very high satisfaction with the exercise (M = 39.79; M = 39.08) and this difference is not significant between group conditions (p > .01).

There was a lack of statistically significant interaction effects for measures of task performance (i.e., number of items, number of courses of action, quality of performance, and self-rated performance), interpersonal adjustment (i.e., adjustment to the leader and to the group), and two measures of task adjustment (i.e., role ambiguity and job related tension).

MANOVA

To take into account the intercorrelations among the dependent variables and to compensate for increased Type 1 errors associated with
multiple univariate testing of the same data, a 3 x 2 factorial MANOVA was performed on the task performance, task adjustment, and interpersonal adjustment dependent measures. Independent variables were leadership style (structuring, considerate, and charismatic) and group productivity (high and low). Initially, the assumption of homogeneity of variance-covariance matrices was assessed by Box's M test, a multivariate analog of Bartlett's test (Green, 1978; Tabachnick & Fidell, 1983). The results indicated that this assumption was satisfactorily met, approximate $F(330, 28475) = 1.181$, $p > .01$.

Based on Wilks' lambda criterion, the dependent variables were significantly affected by leadership style, approximate $F(22, 256) = 50.13$, $p < .0005$, group productivity, approximate $F(11, 128) = 10.90$, $p < .0005$, and their interaction, approximate $F(22, 256) = 5.34$, $p < .0005$ (see Table 10). Inspection of Table 10 further reveals a very strong association between leadership style and the dependent variables, $\eta^2 = .96$. The association was less substantial for group productivity ($\eta^2 = .48$) and for the interaction ($\eta^2 = .53$) and the dependent variables.

According to several statisticians (e.g., Hair et al., 1979; Huberty, 1975; Marascuilo & Levin, 1983; Pedhazur, 1982; Tatsuoka, 1970, 1971), the appropriate technique for investigating significant MANOVA effects post hoc is discriminant analysis. By applying discriminant analysis, the dependent variables which maximally differentiate between the groups can be identified. Since the interaction effects were relatively weak, the main effects were also subjected to post hoc testing. However, the interpretation of tests of main effects must be qualified by the interaction.
Table 10
Multivariate Analysis of Variance Summary Table
for the Dependent Measures

<table>
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<tr>
<th>Source of Variation</th>
<th>Wilks' Λ</th>
<th>Approximate F</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Significance Level</th>
<th>η²(%)</th>
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<td>256</td>
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<td>96.00</td>
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<td>11</td>
<td>128</td>
<td>.0005</td>
<td>48.00</td>
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<td>A x B</td>
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<td>5.34</td>
<td>22</td>
<td>256</td>
<td>.0005</td>
<td>53.00</td>
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Note: N = 144.
Discriminant Analysis

Leadership Style

For the leadership effect, two discriminant functions were calculated, with a combined $\chi^2(22) = 454.07$, $p < .001$ (see Table 11). This result indicates that the first discriminant function is highly significant. After removal of the first function, the remaining discriminant function was also significant, $\chi^2(10) = 180.06$, $p < .001$, and thus represented an additional dimension for separating the leadership styles. The two discriminant functions accounted for 96% of the between group variability in discriminating among styles. Thus the discriminant functions have substantial discriminating power for differentiating the leadership styles.

Figure 4 shows the centroids for the three leadership styles plotted on the two discriminant functions. Confidence contours representing one and two standard deviations are drawn around each centroid to highlight the separations between the leadership styles. Inspection of Figure 4 indicates that the first discriminant function differentiates the structuring leadership style from the considerate and charismatic styles. The considerate and charismatic styles are not differentiated on this function. The second discriminant function clearly distinguishes all three leadership styles from each other.

Interpretation of Figure 4 is further assisted by the computation of Roy-Bose confidence intervals for pairwise comparisons of the centroids (see Table 12). The confidence intervals are consistent with the graphical interpretation. For discriminant function one, structuring leaders are
Table 11

Standardized Discriminant Function Coefficients for Leadership Style

<table>
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<tr>
<th>Dependent Variable</th>
<th>Discriminant 1</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Items</td>
<td>.008</td>
<td>.345</td>
</tr>
<tr>
<td>Courses of Action</td>
<td>.129</td>
<td>.063</td>
</tr>
<tr>
<td>Quality of Performance</td>
<td>.094</td>
<td>-.513</td>
</tr>
<tr>
<td>Self-Rated Performance</td>
<td>-.098</td>
<td>.275</td>
</tr>
<tr>
<td>Task Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Ambiguity&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.493</td>
<td>-.760</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>.046</td>
<td>.261</td>
</tr>
<tr>
<td>Specific Satisfaction</td>
<td>-.017</td>
<td>-.226</td>
</tr>
<tr>
<td>General Satisfaction</td>
<td>.011</td>
<td>-.165</td>
</tr>
<tr>
<td>Tension</td>
<td>.004</td>
<td>-.243</td>
</tr>
<tr>
<td>Interpersonal Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustment to Leader</td>
<td>-.944</td>
<td>-.203</td>
</tr>
<tr>
<td>Adjustment to Group</td>
<td>.157</td>
<td>.043</td>
</tr>
</tbody>
</table>

<sup>a</sup>The role ambiguity scale is reverse scored: a low score is associated with role ambiguity while a high score is associated with role clarity.
Figure 4
Typology of the Centroids in Discriminant Space for Leadership Style

Note: Dark contours represent one standard deviation; light contours represent two standard deviations. 1 = structuring style; 2 = considerate style; 3 = charismatic style.
Table 12
Roy-Bose Confidence Intervals for Pairwise Comparisons of the Mean Standardized Discriminant Scores

<table>
<thead>
<tr>
<th></th>
<th>99% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\hat{\psi}$</td>
</tr>
<tr>
<td><strong>Leadership Style</strong></td>
<td></td>
</tr>
<tr>
<td>Discriminant Function 1</td>
<td></td>
</tr>
<tr>
<td>$L_1$ vs. $L_2$</td>
<td>$(4.20, 6.35)^*$</td>
</tr>
<tr>
<td>$L_1$ vs. $L_3$</td>
<td>$(4.73, 6.88)^*$</td>
</tr>
<tr>
<td>$L_2$ vs. $L_3$</td>
<td>$(-0.55, 1.61)$</td>
</tr>
<tr>
<td>Discriminant Function 2</td>
<td></td>
</tr>
<tr>
<td>$L_1$ vs. $L_2$</td>
<td>$(0.88, 3.04)^*$</td>
</tr>
<tr>
<td>$L_1$ vs. $L_3$</td>
<td>$(1.07, 3.22)^*$</td>
</tr>
<tr>
<td>$L_2$ vs. $L_3$</td>
<td>$(3.03, 5.18)^*$</td>
</tr>
<tr>
<td><strong>Group Productivity</strong></td>
<td></td>
</tr>
<tr>
<td>Discriminant Function 1</td>
<td></td>
</tr>
<tr>
<td>$G_1$ vs. $G_2$</td>
<td>$(1.00, 2.79)^*$</td>
</tr>
<tr>
<td><strong>Leadership Style x Group Productivity</strong></td>
<td></td>
</tr>
<tr>
<td>Discriminant Function 1</td>
<td></td>
</tr>
<tr>
<td>$L_1G_1$ vs. $L_1G_2$</td>
<td>$(1.04, 4.68)^*$</td>
</tr>
<tr>
<td>$L_2G_1$ vs. $L_2G_2$</td>
<td>$(-1.37, 2.27)$</td>
</tr>
<tr>
<td>$L_3G_1$ vs. $L_3G_2$</td>
<td>$(-1.00, 2.64)$</td>
</tr>
</tbody>
</table>

* $p < .01$.

$^a$L$_1$ = structuring style; L$_2$ = considerate style; L$_3$ = charismatic style.

$^b$G$_1$ = high group productivity; G$_2$ = low group productivity.
significantly differentiated from considerate (p < .01) and charismatic leaders (p < .01), while the latter leaders are not significantly distinguished (p > .01). All three leadership styles are significantly separated from each other on discriminant function two (p's > .01).

Inspection of the standardized discriminant function coefficients in Table 11 indicates that the dependent variables adjustment to the leader (-.944) and role ambiguity (.493) maximally separate the leadership styles on the first discriminant function. The second discriminant function is chiefly defined by role ambiguity (-.760) and quality of performance (-.513) variables.

**Group Productivity**

For the group productivity effect, one discriminant function was computed, with $\chi^2 (11) = 90.21, p < .001$ (see Table 13). This function accounted for 48% of the between group variability in discriminating among high and low group productivity conditions.

As shown in Figure 5, discriminant function one differentiates high group productivity from low group productivity. Examination of Table 12 reveals that this differentiation is significant (p < .01).

Inspection of the standardized discriminant function weights in Table 13 indicate that adjustment to the group (.765) and specific satisfaction with the task (.446) maximally discriminate between high and low group productivity conditions.
Table 13
Standardized Discriminant Function Coefficients for Group Productivity

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Discriminant Function 1$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task Performance</strong></td>
<td></td>
</tr>
<tr>
<td>Number of Items</td>
<td>.171</td>
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<tr>
<td>Courses of Action</td>
<td>.302</td>
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<tr>
<td>Quality of Performance</td>
<td>-.256</td>
</tr>
<tr>
<td>Self-Rated Performance</td>
<td>-.320</td>
</tr>
<tr>
<td><strong>Task Adjustment</strong></td>
<td></td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>.074</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>-.290</td>
</tr>
<tr>
<td>Specific Satisfaction</td>
<td>.446</td>
</tr>
<tr>
<td>General Satisfaction</td>
<td>.053</td>
</tr>
<tr>
<td>Tension</td>
<td>-.224</td>
</tr>
<tr>
<td><strong>Interpersonal Adjustment</strong></td>
<td></td>
</tr>
<tr>
<td>Adjustment to Leader</td>
<td>-.220</td>
</tr>
<tr>
<td>Adjustment to Group</td>
<td>.765</td>
</tr>
</tbody>
</table>

$^a$To aid in the interpretation of discriminant function 1, the weights were multiplied by -1.
Figure 5
Typology of the Centroids in Discriminant Space for Group Productivity

Note: Dark contours represent one standard deviation; light contours represent two standard deviations.

1 = high group productivity;  2 = low group productivity.
Leadership Style x Group Productivity

For the leadership style and group productivity interaction, two discriminant functions were calculated with a combined $\chi^2 (55) = 101.58, \ p < .001$, indicating that the first discriminant function is highly significant. With the first discriminant function removed, the second discriminant function did not reach statistical significance, $\chi^2 (40) = 16.10, \ p > .05$. This finding suggests that the second discriminant function does not significantly separate the groups. Therefore, only the first discriminant function was retained and interpreted (see Table 14). This discriminant function accounted for 45% of the between-group variability.

Figure 6 indicates that discriminant function one clearly differentiates between the structuring style and high group productivity and the structuring style and low group productivity interaction at one standard deviation. In contrast, the considerate - high productivity and considerate-low productivity groups appear to overlap considerably. The charismatic - high productivity and charismatic - low productivity groups also show extensive overlap.

Examination of Roy-Bose confidence intervals corroborates these findings (see Table 12). The structuring-high productivity and structuring - low productivity groups were significantly separated ($p < .01$). In contrast, the considerate leader combined with low and high group productivity as well as the charismatic leader with the respective group conditions were not significantly differentiated ($p_0 > .01$).
Table 14

Standardized Discriminant Function Coefficients for Leadership Style by Group Productivity

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Discriminant Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task Performance</strong></td>
<td></td>
</tr>
<tr>
<td>Number of Items</td>
<td>-.154</td>
</tr>
<tr>
<td>Courses of Action</td>
<td>-.701</td>
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<tr>
<td>Quality of Performance</td>
<td>.537</td>
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<tr>
<td>Self-Rated Performance</td>
<td>-.063</td>
</tr>
<tr>
<td><strong>Task Adjustment</strong></td>
<td></td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>.058</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>-.786</td>
</tr>
<tr>
<td>Specific Satisfaction</td>
<td>.369</td>
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<tr>
<td>General Satisfaction</td>
<td>.305</td>
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<tr>
<td>Tension</td>
<td>.339</td>
</tr>
<tr>
<td><strong>Interpersonal Adjustment</strong></td>
<td></td>
</tr>
<tr>
<td>Adjustment to Leader</td>
<td>-.169</td>
</tr>
<tr>
<td>Adjustment to Group</td>
<td>-.222</td>
</tr>
</tbody>
</table>
Figure 6
Typology of the Centroids in Discriminant Space for Leadership Style by Group Productivity

Note: Dark contours represent one standard deviation; light contours represent two standard deviations. 1 = structuring style, high productivity; 2 = structuring style, low productivity; 3 = considerate style, high productivity; 4 = considerate style, low productivity; 5 = charismatic style, high productivity, 6 = charismatic style, low productivity.
Inspection of the discriminant coefficients for the leadership style and group productivity interaction in Table 14 suggests that the primary dependent variables distinguishing between groups are role conflict (-.786), number of courses of action (-.701), and quality of in-basket performance (.537).

To conclude, it is interesting to note the similarities and differences between the conclusions just drawn on the basis of multivariate analysis and those based on the univariate ANOVAs. In terms of similarities, role conflict and ambiguity, specific satisfaction, adjustment to the leader and to the group, number of courses of action, and quality of task performance were important dependent measures in both univariate and multivariate analyses. In terms of differences, general satisfaction, which was among those dependent variables showing the largest differences univariately, was found to contribute negligibly to group differentiation in terms of the linear combination of dependent variables. The similarities and differences between the univariate and multivariate analyses are further explored in the following chapter.

Supplemental Analyses

Individual Differences

A 3(Leadership Style) x 2(Group Productivity) MANCOVA was performed on 11 dependent variables. In this analysis, the linear combination of the dependent variables was statistically adjusted for the effects of three covariates: tolerance for ambiguity, need for achievement, and need for affiliation. The covariates were judged to be
adequately reliable for covariance analysis (see Table 5). The assumption of homogeneity of regression slopes was satisfactorily met for this analysis ($p > .01$). In addition, the assumption of homogeneity of variance-covariance matrices was assessed by Box's $M$ test (Green, 1978; Tabachnick & Fidell, 1983). Results showed that this assumption was satisfactorily met, approximate $F(525, 28154) = 1.057$, $p > .01$.

Examination of Table Q21 (see Appendix Q) reveals that the dependent variables were significantly related to leadership style, approximate $F(22, 250) = 48.76$, $p < .0005$, to group productivity, approximate $F(11, 125) = 9.80$, $p < .0005$, and to the leadership style by group productivity interaction, approximate $F(22, 250) = 5.30$, $p < .0005$, according to Wilks' multivariate test of significance. The multivariate test for the covariates failed to reach statistical significance, approximate $F(33, 368) = 1.19$, $p > .20$.

**Participant Gender**

To determine if there were differences between male and female participants' perceptions of the three leadership styles, Student's $t$ tests were computed for participants' ratings of the leaders on the leadership style manipulation checks (see Table Q22 in Appendix Q). Inspection of Table Q22 reveals no significant gender effects for the structuring, considerate, and charismatic leadership styles ($p$'s $> .01$). This finding suggests that male and female participants had consistent perceptions of the three leadership styles.
Performance of the Optional Task

The frequency with which participants complied with the leader's request to perform the optional task is shown in Table Q23 in Appendix Q. This table indicates that the vast majority of participants (93.8%) agreed to perform the optional task, while the remainder of participants did not agree (6.2%). There was minimal variation between the three leadership styles for participants' compliance to do the optional task. Similarly, Table Q24 in Appendix Q reveals that in the high group productivity condition, 71 participants agreed to do the optional task, while in the low group productivity condition 64 participants agreed to do the optional task. In total, only 9 participants refused to do the optional task.
CHAPTER IV

DISCUSSION OF RESULTS

This chapter is organized into three sections. The first section discusses the results relevant to the hypotheses outlined in Chapter I based on the univariate analyses. The pattern of similarities and differences between the univariate and multivariate analyses is highlighted in the second section. Interpretation of the results of secondary analyses is presented in the third section.

TESTS OF HYPOTHESES BASED ON UNIVARIATE ANALYSES

An Overview

The findings in this dissertation were numerous and complex. In order to present and discuss the results as clearly and coherently as possible, a brief overview of the major univariate findings is presented below.

The univariate analyses of variance indicated that individuals who worked under charismatic leaders had significantly higher task performance in terms of the number of courses of action suggested on the in-basket exercise, greater task satisfaction, lower role conflict, and higher adjustment to the leader when compared to individuals working under
structuring and considerate leaders. In addition, the qualitative task performance of individuals with charismatic leaders surpassed that of individuals with considerate leaders. A surprising finding was while individuals with structuring leaders experienced role clarity and reduced role conflict, their task performance and task satisfaction were equivalent to those with considerate leaders.

The results further indicated that individuals with considerate and charismatic leaders had higher adjustment to the leader than individuals with structuring leaders. Contrary to expectation, individuals with charismatic leaders had higher adjustment to the leader than individuals with considerate leaders.

The group productivity data indicated that individuals in high productivity groups reported significantly higher task satisfaction, lower role conflict, and higher adjustment to the group than did individuals in low productivity groups. An unexpected finding was the lack of significant effects for group productivity norms on individual task performance.

Interactions between leadership style and group productivity revealed that charismatic leaders, irrespective of high or low group productivity norms, produced high individual task performance, task adjustment, and adjustment to the leader and to the group. In contrast to the charismatic leader, the structuring leader's impact on individuals' task adjustment was modified by group productivity norms. Individuals who worked with a structuring leader and in a high productivity group reported higher specific task satisfaction, higher general task satisfaction, and lower role
conflict than did individuals who worked with a structuring leader and in a low productivity group. Despite the significant interaction effect of structuring leadership and group productivity norms on individual task adjustment, there was an absence of statistically significant effects on task performance, role ambiguity, and adjustment to the leader and to the group. Finally, individuals with a considerate leader and in a high productivity group had significantly higher specific task satisfaction than those with a considerate leader and in a low productivity group. The results further indicated that individuals exposed to a considerate leader, irrespective of group productivity norms, had marginal task performance and low task adjustment. However, individuals reported positive adjustment to the leader and to the group.

The remainder of this section presents and discusses the univariate results in detail, based on the hypotheses posed in Chapter I.

LEADERSHIP STYLE

Task Performance and Task Adjustment

Hypothesis 1. Individuals working under a charismatic leader will have higher task performance than will individuals working under a considerate leader.

Hypothesis 2. Individuals working under a charismatic leader will report higher task adjustment than will individuals working under a considerate leader.
These hypotheses were partially supported by the findings of this study. With regard to task performance, individuals with charismatic leaders as compared to individuals with considerate leaders generated significantly more courses of action on the in-basket exercise ($M = 24; M = 19; p < .01$) and had significantly higher quality of task performance ($M = 3.46; M = 2.46; p < .01$) (see Table 7). Contrary to prediction, there was an absence of a leadership effect on performance in terms of the number of in-basket items completed ($M = 15; p > .01$) and in terms of participants' perceptions of their task performance ($M = 21.69; p > .01$) (see Table 7).

Turning to the task adjustment data, while there were no significant effects for job related tension, individuals with charismatic leaders reported significantly higher general task satisfaction ($M = 11.06; M = 7.38; p < .01$), higher specific task satisfaction ($M = 39.44; M = 29.73; p < .01$), higher role clarity ($M = 28.65; M = 16.43; p < .01$), and lower role conflict ($M = 15.49; M = 22.06; p < .01$) when compared to those with considerate leaders (see Table 7).

The effectiveness of charismatic leadership in facilitating individuals' task performance and task adjustment is consistent with theoretical discussions of charisma. For example, Max Weber (1947), in his sociological treatment of charisma, recognized that charismatic leaders obtained their effects by vividly articulating a transcendent goal which

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5 There was a lack of significant main effects and interactions for three dependent measures: number of in-basket items completed, self-rated performance, and job related tension. Explanations for the absence of differences on these measures will be discussed later in this chapter (see pp.227-228).
clarified or specified a mission and which communicated values that had ideological significance for followers. Moreover, in his theory of charismatic leadership in organizations, House (1977) asserted that by simultaneously communicating high performance expectations for followers and by exhibiting confidence in their ability to meet such expectations, the charismatic leader enhances followers satisfaction, motivation, and performance in support of the articulated goal. Therefore, the charismatic leader is asserted "to clarify followers' goals, cause them to set or accept higher goals, and have greater confidence in their ability to contribute to the attainment of such goals" (House, 1977, p.191).

A consistent view of the inspirational effects of charismatic appeals on followers' motivation is offered by Avolio and Bass (1985). They argue that by espousing a vision which followers' view as being worthy of their effort, the charismatic leader excites followers, and, in turn, elevates their anticipated levels of effort. Similarly, Bennis (1982, p.55) posits that a fundamental component of charismatic power is the "capacity to create and communicate a compelling vision of a desired state of affairs" which energizes, involves, and commits followers to pursue group objectives. McClelland (1975, p.260) has accurately captured these charismatic effects on followers:

*Whatever the source of the leader's ideas, he cannot inspire his people unless he expresses vivid goals which in some sense they want. Of course, the more closely he meets their needs, the less 'persuasive' he has to be; but in no case does it make sense to speak as if his role is to force submission. Rather it is to strengthen and uplift, to make people feel they are the origins, not the pawns, of the socio-political system (deCharms, 1968). His message is not so much: 'Do as I say because I am strong and know best. You are children with no wills of your own and must follow me because I know better'; but rather, 'Here are the goals which are true and right and which we share. Here is*
how we can reach them. You are strong and capable. You can accomplish these goals! His role is to make clear which are the goals the group should achieve, and then to create confidence in its members that they can achieve them.

Inspection of the means on the charismatic manipulation checks in Table Q16 (see Appendix Q) provides support for the theoretical explanation of charismatic effects discussed above. Individuals with charismatic leaders described their leaders as exhibiting the following behaviours to a significantly greater extent than individuals with considerate leaders:

(a) she vividly describes the importance of the project (M_{Char} = 4.48; M_{Cons} = 2.35);
(b) she enthusiastically expresses work goals (M_{Char} = 4.27; M_{Cons} = 2.17);
(c) she expects you to strive for high work standards (M_{Char} = 3.73; M_{Cons} = 2.00);
(d) she inspires you to do your very best on the exercise (M_{Char} = 4.25; M_{Cons} = 2.31);
(e) she is confident in your ability to perform well on the exercise (M_{Char} = 4.13; M_{Cons} = 2.42).

Collectively, these results suggest that charismatic leaders, in comparison to considerate leaders, may have strengthened and uplifted their subordinates, thereby leading to higher task performance and adjustment.

The lower task performance and adjustment of individuals with considerate leaders relative to those with charismatic leaders supports previous theoretical literature and empirical findings. For example, studies of the Ohio State dimensions of consideration and initiating structure have generally found that considerate leader behaviour is not
related to task performance (e.g., Stogdill, 1974). Similarly, path-goal formulations suggest that in unstructured task conditions, considerate leaders have no effect on individuals' task performance and satisfaction (e.g., Downey, Sheridan, & Slocum, 1975; Greene, 1979; House, 1971; House & Dessler, 1974; Stinson & Johnson, 1975).

**Hypothesis 3.** Individuals working under a structuring leader will have higher task performance than will individuals working under a considerate leader.

**Hypothesis 4.** Individuals working under a structuring leader will report higher task adjustment than will individuals working under a considerate leader.

Contrary to prediction, there were no significant differences on task performance measures for individuals working under structuring and considerate leaders. Across both leadership styles, the participants suggested 19 courses of action on average and had fairly satisfactory quality of performance ($M = 2.70$ on a 5-point scale) (see Table 7). With regard to task adjustment, while individuals with structuring leaders had significantly higher role clarity ($M = 28.77$) and lower role conflict ($M = 19.42$) than individuals with considerate leaders ($M = 16.43$; $M = 22.06$; $p < .01$) there were no statistically significant differences for general task satisfaction ($M = 8.60$; $M = 7.38$; $p < .01$) and specific task satisfaction ($M = 30.83$; $M = 29.73$; $p < .01$) measures (see Table 7). These results indicate that structuring leaders provided subordinates with role clarity by defining work role expectations and reduced role conflict. They indicate,
however, that these positive effects did not generalize to other aspects of task adjustment or to task performance.

The above findings are inconsistent with previous research suggesting that under ambiguous task conditions or in unfavourable situations, structuring leader behaviour is positively associated with subordinate task performance, task satisfaction, and role clarity (e.g., Chemers & Skrzypek, 1972; Fleishman, Harris, & Burtt, 1955; Gilmore, Beehr, & Richter, 1979; Greene, 1979; Gustofson, 1968; House & Dessler, 1974; Schriesheim & Murphy, 1976). In the present study, the provision of specific task directives by the structuring leader were not sufficient to produce high task satisfaction or performance.

Several explanations for these results may be advanced. Perhaps the manipulation of structuring leader behaviour was not strong enough to produce the effects hypothesized in this study. However, statistical analyses of the leadership style manipulation checks indicated highly significant differences between the structuring and considerate styles on these manipulation checks thereby reducing the viability of this explanation (see Table Q17 in Appendix Q for complete details).

Alternatively, when the task is sufficiently ambiguous, leader structuring behaviour, such as was provided in this study, may simply not be enough to produce a significant change in performance. Instead, subordinates may need to be activated and energized to meet the challenging nature of the task. Examination of the participants' written comments regarding their impressions of the task and the leader revealed
several themes supporting this explanation. As expected, approximately 85% of the individuals with considerate leaders mentioned while the leader was friendly and approachable, they were confused about how to do the exercise. Surprisingly, 60% of the individuals with structuring leaders reported while the task was clearly explained to them by the leader and they had the opportunity to ask questions, the exercise was still vague and they were unsure of how to handle it. They also commented that the task seemed like a lot of work and was not very exciting or stimulating. This anecdotal evidence suggests while the task was clearly defined by the structuring leader the participants still felt uncertain as to how to proceed and were not highly motivated to do so.

