

THE ROLE OF SELF-LEADERSHIP AND EMPLOYMENT CHARACTERISTICS
IN PREDICTING JOB SATISFACTION AND PERFORMANCE

by

Heather Elise Roberts

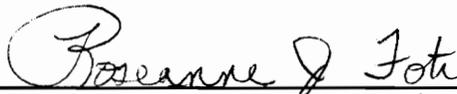
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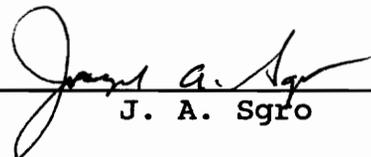
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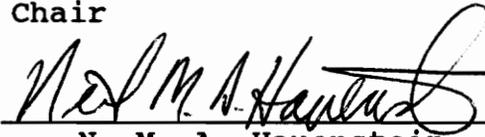
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(ABSTRACT)

Recent research in organizational psychology has recognized the value of exploring the person-situation interactional perspective as a determinant of work outcomes. The present field study investigated the interaction between a dispositional characteristic (self-leadership) and two situational characteristics (job autonomy and supervisory structure) in determining job satisfaction and employee performance. The situational characteristics accounted for a significant amount of variance for both job satisfaction and performance; however, self-leadership only accounted for significant unique variance in employee performance. Results showed significant effects for the hypothesized interaction for job satisfaction; however, the proposed interaction for performance was not supported. Implications of the current results and suggestions for future research are discussed.

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INTRODUCTION

Traditionally, organizational research has focused on the characteristics of the work environment (i.e., task identity and variety, autonomy, supervisory structure, feedback), and neglected specific characteristics of the employee when predicting work outcomes. Until recently, little attention had been given to the interactive effects of internal variables and situational determinants on the specific work outcomes of satisfaction and performance (Bittle, 1991). Although the relationship between job satisfaction and productivity is weak at best (Iaffaldano & Muchinsky, 1985; see Lott & Lott, 1965 for a review), numerous theories in organizational psychology have emerged in their quest to discover what variables lead to a happy and productive organization.

Historically, research has focused on how the organization can elicit positive attitudes and behaviors from the employees through the use of situational factors (i.e., job redesign, incentives and reward structures, amount and style of supervision), and have neglected the personal determinants that employees bring with them to the workplace. Although these situational models have been tested extensively, their value in explaining the variance in work outcomes appear negligible (Hackman & Lawler, 1971; Korman, 1966; Staw & Ross, 1985). Thus, current theories

that view job and leader characteristics as sole determinants of work outcomes are inadequate. Researchers need to move away from their emphasis on situationalism and begin to investigate the possibility that individual characteristics may be interacting with these job characteristics in determining satisfaction and performance.

Research in the area of self-directed and self-motivated behavior has only been given meaningful recognition in the last decade and has yet to receive the attention it requires in predicting job satisfaction and employee performance. Organizational research must investigate what role self-influence plays in the organizational environment. The present study tackles this challenge in focusing on whether the internal process of self-leadership modifies two traditional external characteristics of the job, autonomy and supervisory style, to produce various levels of job satisfaction and employee performance.

Job Autonomy

The job characteristics model posits that satisfaction and performance are determined by specific external characteristics of jobs and may be augmented by such job redesign methods as job enrichment and job enlargement (Hackman & Oldham, 1975, 1976). Job characteristics theory contends that there are five core job dimensions: skill

variety, task identity, task significance, autonomy, and feedback. Job autonomy is the job