Another explanation for these findings is that in comparison to prior empirical studies, this laboratory experiment may have created more ambiguous circumstances for participants to cope with, thereby impeding their potentially positive task adjustment and performance under structuring leadership. Specifically, previous studies examining the effectiveness of structuring leader behaviour on employees' performance and satisfaction under ambiguous task conditions have typically been conducted in field settings. Therefore, while there was variation in the ambiguity of the employees' jobs, other aspects of their work environment were very familiar to them (e.g., their manager, their peers, the office layout, and so on). In contrast, in the present study, participants were involved in a very ambiguous work situation which included new organizational members (i.e., the leader and the co-workers), a new work setting, and a new task.
Another interpretation for the present findings is that this study did not examine leadership in isolation; both the leader and the group exerted influence on the participants' behaviour. Therefore, the group productivity norms may have affected the salience of the structuring leader's effect on individuals' task performance and adjustment. This explanation will be further developed in the discussion of interaction effects presented later in this chapter.

**Hypothesis 5.** Individuals working under a charismatic leader will have the same level of task performance as individuals working under a structuring leader.

**Hypothesis 6.** Individuals working under a charismatic leader will report the same level of task adjustment as individuals working under a structuring leader.

An unexpected finding was while there was no significant difference for qualitative task performance, individuals with charismatic leaders produced significantly more courses of action on the in-basket exercise (M = 24) than individuals with structuring leaders (M = 19; p < .01) (see Table 7). Moreover, while perceived role clarity was virtually equivalent for individuals with charismatic and structuring leaders (M = 28.65; M = 28.77; p > .01), individuals with charismatic leaders reported significantly higher general task satisfaction (M = 11.06; M = 8.60; p < .01), higher specific task satisfaction (M = 39.44; M = 30.83; p < .01), and lower role conflict (M = 15.48; M = 19.42; p < .01) (see Table 7). These results suggest while both charismatic and structuring leaders provide individuals
with task clarity, individuals with charismatic leaders have higher task performance in terms of the number of courses of action suggested, greater task satisfaction, and lower role conflict than individuals with structuring leaders.

In light of recent comparative analyses of exchange and charismatic theories of leadership, the results of this study appear highly plausible (Bass, 1985; House, 1985b). For example, Bass (1985) argues that exchange or transactional leaders, by clarifying subordinates' role requirements and by explicating how subordinates' needs and wants will be fulfilled in exchange for subordinates' satisfactory performance, motivate subordinates to exert expected effort. In contrast, charismatic or transformational leaders, by appealing to higher values that express subordinates' fundamental needs, motivate followers to exert effort beyond the ordinary limits.

House (1985b) has embellished this theme in his insightful discussion of exchange and charismatic theories of leadership. According to him, the essential difference between exchange and charismatic leader behaviour resides "in the components of the subordinate's motivation that are affected by leader behaviour and by the kinds of leader behaviour that affect components of the subordinate's motivation" (House, 1985b, p.1). Specifically, exchange oriented leaders accept subordinates' goals, values, and desires as given; they focus on subordinates' abilities and cognitions required to meet these goals. Charismatically oriented leaders strive to change subordinates' needs and values and therefore their goals; they focus on the level and kinds of goals to which subordinates aspire.
Therefore, the foregoing analyses of exchange and charismatic theories of leadership clearly suggest that in accordance with this study's findings, charismatic leadership would result in higher subordinate task performance than structuring leadership. It should be noted that this assertion rests on the assumption that structuring leadership is reflective of exchange or transactional leadership.

To gain further insight into the present study's findings, it is instructive to examine the specific components of charismatic leader behaviour which may have influenced these results. For example, charismatic leaders, by imputing a mission and ideological goals which heighten subordinates' perceptions of the meaning and importance of their specific task assignment, may forge a strong affective connection between subordinates and their jobs (e.g., House, 1977; Smith, 1982). This contention has been supported by a recent field study which found that subordinates of charismatic leaders experienced greater meaningfulness of work than subordinates of noncharismatic leaders (Smith, 1982). Thus a crucial dimension that may influence the degree of individual task adjustment and performance is the articulation of goals in terms of values that have ideological significance for subordinates. As Berlew (1974, p.269) notes:

The first requirement for...charismatic leadership is a common or shared vision for what the future could be. To provide meaning and generate excitement, such a common vision must reflect goals or a future state of affairs that is valued by the organizations' members and thus important to them to bring about....All inspirational speeches or writings have the common element of some vision or dream of a better existence which will inspire or excite those who share the author's values.
A related explanation for these results is that charismatic leaders communicate messages that arouse motives especially relevant for task accomplishment (House, 1977). Recent research evidence supports this explanation. For example, in a survey of 70 male executives' reactions to transformational leaders they had encountered during their careers, Bass (1985) found that the executives worked "ridiculous" hours, demonstrated higher quality of performance, exhibited greater innovativeness, and expressed a readiness to extend and develop themselves further. Moreover, results of studies conducted in military, industrial, and educational settings have consistently revealed that subordinates with transformational leaders exert greater effort than subordinates with transactional leaders (e.g., Avolio et al., 1985; Bass, 1985; Waldman et al., 1985).

Similar results are reported by Smith (1982) in a study of subordinate responses to charismatic and noncharismatic leaders. He found that subordinates with charismatic leaders worked longer hours and had higher performance ratings than those with noncharismatic leaders. Smith interpreted these results as reflecting the heightened motivation and effort by subordinates in support of the goal of the charismatic leader. Inspection of the means on the charismatic leadership style manipulation checks lends support to this interpretation (see Table Q16 in Appendix Q). Individuals with charismatic leaders described their leaders as exhibiting the following behaviours to a significantly greater extent than those with structuring leaders:

(a) she inspires you to do your very best on the exercise (M_char = 4.25; M_struc = 2.54);
(b) she increases your motivation to do the exercise \( (M_{\text{Char}} = 3.90; M_{\text{Struc}} = 2.42) \);

(c) she really makes you want to do the exercise \( (M_{\text{Char}} = 3.73; M_{\text{Struc}} = 2.27) \);

(d) she encourages you to be creative and productive in doing the exercise \( (M_{\text{Char}} = 4.40; M_{\text{Struc}} = 2.27) \).

In addition, approximately 75% of the individuals with charismatic leaders anecdotally expressed enthusiasm about the project and felt they were "contributing to something really important, something that would impact on their future". Thus the charismatic leader may act as a catalyst for subordinates' effective task performance and adjustment.

Adjustment to the Leader

Hypothesis 7. Individuals working under a charismatic leader will report higher adjustment to the leader than will individuals working under a structuring leader.

As predicted, individuals reported significantly greater satisfaction, personal liking, comfortableness, and willingness to work with a charismatic leader \( (M = 30.44) \) as compared to individuals with a structuring leader \( (M = 16.49) \) (see Table 7). Specifically, individuals with charismatic leaders experienced very high adjustment to the leader \( (M = 6.09 \text{ on a 7-point scale}) \) while those with structuring leaders experienced moderate adjustment to the leader \( (M = 3.30 \text{ on a 7-point scale}) \).

The positive interpersonal relationship between charismatic leaders and their subordinates supports the theoretical literature on charisma. For example, Weber (1947) recognized that a fundamental aspect of
charisma was the extraordinary, intensely personal relationship between a charismatic leader and his/her followers. In his elaboration of Weber's conceptualization of the charismatic relationship, Tucker (1970, p.73) observes:

Oftentimes, the relationship of the followers to the charismatic leader is that of disciples to a master, and in any event he is revered by them. They do not follow him out of fear or monetary inducement, but out of love, passionate devotion, and enthusiasm.

Thus the initial and continuing appeal of charismatic leaders is based on emotional rather than rational grounds in that "the follower is inspired enthusiastically to give unquestioned obedience, loyalty, commitment and devotion to the leader and to the cause that the leader represents" (House, 1977, p.191).

Theoretical statements regarding the intense emotional attachment between charismatic leaders and their followers are supported by field research. For example, in-depth case studies of charismatic leaders in diverse organizational settings and roles have described the presence of strong affective bonds, characterized by mutual respect, caring, and trust, between charismatic leaders and their followers (Day, 1980; Roberts, 1984). In addition, Bass (1985) found that strong liking, admiration, respect, loyalty, and trust typified the relationship between senior executives and transformational leaders they had encountered during their career. However, as Martin and her colleagues (1983) have noted, in most modern organizations social norms inhibit the open expression of strong feelings of attraction. Rather, they suggest that employees might indicate a deep emotional attachment to a charismatic leader by describing
his/her abilities or qualities in superhuman terms, by expressions of unusual warmth or emotion-toned admiration, or by going to extraordinary lengths to display loyalty or productivity. It should be underscored that while the results of the present study indicated that a positive interpersonal relationship was established between the charismatic leader and her followers, this relationship did not appear to have the depth or intensity suggested in the theoretical literature.

The observed differences in individuals' interpersonal adjustment to the structuring and to the charismatic leaders are consistent with Smith's (1982) postulations regarding the distinction between charismatic and instrumental leader behaviours. He contends while charismatic leaders strive to establish a strong affective bond with subordinates, instrumental leaders view their relationship with subordinates in more calculative, instrumental terms (Smith, 1982, p.19). Thus it is expected that subordinates of an instrumental leader would have moderate levels of trust in their leader, reflecting their evaluation of the leader's expertise to assist them toward goal attainment. In contrast, it is expected that subordinates of a charismatic leader would have high levels of trust in their leader and would willingly put their fate in their leader's hands. Smith (1982, p.20) further posits that levels of liking, attraction, and affection for the leader would be high and generalized for "charismatic" followers, and moderate and more specifically calculative for "instrumental" followers. That is, subordinates of an instrumental leader would be attracted to their leader as a specific source of valued extrinsic rewards and as a facilitator of goal accomplishment, but would not hold the same generalized high level of affection and attraction toward their leader as would subordinates of a charismatic leader (Smith, 1982, pp.20-21).
Empirical support for these predictions is provided by Smith (1982) in his study of subordinates' responses to charismatic and noncharismatic leaders. He found that in comparison to subordinates of noncharismatic leaders, subordinates of charismatic leaders had higher levels of trust and acceptance by the leader. Consistent results are reported by House (1985a) in his biographical analysis of charismatic and noncharismatic heads of state. He discovered that followers of charismatic leaders had higher obedience, acceptance, and trust in their leader than did followers of noncharismatic leaders. Therefore, the findings of this study, that individuals with charismatic leaders have higher adjustment to the leader than individuals with structuring leaders, are congruent with results from studies conducted in organizational and political contexts.

Hypothesis 8. Individuals working under a considerate leader will report higher adjustment to the leader than will individuals working under a structuring leader.

The present study's findings supported this hypothesis: individuals working under a considerate leader had significantly higher adjustment to the leader ($M = 26.77$) as compared to those working under a structuring leader ($M = 16.49; p < .01$) (see Table 7). This finding is essentially in agreement with those obtained by earlier researchers which suggest that considerate leaders appear to have their primary effect in terms of social or psychological maintenance. For example, Bales and Slater (1955) observed that socioemotional oriented leaders provided social satisfaction for group members which resulted in reduction of group frustration and stress. In an exhaustive review of the leadership literature, Stogdill
(1974, p.404) noted that the relationship between leadership styles and satisfaction indicates that "person oriented patterns of leadership tend to enhance employee satisfaction". Bass (1981, p.382), in his update of Stogdill's (1974) Handbook of Leadership, reached the same conclusion: "generally, supervisory consideration seems to be associated with subordinate satisfaction with their supervisors". In addition, under conditions of role stress, several researchers have reported that considerate leader behaviour serves as a source of social satisfaction and support for the employee (e.g., House, 1981; Seers et al., 1982; Sheridan & Vrendenburgh, 1979). Finally, the present study's findings are also in agreement with laboratory studies using confederates as leaders (e.g., Tjosvold, 1984; Weed, Mitchell, & Moffitt, 1976). For example, Weed, Mitchell, and Moffitt (1976) found that subordinates with leaders high in human relations orientation and low in task orientation were satisfied and enjoyed working with such leaders.

A study by Bales (1958) is especially relevant to the present study's finding that individuals reported neither positive nor negative adjustment to the structuring leader. He hypothesized that the ratio of verbal interaction received to that initiated would distinguish between task oriented leaders who were well liked and those who were not well liked in small experimental discussion groups. The results indicated that there was no relationship between task orientation and liking for leaders who made it possible for group members to give feedback and to raise objections, qualifications, and questions. Therefore, in accordance with the present study's finding, when the structuring leader is responsive to participants' input, there is an absence of association between structuring leadership and participants' interpersonal adjustment to the leader.
Hypothesis 9. Individuals working under a charismatic leader will report the same level of adjustment to the leader as individuals working under a considerate leader.

Contrary to prediction, the results indicated that individuals with charismatic leaders had significantly higher adjustment to their leader ($M = 30.44$) than individuals with considerate leaders ($M = 26.77$; $p < .01$) (see Table 7). This finding seems surprising given the considerate leader's exclusive focus on establishing a strong emotional bond with subordinates by conveying warmth, acceptance, support and reassurance. However, recent theoretical literature sheds light on this result. In an analysis of charismatic political leadership, Willner (1984) observes while the charismatic relationship is not different from considerate leadership since with each style an emotional bond is established between leaders and followers, it is the quality and intensity of this emotional bond between charismatic leaders and followers that are the significant factors. As discussed earlier, charismatic leaders are thought to generate devotion, awe, and reverence in their followers. Thus it is suggested that charismatic leaders establish a qualitatively different interpersonal relationship with their subordinates as compared to other leadership styles.

A related explanation for this result is that under ambiguous conditions individuals may need more than rapport with their leader. Charismatic leaders—not only emphasize the importance of the individual, they also have an ability to make individual followers feel powerful, efficacious, and important (McClelland, 1975). For example, one source of John F. Kennedy's charisma may have been this ability; students felt
stronger and more powerful after watching a movie of his inaugural address as President ("Ask not what your country can do for you...") (McClelland, 1975, p.259). Thus emotional attachment and ensuing transfer of feelings of power may be aspects of charismatic leadership that enhance the interpersonal perception of the leader. Moreover, followers' positive emotional attachment to the leader may in turn result in high levels of commitment to the task, motivation, and goal attainment. Thus the charismatic leader can be seen as an object of identification after which followers model their values, goals, and behaviour (Friedrich, 1961).

Another plausible explanation for more favourable subordinate perceptions of charismatic leaders as compared to considerate leaders is while both leaders are likeable, only charismatic leaders meet subordinates' expectations regarding task clarification. This explanation is consistent with the idiosyncrasy credit concept advanced by Hollander (1964). In attempting to explain the emergence of leadership and the determinants of leader effectiveness within groups, Hollander (1964) asserts that group members' judgements of an emergent leader will be positive to the extent that the leader conforms to expectations and contributes toward the group's goal. Therefore, the more positively disposed impressions of charismatic leaders may be due to their ability to meet followers' expectations regarding their work situation more adequately than considerate leaders.

In summary, the foregoing discussion suggests that individuals with charismatic leaders had higher task performance in terms of the number of courses of action suggested, greater task satisfaction, lower role conflict,
and higher adjustment to the leader in comparison to individuals with structuring and considerate leaders. In addition, the qualitative task performance of individuals with charismatic leaders surpassed that of individuals with considerate leaders. These findings were attributed to several interrelated facets of charismatic leader behaviour: establishing a strong affective connection with subordinates and making them feel relatively powerful and efficacious; imputing a mission and ideological goals which heighten subordinates' work motivation, effectiveness, and perceptions of the meaning and importance of their task; and simultaneously communicating high expectations of, and confidence in, subordinates' ability to meet these expectations.

As predicted, individuals with considerate and charismatic leaders had higher adjustment to the leader than individuals with structuring leaders. A surprising result was while individuals with structuring leaders experienced role clarity and lower role conflict, their task performance and task satisfaction was equivalent to those with considerate leaders. It was suggested that the work situation was sufficiently ambiguous that the role clarification behaviour of structuring leaders was simply not enough to produce significant changes in participants' task performance and task satisfaction. This is borne out when one compares charismatic and structuring leaders where role clarity is high under both leaders yet performance and adjustment are different, suggesting once again that something more than clearly defining task expectations for subordinates is needed to produce high task performance and adjustment. It was further suggested that the presence of group members espousing high or low productivity norms may have influenced the salience of the structuring
leader's effects on the participants' adjustment to and performance on the task. A statistically significant interaction effect was found between leadership style and group productivity. Therefore, interpretation of these results needs to be tempered by consideration of this interaction effect.

GROUP PRODUCTIVITY

Task Performance

Hypothesis 10. Individuals in high productivity groups will have higher task performance than individuals in low productivity groups.

An unexpected finding was the absence of a statistically significant group productivity effect for task performance. On average, individuals in the high and low productivity groups suggested 21 courses of action and had satisfactory qualitative performance ($M = 2.95$) on the experimental task (see Table 7).

Several possible interpretations for these findings can be offered. Perhaps the manipulation of high and low productivity norms was not sufficiently strong to cause changes in individual task performance. However, the author felt that increasing the potency of the group productivity manipulation might be perceived by the participants as lacking in authenticity and thereby create demand characteristics. That is, if the co-workers had engaged in excessively disruptive activities during the experimental session (e.g., talking continuously; leaving the office for coffee) the participants' suspicions may have been aroused about
the realism of their situation. Moreover, the group productivity manipulation checks indicated highly significant differences between high and low group productivity conditions (see Table Q18 in Appendix Q). Therefore, other explanations seem more plausible.

Examination of the group dynamics literature sheds some light on this finding. According to some researchers (e.g., Cartwright & Zander, 1960; Thibaut & Strickland, 1956), the nature of one's membership in a group influences one's tendency to model his/her attitudes and actions after those of other members. Specifically, pressures for conformity to group behaviours or beliefs are highly ineffective in changing member behaviour if he/she is not concerned with maintaining membership in the group that is exerting influence on him/her. Thus, given the participants' temporary membership in a group, the pressures on them to act in accordance with group productivity norms may have been weakened.

Thomas and Griffin (1983) reached the same conclusion in their review of the literature dealing with the effects of social and information cues in the workplace on employees' task perceptions, evaluations, and reactions. They asserted that "salient cues may have a greater impact on attitudes and behaviour on an actual job in which continued employment and promotions are contingent on at least partially accurate perceptions of tasks than in the laboratory" (Thomas & Griffin, 1983, p.675). White and Mitchell (1979, p.8) concur with this assertion: "...the effect of the comments of an unknown co-worker in a short work session would intuitively seem to be less important than the comments of a co-worker with whom one works 8 hours a day, 5 days a week, because the ad hoc
nature of the present groups probably produced far less social pressure to conform than could be expected by a member of a long-term integrated work team."

Another closely related explanation for the nonsignificant result may be that conformity to group productivity norms requires more extensive interaction over a longer period of time between the individual and the group. Initially, newcomers may be absorbed in coping with the new task realities in their work situation. Over time, however, the group could exert increasing pressure on newcomers for conformity to high or low productivity standards. This contention is supported by the organizational socialization literature on new employees' integration into their job settings (e.g., Feldman, 1981; Katz, 1980; Van Maanen & Schein, 1979). As Katz (1980, p.110) has observed, "the new secretary, engineer, or technician faithfully arrives and leaves work at the regularly scheduled hours and seems to perform all task assignments willingly and diligently - at least initially. With increasing awareness of one's job setting, its actual practices, procedures, and norms, the individual is soon freer to decide which tasks will be performed carefully or promptly as well as develop his/her own interpretation of permissible working hours."

The argument that conformity to group productivity norms requires more extensive interaction between the individual and the group is further supported by case studies of shop floor behaviour (e.g., Burawoy, 1979; Schrank, 1978). For example, Robert Schrank, in his description of his life in a furniture factory, reported that for the first few weeks on the job, he busily kept the machine operators supplied with material. It was
not until his third or fourth week at the factory that he was inculcated with two fundamental lessons of working from his peers; how to work less hard in order to make the task easier and don't do more work than is absolutely necessary (Schrank, 1978). Therefore, as the length of one's membership in a work group increases, the influence of group productivity norms on individual task performance might be more potent.

A final interpretation of these findings is that leadership style may affect the salience of group productivity norms on individual task performance. This explanation will be amplified further in the discussion of the interaction effects.

Adjustment to the Task and to the Group

Hypothesis 11. Individuals in high productivity groups will report higher task adjustment than individuals in low productivity groups.

Hypothesis 12. Individuals in high productivity groups will report higher adjustment to the group than individuals in low productivity groups.

As predicted, individuals in the high productivity group, as compared to the low productivity group, had higher adjustment to the group (M = 60.75; \( \bar{M} = 49.99; p < .01 \)) (see Table 7). The results further indicated while there was an absence of a statistically significant group productivity effect for role ambiguity, those in the high productivity group had higher general task satisfaction (M = 9.82; \( \bar{M} = 8.21; p < .01 \)), higher specific task satisfaction (M = 36.43; \( \bar{M} = 30.24; p < .01 \)), and lower role conflict (M = 17.58; \( \bar{M} = 20.39; p < .01 \)) than those in the low productivity group (see Table 7).
These findings are consonant with laboratory studies examining the influence of social information cues about a task on individuals' assessment of task characteristics. Specifically, these studies have consistently shown that in comparison to negative social cues, positive social cues provided by confederate co-workers result in higher task satisfaction and more favourable perceptions of task characteristics (e.g., Griffin, 1983; Vance & Biddle, 1985; White & Mitchell, 1979). Therefore, the social cues of co-workers are an important determinant of individuals' perceptions of the task environment.

The small group research literature sheds some light on the present study's findings. For example, Berkowitz (1954) reported that participants liked their partners (confederates) better when the latter were supposedly proficient on a task than when they were supposedly poor. Similarly, Zander (1968) found that members of successful groups are more likely to experience satisfaction, form a favourable impression of themselves and other members of the group, and wish to continue to pursue the activity on which the group was successful. Thus to the extent the participants in high productivity groups perceived their co-workers as successfully accomplishing the task at hand, the more satisfied they would be with their co-workers and with the task.

Another possible interpretation of these findings is that group norms for high productivity were congruent with the task demands faced by individuals, thereby leading to positive adjustment to the task and to the group. In contrast, the group norms for low productivity were incompatible with the task demands faced by individuals, thereby leading
to role conflict, dissatisfaction with the task, and reduced liking for group members from whom the conflict stems. These results are consistent with the empirical evidence regarding role conflict; role conflict has been shown to be directly related to psychological withdrawal from the group and job induced tension and inversely related to job satisfaction (e.g., Brief & Aldag, 1976; House & Rizzo, 1972; Kahn et al., 1964; Miles, 1976).

Individuals in both high and low productivity groups reported neither role ambiguity nor role clarity (M = 24.62; 4.10 on a 7-point scale) (see Table 7). One possible explanation for this result is since the co-workers did not provide task direction, clarify task responsibilities, or obfuscate the leader's description of the task, the participants' task expectations were not influenced. This suggests that in order to increase or to decrease participants' role ambiguity, the group productivity manipulation would need to be expanded to incorporate the provision of task information.

In summary, individuals in the high productivity group reported greater task satisfaction, lower role conflict and higher adjustment to the group than individuals in the low productivity group. These findings suggested that group norms for high productivity were congruent with the task demands faced by the individual, thereby leading to positive adjustment to the task and to the group. The lack of significant effects for group productivity norms on individual task performance was surprising. It was suggested that conformity to group productivity norms require more extensive interaction over a long period of time between the individual and the group. Moreover, the salience of the group
productivity effect may have been reduced by the presence of a leader who also exerted influence on the participants' behaviour. Therefore, the interpretation of the group productivity main effect needs to be qualified by the leadership style-group productivity interaction.

LEADERSHIP STYLE x GROUP PRODUCTIVITY

**Hypothesis 13(a).** Individuals exposed to a structuring leader and in a high productivity group will have higher task performance, task adjustment, and adjustment to the leader and to the group than individuals exposed to a structuring leader and in a low productivity group.

As predicted, individuals with a structuring leader and in a high productivity group reported higher task adjustment than individuals with a structuring leader and in a low productivity group. Specifically, under structuring leadership, individuals in high productivity groups experienced higher general task satisfaction ($M = 10.88; M = 6.33; p < .01$), higher specific task satisfaction ($M = 37.25; M = 24.42; p < .01$), and lower role conflict ($M = 14.33; M = 24.50; p < .01$) than individuals in low productivity groups (see Table 8). There were no significant interaction effects for role ambiguity ($M = 30.92; M = 26.63; p > .01$) (see Table 8). These results suggest for the structuring leader-high group productivity condition, the leader and the group structure the participant's reality in mutually reinforcing ways by advocating task accomplishment, thereby leading to task satisfaction and minimal role conflict. For the structuring leader-low group productivity condition, the contradiction between the
structuring leader's emphasis on task accomplishment and the group's disinterest in performing the task creates substantial role conflict and dissatisfaction with the exercise. These results are consistent with previous research (e.g., Beehr, Walsh, & Taber, 1976; Brief & Aldag, 1976; House & Rizzo, 1972).

The nonsignificant interaction effect for role ambiguity may be attributed to the fact that the structuring leader provided detailed task direction to participants while the group did not offer any information that may have confused or hindered the participants' understanding of these directions; therefore, participants had fairly clear perceptions of the task requirements (M = 28.77; 4.80 on a 7-point scale) (see Table 7).

The results further indicated a lack of significant interaction effects for task performance and interpersonal adjustment measures. With regard to task performance, individuals suggested 19 courses of action and had satisfactory quality of performance (M = 2.94 on a 5-point scale) (see Table 7). The interpersonal adjustment data revealed that individuals were moderately adjusted to the leader (M = 16.49; 3.30 on a 7-point scale) and relatively highly adjusted to the group (M = 58.18; 5.81 on a 8-point scale) (see Table 7).

These nonsignificant results are not consistent with previous empirical research which suggests that role conflict leads to less effective performance, psychological withdrawal from the group, and reduction in trust, liking, and respect for role senders from whom the conflict stems (e.g., French & Caplan, 1972; Liddell & Slocum, 1976; Miles, 1976).
Several possible explanations for the present study's findings may be advanced.

For task performance, role clarity may have moderated the deleterious effects of role conflict, thereby facilitating task performance for individuals in low productivity groups. Alternatively, for an individualistic task where the participant is unilaterally responsible for its completion, individuals may have responded to induced role conflict by becoming more involved in the task. Katz (1977) reached the same conclusion in his study of the influence of structuring and considerate leaders on individual performance under conditions of high affective group conflict.

Another explanation is that leader structuring behaviour and high group productivity norms may simply not be sufficient to produce outstanding task performance. As discussed earlier, participants anecdotally reported while the structuring leader clearly defined the task, they felt unsure as to how to proceed and were not highly motivated to do so. Therefore, individuals may need to be activated or energized in order to meet the challenge of the task. A final explanation is perhaps that as an individual becomes more established in his/her organizational role and work situation over time, structuring leadership in combination with high group productivity norms would produce higher individual task performance than would structuring leadership in combination with low group productivity norms.
The lack of significant interaction effects for measures of adjustment to the leader and to the group suggests that the evaluation of interpersonal relations may be separate from the evaluation of the task. That is, individuals' differential adjustment to the task is independent of favourable impressions of the leader and of the group. This contention is supported by the generally weak correlations between adjustment to the leader and task adjustment, and between adjustment to the group and task adjustment (see Table 6). Examination of the operational definitions of the interaction style of the leader and of the co-workers sheds further light on these nonsignificant results. The structuring leader acted in a neutral manner towards participants; the co-workers acted in a friendly and interested manner towards the participants regardless of productivity norms. Therefore, the participants were moderately adjusted to the leader and relatively highly adjusted to the co-workers (see Table 7).

**Hypothesis 13(b).** Individuals exposed to a considerate leader and in a high productivity group will have higher task performance, task adjustment, and adjustment to the leader and the group than individuals exposed to a considerate leader and in a low productivity group.

In accordance with the hypothesis, individuals with a considerate leader and in a high productivity group had significantly higher specific task satisfaction ($M = 32.25$) than individuals with a considerate leader and in a low productivity group ($M = 27.21$; $p < .01$) (see Table 8). The considerate leader, by providing interpersonal support, and the high productivity group, by providing encouragement to do the task, acted in a complementary manner, thereby increasing individual task satisfaction. In
contrast, in the consideration-low productivity condition, the considerate leader, by providing interpersonal support, and the low productivity group, by providing discouragement to do the task, acted in a discordant manner, thereby decreasing individual task satisfaction.

The remaining results were incongruent with this experimental hypothesis. The task performance data indicated that under both group productivity conditions, individuals exposed to a considerate leader recommended 19 courses of action and had fairly satisfactory quality of performance (M = 2.46 on a 5-point scale) (see Table 7). With regard to the task adjustment measures, individuals reported moderate general satisfaction with the task (M = 7.38; 3.69 on a 7-point scale), considerable role ambiguity (M = 16.43; 2.74 on a 7-point scale, reverse scored), and moderate role conflict (M = 22.06; 4.41 on a 7-point scale) (see Table 7). Collectively, these results suggest that individuals felt confused and uncertain about how to approach the task resulting in low task adjustment and marginal task performance.

Examination of the operationalizations of considerate leadership and group productivity offers some insights into these results. As discussed in Chapter II, considerate leadership was operationally defined as concern for the personal welfare of the participant, engagement in participative two-way conversations, and emphasis on the comfort, well being, and satisfaction of the participant. The group productivity manipulation focused on providing task performance cues by displaying either highly productive or minimally productive behaviour on the part of confederate co-workers. Therefore, the participants did not actually receive explicit
task directions, facilitative of goal accomplishment, from either the leader or the co-workers. Accordingly, the participants' task performance and task adjustment was marginal.

The results further indicated that individuals reported positive adjustment to the leader (M = 26.77; 5.35 on a 7-point scale) and fairly high adjustment to the group (M = 53.21; 5.32 on a 8-point scale) (see Table 7). This contradicts previous research which suggests that role conflict and role ambiguity are related to unsatisfactory work group relationships and inadequate perceived leader behaviour (e.g., French & Caplan, 1972; Rizzo et al., 1970; Van Sell et al., 1981). However, as discussed earlier, perhaps the adverse effects of role stress do not necessarily generalize to perceptions of interpersonal relations. The considerate leader acted in a reassuring and supportive manner and expressed concern about the individual's personal welfare; the group consistently acted in a friendly manner regardless of productivity norms. Hence the participants had a favourable impression of both the group and the leader.

Hypothesis 13(c). Individuals exposed to a charismatic leader and in a high productivity group will have the same level of task performance, task adjustment, and adjustment to the leader and to the group as individuals exposed to a charismatic leader and in a low productivity group.

The results of the present study supported this hypothesis. The directionality of group productivity norms appeared to be nullified by the charismatic leader resulting in high task performance, task adjustment,
and adjustment to the leader and to the group. With regard to task performance, individuals provided 24 courses of action and had satisfactory quality of performance ($M = 3.46$ on a 5-point scale) (see Table 7). For task adjustment, participants reported high specific task satisfaction ($M = 39.44$), high general task satisfaction ($M = 11.06; 5.53$ on a 7-point scale), moderate role clarity ($M = 28.65; 4.77$ on a 7-point scale), and low role conflict ($M = 15.48; 3.09$ on a 7-point scale (see Table 7). Finally, individuals reported very positive adjustment to the leader ($M = 30.44; 6.01$ on a 7-point scale) and moderately high adjustment to the group ($M = 54.73; 5.47$ on a 8-point scale) (see Table 7).

These results lend support to the theoretical literature which suggests that charismatic leaders "are capable of having profound and extraordinary effects on followers" (House, 1977, p.189). As discussed earlier, charismatic leaders, by establishing a strong emotional bond with followers, by providing an ideological goal which heightens followers' work motivation and perceptions of the meaning and significance of their work, and by expressing confidence in followers' ability to meet high performance expectations, facilitate high individual task performance, task adjustment, and interpersonal adjustment.

In summary, the foregoing discussion of interaction effects suggests that charismatic leaders, regardless of group productivity norms, foster high individual task performance, task adjustment, and adjustment to the leader and to the group. Therefore, charismatic leaders overcome group pressures for low task productivity and augment group pressures for high task productivity, thereby facilitating individuals' adjustment and performance in a new work setting.
In contrast to the charismatic leader, the structuring leader's impact on individual's task adjustment was modified by group productivity norms. Individuals who worked with a structuring leader and in a high productivity group reported higher specific task satisfaction, higher general task satisfaction, and lower role conflict than individuals who worked with a structuring leader and a low productivity group. Therefore, in order to reach the high level of task satisfaction of individuals with charismatic leaders, individuals with structuring leaders may need the support of high group productivity norms. Interestingly, despite the significant interaction effect of structuring leadership and group productivity norms on individual task adjustment, there was an absence of statistically significant effects of structuring leadership and group productivity norms on task performance, role ambiguity, and adjustment to the leader and to the group. Perhaps as individuals become more established in their organizational roles and work situations over time, structuring leadership and high group productivity norms would influence their task performance, role clarity, and interpersonal adjustment.

Finally, individuals with a considerate leader and in a high productivity group had significantly higher specific task satisfaction than those with a considerate leader and in a low productivity group. Thus the considerate leader, by providing interpersonal support, and the high productivity group, by providing encouragement to do the task, acted in a complementary manner, thereby increasing individual task satisfaction. The results further indicated that individuals exposed to considerate leaders, regardless of the directionality of group productivity norms, had marginal task performance and low task adjustment. However, individuals reported positive adjustment to the leader and to the group.
Overall, individuals with structuring and considerate leaders had highly similar task performance and adjustment to the group. However, individuals in the structuring-high productivity group had more positive task adjustment than those with considerate leaders. On the other hand, individuals with considerate leaders had higher adjustment to the leader than those with structuring leaders.

**Nonsignificant Results**

As mentioned earlier, there were no significant effects for three dependent measures: the number of in-basket items completed, self-rated performance, and job related tension. These results indicated that across all conditions the participants attempted on average 15 out of 20 memos, perceived their task performance as adequate (\(M = 22.31; 3.16\) on a 5-point scale) and reported occasional tension associated with the task (\(M = 36.59; 2.81\) on a 5-point scale) (see Table 7).

A possible explanation for the lack of significant differences for the number of in-basket items attempted is that individuals' quantitative performance may not have been adequately tested by this measure. That is, due to the short length of the in-basket exercise, the detection of possible group differences may have been attenuated. If, for example, the exercise had consisted of 60 memos, some group differences may have been evident.

Another related explanation for the absence of significant differences is that the number of in-basket items attempted was not a sufficiently
sensitive measure of task performance under ambiguous circumstances. That is, all participants, regardless of treatment conditions, were aware of the number of memos to be completed within the specified time period. Therefore, this aspect of the task was clearly defined and, consequently, the participants handled approximately the same number of memos. However, it is likely that the participants faced ambiguity in deciding on their quality of task performance and on their generation of alternative courses of action to the memos. Therefore, the differences between treatments were reflected in these dimensions of task performance.

The absence of significant differences for the self-rated performance measure may be attributed to several factors. For example, there was a lack of task feedback and of criteria against which participants could evaluate their task performance. A related factor is that the ambiguous nature of the task may have made it difficult for participants to judge how well they performed.

The nonsignificant differences for the job related tension measure may be due to the fact that participants had difficulty in rating the frequency of work related tension; they experienced tension but were uncertain to what extent. Once again, the participants did not have a set of standards against which to judge their experience of tension. An alternative explanation is that the transitory nature of the task may have attenuated group differences in work related tension. Over time in a work situation, organizational members could potentially more accurately assess the frequency of job stress.
Multivariate Analyses

To supplement the univariate ANOVAs, a multivariate analysis of variance (MANOVA) was also conducted. This multivariate technique takes into account correlations among dependent variables and compensates for increased Type 1 errors associated with multiple univariate testing of the same data (e.g., Green, 1978; Marascuilo & Levin, 1983; Tatsuoka, 1970). Therefore, MANOVA allows simultaneous testing of all the dependent variables and considers the various interrelationships among them.

When significant MANOVA results are obtained, discriminant analysis can be subsequently applied in order to construct a linear combination of the set of dependent variables that will maximally differentiate among the groups in question (e.g., Green, 1978; Marascuilo & Levin, 1983; Tatsuoka, 1970). By examining the relative standardized weights assigned to the different variables in the linear combination, how much (or little) each dependent variable contributed to the differentiation between groups can be determined. According to Tatsuoka (1970, p.4), inspection of the pattern of standardized weights gives a much more accurate account of the nature of group differences in terms of a given set of variables than does looking at each variable separately without regard for their interrelations and partly overlapping information. In the present study, standardized discriminant weights whose absolute values were no less than approximately one-half of the largest weights were interpreted (Tatsuoka, 1970, pp.3-4).

There are two approaches to interpreting standardized discriminant weights assigned to each variable in computing the discriminant functions.
One approach uses the relative magnitude of the standardized discriminant weights as an index of the relative contribution or importance of the dependent variables to the discrimination between the groups, ignoring the positive or negative sign (Hair et al., 1979; Huberty, 1975; Klecka, 1980, pp.29-30). Dependent variables with relatively larger weights contribute more to the discriminating power of the function than do variables with smaller weights (e.g., Klecka, 1980; Pedhazur, 1982). Therefore, when the sign is ignored, each weight represents the relative contribution of its associated variable to that function (Hair et al., 1979, p.104; Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975, p.443). After identifying the variables which maximally discriminate between the groups on the basis of the absolute magnitude of the discriminant weights, the group means are used to aid in the interpretation of these variables (e.g., Aaker & Day, 1980; Tabachnick & Fidell, 1983).

The other approach to interpreting standardized discriminant weights involves examining both the sign and the magnitude of the weight assigned to each variable in computing the discriminant functions (Tatsuoka, 1970). According to Tatsuoka (1970, p.4), a positive sign indicates the direction which is descriptive of the group having the higher mean standardized score on the linear combination of the set of variables. A negative sign indicates the direction which is descriptive of the group having the lower mean standardized score on the linear combination of the set of variables (Tatsuoka, 1970, p.4). With regard to the magnitude of the standardized weights, as discussed above, dependent variables with relatively larger weights contribute more to the discriminating power of the function than do variables with smaller weights (e.g., Kachigan, 1982; Pedhazur, 1982; Thorndike, 1978).
In summary, one approach to interpreting standardized discriminant weights entails examining the relative magnitude of the weights, irrespective of the sign, to identify the dependent variables which maximally differentiate between the groups and then uses the univariate group means to interpret the differences between the groups. The other approach examines both the relative magnitude of the weights and their direction (i.e., the positive or negative sign) to identify the dependent variables which maximally differentiate between the groups and the direction of such differences between the groups.

In the present study, with the exception of one finding, the use of these two approaches to interpret the standardized discriminant weights yielded identical results. To give a specific example which will be discussed in the following section, the standardized discriminant function coefficients for the leadership style main effect indicated that adjustment to the leader (-.944) and role ambiguity (.493) maximally separated the considerate and structuring leadership styles on the first discriminant function (see Table 11). Using the first approach in which the magnitude of the weights are taken into account but the signs are ignored, the univariate group means are used to identify under which leadership style condition participants had higher adjustment to the leader and higher role ambiguity in comparison to the other leadership style condition. The group means reveal that individuals with considerate leaders have higher

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6. When the sign is taken into consideration, the results for the interaction effect indicated that individuals in the structuring-low productivity group recommended more courses of action than individuals in the structuring-high productivity group. This finding needs to be subject to further investigation.
adjustment to the leader \( (M = 26.77) \) than individuals with structuring leaders \( (M = 16.49) \) (see Table 7). In contrast, individuals with structuring leaders have higher role clarity \( (M = 28.77) \) than individuals with considerate leaders \( (M = 16.43) \) (i.e., the role ambiguity scale is reverse scored).

In the second approach to interpreting standardized discriminant weights both the sign and magnitude of the weights are taken into account. The negative sign for the adjustment to the leader variable (-.944) is descriptive of the considerate leadership style which has the lower mean standardized discriminant function score (see Figure 4). The magnitude of the weight indicates that individuals with considerate leaders have higher adjustment to the leader than individuals with structuring leaders. This interpretation using both the sign and magnitude of the weight is consistent with the interpretation using the univariate group means. The positive sign for the role ambiguity variable (.493) is descriptive of the structuring leadership style which has the higher mean standardized discriminant function score (see Figure 4). The magnitude of the weight indicates that individuals with structuring leaders have higher role clarity than individuals with considerate leaders. This interpretation is also supportive of the interpretation using the univariate group means. Therefore, both methods of interpreting the standardized discriminant weights produced the same results. To facilitate the interpretation of the following multivariate results, group means or cell means are cited.

It should be underscored that standardized discriminant weights are not unambiguous indices of the relative importance of the variables with
which they are associated. For example, a small weight may either mean that its corresponding variable is irrelevant in determining a relationship, or that it has been partialled out of the relationship because of a high degree of correlation with other dependent variables. In addition, standardized discriminant weights lack stability since they are affected by the variability of the variables with which they are associated and by the intercorrelations among the variables (Hair et al., 1979, p.104; Pedhazur, 1982, p.701). These problems suggest caution in using weights to interpret the results of a discriminant analysis.

With these caveats in mind, the standardized discriminant weights which maximally separate the leadership styles, the group productivity conditions, and the leadership style-group productivity interactions will be described, interpreted, and compared to the univariate results. Prior to presenting these results, some general observations should be made. First, highly similar results were obtained in the univariate and multivariate analyses. Second, in both analyses, the results were consistently in the same direction; there were no reversals of findings. Third, in comparison to the multivariate analyses, the univariate analyses revealed more dependent variables which significantly differentiated between groups. Finally, different dependent variables contributed to the discrimination between treatment groups for the interaction effect in both analyses. These general observations will be elaborated in the following sections.
Leadership Style

The standardized discriminant function coefficients indicated that adjustment to the leader (-.944) and role ambiguity (.493) maximally separated the leadership styles on the first discriminant function (see Table 11). The second discriminant function was chiefly defined by role ambiguity (-.760) and quality of task performance (-.513) (see Table 11).

There were several similarities between univariate and multivariate analyses for the leadership style main effect. Specifically, in both analyses the qualitative task performance of individuals with charismatic leaders (M = 3.46) surpassed that of individuals with considerate leaders (M = 2.46) (see Table 7). In addition, individuals with charismatic and structuring leaders had higher role clarity (M = 28.65; M = 28.77) than did individuals with considerate leaders (M = 16.43) (see Table 7). Finally, individuals with charismatic leaders (M = 30.44) and considerate leaders (M = 26.77) had higher adjustment to the leader as compared to individuals with structuring leaders (M = 16.49) (see Table 7).

In the univariate analyses, there was no statistically significant difference in the qualitative task performance of individuals with charismatic and structuring leaders. However, consistent with the trend in the means for the univariate analyses, the multivariate results revealed that the qualitative task performance of individuals working under charismatic leaders also surpassed that of individuals working under structuring leaders (M = 3.46; M = 2.94) (see Table 7). While this result is suggestive that charismatic leaders facilitate individuals' qualitative task performance, it should be subject to further investigation before any firm conclusions can be drawn.
Unlike the univariate analyses, the multivariate findings indicated an absence of differentiation between the considerate and charismatic leadership styles on the adjustment to the leader variable. Future studies need to determine if charismatic leaders establish a qualitatively different interpersonal relationship with their subordinates as compared to considerate leaders.

With the univariate analyses, there was a significant effect of leadership style on role conflict and number of courses of action. However, with the multivariate analyses, measures of role conflict and courses of action contributed minimally to the discrimination among the leadership styles.\(^7\) However, inspection of the interaction effect revealed that these variables maximally discriminated among the structuring-high productivity and structuring-low productivity groups. Since it has been repeatedly noted that the interpretation of main effects needs to be tempered by consideration of the significant interaction effect, the contribution of these variables to discriminating among the experimental groups will be discussed subsequently in the interaction section.

A final discrepancy with the ANOVA results is that the dependent variable specific task satisfaction contributed negligibly to the differentiation between leadership styles. To determine whether this variable is important in distinguishing between charismatic, structuring,

\(^7\)In addition, general task satisfaction, which was among those dependent variables showing the largest differences univariately, was found to contribute negligibly to group differentiation in terms of the linear combination of dependent variables. This finding will be discussed at the conclusion of this section.
and considerate leaders, further investigations need to be undertaken using a different sample and setting.

**Group Productivity**

Inspection of the discriminant function weights revealed that adjustment to the group (.765) and specific satisfaction with the task (.446) maximally discriminated between high and low group productivity conditions (see Table 13).

Examination of the group productivity effect in both univariate and multivariate analyses indicated a highly consistent pattern of results. Individuals in the high productivity group, as compared to those in the low productivity group, experienced higher adjustment to the group (\(M = 60.75; \overline{M} = 49.99\)) and greater satisfaction with specific aspects of the task (\(M = 36.43; \overline{M} = 30.24\)) (see Table 7). A further consistency between the univariate and multivariate findings was that the task performance measures, role ambiguity, job related tension, and adjustment to the leader contributed minimally to the discrimination between high and low productivity groups.

The only discrepancy with the univariate findings is that the dependent variable role conflict contributed minimally to the differentiation between group productivity conditions in the multivariate analysis. To determine whether this variable is important in distinguishing between low and high group productivity, further studies need to be conducted using a different sample and setting.
Leadership Style x Group Productivity

The discriminant coefficients for the leadership style and group productivity interaction suggest that the primary dependent variables distinguishing between groups are role conflict (-.786), number of courses of action (-.701), and quality of in-basket performance (.537) (see Table 14). Examination of the univariate and multivariate analyses for the interaction effect revealed a similar pattern of results. In both analyses the charismatic-high productivity and charismatic-low productivity groups were not significantly differentiated. Therefore, the effect of directionality of group productivity norms appeared to be nullified by the charismatic leader.

Supportive of the univariate findings, the multivariate results further indicated that the effect of structuring leadership was modified by group productivity norms. In both types of analyses, individuals in the structuring-high productivity group reported lower role conflict (M = 14.33) than individuals in the structuring-low productivity group (M = 24.50) (see Table 8). However, univariately, task adjustment variables (i.e., specific task satisfaction and general task satisfaction) showed large differences for this interaction effect while multivariately task performance variables (i.e., quality and courses of action) showed the greatest contribution in terms of the discrimination among groups. Specifically, the multivariate results suggested that the effects of role conflict generalized to differential task performance in terms of quality and number of courses of action. That is, individuals in the structuring-high productivity group had higher quality of task performance (M = 3.21) and suggested more courses of action on the in-basket exercise (M = 19.42) than individuals in
the structuring-low productivity group (M = 2.67; M = 18.71) (see Table 8). These findings imply that structuring leaders in combination with high group productivity norms can facilitate both individuals' task adjustment and performance.

Finally, the multivariate analysis revealed that the considerate-high productivity and considerate-low productivity groups were not significantly distinguished by the linear combination of dependent variables. However, univariately, individuals with a considerate leader and in a high productivity group had significantly higher specific task satisfaction than individuals with a considerate leader and in a low productivity group. Therefore, while the univariate interaction is suggestive that the directionality of group productivity norms in conjunction with considerate leadership differentially affects individuals' task satisfaction, it requires further investigation.

An unexpected multivariate finding for both the main and interaction effects was that general task satisfaction was found to contribute negligibly to group differentiation in terms of the linear combination of dependent variables. Task satisfaction was among those dependent variables showing the largest differences univariately. A plausible explanation for this finding is that since standardized coefficients take into consideration the simultaneous contribution of all other variables, it is possible that if two variables share information (i.e., if they are highly correlated) they must share their contribution to the function, even if that joint contribution is very important (Klecka, 1980). Consequently, their standardized coefficients may be smaller than when only one of the
variables is used (Klecka, 1980, p.33). Accordingly, the general task satisfaction variable may have been suppressed by the other variables with which it was correlated (Cohen & Cohen, 1975).

**Supplemental Results**

**Individual Differences**

The lack of statistically significant effects for the individual difference measures was surprising (see Table Q21 in Appendix Q). Conceptually, participants' tolerance for ambiguity, need for achievement, and need for affiliation were expected to influence their adjustment and performance in an ambiguous work situation. One possible explanation for the nonsignificant results is that the strength of the experimental inductions for leadership style and for group productivity may have overpowered the potential influence of personality variables. Perhaps if the treatments were weaker there would have been a greater contribution of individual differences in that participants may be required to draw on their personal resources to cope with the experimental situation. This interpretation is consistent with the argument advanced by Mischel (1973). He contends when situational cues are clear and well understood, the expression of individual differences will be constrained. Therefore, individual differences will be less predictive of behaviour than will situational variables.

**Participant Gender**

The supplemental results revealed that male and female participants
had consistent perceptions of the various leadership styles (see Table Q22 in Appendix Q). As discussed in Chapter II, the majority of studies indicate only modest, if any, effects of leader gender on subordinates' perceptions of the leader (e.g., Bartol & Wortman, 1975; Donnell & Hall, 1980; Eskilson & Wiley, 1976; Osborn & Vicars, 1976; Rice et al., 1984). The present study's finding supports the notion that there are no differences between male and female subordinates' perceptions of female leaders.

**Performance of the Optional Task**

The supplemental results also indicated that the vast majority of participants performed the optional task of answering five more memos. Only 9 out of 144 participants refused to do the optional task (see Tables Q23 and Q24 in Appendix Q). One explanation for this result is that the participants may not have perceived the task as being optional and just considered it an extension of the exercise. A related explanation for this finding is that the participants' willingness to complete five additional memos may be an insensitive measure of their personal commitment to and motivation by the leader and/or co-workers. As discussed earlier with respect to the nonsignificant result for the number of items completed, a more demanding task may be necessary to adequately test the participants' commitment to the leader and/or co-workers. Another interpretation for this finding is that the participants may have had a strong desire to complete the task and therefore readily complied with the leader's request to perform an optional task. Perhaps in an ongoing organization with a greater diversity of employee characteristics, there would be greater differences in individuals' willingness to perform extra work.
CHAPTER V
CONCLUSION

This chapter is composed of four sections. The first section briefly summarizes the present study. Subsequently, implications and speculations regarding the study's findings are discussed. The third section addresses the limitations of the study, especially with regard to external validity. Finally, directions for future research are proposed.

A Summary of the Present Study

Charismatic leadership, leadership which inspires followers to transcend their interests for superordinate goals, is a widely recognized phenomenon in both the academic literature and popular press. Despite the apparent pervasiveness of charisma in social life, it has remained a largely unexplored concept empirically. Many studies of leadership have focused on two dimensions of leadership style, structuring and consideration. The present study attempted to assess the impact of charismatic, considerate, and structuring leadership styles on individuals' adjustment and performance in a new work setting.

In addition to the leader, the work group also exerts a major influence on individuals' adjustment to new social and task realities by acting as a normative referent for appropriate types of behaviour, especially the level of work productivity. Groups can act in concert with
the leader's aims or objectives by advocating high work productivity or against these aims and objectives by encouraging low work productivity. Therefore, the purpose of the present study was to examine the effects of three leadership styles (charismatic, structuring, and considerate) and two levels of work productivity (high and low) on individuals' adjustment to and performance on an ambiguous decision making task.

One hundred and forty-four Commerce and Business Administration undergraduates were recruited to participate in the study. The experiment was presented to participants as a Management Training Project which was designed to assess their practical business skills. The participants completed an in-basket exercise under the direction of the Project Manager (a trained experimental confederate) who portrayed a charismatic, structuring, or considerate leadership style, depending on the experimental condition being investigated. Participants individually worked on the exercise in the presence of two other students (also trained experimental confederates) who advocated either high or low productivity on the task. At the conclusion of the exercise, the participants completed a questionnaire measuring their adjustment to the task, to the manager, and to the other students. Trained raters assessed the participants' qualitative and quantitative performance on the exercise.

Univariate analyses of variance indicated that charismatic leaders had the strongest influence on the performance and adjustment of participants. Specifically, individuals in the study who worked under charismatic leaders had significantly higher task performance in terms of the number of courses of action suggested on the in-basket exercise, greater task
satisfaction, lower role conflict, and higher adjustment to the leader when compared to individuals working under structuring and considerate leaders. In addition, the qualitative task performance of individuals with charismatic leaders surpassed that of individuals with considerate leaders. These findings were attributed to several interrelated facets of charismatic leader behaviour: establishing a strong affective connection with subordinates and making them feel relatively more powerful and efficacious; imputing a mission and ideological goals which heighten subordinates' work motivation, effectiveness, and perceptions of the meaning and importance of their task; and simultaneously communicating high expectations of, and confidence in, subordinates' ability to meet these expectations (see Chapter IV for a full discussion of the study's findings). The results further indicated that individuals with considerate and charismatic leaders had higher adjustment to the leader than individuals with structuring leaders. These findings were consistent with previous theories and empirical research which suggest that both considerate and charismatic leaders establish a strong emotional bond with subordinates.

A surprising finding was while individuals with structuring leaders experienced role clarity and reduced role conflict, their task performance and task satisfaction were equivalent to those with considerate leaders. That is, the results indicated in most instances that individuals with considerate and structuring leaders contributed adequate task performance and had moderate task satisfaction. It was suggested that the work situation was sufficiently ambiguous that the role clarification behaviour of structuring leaders was simply not enough to produce significant changes in participants' task performance and task satisfaction. This is borne out
when one compares charismatic and structuring leaders where role clarity is high under both leaders yet performance and adjustment are different. This suggests, once again, that something more than clearly defining task expectations for subordinates is needed to produce high task performance and adjustment. It was further suggested that the presence of group members espousing high and low productivity norms may have reduced the salience of the structuring leader's effects on the participants' adjustment to and performance on the task.

The group productivity data indicated that individuals in high productivity groups reported significantly higher task satisfaction, lower role conflict, and higher adjustment to the group than did individuals in low productivity groups. These findings suggested that group norms for high productivity were congruent with the task demands faced by the individual, thereby leading to positive adjustment to the task and to the group. The lack of significant effects for group productivity norms on individual task performance was contrary to expectation. One possible explanation is that group membership was of such brief duration that the well known pressures for individuals' adherence to group norms did not have time to develop. Moreover, the salience of the group productivity effect may have been reduced by the presence of a leader who also exerted influence on the participants' behaviour.

Interactions between leadership style and group productivity revealed that only charismatic leaders were able to overcome the negative effects of the low group productivity condition; under structuring and considerate leaders the negative effect of the low productivity norm persisted.
Specifically, charismatic leaders, irrespective of high or low group productivity norms, produced high individual task performance, task adjustment, and adjustment to the leader and to the group. These findings support the theoretical literature which suggests that charismatic leaders, by force of their personal qualities, are capable of inducing follower performance and adjustment beyond the ordinary limits (Bass, 1985; House, 1977).

In contrast to the charismatic leader, the structuring leader's impact on individuals' task adjustment was modified by group productivity norms. Individuals who worked with a structuring leader and in a high productivity group reported higher specific task satisfaction, higher general task satisfaction, and lower role conflict than did individuals who worked with a structuring leader and in a low productivity group. Therefore, in order to reach the high level of task satisfaction of individuals with charismatic leaders, individuals with structuring leaders needed the support of high group productivity norms. Interestingly, despite the significant interaction effect of structuring leadership and group productivity norms on individual task adjustment, there was an absence of statistically significant effects on task performance, role ambiguity, and adjustment to the leader and to the group. Perhaps as individuals become more established in their organizational roles and work situations over time, structuring leadership and high group productivity norms would influence their task performance, role clarity, and interpersonal adjustment.
Finally, individuals with a considerate leader and in a high productivity group had significantly higher specific task satisfaction than those with a considerate leader and in a low productivity group. This finding suggests that the considerate leader, by providing interpersonal support, and the high productivity group, by providing encouragement to do the task, acted in a complementary manner, thereby increasing individual task satisfaction. The results further indicated that individuals exposed to a considerate leader, irrespective of group productivity norms, had marginal task performance and low task adjustment. However, individuals reported positive adjustment to the leader and to the group.

Overall, individuals with structuring and considerate leaders had highly similar task performance and adjustment to the group. However, individuals in the structuring-high productivity group had more positive task adjustment than those with considerate leaders. On the other hand, individuals with considerate leaders had higher adjustment to the leader than those with structuring leaders.

For reasons explained in Chapter III, the data then were subjected to multivariate analyses. The results were similar for the univariate and multivariate analyses. In both analyses for the leadership style effect, individuals with charismatic leaders had higher qualitative task performance than those with considerate leaders. The multivariate analyses also indicated that the qualitative task performance of individuals working under charismatic leaders surpassed that of individuals working under structuring leaders. The univariate and multivariate results further revealed that both charismatic and structuring leaders increased
subordinate role clarity while considerate leaders maintained subordinate role ambiguity. Finally, both analyses indicated that individuals with charismatic and considerate leaders had higher adjustment to the leader than individuals with structuring leaders. The univariate results also showed that individuals with charismatic leaders reported higher adjustment to the leader as compared to individuals with considerate leaders.

The univariate and multivariate results for the group productivity effect were also similar. Specifically, individuals in the high productivity group experienced higher adjustment to the group and greater satisfaction with specific aspects of the task than individuals in the low productivity group. The only discrepancy with the univariate results was that multivariately the dependent variable role conflict contributed nominally to the distinction between group productivity conditions.

Turning to the interaction effect, both the univariate and multivariate analyses revealed that the charismatic-high productivity and charismatic-low productivity groups were not significantly differentiated. Thus the directionality of group productivity norms appeared to be nullified by the charismatic leader.

Consistent with the univariate results, the multivariate results indicated that the effects of structuring leadership were modified by group productivity norms. Specifically, both the univariate and multivariate analyses revealed that individuals in the structuring-high productivity group reported lower role conflict than individuals in the structuring-low productivity group. However, univariately, task adjustment variables
(i.e., specific and general task satisfaction) showed large differences for this interaction effect, while multivariately, task performance variables (i.e., quality and courses of action) showed the greatest contribution in terms of the discrimination among groups. The univariate and multivariate results suggested that individuals with structuring leaders and in a high productivity group had higher task adjustment and performance as compared to those with structuring leaders and in a low productivity group.

For the considerate leader–group productivity interaction, univariately, specific task satisfaction showed a large difference for this interaction effect. However, multivariately, the considerate–high productivity and considerate–low productivity groups were not significantly differentiated according to the linear combination of dependent variables. It was proposed that while the univariate interaction suggests that the directionality of group productivity norms in conjunction with considerate leadership differentially affect individuals' task satisfaction, it needs to be explored in future research.

Further implications and speculations with regard to the present study's findings will be treated in the following section.

Implications and Speculations

The generalization of findings from laboratory studies is legitimate only within relatively narrow limits (e.g., Cook & Campbell, 1979). With this caveat in mind, it is nevertheless worth highlighting some of the
implications of the present study's results and speculating beyond these results. The implications that flow from the leadership style findings will be addressed initially followed by a discussion of the group productivity findings.

Leadership Style

Charismatic Leadership

Based on the psychological literature on intraorganizational charisma, a complex, multifaceted conceptualization and operationalization of charismatic leadership were developed and adopted in this study. This conceptualization encompassed several fundamental components including a charismatic leader's ability to articulate an ideological mission, to communicate high performance expectations and exhibit confidence in followers' abilities to meet these expectations, to establish a strong emotional bond with followers, to project a dynamic, powerful, and confident image, and to display rhetorical skill. It is tempting to ask which of these components are the most fundamental to charismatic leadership. How many of these charismatic qualities can we strip away and still have an empirically identifiable charismatic phenomenon? Drawing on the theoretical literature (e.g., House, 1977; Trice & Beyer, 1984; Tucker, 1970; Weber, 1947), it might be inferred that charisma is a gestalt; that is, it is more than the sum of its parts. If we focus only on an individual component of charisma, the nature and effects of charisma may be fundamentally altered.
It will be recalled that professional actresses were trained to portray the aforementioned conceptualization of charismatic leadership. Statistical analyses of the leadership style manipulation checks revealed that the participants perceived the charismatic leader as being distinct from the structuring and considerate leadership styles. In fact, anecdotally, many participants working under a charismatic leader expressed the sentiment that they were making an important contribution to the success of the project's mission. In the words of one participant: "I felt inspired - I was contributing to something really important, something that would impact on my future."

These results have several theoretical and practical implications. First, charisma can be empirically isolated, identified, and distinguished from other leadership styles, notably in this study structuring and considerate styles. As Sashkin (1977) has speculated, charisma is not the sum of a number of leadership elements already well known - it is a qualitatively different phenomenon. That is, charisma is not the combination of structuring and considerate leadership but may be the combination of some old dimensions reported in the leadership literature and some new dimensions not yet well understood. Second, charismatic leadership can be studied under controlled laboratory conditions. Therefore, charisma is not as elusive as some scholars have thought it to be. However, as the present study has demonstrated, in order to examine it, we need a sophisticated design and a strong induction of the effect introducing charisma through the use of carefully developed and clearly recognizable models. Failure to provide such a design and clear models of leadership styles may lead to superficial and misleading results. Third,
individuals can be trained to exhibit charismatic behaviours. (In this study, this point is made through the successful use of professional actresses.)

Turning to the study's findings, individuals with charismatic leaders, regardless of group productivity norms, had high task performance, task adjustment, and adjustment to the leader and to the group. This suggests that at least in the short run, the power of the charismatic leader supersedes the directionality of group productivity norms. A clear and important implication of these results is that charismatic leaders can substantially ease individuals' adjustment and performance in a new work situation. More specifically, this study demonstrates that charismatic leaders can have a positive impact on individuals' adjustment and performance for their first day at work in a temporary organization. By enhancing the role assimilation process, charismatic leaders could reduce the "start-up" time of new employees.

The results further indicated that individuals working under the charismatic leader and exposed to low group productivity norms experience low role conflict. This finding has both positive and negative implications. On the positive side, it implies that under charismatic leadership, employees can forge ahead in the face of adverse circumstances with minimal conflict. On the negative side, by ignoring conflict, employees working under a charismatic leader may be unable to confront and manage crucial issues. An example of such possible dysfunctional consequences of charismatic leadership was provided by Smith and Simmons (1983) in their recent description of the development of a new treatment facility for
emotionally disturbed children. The Medical Director, labelled by these investigators as charismatic, fostered the dependency of his clinical staff leading to an avoidance of needed confrontations between the staff and the director and to an undermining of the staff's capacity and willingness to take initiatives. Moreover, Smith and Simmons (1983, p.391) contend "if conflicts are brushed aside by charismatic exhortations to be team players, superficial unity may result, but at the cost of driving the conflicts deeply underground. This increases the probability that these conflicts will surface elsewhere in displaced and less manageable forms".

The long term effects of charismatic leaders are difficult to predict with certainty. As Weick (1979, p.190) has observed, "it is possible that experiments tell us more about how a person will act on his first day of work than on his 400th day". Thus, over time, the charismatic leader's positive effects on individuals' adjustment and performance may become stronger, remain the same, or become weaker. For example, the charismatic leader's capacity to overcome low group productivity norms may not be sustained in the long run. Low productivity norms may create greater conflict for individuals as they strive to maintain group membership, thereby moderating the positive effects of charismatic leadership. Alternatively, low group productivity norms may not be upheld under charismatic leadership. That is, group members may be "inspired" to adopt high performance standards. Another possible outcome is that the followers of the charismatic leader could break off from the low productivity group and form "the inner circle" of charismatic supporters.
In addition to group productivity norms, the nature of the task demands may also modify the effects of charismatic leadership on followers' performance and adjustment. Etzioni (1961) and House (1977) have suggested that to the extent work involves decisions about means and the personal commitment of subordinates is unnecessary, charismatic leaders would be undesirable, while to the extent work involves decisions about ends and the moral involvement of subordinates is necessary, charismatic leaders would be beneficial for the organization. As a long range issue, we may eventually be able to define the organizational conditions under which charismatic leadership is and is not desirable from an organizational perspective (Sashkin, 1977, p.217).

Structuring and Considerate Leadership

The copious references to considerate and structuring leader behaviour in the theoretical and empirical literature leads one to believe that these behaviours have been exhaustively studied. In the author's opinion, based on examination of the literature on these leadership behaviours and working with them in the study, these behaviours have not been studied in sufficient depth. According to Dubin (1979, p.226), the central problem in developing our knowledge about leadership is our reluctance, or inability, to specify the dimensionality of the leadership phenomenon. In the present study, the conceptualization and operationalization of structuring and considerate leader behaviours were based on existing definitions of these behaviours in the field, on items on leadership questionnaires, and on prior operationalizations of considerate and structuring leader behaviours in experiments using confederates as leaders. However, close examination of these sources revealed significant
gaps in the specification of the nonverbal behaviours, paralinguistic cues, and interaction styles of considerate and structuring leaders. These gaps become readily apparent when training professional actresses to portray the facial expressions, voice tone, posture and other characteristics associated with a particular leadership style. An especially critical gap in the leadership literature is the failure to specify the interaction style of structuring leaders. There are few linkages between the personality traits of structuring leaders and the behaviors they display. Thus it is unclear whether structuring leaders are cool and aloof, warm and friendly or indeed, just what characteristics are significant.

Previous leadership research has not fully acknowledged the complex and multifaceted nature of considerate and structuring leader behaviours. Many leadership scholars have argued that we need to recognize the richness and diversity of the leadership process and the creative unboundedness of leadership acts (e.g., McCall & Lombardo, 1978; Pondy, 1978; Weick, 1978). Thus, in order to do justice to considerate and structuring leadership styles, we need to focus the research spotlight on the multidimensional facets of these styles.

Turning to the study's results, the effectiveness of the structuring leadership style was increased by high group productivity norms. Specifically, the univariate and multivariate results indicated that individuals in structuring-high productivity groups had higher task satisfaction and lower role conflict than individuals in structuring-low productivity groups. These results imply that the structuring leader, in conjunction with a work group that supports high productivity norms, can
substantially ease individuals’ task adjustment in a new work situation. To speculate further, while structuring leadership may be appropriate during the initial stages of organizational entry, it may lose its effectiveness over time. That is, as newcomers become established in their organizational role, there may be less need for the leader to tightly structure their work assignments. Instead, newcomers may begin to rely on sources of input other than the leader's structuring behaviour to clarify their role requirements such as instrumental support from their peers and task feedback. Indeed, as path-goal theory suggests, as tasks become clearly defined, subordinates may perceive structuring leadership as an imposition of control that is redundant given existing task structure (e.g., House & Dessler, 1974). Therefore, to remain effective over time, the structuring leader may need to vary the amount of task direction as well as the kind and timing of the direction provided (Hersey & Blanchard, 1977).

The results further imply that subordinates in low productivity groups could pose a difficult problem for the structuring leader. These subordinates appear to be caught between conflicting role demands leading to low task adjustment. Thus, at least in the short term, structuring leaders appear ineffective in resolving these conflicts and an alternative leadership style, notably charisma, may be more appropriate.

The study's univariate and multivariate findings indicated that individuals with considerate leaders in both group productivity conditions had high adjustment to the leader, satisfactory task performance, and low task adjustment. These findings imply that considerate leaders, irrespective of group productivity norms, are very effective in easing
individuals' adjustment to new social realities, but are relatively ineffective in facilitating their performance and adjustment to new task realities. However, to speculate, the interpersonal relationship initially established between the considerate leaders and their subordinates may have positive pay-offs with regard to the subordinates' long term adjustment to the organization.

The univariate results also indicated that individuals in considerate-high productivity groups had higher specific task satisfaction than individuals in considerate-low productivity groups. To the extent that this finding is valid, it implies that considerate leaders, when supplemented by high group productivity norms, may be relatively effective in facilitating individuals' adjustment to new task realities. On balance, it would seem that this finding must be studied in more detail in order to reach any firm conclusion.

**Group Productivity**

To date, the work group has been a neglected aspect in organizational leadership studies. However, as Schriesheim and his colleagues (1979, p.107) have observed, leadership does not occur in a social vacuum; interdependence exists between leaders and members of groups. "The group's definition of its task, goals, and paths to its goals strongly affects what a leader can accomplish in the group. In turn, the leader often has an impact on group outcomes by influencing the groups' norms and goals" (Bass, 1981, p.429). The results of the present study are illustrative of the interactive influence of leadership style and group productivity norms on individuals' task and social adjustment.
Specifically, the results indicated that individuals in high productivity groups had higher adjustment to the group and to the task than individuals in low productivity groups. These findings suggest that group productivity norms can play a critical role in facilitating or impeding individuals' adjustment to a new organizational role. Moreover, as the length of an individual's membership in a work group increases, the influence of group productivity norms on his/her task performance usually is more potent (e.g., Cartwright & Zander, 1960; Thibaut & Strickland, 1956; White & Mitchell, 1979). The results further indicated that the directionality of group productivity norms greatly influenced individuals' task adjustment under structuring leadership. This result implies that the strength and direction of relationships between leader behaviour and criteria of adjustment is contingent upon the group productivity norms being experienced by the relevant individuals.

Collectively, the results of the present study indicate that it is important to examine leader-subordinate relations in a social context. The work group has a life of its own that is not fully recognized in leadership studies. Through the inclusion of group members, important insights into the nature and dynamics of the leadership process can be gained.

Validity Issues

The factors influencing internal validity in experimental simulations and the extent to which external validity can be obtained through such investigations are crucial issues (e.g., Campbell & Stanley, 1963; Cook &
Campbell, 1979). The present findings will be considered according to these two sources of validity.

**Internal Validity**

Internal validity refers to "the approximate validity with which we infer that a relationship between two variables is causal or that the absence of a relationship implies the absence of cause" (Cook & Campbell, 1979, p.37). Threats to internal validity such as maturation, selection, and testing were controlled for in the present study by randomizing the time slots to which participants were assigned for the six experimental conditions. In addition, an attempt was made to rule out potential sources of confounds by: (a) providing clear operational definitions of the leadership styles and group productivity conditions, (b) using prepared scripts, (c) carefully selecting and extensively training the confederates, (d) ensuring the actresses were highly similar in their portrayals of the various leadership styles, (e) ascertaining there were significant differences between the three leadership styles and between the group productivity conditions, (f) ensuring the treatments and their implementation were as standard as possible across all occasions of implementation, and (g) using self-contained offices which were physically separate from other offices. Finally, the likelihood of drawing false conclusions about covariation was reduced by: (a) using statistically powerful tests and an adequate sample size, (b) meeting the assumptions of the statistical tests employed, (c) selecting a stringent alpha level, and (d) ensuring the dependent measures had high reliability. Therefore, to the best of the author's ability, internal validity considerations were satisfied in the present study.
External Validity

External validity refers to "approximate validity with which conclusions are drawn about the generalizability of a causal relationship to and across populations of persons, settings, and times" (Cook & Campbell, 1979, p.39). To enhance its generalizability, the present study employed: (a) multifaceted conceptualizations of leadership style and group productivity, (b) a complex and ambiguous task which closely represents the kind of work encountered in managerial jobs, (c) an elaborately designed and highly realistic organizational setting, (d) a rich and complex simulation involving both a project manager and co-workers, and (e) a post-experimental interview to reveal participants' perceptions, understandings, and meanings associated with the research situation (Adair, 1984). In addition, the generalizability from research operations to referent constructs was increased by: (a) providing definitions of the constructs to permit tailoring the manipulations and measures to these definitions, (b) using multiple dependent measures to represent the constructs, (c) providing participants with a detailed and plausible rationale for the study, and (d) ensuring confederates were unaware of the experimental hypotheses.

Despite attempts to increase its generalizability, the study had several limitations in terms of external validity. First, the interaction of the participant with the group and with the leader was brief and transitory with no commitment made to future interaction. Therefore, the stability of the participants' performance and perceptions over time may be questioned. As exposure to other organizational members becomes more intense and prolonged, interpersonal relationships may change. A related
limitation was that the in-basket exercise was also bounded; the participants knew that the exercise would last for 45 minutes. In addition, the exercise was selected in order to limit the extent to which participants could use prior knowledge and experience to define the situation.

A third constraint was that the participants did not formally join an organization; their participation was temporary and vicarious in nature. They did not have a job description, a salary, a stake in getting along with others and so on. The possible effects due to differences between simulated and actual membership in an organization were unknown.

A fourth limitation was that the sample was relatively homogeneous. However, as Sashkin and Garland (1979, p.69) have pointed out, utilization of business school students who may subsequently occupy managerial positions in a wide variety of organizations may enhance the generalizability from this sample to "managers in general".

One further limitation in the findings is that they may be only applicable to female leaders. As discussed in Chapter II, the choice of actresses rather than actors for the leader roles was based purely on criteria of skill and performance. The best people were chosen for the leader assignment. (In this case, the best candidates in the sample were female.) In responding to this possible limitation it should be noted that a majority of studies have found minimal differences between male and female leaders in behaviour or in subordinate satisfaction and performance (e.g., Bartol, 1974, 1978; Bartol & Wortman, 1975, 1979; Osborn & Vicars, 1976; Trempe et al., 1985). Moreover, in the present study, male and female
participants had consistent perceptions of the actresses' portrayal of the various leadership styles (see the Supplemental Results section on p.190 in Chapter III). It is felt that these findings enhance the generalizability of the present study's results to male leaders. As a general observation, women are increasingly assuming managerial positions in work organizations so that the need for understanding this new effect on managerial performance becomes salient. Studies which deal with female leaders will likely become more prevalent in the years ahead.

To conclude, while stringent experimental control enhanced the internal validity of the study, a certain amount of external validity was sacrificed. However, according to Cook and Campbell (1979, p.84), "jeopardizing internal validity for the sake of increasing external validity usually entails a minimal gain for a considerable loss". Therefore, the analogue, while limiting, is a useful way of unravelling the complexities of interactions among the leader, the group, and the individual, thereby enabling more precise understanding of the contribution of various components to the leadership process.

Directions for Future Research

Future research on this topic can proceed in several directions. First, there are a multitude of questions surrounding charismatic leadership that need to be addressed in future investigations. For example,
1. What are the situational determinants of charismatic leadership?

Following Weber (1947), many contemporary scholars contend that stressful circumstances are particularly conducive to the emergence of charismatic leadership (e.g., Bass, 1985; Friedland, 1964; House, 1977). Numerous questions need to be empirically examined with regard to such conditions of stress. For instance, does the stress need to originate in the external organizational environment (e.g., rapidly changing technology; declining market share) or in the internal organizational environment (e.g., conflict between two units over resources; a change in organizational culture)? How intense must a stressful situation be to promote the emergence of a charismatic leader?

Other researchers have argued that charisma does not necessarily have to be born out of stressful circumstances (Clark, 1970; Willner, 1984). According to them, potentially charismatic individuals, through their attributes, actions, and/or mode of presentation, can foster the conditions that create their charisma. This contention provokes another line of inquiry. What is the relationship between the messages espoused by the leader and the characteristics of the social situation that catalyze charismatically oriented perceptions? What types of cultural systems encourage or impede the emergence of strong, innovative personalities? What are the organizational conditions under which a leader can lose and/or regain charisma?

2. What are the contingent factors that promote and sustain charismatic leadership in organizations?
There are many factors that could influence the cultivation and maintenance of charismatic leadership in organizations such as organizational structure, systems, and culture, organizational level and position, type of industry, and nature of the work. For instance, where is charisma lodged in the organization? Could a foreman of a group of assembly line workers become a charismatic leader, or is charismatic leadership only applicable to executives who have access to a larger segment of the organization's members as potential followers (Sashkin, 1977, p.215)? How is the influence of the charismatic leader dispersed throughout the organizational structure? Is charismatic leadership only effective under complex, ambiguous task conditions or can it be successfully applied to routine, mundane tasks?

3. What are the functional and dysfunctional consequences of charismatic leadership from both organizational and individual perspectives?

In a complete assessment of charismatic leadership in organizations, the costs and benefits of such leadership merit attention. Do charismatic leaders create stressful circumstances in order to perpetuate their charismatic image? To what extent do charismatic leaders subvert institutional innovations in order to pursue their own course of action? When does the charismatic leader's effort to win the devotion and commitment of his/her followers turn to the tyranny of thought control and brainwashing? While an organization may benefit by creating charismatic devotions to a transcendent goal, how will its members be affected?

4. What are the personality characteristics of a charismatic leader?
According to the sociological and psychological literatures, charismatic leaders are characterized by high levels of self confidence, dominance, need for influence, and strong conviction in the moral righteousness of their beliefs (House, 1977). Further insights into the charismatic personality may be gained by reviewing the extensive empirical research on general leadership traits (e.g., Stogdill, 1948) as well as studies of charismatic political leaders (e.g., Willner, 1984). For example, seemingly inexhaustible energy and unflagging vitality might be one of the modern functional equivalents to superhuman powers (Willner, 1984). Alternatively, a flair for creativity or a capacity for innovation may characterize the charismatic leader. The motivational base of the charismatic leader also needs to be examined. McClelland's (1975) distinction between socialized and personalized power orientations is particularly illuminating. The socialized oriented leader strengthens and inspirits his/her followers by conceiving and articulating a mission that unites followers in the pursuit of objectives worthy of their best effort. In contrast, the personalized oriented leader tries to win out over adversaries or to exert personal dominance. The similarities and differences between male and female charismatic leaders also need to be addressed. Finally, crosscultural differences in the perceptions and effects of charismatic leaders may be detected.

In addition to personality characteristics, the physical and behavioural attributes of charismatic leaders need to be explored such as appearance, manner, voice resonance, and gestures. As well, the means by which leaders project their charismatic image need to be studied. For example, what are the elements of style that contribute to the oratorical
skill of charismatic leaders? How do leaders fortuitously evoke cultural myths and symbols and the emotions surrounding them to legitimize their charismatic powers? Can genuine charisma, in which an actual personal relationship is established between a leader and his/her followers, be differentiated from pseudo or manufactured charisma, in which a symbolic social relationship is substituted for an actual one via media devices and stage effects?

5. What are the personality traits or need configurations of persons that accept, believe, and follow the image of the charismatic leader?

Since the identification of charismatic leaders is based on the perceptions of followers, it is important to elucidate the personal characteristics of such followers. For instance, are some people more susceptible to the charismatic appeal than others? What are the traits of those individuals who reject the charismatic image? Do followers' perceptions of charismatic leaders change over time with increasing exposure to such leaders? Do followers strengthen their commitment and devotion to the leader? Or do followers become skeptical of the leader, believing s/he is a manipulator with ulterior motives?

To address the aforementioned research questions, several different methodologies could be employed. For example, Avolio and Bass (1985) have recommended the use of longitudinal experimental designs to determine the antecedent conditions which cause a charismatic leader to be more or less successful (e.g., building a charismatic relationship; fostering subordinate self confidence). Alternatively, House (1985a) has recently proposed that the behaviour of charismatic Canadian and American
heads of state and their effects on subordinates can be fruitfully investigated by conducting a content analysis of relevant autobiographies, official biographies, diaries, and collections of personal papers and letters. Willner (1984) has suggested that surveys testing the public's attitudes toward political leaders could serve as a useful source of what might be called charismatic responses. Finally, to complement our objective focus on charisma, Cephart (1985) advocates the use of interpretive theory to guide our investigations of the situationally dependent meanings surrounding charisma.

In addition to exploring a wide array of research questions with different methodologies, definitional issues surrounding the term "charisma" need to be addressed. In particular, it would be useful to develop a typology of charisma. For example, the delineation of the situational contexts in which charisma arises, such as political arenas, religious spheres, social movements, and business, government, and union organizations, may aid in differentiating the degree, type, and intensity of charismatic behaviours and effects.

The present study also pointed to the need for more elaborate conceptualizations and operationalizations of considerate and structuring leader behaviours. Leadership scholars have repeatedly emphasized that greater complexity and richness in the conceptualization of leader behaviours is required in order to accurately reflect the actual organizational leadership process (e.g., McCall & Lombardo, 1978; Pondy, 1978). A productive area for future investigation is to link the exhaustive research on personality characteristics of leaders with studies of
considerate and structuring leader behaviours. In addition to personality traits, the interpersonal style, nonverbal behaviours, and paralinguistic cues associated with structuring and considerate leadership require further exploration.

The importance of recognizing the social context of leader-follower relations by including group members was demonstrated in the present study. Further research needs to be conducted on how members of groups in organizations use each other as models in increasing their job relevant skills and their ability to adapt effectively to new organizational roles. For example, the group's provision of instrumental and/or emotional support may facilitate individuals' adaptation to their new organizational environment. In addition, future studies need to further address the influence of contradictory social cues on individuals' perceptions and evaluations of the task. For instance, how do the credibility and status of the source determine which cues might be believed? How do individuals respond to different sources of information over time as group norms are internalized? Finally, other specific characteristics or processes associated with the work group that merit investigation include group size, group cohesiveness, the degree of stability of group membership, the stage of group development, social characteristics of group members (e.g., age, sex, physical attractiveness), and the personality composition of the group (e.g., dominance, interpersonal sensitivity, extroversion-introversion).
Concluding Comments

As a first step in the investigation of the interactive influence of leadership style and group productivity norms on individuals' adjustment and performance, this study yielded interesting results. Additional research with a greater variety of leader and group behaviours and conducted in field settings is needed to more fully appreciate the dynamics of the leadership situation and their effects on employee adjustment and performance. In particular, through an enriched understanding of the role and processes involved in charismatic leadership, organizational scholars may eventually be able to enhance the effectiveness of potential charismatic leaders and to minimize the dysfunctions of such leaders. This investigator trusts that her study will provide some theoretical and empirical support for future leadership research.
References


APPENDIX A

The In-Basket Exercise
THE IN-BASKET EXERCISE

INSTRUCTIONS

MARKETING G.M. ASSIGNMENT
ALLOTTED TIME: 45 minutes

DESCRIPTION:

For purposes of this exercise, you are R. Andrews, the newly appointed General Manager for the Cogen Products Marketing Division.

Your predecessor, John B. Smythe, has been suddenly transferred to another province and is unavailable for contact.

Your promotion was effective Monday, February 17 and since that time you have been heavily involved in out-of-office activities. Today is Saturday, February 22. You are in your new office, and the time is 3:00 p.m. At 3:45 p.m. you must leave to catch a plane for a weekend trip.

PROCEDURES:

You have 45 minutes to review and work through the enclosed stack of mail collected during the preceding weeks. Margie has been John Smythe's secretary and continues in the job as your secretary.

The in-basket consists of:

1. Organization Chart for Cogen Products Division
2. Calendar for February
3. In-Basket Items

Spend the time actually disposing of the In-Basket. Record everything you do or plan to do in writing, even if they are reminders to yourself. Also, provide a brief statement of why you took the action you did (i.e., what assumptions you made, what results you expect, etc.) Label with "Why". You may write on the actual items. If you indicate a meeting or a phone call, note what agenda will be discussed and what results you expect. After you have completed an item, please place it in your out-basket. Behave as though R. Andrews were really you!
COGEN PRODUCTS DIVISION

VICE PRESIDENT
James D. Foster

G.M. Manufacturing
Thomas Green

G.M. Administration
Bill Shott

G.M. Marketing
John B. Smythe
(R. Andrews)

G.M. Employee Rel.
H. Williams

G.M. Finance & Controller
Ed Bradford

Divisional Sales Manager
Joseph Lung

District Manager
Jack Dow
John Payne
Ed Wells
Grant Hancock

Sales Training Mgr.
John Hutchinson

Export Division
Eduardo Gonzalez
Date: ____________________

To: R. Andrews

- FOR FOLLOW-UP - PER YOUR REQUEST
- FOR COMMENT - FOR INFORMATION
- FOR REPLY - FOR FILES
- FOR APPROVAL - MORE DETAILS NEEDED
- FOR SIGNATURE - WE SHOULD DISCUSS THIS
- PLEASE RETURN - PLEASE INVESTIGATE
- PLEASE HANDLE - PLEASE CIRCULATE

Williams and Green favor Plan A.
Bradford and Shott favor Plan B.
Your vote is important. Must decide Monday the 24th.

Regards

Jim
MEMORANDUM

February 18

TO:        James D. Foster, Vice President
FROM:      Edward G. Bradford
SUBJECT:   SASKATOON PLANT EXPANSION, ANALYSIS OF ALTERNATE PLANS

At your request and that of the Executive Committee, our Finance Division has completed an evaluation of the alternate plans proposed for the expansion of the Saskatoon plant. Our study was based upon those aspects which we believed to be particularly germane to the situation: 1) cost; 2) company policy; 3) quality of the product; 4) risk; and 5) flexibility.

Plan A calls for the construction of a wing building of 324,800 square feet, including an entire floor containing 56,000 square feet of storage space. Plan B contemplates a wing building of 280,000 square feet, including only 11,200 square feet of storage space. Since the manufacturing layout and size of manufacturing departments in both plans are identical, the question of storage space seems to be the key to the determination of the best plan. We have kept in mind the fact that the choice of plan will affect the entire operational policy of this unit, the largest, oldest, and most widely known plant in the company.

Plan B calls for a fluctuating production level keyed to sales. While this type of operation permits a substantially reduced inventory level which in turn minimizes storage requirements, it does call for a substantial seasonal work force from January to July of each year. Plan A calls for a continuation of existing production and inventory policies, resulting in large Cogen inventories but enabling us to maintain a stable year-round work force.

While the advantages of a stable work force and complete control of storage facilities are not to be minimized, this division is of the opinion that we will be paying more for these advantages than they are worth in terms of plant investment and inventory risks. I, therefore, recommend that we adopt Plan B. More detailed reasons are listed below.
1. Cost. Plan B enables the company to produce the same or even slightly higher output in a plant costing $750,000 less than Plan A. These funds can be reinvested and at present yields should bring an annual return of $45,000. The security aspect of this liquid reserve, therefore, is an important asset to the company.

2. Production potential. Plan B contains productive facilities for a peak output of 22,000 units per month, while Plan A is restricted to 20,000 units per month and will require an additional investment of $150,000 to equal output under Plan B. Our five-year sales forecasts project a maximum increase of 170,000 units annually, but the added production under Plan B will give the marketing division additional production capacity to exploit.

3. Space requirements. Under Plan B, the company would employ 11,200 feet of its own storage space and lease 15,000 feet for six months. It still would operate under the production and inventory schedule of Plan A. This affords the company a desirable flexibility of operation and makes full use of plant storage space, neither of which is available under Plan A.

4. Cost of storage. Plan B involves an annual outside storage expense of $37,750. The cost of internal plant storage under B is $9,000 less than under A. Thus the net cost of storage under B is $28,750 more than under A.

5. Cost of training. Plan B requires a deviation from our traditional policy of annual employment. From January to July we will need to increase production employment by about 500 workers. Cost of training and supervising these workers, based on a 50 percent expectation of getting experienced help is estimated to be about $36,000.

6. Packing. Plan A enjoys a superiority of about $27,000 per year savings in packing and handling costs.

7. Taxes. Real estate taxes are $15,000 less under Plan B than under A.

8. Other considerations. Plan B avoids the risk of inventory loss in a falling market. Because Cogen sales are normally booked far in advance, production planning can be exploited to the maximum
under Plan B.

Adding up the pros and cons of both plans, we find that the net advantage of Plan A over Plan B is only $31,750 per year. On this basis, it will take 20 years to recover the additional plant investment required of $750,000 for Plan A. Such a net advantage clearly is not worth the expense involved.

It is recognized that a steady employment policy has much in its favour. Worker efficiency, good labour relations, low turnover, non-waste of management time during the competitive recruitment season — these are worthwhile benefits. But at a cost of three quarters of a million dollars, the price seems excessive.

Plan B offers much greater flexibility, especially that of belt-tightening in a slow market. In the light of the Executive Committee's concern with costs, and the anticipated company-wide cost reduction campaign, it would seem that this would hardly be the time to recommend Plan A.

Edward G. Bradford
General Manager
Finance & Controller
MEMORANDUM

February 19

TO: R. Andrews

FROM: Joe Lang

SUBJECT: DISTRICT MANAGER'S MEETING

Welcome aboard in your new responsibilities as General Manager of Marketing.

I have planned a District Manager's meeting for Thursday morning, February 27. We wanted to go over the marketing strategy for the balance of the year and get your inputs. I was unable to get in touch with you and assumed that you would be available. This would be a marvelous occasion for a presentation of your views and a chance to provide some real motivation for this group.

JL: jk
To: R. Andrews

- FOR FOLLOW-UP -
- FOR COMMENT -
- FOR REPLY -
- FOR APPROVAL -
- FOR SIGNATURE -
- PLEASE RETURN -
- PLEASE HANDLE -

- PER YOUR REQUEST -
- FOR INFORMATION -
- FOR FILES -
- MORE DETAILS NEEDED -
- WE SHOULD DISCUSS THIS -
- PLEASE INVESTIGATE -
- PLEASE CIRCULATE -

Is this Okay with you?

From: Joe Lang
MEMORANDUM

February 18

TO: Joe Lang

FROM: Eduardo Gonzalez

We have been approached by the government of Brazil to adopt our product as the official item for all government purchases. As you might expect, the government official expects some gratuity. I think he would settle for a $2-3,000 incentive. As you know, this is typical for South American countries. I know Cogen has had reservations about marketing in Brazil before, but if we want their business, we have to go along. It is likely to be a big order and we can sure use the sales.

EG:hl
MEMORANDUM

February 19

TO: R. Andrews

FROM: Joe Lang

According to our most recent sales forecast, we could be off our budget estimate by as much as 20% on next quarter's sales. While there are still many uncertainties to this figure (introduction of Excello, etc.) I thought it would be important to notify you as Mr. Foster wanted the latest projections for a security analyst's meeting next Friday.

I am not sure what the real problem is. Hope we find out more at our District Manager's meeting.

JL:jk
MEMORANDUM

February 19

TO: R. Andrews

FROM: Joe Lang

SUBJECT: DISTRIBUTION OF EXCELLO PRODUCTS

I understand that our new Excello product will be in production and ready for distribution early April. I have called a meeting of the sales force for the afternoon of February 28 to introduce this new product to them. Could you be there to say a few words about this new item in our overall line? I know the men would like to meet the new boss.

JL: jk
MEMORANDUM

February 4

TO: Mr. Smythe

FROM: Joe Lang

SUBJECT: PERFORMANCE REVIEW ON GRANT HANCOCK

Grant and I had a good discussion on his performance for the last year. As you know, Grant is very interested in moving into general management positions. He has done an outstanding job as a District Manager and I sure need him to stay in that position to help our sagging sales picture. Without him, I think we would be in far worse shape. Rather than encouraging him to go into general management, I would like to make it worth his while to stay in sales by giving him a bonus or stock options or something like that. Would this be possible? Grant is waiting for some feedback and I would like to get right back to him so he doesn't begin looking elsewhere. Maybe you would even talk him into staying by giving him a good word.

JL: jk
MEMORANDUM

February 20

TO: R. Andrews

FROM: Jim Foster

SUBJECT: NEW ASSIGNMENT

Just a brief note to reaffirm my comments to you on the telephone last evening. I have complete confidence in your ability to carry on in the absence of John Smythe.

At the Executive Committee meeting on Monday morning, I would like to have your personal views on what you think are Cogen's most pressing problems. We're all so deeply locked in this ivory tower that it will be refreshing to get a view from your experience as a Regional Marketing Manager. Please be frank.

I know it's difficult for you to be exact at this time, but I also would like you to bring us up-to-date on sales estimates for the next quarter and status on the new Excello product. The security analysis will be here on Friday and will pin me down on these two issues.

Best of luck in your new assignment.

JF:sl
If I do this, I can foresee all kinds of problems resulting due to the reactions of other D.M.'s.
MEMORANDUM

February 20

TO: R. Andrews

FROM: H. Williams

SUBJECT: MINORITY GROUP HIRING

I have been contacted by a federal government representative of the Affirmative Action Program. They feel we should do more in the area of hiring members of minority groups, especially women. It seems to me that your District Managers have been extremely reluctant to do this, and I hope that you can prepare a plan of affirmative action to encourage more equality in hiring. Jim Foster gave his commitment that we would hire at least 20% minorities for the next twelve months. I would appreciate hearing from you at your earliest convenience.

HW:bi
MEMORANDUM

February 17

TO: R. Andrews

FROM: Joe Lang

SUBJECT: Motivation of District Managers

I need to talk with you about motivating my District Managers (who, in turn, will hopefully motivate their people). It seems to me they're just not performing up to what I think they should, considering our products and the market we're serving. I'd appreciate some time with you to get the benefit of your thinking on this subject.
MEMORANDUM

TO: R. Andrews
FROM: H. Williams
SUBJECT: MANAGEMENT TRAINING PROGRAM

The University is offering a 2-week program in General Sales Management June 15. Joe Lang wanted to attend one of these programs but I thought you would want to give the O.K. first. They need confirmation by March 15th.

HW:bi
MEMORANDUM

February 21

TO: Joe Lang

FROM: John Payne

SUBJECT: RECLASSIFICATION

This is an embarrassing letter to write, but I feel that I must get it off my chest. When John Smythe had been out in our district about six months ago, he had promised that he would recognize my senior position in the Company.

As you recall, I have been a District Manager longer than any other of my colleagues, and probably longer than any two of them put together. I have been consistently passed over for promotion, and feel that I should be given recognition for my long standing contribution to the Company. Smythe had promised that I would be made a Senior District Manager by the end of the year. This has not happened as yet, and I feel that commitment should be kept.

JP:lk
MEMORANDUM

February 20

TO: R. Andrews

FROM: Bill Shott

SUBJECT: VISIT OF MANAGING DIRECTOR - EUROPEAN SUBSIDIARY

I have just received word that the managing director of our central European subsidiary will be here next week and would like to spend some time with you. The best time appears to be Thursday afternoon. I think he would like to talk with you about your plans for marketing their product in Canada and what they could use in Europe to bring about an increase in sales. I don't think it will take more than 2-3 hours.

BS: cp
February 19

TO: R. Andrews
FROM: H. Williams

For the last three years, there has been a growing tendency for "Illness" requiring sick leave to increase on the Monday and Tuesday following the Saturday opening of fishing season. Frankly, the salesmen in Grant Hancock's district are the worst offenders.

I urge you to take the necessary steps to bring this condition under control since opening day is a month off.
APPENDIX B

Experimental Scripts for the Secretary,
Leaders, Co-workers and Interviewer
Experimental Script for the Secretary

Upon reporting to the assigned office, the participant initially encounters the secretary who is talking on the telephone, typing, filing, etc. One co-worker is seated, filling out a questionnaire.

Secretary: Hi, can I help you?
Participant: I'm here for the Management Training Project.
Secretary: Oh yes. We were expecting you. You're ________?
Participant: That's right.
Secretary: Just have a seat.
(While the secretary compiles the necessary forms for the participant to complete, she engages in social conversation about the weather.)
Secretary: There are a few things I need you to do. First of all, now that you're here you'll get your 3% added on to your final Commerce 220 grade. Could you please sign this sheet showing that you're participating in this project? Here's a pen. (The secretary hands the participant the sign-in sheet for his/her signature.)
Now would you please fill out this application form for our personnel records?
(The participant completes the demographic data form. Meanwhile the co-worker finishes his/her questionnaire and the secretary escorts him/her to the leader's office. The secretary then returns to her office.)
Secretary: Would you also fill out these forms? All of the students participating in this project have to fill these out. The Mackenzie Institute wants to compare U.B.C. Commerce students with students at other universities and colleges. Your answers are totally confidential. So just complete the forms as accurately and honestly as you can.
(While the participant is completing the consent form and the individual difference measures, the other co-worker reports to the secretary's office.)
Co-worker: Hi, I'm _________. I'm here for the second part of the project.
Secretary: Oh, hi _________. You were here last week weren't you?
Co-worker: Yes I was.
Secretary: Okay, well just have a seat and I'll get you to sign in again. (The co-worker signs in.) I'll just see if Judy/Anne is free to see you now.

(The secretary leaves the office and subsequently returns.)

Secretary: Okay, she's ready to see you. Her office is just down the hall.

Co-worker: Right, I remember.

(The co-worker enters the leader's office. A few minutes later the leader takes both co-workers into the workroom.)

(The participant completes the consent form and the individual difference measures and hands them to the secretary.)

Secretary: Thanks. (The secretary consults her journal.) You'll be working with Judy/Anne today. She's the manager of this project. I'll let her know you're here.

(The secretary leaves to get the leader.)
Experimental Script for the Charismatic Leader

(The leader enters and greets the participant.)

Leader: Hello, I'm Judy Henderson/Anne Davidson. Pleased to meet you (the leader shakes the participant's hand) and thank you for joining us. I've been so impressed with the turn out so far - it has made this project really successful. Let's go into my office.

(The leader escorts the participant into her office.)

Leader: Just have a seat here. (The leader alternates between sitting on the edge of her desk and standing up to pace.) Now, do you know anything about the Management Training Project? Well, let me give you some (some further) background. As you probably know, there has been a lot of changes in the workplace, what with the influence of computers, high technology, and greater foreign competition. We want Canadian industry to keep up with these changes. And to do that, we need managers who are well-trained in practical business skills and techniques. We want to ensure that what's being taught here and how it's being taught will train you and future commerce students to meet the challenges of today's highly competitive market.

So I'm representing The Mackenzie Institute, which is a well known management consulting firm. We're working with the Faculty of Commerce to evaluate the practical business skills of Commerce students at U.B.C. We're conducting this project at Western, Queens, and York as well. But we're starting at U.B.C. because of its high academic standards and because members of the faculty have expressed great interest in the project. So this is a great place for us to start.

The exercise we've developed to assess your business skills is called an in-basket. After it was put together I tried it myself and I thought it was kind of fun.

But before you start the exercise, I want to stress the importance of this project. We really want this project to work. It's one of the first projects to tie downtown and academic interests together. The results of this project could go a long way towards changing the way business schools train their students. We could see changes in the content and structure of commerce courses, in the teaching methods, and in the length of the programmes. We hope this project will have a direct effect on how managers are trained in the future. What you're doing for us today could give us ideas that could be used as early as your fourth year here at U.B.C. So actually what you're doing today is going to have an impact on your own future.
Now here are the instructions for the exercise. They're pretty straightforward so you can go through them on your own. Basically, for the next 45 minutes you will be Rex/Rhonda Andrews, the new General Manager for Cogen Products Marketing Division. You've just been assigned to this job and what you have to do is deal with a number of memos and letters that have accumulated.

At first this exercise may appear confusing to you. It's a challenging exercise and there's a lot to do and think about. But I believe that you can get over your initial confusion, take control of the exercise, and do an excellent job.

As you go through the exercise, I really want you to be as creative and imaginative as you can. Because that's what we want – we want to know what you have to offer. Simply try to imagine the best possible way to get through the material and organize the work in ways that seem logical and effective to you – just to you. Be intuitive. Don't be afraid to take risks. Trust your instincts. I have every confidence that if you draw on your creativity you'll do extremely well.

Well we've covered a lot of ground. Do you have any questions?

(The leader answers the participant's questions.)

**Leader:**

Let's go through to the next office. You'll be working with two other Commerce students who are in third and fourth year. They've already done the exercise you'll be working on today. So they're working on other exercises.

(The leader and participant enter the next office where the co-workers are working. The leader introduces the participant to the co-workers.)

Just have a seat here. Here's the exercise and instructions. I'll check back to see how you are doing in approximately 20 minutes.

(The leader turns to each co-worker and inquires about his/her progress. The leader then exits.)

(The participant begins the in-basket exercise. Five minutes later the group productivity manipulation begins. The leader returns twenty minutes later.)

**Leader:**

How's it going?

**Participant:**

__________________.
Leader: I'm sure you've established a well thought out strategy for tackling this and will do a great job. (The leader asks the co-workers how they are finding their exercises.)

Leader: I'll be back in twenty-five minutes to pick up all of the exercises.

(The leader exits. The group productivity manipulation continues. The leader returns twenty-five minutes later.)

Leader: Okay, that's great. Thanks a lot. (The leader collects the exercises.) (Addressing participant.) There's another exercise for you to do - to answer five more memos. (Addressing co-workers.) And there's another case for you. (The leader hands the various tasks to the participant and co-workers.) These exercises are strictly optional - you have a choice as to whether or not you want to do them. Whatever you decide, just take the exercises to the secretary.

There will be a Research Associate from the Faculty of Commerce who will give you a questionnaire to fill out. The Faculty is performing an evaluation of this project. It's kind of a study of a study.

Well I'll leave you to make your decision. Thanks a lot for coming in.

(The leader exits.)
Experimental Script for the Structuring Leader

(The leader enters and greets the participant.)

Leader: Hello, I'm Judy Henderson/Anne Davidson. (The leader shakes the participant's hand.) I understand you're here for the project. There's a lot of work to do in a short time so let's get started. Please come into my office.

(The leader escorts the participant into her office.)

Leader: Just have a seat here. (The leader sits behind her desk.) Let me begin by giving you some background on the Management Training Project. As you probably know, there has been a lot of criticism directed towards business schools regarding their failure to adequately train managers in the practical skills and techniques required in the business world. We want to ensure that the business administration curriculum and teaching methods are responsive to industry and government's management needs. So the Faculty of Commerce and The Mackenzie Institute are attempting to evaluate the practical business skills of Commerce students in selected colleges and universities across Canada. We've developed several exercises for this purpose. The exercise you'll be doing today is an in-basket.

Here are the instructions. It is critical to carefully read these instructions. I'll go through them now with you point by point. Please pay close attention.

(The leader reads the instructions aloud, emphasizing particular phrases.)

There is a certain way to approach this exercise. I'll tell you exactly what you have to do. Take the first five to ten minutes to quickly read through the memos. Note who they are from, who they are to, the date of the memo, and their contents. Next, prioritize the memos. That is, order the memos from most important to least important. Is that clear?

Act on these memos by referring, delegating, making decisions, requesting further information, and, in general, exercising good administrative judgement. You should be methodical in your approach to this exercise. Do you have any questions? (The leader answers the participant's question(s).)

Let's go into the next office. You'll be working with two other Commerce students who are in third and fourth year. They've already done the exercise you'll be working on today, so they're working on other exercises.
(The leader and participant enter the next office where the co-workers are working. The leader introduces the participant to the co-workers.)

Just have a seat here. Here's the exercise. Remember, there is a lot of work to accomplish and as much as possible should be completed within the specified time period. The memos should be handled in the most effective and efficient way possible. In a job like this it's important that things be done right. So it's important that you give your full attention to this exercise.

I'll return in twenty minutes (looks at her watch) to check on your progress. I'd like you to get as much accomplished as possible.

(The leader turns to each co-worker and inquires about his/her progress. The leader then exits.)

(The participant begins the in-basket exercise. Five minutes later the group productivity manipulation begins. The leader returns twenty minutes later.)

Leader: How's it going? How many items have you done?

Participant: 

Leader: You've got twenty-five minutes left. Make sure you focus carefully on the memos. Do you have any questions?

(The leader asks the co-workers how they are finding their exercises.)

Leader: I'll be back in twenty-five minutes to pick up all of the exercises.

(The leader exits. The group productivity manipulation continues. The leader returns twenty-five minutes later.)

Leader: Okay, your time is up. I'll collect the exercises. (Addressing participant.) There's another exercise for you to do - to answer five more memos. (Addressing co-workers.) And there's another case for you. (The leader hands the various tasks to the participant and co-workers.) These exercises are strictly optional - you have a choice as to whether or not you want to do them. Whatever you decide, just take the exercises to the secretary.

There will be a Research Associate from the Faculty of Commerce who will give you a questionnaire to fill out. The Faculty is performing an evaluation of this project. It's kind of a study of a study.
Well I'll leave you to make your decision. Thanks a lot for coming in.

(The leader exits.)
Experimental Script for the Considerate Leader

(The leader enters and greets the participant.)

Leader: Hello, I'm Judy Henderson/Anne Davidson and you must be 
        __________. (The leader shakes the participant's 
        hand.) Thanks a lot for coming. I know you must be 
        very busy at this time of the year. Did you have any 
        trouble finding the place?

Participant: ________________.

Leader: Well let's go into my office.

(Enroute to the leader's office.)

Leader: I understand that you just had midterms. How did they 
        go?

Participant: ________________.

(The leader and participant enter the leader's office.)

Leader: Just have a seat here. (The leader sits on the edge of 
        her desk.) So what year of Commerce are you in?

Participant: ________________.

Leader: Have you thought about what area you want to major in?

(If the participant answers "I don't know yet".)

Leader: Well you've still got lots of time before you have to make 
        up your mind. It's good to leave your options open.

(If the participant has decided on his/her major.)

Leader: That's a good area - you'll find lots of opportunities in 
        that field.

(The leader engages in further social conversation about 
the Commerce programme for approximately 2 minutes.)

Well let me give you some idea of why you're here. There 
has been some concern about how we can improve the 
practical business skills of Commerce students. We want 
to make sure that when you get out here you'll be fully 
p repared to fit right into a company, an organization, or 
even start your own business. So it's important that 
what's being taught will be really useful to you.
As you've probably gathered, I'm managing this project on behalf of The Mackenzie Institute. We're a management consulting firm and we're working with business faculties across Canada on this project. To help us get a handle on your practical business skills, we've developed an exercise for you to work on. It's called the in-basket.

Let's go through to the next office. You'll be working with two other Commerce students who are in third and fourth year. They've already done the exercise you'll be working on today, so they're working on other exercises.

(The leader and participant enter the next office where the co-workers are working. The leader introduces the participant to the co-workers.)

Just have a seat here and make yourself comfortable.

Here are the instructions. I'll just leave you to go over them on your own - they're basically self-explanatory. As you work your way through the exercise just relax and work at your own pace. So just get yourself settled. Here's a pen. I'm sure you'll find everything will go smoothly. The instructions should cover any questions you might have. Is there anything else you want to know?

Well I'll leave you to it. If you want to discuss anything with me I'm right in the next office.

(The leader turns to each co-worker and inquires about his/her exercise.)

Leader: I'll pop in to see how you're all doing in about twenty minutes or so.

(The leader exits.)

(The participant begins the in-basket exercise. Five minutes later the group productivity manipulation begins. The leader returns twenty minutes later.)

Leader: How's everything going so far?

Participant: ____________.

Leader: I really appreciate you taking time out to do this. I'm sure you're doing just fine.

(The leader asks the co-workers how they are finding their exercises.)
Leader: I'll be back in twenty-five minutes to pick up all of the exercises.

(The leader exits. The group productivity manipulation continues. The leader returns twenty-five minutes later.)

Leader: Okay, that's great. Thanks a lot. (The leader collects the exercises.) (Addressing participant.) There's another exercise for you to do - to answer five more memos. (Addressing co-workers.) And there's another case for you. (The leader hands the various tasks to the participant and co-workers.) These exercises are strictly optional - you have a choice as to whether or not you want to do them. Whatever you decide, just take the exercises to the secretary.

There will be a Research Associate from the Faculty of Commerce who will give you a questionnaire to fill out. The Faculty is performing an evaluation of this project. It's kind of a study of a study.

Well I'll leave you to make your decision. Thanks a lot for coming in.

(The leader exits.)
Experimental Script for the High Productivity Co-Workers

Stage 1: Begins five minutes after the leader has departed.

Co-worker A: (addressing participant) What are you working on? Are you doing the in-basket exercise with Rex/Rhonda Andrews?

Participant: _______________.

Co-worker A: I did it last week. I thought it was really interesting.

Co-worker A: (addressing Co-worker B) How's your work going?

Co-worker B: Really well. I'm working on a marketing case. I'm really enjoying it.

Co-worker A: Yeah, my case is kind of fun too.

(Co-workers complete stage one of the process measure.)

Stage 2: The leader enters after twenty minutes.

Leader: How's it going?

Co-worker A: Just fine.

Co-worker B: No problem. I really like the case.

Stage 3: Begins five minutes after the leader has departed.

Co-worker A: How's it going?

Participant: _______________.

Co-worker A: I'm sure you're doing well. It's great to get a chance to use the stuff we've learned in class.

(Co-workers complete stage two of the process measure.)

Stage 4: The leader has asked the participants to do an optional task and has departed.

Co-worker A: Well I think I'll do this extra case.

Co-worker B: Yeah, me too.

(Co-worker A leaves after twelve minutes have elapsed. Co-worker B departs after fifteen minutes.)
Experimental Script for the Low Productivity Co-workers

Stage 1: Begins five minutes after the leader has departed.

Co-worker A: (addressing participant) What exercise are you working on?

Participant: ________________.

Co-worker A: Is that the one with Rex/Rhonda Andrews?

Participant: Yes.

Co-worker A: Oh yeah, I did that last week. I didn't put much effort into it. It was pretty boring.

Co-worker B: Yeah I did that one too. I didn't take it too seriously. Don't worry about it.

(Co-workers complete stage one of the process measure.)

Stage 2: The leader enters after twenty minutes.

Leader: How's it going?


Co-worker B: Not bad.

Stage 3: Begins five minutes after the leader has departed.

Co-worker A: (addressing participant) How much time do we have? What did she say?

Participant: ________________.

Co-worker A: Oh God, another half hour to stay awake! I've had enough of this already.

(Co-workers complete stage two of the process measure.)

Stage 4: The leader has asked the participants to do an optional task and has departed.

Co-worker A: Are you guys going to stay? Well, I'm going. I've got too many other important things to do.

(Co-worker A leaves. Co-worker B leaves five minutes later.)
Experimental Script for the Interviewer

Hi, I'm Richard Side. I'm a Research Associate with the Faculty of Commerce, and on the behalf of the Faculty, I'd like to thank you for participating in The Mackenzie Institute Project. They're just getting going with the project. As the manager may have mentioned, they'll be doing this project at other universities in Canada. In subsequent phases of the project, there will be other management exercises and different project managers. To help us, the Faculty, determine the success of the project, we'd like your reactions on this questionnaire. So far, we've had a variety of opinions.

There are two parts to this questionnaire. One part focuses on the in-basket exercise you've just finished and we want to get your reaction to it. The other part focuses on the manager and students you've been working with. Based on your reactions, the Faculty may recommend changes in the set-up of the project in the future. So just complete these questions as accurately and as honestly as you can. When you're finished, just bring the questionnaire to the secretary's office and I'll ask you a few more questions.
APPENDIX C

Leadership Style Manipulation Checks
FOR EACH OF THE STATEMENTS BELOW, PLEASE CIRCLE THE NUMBER THAT COMES CLOSEST TO DESCRIBING YOUR MANAGER:

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. She is strictly business.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. She expresses interest in your personal welfare.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>3. She inspires you to do your very best on the exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. She establishes a friendly and supportive relationship with you.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. She encourages you to be creative and productive in doing the exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. She is concerned with meeting deadlines.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. She maintains warm interpersonal relations.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. She is confident in your ability to perform well on the exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. She maintains definite standards of work performance.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>To a very little extent</td>
<td>To a little extent</td>
<td>To some extent</td>
<td>To a great extent</td>
<td>To a very great extent</td>
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<tr>
<td>10.</td>
<td>She increases your motivation to do the exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>11.</td>
<td>She is very friendly.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>12.</td>
<td>She vividly describes the importance of the project.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13.</td>
<td>She provides detailed direction about how to do the exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14.</td>
<td>She really makes you want to do the exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15.</td>
<td>She tells you how the exercise should be done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>16.</td>
<td>She is easy to approach.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17.</td>
<td>She expects you to strive for high work standards.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18.</td>
<td>She emphasizes the quantity of work to be accomplished.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19.</td>
<td>She has good interpersonal skills.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20.</td>
<td>She gets you involved and committed to the exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21.</td>
<td>She talks about how much there is to do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td>To a very little extent</td>
<td>To a little extent</td>
<td>To some extent</td>
<td>To a great extent</td>
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<td>--------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-------------------</td>
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<tr>
<td>22.</td>
<td>She makes you feel comfortable and relaxed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23.</td>
<td>She is a persuasive and influential person.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24.</td>
<td>She is concerned with getting the work done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25.</td>
<td>She engages in social conversation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26.</td>
<td>She enthusiastically expresses work goals.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27.</td>
<td>She is very task oriented.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28.</td>
<td>She makes you feel at ease when talking with her.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29.</td>
<td>She is a dynamic and energetic person.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30.</td>
<td>She expects you to get the work done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31.</td>
<td>She establishes good rapport with you.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**Note.** Items 3, 5, 8, 10, 12, 14, 17, 20, 23, 26, and 29 are checks for the charismatic leadership style. Items 2, 4, 7, 11, 16, 19, 22, 25, 28, and 31 are checks for the considerate leadership style. Items 1, 6, 9, 13, 15, 18, 21, 24, 27, and 30 are checks for the structuring leadership style.
APPENDIX D

Individual Self-Rated Performance Scale
PLEASE RATE YOUR IMPRESSION OF YOUR PERFORMANCE ON THE IN-BASKET EXERCISE BY CIRCLING A NUMBER FROM 1 TO 5 FOR EACH OF THE FOLLOWING QUESTIONS.

1. How much did you produce in the exercise?
   1. My production was very low
   2. It was fairly low
   3. It was neither high nor low
   4. It was fairly high
   5. It was very high

2. How do you think the quality of your responses were to the exercise?
   1. My responses were of poor quality
   2. My responses were not too good
   3. Fair quality
   4. Good quality
   5. Excellent quality

3. Did you seem to get maximum output from the resources you had available? That is, how efficiently did you perform the exercise?
   1. I did not work efficiently at all
   2. Not too efficient
   3. Fairly efficient
   4. I was very efficient
   5. I was extremely efficient

4. How good a job did you do in anticipating problems that may come up in the future and preventing them from occurring or minimizing their effects?
   1. I did a poor job in anticipating problems
   2. Not too good a job
   3. A fair job
   4. I did a very good job
   5. I did an excellent job in anticipating problems

5. When changes were made in routines, how quickly did you accept or adjust to these changes?
   1. I accepted and adjusted to them very slowly
   2. Rather slowly
   3. Fairly rapidly
   4. I adjusted very rapidly, but not immediately
   5. I accepted and adjusted to them immediately
6. From time to time emergencies arise, such as crash programs, schedules moved ahead, or a breakdown in the flow of work occurs. When these emergencies occur, they cause work overloads for many people. Some people cope with these emergencies more readily and successfully than others. How good a job do you do at coping with these situations?

1. I do a poor job of handling emergency situations
2. I do not do very well
3. I do a fair job
4. I do a good job
5. I do an excellent job of handling these situations

7. From time to time newer ways are discovered to organize work and newer techniques are found with which to do the work. How good a job do you do at keeping up with those changes that could affect the way you work?

1. I do a poor job of keeping up to date
2. Not too good a job
3. A fair job
4. I do a good job
5. I do an excellent job of keeping up to date
APPENDIX E

General Satisfaction Scale
PLEASE INDICATE THE DEGREE TO WHICH THE IN-BASKET EXERCISE WAS SATISFYING TO YOU BY CIRCLING THE APPROPRIATE NUMBER ON THE SCALES BELOW.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Somewhat Disagree</th>
<th>Slightly Disagree</th>
<th>Neither Agree Nor Disagree</th>
<th>Slightly Agree</th>
<th>Somewhat Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Generally speaking, I was very satisfied with my exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2. Generally speaking, I was very satisfied with the kind of work I had to do on my exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
APPENDIX F

Job Descriptive Index:

Job Satisfaction Subscale
FOR EACH OF THE FOLLOWING ITEMS, PUT Y BESIDE AN ITEM IF IT DESCRIBES THE IN-BASKET EXERCISE YOU JUST COMPLETED, N IF THE ITEM DOES NOT DESCRIBE THE EXERCISE, OR ? IF YOU CANNOT DECIDE.

IN-BASKET EXERCISE

______ Fascinating
______ Routine
______ Satisfying
______ Boring
______ Good
______ Creative
______ Respected
______ Hot
______ Pleasant

______ Useful
______ Tiresome
______ Healthful
______ Challenging
______ On your feet
______ Frustrating
______ Simple
______ Endless
______ Gives sense of accomplishment
APPENDIX G

Role Ambiguity Scale
PLEASE INDICATE THE DEGREE TO WHICH THE FOLLOWING TASK CONDITIONS EXISTED FOR YOU WHEN DOING THE IN-BASKET EXERCISE BY CIRCLING THE APPROPRIATE NUMBER ON THE SCALES BELOW.

1. I had clear, planned goals and objectives for my exercise.

    1   2   3   4   5   6   7
    Very      Very
    False     True

2. I knew that I had divided my time properly.

    1   2   3   4   5   6   7
    Very      Very
    False     True

3. I knew what my responsibilities were.

    1   2   3   4   5   6   7
    Very      Very
    False     True

4. I knew exactly what was expected of me.

    1   2   3   4   5   6   7
    Very      Very
    False     True

5. I felt certain about how much authority I had on the exercise.

    1   2   3   4   5   6   7
    Very      Very
    False     True

6. Explanation was clear of what had to be done.

    1   2   3   4   5   6   7
    Very      Very
    False     True
APPENDIX H

Role Conflict Scale
PLEASE INDICATE THE DEGREE TO WHICH THE FOLLOWING TASK CONDITIONS EXISTED FOR YOU WHEN DOING THE IN-BASKET EXERCISE BY CIRCLING THE APPROPRIATE NUMBER ON THE SCALE BELOW.

1. I had to go against a rule or directive in order to carry out the exercise.
   1  2  3  4  5  6  7
   Very False

2. I worked with a manager and students who operated quite differently.
   1  2  3  4  5  6  7
   Very False

3. I received incompatible requests from my manager and the other students.
   1  2  3  4  5  6  7
   Very False

4. I did things on the exercise that are apt to be accepted by one person and not accepted by others.
   1  2  3  4  5  6  7
   Very False

5. I received an assignment without adequate resources and materials to execute it.
   1  2  3  4  5  6  7
   Very False

6. I worked on unnecessary things.
   1  2  3  4  5  6  7
   Very False
7. I had to do things that should be done differently under different conditions.

<table>
<thead>
<tr>
<th>1</th>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very</td>
<td>False</td>
<td>Very</td>
<td>True</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. I received an assignment without the manpower to complete it.

<table>
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<tr>
<th>1</th>
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<th>4</th>
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<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very</td>
<td>False</td>
<td>Very</td>
<td>True</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX I

Job Related Tension Index
ALL OF US OCCASIONALLY FEEL BOTHERED BY CERTAIN KINDS OF THINGS IN OUR WORK. FOCUS YOUR ATTENTION ON THE IN-BASKET EXERCISE YOU HAVE JUST COMPLETED. PLEASE INDICATE HOW FREQUENTLY YOU FELT BOTHERED BY CERTAIN ASPECTS OF THE EXERCISE BY CIRCLING THE NUMBER UNDER THE APPROPRIATE ADJECTIVE.

<table>
<thead>
<tr>
<th>1. Feeling that you had too heavy a workload, one that you couldn't possibly finish during the time allotted.</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Rather</th>
<th>Nearly all the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Thinking that you'll not be able to satisfy the conflicting demands of various people over you.</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Rather</th>
<th>Nearly all the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Feeling that you're not fully qualified to handle the exercise.</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Rather</th>
<th>Nearly all the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Not knowing what your manager thinks of you, how she evaluates your performance.</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Rather</th>
<th>Nearly all the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. The fact that you couldn't get information needed to carry out your exercise.</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Rather</th>
<th>Nearly all the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Feeling that you may not be liked and accepted by the people you work with.</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Rather</th>
<th>Nearly all the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Feeling unable to influence your manager's decisions and actions that affect you.</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Rather</th>
<th>Nearly all the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Rather Often</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------</td>
<td>-------</td>
<td>--------</td>
<td>-----------</td>
<td>--------------</td>
</tr>
<tr>
<td>8.</td>
<td>Thinking that the amount of work you had to do may have interfered with how well it gets done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9.</td>
<td>Feeling that you have too little authority to carry out the responsibilities assigned to you.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10.</td>
<td>Being unclear on just what the scope and responsibilities of your exercise were.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11.</td>
<td>Having to decide things that affect the lives of individuals.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12.</td>
<td>Not knowing just what the people you work with expect of you.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13.</td>
<td>Feeling that you have to do things on the exercise that are against your better judgement.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
APPENDIX J

Adjustment to the Leader Scale
PLEASE INDICATE HOW YOU FELT ABOUT YOUR MANAGER BY CIRCLING THE APPROPRIATE NUMBER ON THE SCALES BELOW.

1. How willing would you be to work with your manager again?
   
   
   |   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
   |
   |   | Very unwilling | Neither willing nor unwilling | Very willing |

2. How much did you like your manager personally?

   
   
   |   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
   |
   |   | I disliked her very much | I neither liked nor disliked her | I liked her very much |

3. How satisfied were you with your manager?

   
   
   |   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
   |
   |   | Very dissatisfied | Neither satisfied nor dissatisfied | Very satisfied |

4. How comfortable or relaxed were you with your manager?

   
   
   |   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
   |
   |   | Very anxious | Neither anxious nor relaxed | Very relaxed |

5. How long did it take you to feel comfortable with your manager?

   
   
   |   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
   |
   |   | I never felt comfortable | I felt comfortable half way through | I immediately felt comfortable |
APPENDIX K

Group Atmosphere Scale
DESCRIBE THE ATMOSPHERE OF YOUR GROUP (I.E., THE OTHER STUDENTS YOU WERE WORKING WITH) BY CIRCLING THE APPROPRIATE NUMBER ON THE SCALES BELOW.

1. Friendly  8 7 6 5 4 3 2 1 Unfriendly
2. Accepting  8 7 6 5 4 3 2 1 Rejecting
3. Satisfying  8 7 6 5 4 3 2 1 Frustrating
4. Enthusiastic  8 7 6 5 4 3 2 1 Unenthusiastic
5. Productive  8 7 6 5 4 3 2 1 Nonproductive
6. Warm  8 7 6 5 4 3 2 1 Cold
7. Cooperative  8 7 6 5 4 3 2 1 Uncooperative
8. Supportive  8 7 6 5 4 3 2 1 Hostile
9. Interesting  8 7 6 5 4 3 2 1 Boring
10. Successful  8 7 6 5 4 3 2 1 Unsuccessful
APPENDIX L

Process Measure

Completed by the Co-workers
STAGE 1

1. When did the participant first look up from his/her exercise?
   1. Immediately
   2. Before 1 minute
   3. After 1 minute
   4. After 2 minutes
   5. After 3 minutes
   6. After 4 minutes
   7. Not applicable

2. When did the participant first ask a question or make a remark?
   1. Immediately
   2. Before 1 minute
   3. After 1 minute
   4. After 2 minutes
   5. After 3 minutes
   6. After 4 minutes
   7. Not applicable

3. Was the question/remark:
   1. Task related
   2. General

4. What did the participant say?
   __________________________
   __________________________

5. How interested does the participant appear to be in the exercise?
   1. Not at all interested
   2. Somewhat interested
   3. Very interested
   4
   5
   6
   7
6. To what extent is the participant working on the exercise?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/he hardly works at all</td>
<td>S/he works sometimes</td>
<td>S/he works constantly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. How agitated or restless does the participant appear to be?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all restless</td>
<td>Somewhat restless</td>
<td>Very restless</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

8. How friendly is the participant towards you?

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<tr>
<th></th>
<th>1</th>
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<th>4</th>
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<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all friendly</td>
<td>Somewhat friendly</td>
<td>Very friendly</td>
<td></td>
<td></td>
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</tbody>
</table>

9. When did the participant start to lose interest in the task?

<table>
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<tr>
<th></th>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately</td>
<td>After 5 minutes</td>
<td>After 10 minutes</td>
<td>After 15 minutes</td>
<td>Never</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. Other comments by you and/or the participant:

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
STAGE 2

1. When did the participant first look up from his/her exercise?
   1. Immediately
   2. Before 1 minute
   3. After 1 minute
   4. After 2 minutes
   5. After 3 minutes
   6. After 4 minutes
   7. Not applicable

2. When did the participant first ask a question or make a remark?
   1. Immediately
   2. Before 1 minute
   3. After 1 minute
   4. After 2 minutes
   5. After 3 minutes
   6. After 4 minutes
   7. Not applicable

3. Was the question/remark:
   1. Task related
   2. General

4. What did the participant say?

5. How interested does the participant appear to be in the exercise?
   1. Not at all interested
   2. Somewhat interested
   3. Very interested
   4. 5
   5. 6
   6. 7

6. To what extent is the participant working on the exercise?

<table>
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<tr>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/he hardly works at all</td>
<td>Works sometimes</td>
<td>S/he works constantly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. How agitated or restless does the participant appear to be?

<table>
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<tr>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all restless</td>
<td>Somewhat restless</td>
<td>Very restless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. How friendly is the participant towards you?

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<tr>
<th></th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all friendly</td>
<td>Somewhat friendly</td>
<td>Very friendly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. When did the participant start to lose interest in the task?

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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately</td>
<td>After 5 minutes</td>
<td>After 10 minutes</td>
<td>After 15 minutes</td>
<td>Never</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. Other comments by you and/or the participant:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
11. Overall, how satisfied do you think the participant was with the exercise?

<table>
<thead>
<tr>
<th>1</th>
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<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td>Somewhat satisfied</td>
<td>Extremely satisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Overall, how seriously do you think the participant took the project?

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<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all seriously</td>
<td>Somewhat seriously</td>
<td>Extremely seriously</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. Overall, how much did you interact with the participant?

1. To a very little extent
2. To a little extent
3. To some extent
4. To a great extent
5. To a very great extent

14. Overall, what was your impression of the participant?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
APPENDIX M

Diary Completed by the Participant
THE UNIVERSITY OF BRITISH COLUMBIA

FACULTY OF COMMERCE AND BUSINESS ADMINISTRATION

PLEASE DESCRIBE IN YOUR OWN WORDS YOUR EXPERIENCE IN THE MANAGEMENT TRAINING PROJECT. IN PARTICULAR, DESCRIBE YOUR THOUGHTS AND FEELINGS ABOUT THE PROJECT MANAGER AND YOUR THOUGHTS AND FEELINGS ABOUT THE EXERCISE.
APPENDIX N

Need for Achievement Scale
ON THE FOLLOWING PAGES YOU WILL FIND A SERIES OF STATEMENTS WHICH A PERSON MIGHT USE TO DESCRIBE HIM/HERSELF. READ EACHStatement AND DECIDE WHETHER OR NOT IT DESCRIBES YOU.

IF YOU AGREE WITH A STATEMENT OR DECIDE THAT IT DOES DESCRIBE YOU, CIRCLE TRUE. IF YOU DISAGREE WITH A STATEMENT OR FEEL THAT IT IS NOT DESCRIPTIVE OF YOU, CIRCLE FALSE.

ANSWER EVERY STATEMENT EITHER TRUE OR FALSE, EVEN IF YOU ARE NOT COMPLETELY SURE OF YOUR ANSWER.

1. As a child I worked for a long time for some of the things I earned. True False
2. The many extra hours of work needed to do a job perfectly are simply not worth the effort. True False
3. Even when people do not see what I do, I try to do things at a level of perfection. True False
4. I am sure people seldom think of me as a hard worker. True False
5. I hate to do a job half-heartedly. True False
6. I don't stick to goals which prove hard to reach. True False
7. If I had to make a choice, I would prefer to do a job that was very hard for me, rather than one that was very easy. True False
8. I seldom set standards which are difficult for me to attain. True False
9. I enjoy hard work. True False
10. I am not working toward any specific goal. True False
11. People should be more involved with their work. True False
12. I am not really very certain what I want to do or how to go about doing it. True False
13. I would work just as hard whether or not I had to earn a living. True False
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>14.</td>
<td>I am not really bothered by learning something incompletely.</td>
</tr>
<tr>
<td>15.</td>
<td>I will not be satisfied until I am confident that I am the best in my field of work.</td>
</tr>
<tr>
<td>16.</td>
<td>In my work I seldom do more than is necessary.</td>
</tr>
<tr>
<td>17.</td>
<td>Even when I have just finished an excellent piece of work, I feel that I must do something even better.</td>
</tr>
<tr>
<td>18.</td>
<td>People rarely say I let my work interfere with the other aspects of my life.</td>
</tr>
<tr>
<td>19.</td>
<td>I cannot respect people who can be satisfied with being less than the best.</td>
</tr>
<tr>
<td>20.</td>
<td>I would rather be paid on the basis of how many hours I have worked than by how much work I have done.</td>
</tr>
<tr>
<td>21.</td>
<td>I enjoy things which challenge me.</td>
</tr>
<tr>
<td>22.</td>
<td>Self-improvement means nothing to me unless it leads to immediate success.</td>
</tr>
<tr>
<td>23.</td>
<td>I get disgusted with myself when I have not learned something properly.</td>
</tr>
<tr>
<td>24.</td>
<td>I work because I have to, and for that reason only.</td>
</tr>
<tr>
<td>25.</td>
<td>I will keep working on a problem after others have given up.</td>
</tr>
<tr>
<td>26.</td>
<td>I try to work just hard enough to get by.</td>
</tr>
<tr>
<td>27.</td>
<td>I often set goals that are very difficult to reach.</td>
</tr>
<tr>
<td>28.</td>
<td>I would rather do an easy job than one involving obstacles which must be overcome.</td>
</tr>
<tr>
<td>29.</td>
<td>My goal is to do at least a little bit more than anyone else has done before.</td>
</tr>
<tr>
<td>30.</td>
<td>I really don't enjoy hard work.</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>31.</td>
<td>I prefer to be paid on the basis of how much work I have done rather than on how many hours I have worked.</td>
</tr>
<tr>
<td>32.</td>
<td>I have rarely done extra studying in connection with my work.</td>
</tr>
<tr>
<td>33.</td>
<td>People have always said that I am a hard worker.</td>
</tr>
<tr>
<td>34.</td>
<td>When people are not going to see what I do, I often do less than my very best.</td>
</tr>
<tr>
<td>35.</td>
<td>I don't mind working while other people are having fun.</td>
</tr>
<tr>
<td>36.</td>
<td>It doesn't really matter to me whether I become one of the best in my field.</td>
</tr>
<tr>
<td>37.</td>
<td>Sometimes people say I neglect other important aspects of my life because I work so hard.</td>
</tr>
<tr>
<td>38.</td>
<td>I am sure people think that I don't have a great deal of drive.</td>
</tr>
<tr>
<td>39.</td>
<td>I enjoy work more than play.</td>
</tr>
<tr>
<td>40.</td>
<td>It is unrealistic for me to insist on becoming the best in my field of work all of the time.</td>
</tr>
</tbody>
</table>
APPENDIX O

Tolerance for Ambiguity Scale
PLEASE DO NOT SPEND TOO MUCH TIME ON THE FOLLOWING ITEMS. THERE ARE NO RIGHT OR WRONG ANSWERS AND THEREFORE YOUR FIRST RESPONSE IS IMPORTANT. CIRCLE T FOR TRUE AND F FOR FALSE. BE SURE TO ANSWER EVERY QUESTION.

1. There's a right way and a wrong way to do almost everything. T F
2. Practically every problem has a solution. T F
3. I have always felt that there is a clear solution between right and wrong. T F
4. Nothing gets accomplished in this world unless you stick to some basic rules. T F
5. If I were a doctor, I would prefer the uncertainties of a psychiatrist to the clear and definite work of someone like a surgeon or x-ray specialist. T F
6. Vague and impressionistic pictures really have little appeal for me. T F
7. Before an examination, I feel much less anxious if I know how many questions there will be. T F
8. The best part of working a jigsaw puzzle is putting in that last piece. T F
9. I don't like to work on a problem unless there is a possibility of coming out with a clearcut and unambiguous answer. T F
10. I like to fool around with new ideas, even if they turn out later to be a total waste of time. T F
11. Perfect balance is the essence of all good composition. T F
APPENDIX P

Need for Affiliation Scale
ON THE FOLLOWING PAGES YOU WILL FIND A SERIES OF STATEMENTS WHICH A PERSON
MIGHT USE TO DESCRIBE HIM/HERSELF. READ EACH STATEMENT AND DECIDE WHETHER
OR NOT IT DESCRIBES YOU.

IF YOU AGREE WITH A STATEMENT OR DECIDE THAT IT DOES DESCRIBE YOU, CIRCLE
TRUE. IF YOU DISAGREE WITH A STATEMENT OR FEEL THAT IT IS NOT DESCRIPTIVE
OF YOU, CIRCLE FALSE. ANSWER EVERY STATEMENT EITHER TRUE OR FALSE, EVEN
IF YOU ARE NOT COMPLETELY SURE OF YOUR ANSWER.

1. Often I would rather be alone than with a group of friends. True False
2. If a person does a favor for me, I like to do something in return. True False
3. I think that fame is more rewarding than friendship. True False
4. When I meet old acquaintances, I usually give them a very warm welcome. True False
5. I don't spend much of my time talking with the people I see every day. True False
6. Having friends is very important to me. True False
7. I don't care whether or not the people around me are my friends. True False
8. People consider me to be warm and friendly. True False
9. I am not considered sociable. True False
10. I think that a person must know how to get along well with others before s/he can be a success. True False
11. I seldom put out extra effort to make friends. True False
12. I need the feeling of 'belonging' that comes from having many friends. True False
13. I don't really have fun at large parties. True False
14. I think that any experience is more significant when shared with a friend. True False
15. I don't believe in showing lots of affection toward friends. True False
16. My friendships are many. True False
17. I would not be very good at a job which required me to meet people all day long. True False
18. I like to work with other people rather than all alone. True False
19. Sometimes I have to make a concentrated effort to be sociable. True False
20. I choose hobbies that I can share with other people. True False
21. I pay little attention to the interests of people I know. True False
22. I believe that a person who is incapable of enjoying the people around him/her misses much in life. True False
23. Trying to please people is a waste of time. True False
24. Loyalty to my friends is quite important to me. True False
25. Most of my relationships with people are business-like rather than friendly. True False
26. I am considered friendly. True False
27. After I get to know most people, I decide that they would make poor friends. True False
28. I enjoy being neighbourly. True False
29. Usually I would rather go somewhere alone than go to a party. True False
30. I try to be in the company of friends as much as possible. True False
31. I have relatively few friends. True False
32. To love and be loved is of greatest importance to me. True False
33. I seldom go out of my way to do something to make others happy. True False
<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>34.</td>
<td>Most people think I am warm-hearted and sociable.</td>
<td>True</td>
<td>False</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>When I see someone I know from a distance, I don't go out of my way to say &quot;Hello.&quot;</td>
<td>True</td>
<td>False</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.</td>
<td>I truly enjoy myself at social functions.</td>
<td>True</td>
<td>False</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37.</td>
<td>I want to remain unhampered by obligations to friends.</td>
<td>True</td>
<td>False</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38.</td>
<td>I spend a lot of time visiting friends.</td>
<td>True</td>
<td>False</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.</td>
<td>I am quite independent of the people I know.</td>
<td>True</td>
<td>False</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>I go out of my way to meet people.</td>
<td>True</td>
<td>False</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX Q

Summary Tables
Table Q1

Pilot Test for Differences Between Actress 1 and Actress 2 on the Leadership Style Manipulation Checks

<table>
<thead>
<tr>
<th>Leadership Style Manipulation Check</th>
<th>Actress 1 M</th>
<th>Actress 2 M</th>
<th>df</th>
<th>t</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structuring Style</td>
<td>57.15</td>
<td>57.61</td>
<td>70</td>
<td>-0.41</td>
<td>.68</td>
</tr>
<tr>
<td>Considerate Style</td>
<td>43.00</td>
<td>46.32</td>
<td>60</td>
<td>-1.68</td>
<td>.10</td>
</tr>
<tr>
<td>Charismatic Style</td>
<td>50.08</td>
<td>50.39</td>
<td>67</td>
<td>-0.21</td>
<td>.83</td>
</tr>
<tr>
<td>Manipulation Check</td>
<td>Leadership Style</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>M</td>
<td>df</td>
<td>t</td>
<td></td>
</tr>
<tr>
<td>1. Structuring Manipulation Check</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structuring vs. Considerate Style</td>
<td>57.39</td>
<td>29.71</td>
<td>132</td>
<td>24.73**</td>
<td></td>
</tr>
<tr>
<td>Structuring vs. Charismatic Style</td>
<td>57.39</td>
<td>34.73</td>
<td>139</td>
<td>22.93**</td>
<td></td>
</tr>
<tr>
<td>2. Considerate Manipulation Check</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considerate vs. Structuring Style</td>
<td>44.66</td>
<td>16.17</td>
<td>132</td>
<td>28.88**</td>
<td></td>
</tr>
<tr>
<td>Considerate vs. Charismatic Style</td>
<td>44.66</td>
<td>46.79</td>
<td>129</td>
<td>-1.75*</td>
<td></td>
</tr>
<tr>
<td>3. Charismatic Manipulation Check</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charismatic vs. Structuring Style</td>
<td>50.23</td>
<td>28.86</td>
<td>139</td>
<td>20.52**</td>
<td></td>
</tr>
<tr>
<td>Charismatic vs. Considerate Style</td>
<td>50.23</td>
<td>37.05</td>
<td>129</td>
<td>10.02**</td>
<td></td>
</tr>
</tbody>
</table>

* $p < .08$.  
** $p < .0001$.  

Table Q3
Varimax Rotated Factor Matrix for the Leadership Style Manipulation Checks

<table>
<thead>
<tr>
<th>Leadership Style</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structuring Style</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strictly business</td>
<td>-.915</td>
<td>-.120</td>
</tr>
<tr>
<td>Meeting deadlines</td>
<td>-.891</td>
<td>-.109</td>
</tr>
<tr>
<td>Standards of performance</td>
<td>-.603</td>
<td>.148</td>
</tr>
<tr>
<td>Provides detailed direction</td>
<td>-.834</td>
<td>-.031</td>
</tr>
<tr>
<td>Tells you how to do the exercise</td>
<td>-.819</td>
<td>-.117</td>
</tr>
<tr>
<td>Emphasizes quantity of work</td>
<td>-.860</td>
<td>-.132</td>
</tr>
<tr>
<td>Talks about the amount of work</td>
<td>-.731</td>
<td>-.039</td>
</tr>
<tr>
<td>Getting the work done</td>
<td>-.884</td>
<td>-.120</td>
</tr>
<tr>
<td>Task oriented</td>
<td>-.908</td>
<td>.026</td>
</tr>
<tr>
<td>Expects you to get the work done</td>
<td>-.738</td>
<td>-.055</td>
</tr>
<tr>
<td><strong>Considerate Style</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interested in your personal welfare</td>
<td>.799</td>
<td>.108</td>
</tr>
<tr>
<td>Friendly and supportive relationship</td>
<td>.873</td>
<td>.064</td>
</tr>
<tr>
<td>Warm interpersonal relations</td>
<td>.880</td>
<td>.052</td>
</tr>
<tr>
<td>Very friendly</td>
<td>.876</td>
<td>-.055</td>
</tr>
<tr>
<td>Easy to approach</td>
<td>.845</td>
<td>.070</td>
</tr>
<tr>
<td>Good interpersonal skills</td>
<td>.837</td>
<td>.098</td>
</tr>
<tr>
<td>Makes you feel comfortable and relaxed</td>
<td>.829</td>
<td>.040</td>
</tr>
<tr>
<td>Engages in social conversation</td>
<td>.766</td>
<td>-.024</td>
</tr>
<tr>
<td>Makes you feel at ease</td>
<td>.854</td>
<td>.192</td>
</tr>
<tr>
<td>Establishes good rapport</td>
<td>.762</td>
<td>.208</td>
</tr>
</tbody>
</table>
Table Q3 (continued)
Varimax Rotated Factor Matrix for the Leadership Style Manipulation Checks

<table>
<thead>
<tr>
<th>Leadership Style</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charismatic Style</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspires you</td>
<td>0.046</td>
<td>0.861</td>
</tr>
<tr>
<td>Creative and productive</td>
<td>0.152</td>
<td>0.851</td>
</tr>
<tr>
<td>Confident in your ability to perform well</td>
<td>0.130</td>
<td>0.822</td>
</tr>
<tr>
<td>Increases your motivation</td>
<td>0.052</td>
<td>0.723</td>
</tr>
<tr>
<td>Describes importance of the project</td>
<td>-0.068</td>
<td>0.737</td>
</tr>
<tr>
<td>Makes you want to do the exercise</td>
<td>0.093</td>
<td>0.765</td>
</tr>
<tr>
<td>Strive for high work standards</td>
<td>-0.283</td>
<td>0.623</td>
</tr>
<tr>
<td>Involved and committed to the exercise</td>
<td>0.106</td>
<td>0.860</td>
</tr>
<tr>
<td>Persuasive and influential</td>
<td>0.023</td>
<td>0.774</td>
</tr>
<tr>
<td>Expresses work goals</td>
<td>0.127</td>
<td>0.821</td>
</tr>
<tr>
<td>Dynamic and energetic</td>
<td>0.131</td>
<td>0.788</td>
</tr>
</tbody>
</table>

| Eigenvale | 14.208 | 6.719 |
| Percentage of Variance               | 61.030  | 28.950 |

Note: Factor loadings greater than ± 0.3 are underlined.
Table Q4
Unrotated Factor Matrix for the Self-Rated Performance Scale Items

<table>
<thead>
<tr>
<th>Self-Rated Performance Scale Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity of production</td>
<td>.732</td>
</tr>
<tr>
<td>Quality of responses</td>
<td>.782</td>
</tr>
<tr>
<td>Efficiency in performance</td>
<td>.775</td>
</tr>
<tr>
<td>Anticipation of problems</td>
<td>.710</td>
</tr>
<tr>
<td>Adjustment to changes</td>
<td>.539</td>
</tr>
<tr>
<td>Handling of emergency situations</td>
<td>.631</td>
</tr>
<tr>
<td>Keeping up with changes</td>
<td>.380</td>
</tr>
</tbody>
</table>

Eigenvalue                       | 3.084    |
Percentage of Variance            | 89.960   |

Note: Factor loadings greater than ± 0.3 are underlined.
Table Q5
Varimax Rotated Factor Matrix for the Task Performance Dependent Measures

<table>
<thead>
<tr>
<th>Task Performance Measures</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items</td>
<td>0.093</td>
<td>0.829</td>
</tr>
<tr>
<td>Courses of Action</td>
<td>0.068</td>
<td>0.828</td>
</tr>
<tr>
<td>Quality of Performance</td>
<td>0.159</td>
<td>0.890</td>
</tr>
<tr>
<td><strong>Self-Rated Performance Items</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity of production</td>
<td>0.682</td>
<td>0.375</td>
</tr>
<tr>
<td>Quality of responses</td>
<td>0.768</td>
<td>0.124</td>
</tr>
<tr>
<td>Efficiency in performance</td>
<td>0.761</td>
<td>0.124</td>
</tr>
<tr>
<td>Anticipation of problems</td>
<td>0.729</td>
<td>0.011</td>
</tr>
<tr>
<td>Adjustment to changes</td>
<td>0.525</td>
<td>0.130</td>
</tr>
<tr>
<td>Handling of emergency situations</td>
<td>0.603</td>
<td>0.201</td>
</tr>
<tr>
<td>Keeping up with changes</td>
<td>0.411</td>
<td>-0.084</td>
</tr>
</tbody>
</table>

| Eigenvalue | 3.639 | 1.771 |
| Percentage of Variance | 62.790 | 30.560 |

**Note:** Factor loadings greater than ± 0.3 are underlined.
Table Q6

Unrotated Factor Matrix for the Role Ambiguity Scale Items

<table>
<thead>
<tr>
<th>Role Ambiguity Scale Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had clear, planned goals and objectives</td>
<td>.781</td>
</tr>
<tr>
<td>Knew I divided my time properly</td>
<td>.608</td>
</tr>
<tr>
<td>Knew what my responsibilities were</td>
<td>.888</td>
</tr>
<tr>
<td>Knew what was expected of me</td>
<td>.890</td>
</tr>
<tr>
<td>Felt certain about how much authority I had</td>
<td>.651</td>
</tr>
<tr>
<td>Explanation was clear of what had to be done</td>
<td>.865</td>
</tr>
</tbody>
</table>

Eigenvalue | 3.732  
Percentage of Variance | 96.260

Note: Factor loadings greater than +0.3 are underlined.
Table Q7

Unrotated Factor Matrix for the Role Conflict Scale Items

<table>
<thead>
<tr>
<th>Role Conflict Scale Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go against a rule or directive</td>
<td>.192</td>
</tr>
<tr>
<td>Worked with others who operated differently</td>
<td>.333</td>
</tr>
<tr>
<td>Received incompatible requests</td>
<td>.231</td>
</tr>
<tr>
<td>Did things that are apt to be accepted by one person and not accepted by others</td>
<td>.457</td>
</tr>
<tr>
<td>Received an assignment without adequate resources</td>
<td>.665</td>
</tr>
<tr>
<td>Worked on unnecessary things</td>
<td>.663</td>
</tr>
<tr>
<td>Had to do things that should be done differently</td>
<td>.629</td>
</tr>
<tr>
<td>Received an assignment without manpower to complete it</td>
<td>.686</td>
</tr>
</tbody>
</table>

Eigenvalue 2.158
Percentage of Variance 73.250

Note: Factor loadings greater than ± 0.3 are underlined.
Table Q8

Unrotated Factor Matrix for the Role Conflict Scale Items 2 and 4 to 8

<table>
<thead>
<tr>
<th>Role Conflict Scale Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worked with others who operated differently</td>
<td>0.284</td>
</tr>
<tr>
<td>Did things that are apt to be accepted by one person and not accepted by others</td>
<td>0.447</td>
</tr>
<tr>
<td>Received an assignment without adequate resources</td>
<td>0.707</td>
</tr>
<tr>
<td>Worked on unnecessary things</td>
<td>0.668</td>
</tr>
<tr>
<td>Had to do things that should be done differently</td>
<td>0.651</td>
</tr>
<tr>
<td>Received an assignment without manpower to complete it</td>
<td>0.662</td>
</tr>
</tbody>
</table>

Eigenvalue                                                  2.088
Percentage of Variance                                      86.140

Note: Factor loadings greater than ± 0.3 are underlined.
Table Q9
Unrotated Factor Matrix for the Role Conflict Scale Items 4 to 8

<table>
<thead>
<tr>
<th>Role Conflict Scale Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did things that are apt to be accepted by one person and not accepted by others</td>
<td>.455</td>
</tr>
<tr>
<td>Received an assignment without adequate resources</td>
<td>.684</td>
</tr>
<tr>
<td>Worked on unnecessary things</td>
<td>.664</td>
</tr>
<tr>
<td>Had to do things that should be done differently</td>
<td>.668</td>
</tr>
<tr>
<td>Received an assignment without manpower to complete it</td>
<td>.647</td>
</tr>
</tbody>
</table>

Eigenvalue 2.007
Percentage of Variance 89.970

Note: Factor loadings greater than ± 0.3 are underlined.
Table Q10
Unrotated Factor Matrix for the Job Related Tension Scale Items

<table>
<thead>
<tr>
<th>Job Related Tension Scale Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had too heavy a workload</td>
<td>.476</td>
</tr>
<tr>
<td>Not able to satisfy conflicting demands</td>
<td>.630</td>
</tr>
<tr>
<td>Not fully qualified to handle the exercise</td>
<td>.695</td>
</tr>
<tr>
<td>Not knowing what your manager thinks of you</td>
<td>.505</td>
</tr>
<tr>
<td>Could not get information needed</td>
<td>.537</td>
</tr>
<tr>
<td>Not accepted by the people you work with</td>
<td>.368</td>
</tr>
<tr>
<td>Unable to influence your manager's decisions</td>
<td>.444</td>
</tr>
<tr>
<td>Amount of work interfered with how well it gets done</td>
<td>.654</td>
</tr>
<tr>
<td>Too little authority to carry out responsibilities assigned</td>
<td>.487</td>
</tr>
<tr>
<td>Unclear on scope and responsibilities of your exercise</td>
<td>.584</td>
</tr>
<tr>
<td>Decide things that affect the lives of others</td>
<td>.466</td>
</tr>
<tr>
<td>Not knowing what the people you work with expect of you</td>
<td>.514</td>
</tr>
<tr>
<td>Have to do things on the exercise against your better judgement</td>
<td>.489</td>
</tr>
</tbody>
</table>

Eigenvalue 3.709
Percentage of Variance 71.830

Note: Factor loadings greater than ± 0.3 are underlined.
Table Q11

Varimax Rotated Factor Matrix for the
Task Adjustment Dependent Measures

<table>
<thead>
<tr>
<th>Task Adjustment Measures</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Ambiguity Items</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had clear, planned goals and objectives</td>
<td>.729</td>
<td>-.147</td>
<td>-.259</td>
</tr>
<tr>
<td>Knew I divided my time properly</td>
<td>.533</td>
<td>-.055</td>
<td>-.318</td>
</tr>
<tr>
<td>Knew what my responsibilities were</td>
<td>.899</td>
<td>-.043</td>
<td>-.142</td>
</tr>
<tr>
<td>Knew what was expected of me</td>
<td>.843</td>
<td>.030</td>
<td>-.300</td>
</tr>
<tr>
<td>Felt certain about how much authority I had</td>
<td>.560</td>
<td>-.253</td>
<td>-.284</td>
</tr>
<tr>
<td>Explanation was clear of what had to be done</td>
<td>.801</td>
<td>-.101</td>
<td>-.309</td>
</tr>
<tr>
<td>Role Conflict Items</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did things that are apt to be accepted by one person and not accepted by others</td>
<td>-.204</td>
<td>.119</td>
<td>.383</td>
</tr>
<tr>
<td>Received an assignment without adequate resources</td>
<td>-.233</td>
<td>.178</td>
<td>.563</td>
</tr>
<tr>
<td>Worked on unnecessary things</td>
<td>-.224</td>
<td>.071</td>
<td>.644</td>
</tr>
<tr>
<td>Had to do things that should be done differently</td>
<td>-.277</td>
<td>.086</td>
<td>.627</td>
</tr>
<tr>
<td>Received an assignment without manpower</td>
<td>-.041</td>
<td>.348</td>
<td>.592</td>
</tr>
<tr>
<td>Job Related Tension Items</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had too heavy a workload</td>
<td>-.083</td>
<td>.459</td>
<td>.086</td>
</tr>
<tr>
<td>Not able to satisfy conflicting demands</td>
<td>-.003</td>
<td>.616</td>
<td>.181</td>
</tr>
<tr>
<td>Not fully qualified to handle the exercise</td>
<td>-.139</td>
<td>.670</td>
<td>.133</td>
</tr>
<tr>
<td>Not knowing what your manager thinks of you</td>
<td>.082</td>
<td>.495</td>
<td>.235</td>
</tr>
<tr>
<td>Could not get information needed</td>
<td>-.174</td>
<td>.499</td>
<td>.142</td>
</tr>
<tr>
<td>Not accepted by the people you work with</td>
<td>.096</td>
<td>.396</td>
<td>.007</td>
</tr>
<tr>
<td>Unable to influence your manager's decisions</td>
<td>.187</td>
<td>.467</td>
<td>.195</td>
</tr>
<tr>
<td>Amount of work interfered with how well it gets done</td>
<td>-.083</td>
<td>.622</td>
<td>.183</td>
</tr>
<tr>
<td>Too little authority to carry out responsibilities assigned</td>
<td>-.074</td>
<td>.465</td>
<td>.096</td>
</tr>
<tr>
<td>Unclear on the scope and responsibilities of your exercise</td>
<td>-.402</td>
<td>.527</td>
<td>.121</td>
</tr>
<tr>
<td>Decide things that affect the lives of others</td>
<td>-.199</td>
<td>.456</td>
<td>-.001</td>
</tr>
<tr>
<td>Not knowing what the people you work with expect of you</td>
<td>-.164</td>
<td>.462</td>
<td>.129</td>
</tr>
<tr>
<td>Have to do things on the exercise against your better judgement</td>
<td>-.096</td>
<td>.475</td>
<td>.053</td>
</tr>
<tr>
<td>General Task Satisfaction</td>
<td>.278</td>
<td>-.166</td>
<td>-.688</td>
</tr>
<tr>
<td>Specific Task Satisfaction</td>
<td>.194</td>
<td>-.244</td>
<td>-.647</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>6.988</td>
<td>2.753</td>
<td>1.263</td>
</tr>
<tr>
<td>Percentage of Variance</td>
<td>51.230</td>
<td>20.180</td>
<td>9.260</td>
</tr>
</tbody>
</table>

Note: Factor loadings greater than ± 0.3 are underlined.
Table Q12

Unrotated Factor Matrix for the Adjustment to the Leader Scale Items

<table>
<thead>
<tr>
<th>Adjustment to the Leader Scale Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willingness to work with again</td>
<td>.907</td>
</tr>
<tr>
<td>Personal liking of manager</td>
<td>.872</td>
</tr>
<tr>
<td>Satisfaction with manager</td>
<td>.862</td>
</tr>
<tr>
<td>Comfortableness with manager</td>
<td>.885</td>
</tr>
<tr>
<td>Length of time to feel comfortable</td>
<td>.865</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>3.857</td>
</tr>
<tr>
<td>Percentage of Variance</td>
<td>97.990</td>
</tr>
</tbody>
</table>

Note: Factor loadings greater than + 0.3 are underlined.
Table Q13
Unrotated Factor Matrix for the Group Atmosphere Scale Items

<table>
<thead>
<tr>
<th>Group Atmosphere Scale Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendly - Unfriendly</td>
<td>.728</td>
</tr>
<tr>
<td>Accepting - Rejecting</td>
<td>.583</td>
</tr>
<tr>
<td>Satisfying - Frustrating</td>
<td>.625</td>
</tr>
<tr>
<td>Enthusiastic - Unenthusiastic</td>
<td>.512</td>
</tr>
<tr>
<td>Productive - Nonproductive</td>
<td>.358</td>
</tr>
<tr>
<td>Warm - Cold</td>
<td>.740</td>
</tr>
<tr>
<td>Cooperative - Uncooperative</td>
<td>.803</td>
</tr>
<tr>
<td>Supportive - Hostile</td>
<td>.760</td>
</tr>
<tr>
<td>Interesting - Boring</td>
<td>.694</td>
</tr>
<tr>
<td>Successful - Unsuccessful</td>
<td>.621</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>4.289</td>
</tr>
<tr>
<td>Percentage of Variance</td>
<td>77.080</td>
</tr>
</tbody>
</table>

Note: Factor loadings greater than $\pm 0.3$ are underlined.
Table Q14

Varimax Rotated Factor Matrix for the Interpersonal Adjustment Dependent Measures

<table>
<thead>
<tr>
<th>Interpersonal Adjustment Measures</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group Atmosphere</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friendly - Unfriendly</td>
<td>.721</td>
<td>-.089</td>
</tr>
<tr>
<td>Accepting - Rejecting</td>
<td>.577</td>
<td>-.110</td>
</tr>
<tr>
<td>Satisfying - Frustrating</td>
<td>.626</td>
<td>-.014</td>
</tr>
<tr>
<td>Enthusiastic - Unenthusiastic</td>
<td>.517</td>
<td>.040</td>
</tr>
<tr>
<td>Productive - Nonproductive</td>
<td>.360</td>
<td>.004</td>
</tr>
<tr>
<td>Warm - Cold</td>
<td>.744</td>
<td>-.020</td>
</tr>
<tr>
<td>Cooperative - Uncooperative</td>
<td>.801</td>
<td>-.049</td>
</tr>
<tr>
<td>Supportive - Hostile</td>
<td>.753</td>
<td>-.119</td>
</tr>
<tr>
<td>Interesting - Boring</td>
<td>.687</td>
<td>-.115</td>
</tr>
<tr>
<td>Successful - Unsuccessful</td>
<td>.617</td>
<td>-.081</td>
</tr>
<tr>
<td><strong>Adjustment to the Leader</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willingness to work with again</td>
<td>-.088</td>
<td>.905</td>
</tr>
<tr>
<td>Personal liking of manager</td>
<td>-.079</td>
<td>.870</td>
</tr>
<tr>
<td>Satisfaction with manager</td>
<td>.028</td>
<td>.868</td>
</tr>
<tr>
<td>Comfortableness with manager</td>
<td>-.042</td>
<td>.879</td>
</tr>
<tr>
<td>Length of time to feel comfortable</td>
<td>-.158</td>
<td>.859</td>
</tr>
</tbody>
</table>

Eigenvalue

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.298</td>
</tr>
<tr>
<td></td>
<td>3.897</td>
</tr>
</tbody>
</table>

Percentage of Variance

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>49.680</td>
</tr>
<tr>
<td></td>
<td>34.960</td>
</tr>
</tbody>
</table>

Note: Factor loadings greater than + 0.3 are underlined.
Table Q15

Student's t Tests for Differences Between Actress 1 and Actress 2 on the Leadership Style Manipulation Checks

<table>
<thead>
<tr>
<th>Leadership Style Manipulation Check</th>
<th>Actress 1 M</th>
<th>Actress 2 M</th>
<th>df</th>
<th>t</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structuring Style</td>
<td>39.09</td>
<td>41.37</td>
<td>46</td>
<td>-1.81</td>
<td>.08</td>
</tr>
<tr>
<td>Considerate Style</td>
<td>39.77</td>
<td>41.12</td>
<td>46</td>
<td>-1.15</td>
<td>.25</td>
</tr>
<tr>
<td>Charismatic Style</td>
<td>45.52</td>
<td>45.00</td>
<td>46</td>
<td>.49</td>
<td>.62</td>
</tr>
</tbody>
</table>
Table Q16
Means and Standard Deviations for the Leadership Style Manipulation Checks

<table>
<thead>
<tr>
<th>Manipulation Check</th>
<th>Leadership Styles</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Structuring</td>
<td>Considerate</td>
<td>Charismatic</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Strictly business</td>
<td>4.54</td>
<td>.50</td>
<td>2.00</td>
<td>.36</td>
<td>2.56</td>
<td>.65</td>
</tr>
<tr>
<td>Meeting deadlines</td>
<td>4.48</td>
<td>.62</td>
<td>1.85</td>
<td>.65</td>
<td>2.35</td>
<td>.60</td>
</tr>
<tr>
<td>Standards of performance</td>
<td>3.48</td>
<td>1.05</td>
<td>1.92</td>
<td>.74</td>
<td>2.48</td>
<td>.90</td>
</tr>
<tr>
<td>Provides detailed direction</td>
<td>4.08</td>
<td>.71</td>
<td>1.71</td>
<td>.54</td>
<td>2.23</td>
<td>.72</td>
</tr>
<tr>
<td>Tells you how to do the exercise</td>
<td>4.00</td>
<td>.65</td>
<td>1.65</td>
<td>.64</td>
<td>1.92</td>
<td>.68</td>
</tr>
<tr>
<td>Emphasizes quantity of work</td>
<td>4.15</td>
<td>.71</td>
<td>1.65</td>
<td>.56</td>
<td>2.06</td>
<td>.78</td>
</tr>
<tr>
<td>Talks about the amount of work</td>
<td>3.83</td>
<td>1.15</td>
<td>1.58</td>
<td>.61</td>
<td>2.17</td>
<td>.69</td>
</tr>
<tr>
<td>Getting the work done</td>
<td>4.35</td>
<td>.56</td>
<td>1.96</td>
<td>.46</td>
<td>2.35</td>
<td>.67</td>
</tr>
<tr>
<td>Task oriented</td>
<td>4.46</td>
<td>.54</td>
<td>1.96</td>
<td>.46</td>
<td>2.79</td>
<td>.65</td>
</tr>
<tr>
<td>Expects you to get the work done</td>
<td>3.48</td>
<td>.99</td>
<td>1.48</td>
<td>.55</td>
<td>1.94</td>
<td>.81</td>
</tr>
<tr>
<td>Considerate Style</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interested in your personal welfare</td>
<td>1.65</td>
<td>.60</td>
<td>3.81</td>
<td>.53</td>
<td>2.88</td>
<td>.73</td>
</tr>
<tr>
<td>Friendly and supportive relationship</td>
<td>1.89</td>
<td>.69</td>
<td>4.25</td>
<td>.48</td>
<td>3.35</td>
<td>.48</td>
</tr>
<tr>
<td>Warm interpersonal relations</td>
<td>1.58</td>
<td>.65</td>
<td>3.97</td>
<td>.53</td>
<td>3.10</td>
<td>.56</td>
</tr>
<tr>
<td>Very friendly</td>
<td>1.98</td>
<td>.70</td>
<td>4.40</td>
<td>.49</td>
<td>3.33</td>
<td>.52</td>
</tr>
<tr>
<td>Easy to approach</td>
<td>2.02</td>
<td>.73</td>
<td>4.21</td>
<td>.50</td>
<td>3.50</td>
<td>.65</td>
</tr>
<tr>
<td>Good interpersonal skills</td>
<td>2.21</td>
<td>.62</td>
<td>4.23</td>
<td>.47</td>
<td>3.65</td>
<td>.56</td>
</tr>
<tr>
<td>Makes you feel comfortable and relaxed</td>
<td>2.04</td>
<td>.71</td>
<td>4.29</td>
<td>.68</td>
<td>3.46</td>
<td>.71</td>
</tr>
</tbody>
</table>
Table Q16 continued

Means and Standard Deviations for the Leadership Style Manipulation Checks

<table>
<thead>
<tr>
<th>Manipulation Check</th>
<th>Structuring</th>
<th>Leadership Styles</th>
<th>Charismatic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Considerate Style (continued)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engages in social conversation</td>
<td>1.48</td>
<td>.58</td>
<td>3.79</td>
</tr>
<tr>
<td>Makes you feel at ease</td>
<td>1.98</td>
<td>.60</td>
<td>4.06</td>
</tr>
<tr>
<td>Establishes good rapport</td>
<td>2.02</td>
<td>.76</td>
<td>3.85</td>
</tr>
<tr>
<td>Charismatic Style</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspires you</td>
<td>2.54</td>
<td>.77</td>
<td>2.31</td>
</tr>
<tr>
<td>Creative and productive</td>
<td>2.27</td>
<td>.81</td>
<td>2.23</td>
</tr>
<tr>
<td>Confident in your ability to perform well</td>
<td>2.42</td>
<td>.82</td>
<td>2.42</td>
</tr>
<tr>
<td>Increases your motivation</td>
<td>2.42</td>
<td>1.13</td>
<td>2.27</td>
</tr>
<tr>
<td>Describes importance of the project</td>
<td>2.96</td>
<td>.90</td>
<td>2.35</td>
</tr>
<tr>
<td>Makes you want to do the exercise</td>
<td>2.27</td>
<td>.87</td>
<td>2.21</td>
</tr>
<tr>
<td>Strive for high work standards</td>
<td>3.00</td>
<td>1.30</td>
<td>2.00</td>
</tr>
<tr>
<td>Involved and committed to the exercise</td>
<td>2.44</td>
<td>.77</td>
<td>2.33</td>
</tr>
<tr>
<td>Persuasive and influential</td>
<td>2.67</td>
<td>.81</td>
<td>2.42</td>
</tr>
<tr>
<td>Expresses work goals</td>
<td>2.21</td>
<td>.90</td>
<td>2.17</td>
</tr>
<tr>
<td>Dynamic and energetic</td>
<td>2.73</td>
<td>.82</td>
<td>2.79</td>
</tr>
</tbody>
</table>
Table Q17

Manipulation Checks for the Leadership Style Conditions

<table>
<thead>
<tr>
<th>Manipulation Check</th>
<th>Leadership Style</th>
<th>M</th>
<th>M</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Structuring Manipulation Check</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structuring vs. Considerate Style</td>
<td></td>
<td>40.85</td>
<td>17.64</td>
<td>94</td>
<td>33.84*</td>
</tr>
<tr>
<td>Structuring vs. Charismatic Style</td>
<td></td>
<td>40.85</td>
<td>22.85</td>
<td>94</td>
<td>22.53*</td>
</tr>
<tr>
<td>2. Considerate Manipulation Check</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considerate vs. Structuring Style</td>
<td></td>
<td>40.88</td>
<td>18.85</td>
<td>94</td>
<td>29.54*</td>
</tr>
<tr>
<td>Considerate vs. Charismatic Style</td>
<td></td>
<td>40.88</td>
<td>33.21</td>
<td>94</td>
<td>11.61*</td>
</tr>
<tr>
<td>3. Charismatic Manipulation Check</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charismatic vs. Structuring Style</td>
<td></td>
<td>45.25</td>
<td>27.92</td>
<td>94</td>
<td>17.33*</td>
</tr>
<tr>
<td>Charismatic vs. Considerate Style</td>
<td></td>
<td>45.25</td>
<td>26.97</td>
<td>94</td>
<td>26.97*</td>
</tr>
</tbody>
</table>

* p < .0001.
Table Q18

Manipulation Checks for the High and Low Group Productivity Conditions

<table>
<thead>
<tr>
<th>Manipulation Check</th>
<th>Group Productivity</th>
<th></th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High M</td>
<td>Low M</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Atmosphere Items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enthusiastic-Unenthusiastic</td>
<td>6.09</td>
<td>3.05</td>
<td>142</td>
<td>15.85*</td>
</tr>
<tr>
<td>Productive-Nonproductive</td>
<td>6.66</td>
<td>2.98</td>
<td>142</td>
<td>25.44*</td>
</tr>
<tr>
<td>Role Conflict Item</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received incompatible requests from manager and other students</td>
<td>1.87</td>
<td>3.76</td>
<td>142</td>
<td>-7.94*</td>
</tr>
</tbody>
</table>

*p < .005.
Table Q19

A Summary Table of Newman-Keuls Post Hoc Tests for Significant Leadership Style Main Effects

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>M</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Courses of Action</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( L_1 ) vs. ( L_2 )</td>
<td>19.06</td>
<td>19.49</td>
<td>0.43</td>
</tr>
<tr>
<td>( L_1 ) vs. ( L_3 )</td>
<td>19.06</td>
<td>24.06</td>
<td>5.00*</td>
</tr>
<tr>
<td>( L_2 ) vs. ( L_3 )</td>
<td>19.49</td>
<td>24.06</td>
<td>4.57*</td>
</tr>
<tr>
<td><strong>Quality of Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( L_1 ) vs. ( L_2 )</td>
<td>2.94</td>
<td>2.46</td>
<td>0.48</td>
</tr>
<tr>
<td>( L_1 ) vs. ( L_3 )</td>
<td>2.94</td>
<td>3.46</td>
<td>0.52</td>
</tr>
<tr>
<td>( L_2 ) vs. ( L_3 )</td>
<td>2.46</td>
<td>3.46</td>
<td>1.00*</td>
</tr>
<tr>
<td><strong>Task Adjustment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Role Ambiguity</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>( L_1 ) vs. ( L_2 )</td>
<td>28.77</td>
<td>16.43</td>
<td>12.34*</td>
</tr>
<tr>
<td>( L_1 ) vs. ( L_3 )</td>
<td>28.77</td>
<td>28.65</td>
<td>0.12</td>
</tr>
<tr>
<td>( L_2 ) vs. ( L_3 )</td>
<td>16.43</td>
<td>28.65</td>
<td>12.22*</td>
</tr>
<tr>
<td><strong>Role Conflict</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( L_1 ) vs. ( L_2 )</td>
<td>19.42</td>
<td>22.06</td>
<td>2.64*</td>
</tr>
<tr>
<td>( L_1 ) vs. ( L_3 )</td>
<td>19.42</td>
<td>15.48</td>
<td>3.94*</td>
</tr>
<tr>
<td>( L_2 ) vs. ( L_3 )</td>
<td>22.06</td>
<td>15.48</td>
<td>6.58*</td>
</tr>
<tr>
<td><strong>Specific Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( L_1 ) vs. ( L_2 )</td>
<td>30.83</td>
<td>29.73</td>
<td>1.10</td>
</tr>
<tr>
<td>( L_1 ) vs. ( L_3 )</td>
<td>30.83</td>
<td>39.44</td>
<td>8.61*</td>
</tr>
<tr>
<td>( L_2 ) vs. ( L_3 )</td>
<td>29.73</td>
<td>39.44</td>
<td>9.71*</td>
</tr>
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</table>
Table Q19 continued

A Summary Table of Newman-Keuls Post Hoc Tests for Significant Leadership Style Main Effects

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>M</th>
<th>W</th>
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</thead>
<tbody>
<tr>
<td><strong>General Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L₁ vs. L₂</td>
<td>8.60</td>
<td>7.38</td>
<td>1.22</td>
</tr>
<tr>
<td>L₁ vs. L₃</td>
<td>8.60</td>
<td>11.06</td>
<td>2.46*</td>
</tr>
<tr>
<td>L₂ vs. L₃</td>
<td>7.38</td>
<td>11.06</td>
<td>3.68*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>M</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interpersonal Adjustment</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Adjustment to Leader</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L₁ vs. L₂</td>
<td>16.49</td>
<td>26.77</td>
<td>10.28*</td>
</tr>
<tr>
<td>L₁ vs. L₃</td>
<td>16.49</td>
<td>30.44</td>
<td>13.95*</td>
</tr>
<tr>
<td>L₂ vs. L₃</td>
<td>26.77</td>
<td>30.44</td>
<td>3.67*</td>
</tr>
</tbody>
</table>

* p < .01.

a₁₁ = structuring style; L₂ = considerate style; L₃ = charismatic style.
Table Q20
A Summary Table of Newman-Keuls Post Hoc Tests
for Significant Leadership Style by
Group Productivity Interactions

<table>
<thead>
<tr>
<th>Task Adjustment</th>
<th>M</th>
<th>M</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Conflict</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$L_1G_1$ vs. $L_1G_2$</td>
<td>14.33</td>
<td>24.50</td>
<td>10.17*</td>
</tr>
<tr>
<td>$L_2G_1$ vs. $L_2G_2$</td>
<td>22.63</td>
<td>21.50</td>
<td>1.13</td>
</tr>
<tr>
<td>$L_3G_1$ vs. $L_3G_2$</td>
<td>15.79</td>
<td>15.17</td>
<td>0.62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specific Satisfaction</th>
<th>M</th>
<th>M</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>$L_1G_1$ vs. $L_1G_2$</td>
<td>37.25</td>
<td>24.42</td>
<td>12.83*</td>
</tr>
<tr>
<td>$L_2G_1$ vs. $L_2G_2$</td>
<td>32.25</td>
<td>27.21</td>
<td>5.04*</td>
</tr>
<tr>
<td>$L_3G_1$ vs. $L_3G_2$</td>
<td>39.79</td>
<td>39.08</td>
<td>0.71</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Satisfaction</th>
<th>M</th>
<th>M</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>$L_1G_1$ vs. $L_1G_2$</td>
<td>10.88</td>
<td>6.33</td>
<td>4.55*</td>
</tr>
<tr>
<td>$L_2G_1$ vs. $L_2G_2$</td>
<td>7.38</td>
<td>7.38</td>
<td>0.00</td>
</tr>
<tr>
<td>$L_3G_1$ vs. $L_3G_2$</td>
<td>11.21</td>
<td>10.92</td>
<td>0.29</td>
</tr>
</tbody>
</table>

* $p < .01$.

$L_1$ = structuring style; $L_2$ = considerate style;
$L_3$ = charismatic style; $G_1$ = high group productivity;
$G_2$ = low group productivity.
Table Q21

Multivariate Analysis of Covariance
Summary Table for the Dependent Measures

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Wilks' $\Lambda$</th>
<th>Approximate $F$</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Style (A)</td>
<td>.04</td>
<td>48.76</td>
<td>22</td>
<td>250</td>
<td>.0005</td>
</tr>
<tr>
<td>Group Productivity (B)</td>
<td>.54</td>
<td>9.80</td>
<td>11</td>
<td>125</td>
<td>.0005</td>
</tr>
<tr>
<td>A x B</td>
<td>.47</td>
<td>5.30</td>
<td>22</td>
<td>250</td>
<td>.0005</td>
</tr>
<tr>
<td>Covariates</td>
<td>.74</td>
<td>1.19</td>
<td>33</td>
<td>368</td>
<td>.2270</td>
</tr>
</tbody>
</table>

Note: $N = 144$. 
Table Q22

Student's t Tests for Differences Between Male and Female Participants' Perceptions of the Leadership Styles

<table>
<thead>
<tr>
<th>Leadership Style Manipulation Check</th>
<th>Gender</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male M</td>
<td>Female M</td>
<td></td>
</tr>
<tr>
<td>Structuring Style</td>
<td>25.79</td>
<td>29.27</td>
<td>142</td>
</tr>
<tr>
<td>Considerate Style</td>
<td>32.28</td>
<td>28.87</td>
<td>142</td>
</tr>
<tr>
<td>Charismatic Style</td>
<td>33.14</td>
<td>32.49</td>
<td>142</td>
</tr>
</tbody>
</table>

* p > .01.
Table Q23

Frequency Table for Participants' Compliance With the Leader's Request to Perform an Optional Task

<table>
<thead>
<tr>
<th>Leadership Style Treatment</th>
<th>Participants' Compliance With the Optional Task</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Structuring Style</td>
<td>44</td>
</tr>
<tr>
<td>Considerate Style</td>
<td>44</td>
</tr>
<tr>
<td>Charismatic Style</td>
<td>47</td>
</tr>
<tr>
<td>Total (%)</td>
<td>93.8</td>
</tr>
</tbody>
</table>

Note: N = 144.
Table Q24

Frequency Table for Participants' Compliance With the Leader's Request to Perform an Optional Task in the Presence of Group Productivity Effects

<table>
<thead>
<tr>
<th>Group Productivity Treatment</th>
<th>Participants' Compliance With the Optional Task</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>High Group Productivity</td>
<td>71</td>
</tr>
<tr>
<td>Low Group Productivity</td>
<td>64</td>
</tr>
<tr>
<td>Total (%)</td>
<td>93.8</td>
</tr>
</tbody>
</table>

Note: N = 144.
APPENDIX R

Recruitment of Experimental Participants:
A Description of the Management Training Project by the Course Co-ordinator
Course Coordinator:

Good morning/afternoon. My name is __________________. I am a member of the Faculty of Commerce and Co-ordinator for Commerce 220.

__________________ (instructor's name) has kindly allowed me to address you briefly today. I am here to tell you about a study that is being conducted at selected universities starting with a pilot project at UBC and which is being organized and implemented by the Faculty of Commerce and a consulting organization from downtown - The Mackenzie Institute.

The project has been designed to study the practical business skills of Commerce students. As you may know, there is a great deal of interest these days amongst business schools in finding ways to respond to the call by managers for more practical, applied skills in the graduates they hire from us. A recent Time magazine issue had an article on business schools in which the Deans of those schools were unanimous in their commitment to provide more "hands on" exposure for their students.

The purpose of the project I am discussing with you is intended to ensure that our business administration curriculum and teaching methods are responsive to industry's and government's future management needs. The project involves participation in a series of business simulations with other commerce students and requires only 2 hours of your time if you volunteer for it.

As you think about whether you would like to be involved in this project let me provide you with a few practical details.

1) If you volunteer and do take part in the project, in addition to a very interesting experience, you will receive a bonus of points toward your Commerce 220 final mark which will be worth 3% of your course grade. In other words, after your final mark has been calculated in this course, you will receive 30 additional points (3%) if you have participated in the project. As you will no doubt quickly realize, points added in this way could make a difference to your overall standing - and may be a decisive factor in changing your letter grade in the course (for example, from a fail to a pass, a pass to a second class, a second class to a first class) if you happen to be on the borderline between two grades.

2) I shall pass around a sign up sheet now which indicates a list of dates and times. Please return it to the instructor as soon as it has gone around the classroom this morning/afternoon. If you wish to sign up please print your name, phone number and section number. The Mackenzie Institute representatives will be on campus for the next month in temporary offices in Brock Hall and will direct this project.

3) Deadlines for sign up are as follows: To guarantee your participation in the project, you must sign up before October 14. Sign up sheets will be available before and after 220 classes. Sign up sheets will be available for a further week - that is until October 21st, if there are still any vacancies.
Participation is open to all Commerce 220 students in the Fall term. I hope you will give this matter serious thought and that you will participate. It is an interesting project and it represents a great opportunity to be part of a university-downtown partnership. Thank you. I will answer questions briefly now. I can also be reached at 228-6126 for further information.
APPENDIX S

Photographs of the Experimental Setting
Entrance

Secretary's Office
Manager's Office - View 1

Manager's Office - View 2
Workroom
APPENDIX T

Demographic Data Form
APPLICATION FORM

PLEASE ANSWER THE FOLLOWING QUESTIONS BY EITHER FILLING IN THE BLANKS OR CIRCLING
THE NUMBER OF THE APPROPRIATE ALTERNATIVE.

Age: __________

Sex:  1  Male  2  Female

Year of Commerce (e.g., first, second, etc.): __________

In what area of commerce are you majoring or planning to major?

1  Accounting & M.I.S.  7  Commerce & Law
2  Marketing  8  Industrial Relations Management
3  Industrial Administration  9  Urban Land Economics
4  Finance  10  Computer Science
5  Transportation & Utilities  11  Don't Know
6  Commerce & Economics

What is your previous work experience?

<table>
<thead>
<tr>
<th>Employer</th>
<th>Dates of Employment From Month/Year</th>
<th>To Month/Year</th>
<th>Worked Full Time (√)</th>
<th>Part Time (√)</th>
<th>Position * Managerial (√)</th>
<th>Non-Managerial (√)</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

* A managerial position involves supervising other people while a non-managerial position does not involve supervision of others.
APPENDIX U

Interview Questions
Questions About the Project

I'm going to ask you a few questions about the Management Training Project. First of all, what did you think was the purpose of the project? What did you think was expected from you? How do you think you were supposed to react to this project?

Questions About the Exercise

As I mentioned before, this is the first in a series of evaluations of the practical business skills of Commerce students. Later on, the project will use different simulations such as management games to examine students' practical business skills. So we needed your reaction to the exercise. How did you find it? Have you ever done this type of exercise before?

Questions About the Manager

Another part of this project will involve different managers in different cities across Canada. How did you find your manager?

Describe an actual or ideal manager that you would perform well for. What kind of person do you like to work for?

How closely did the manager correspond to that ideal? In what ways were they the same? In what ways were they different?

Have you worked for a woman manager before?

(If yes) On the whole, would you say your experience with this manager was more positive, the same, or more negative than your previous manager? Why?

(If no) In what way was working for a female manager the same as or different from working for a male manager?

Questions About the Students

We don't know if we should set up separate offices for the other students. How was it working with the other students in the same room?
General Questions

What would you change in the project to make it better?
Do you have any other comments or suggestions?

Just before you go, I'd like to ask you not to discuss your experience here with other students. We want to make sure we're accurately assessing the practical business skills of Commerce students. So if you wouldn't say anything about the Project to others until it ends on November 18th, it would be greatly appreciated.

I should also mention that we will get back to you with a general summary of the results in due course.

Thanks for your help.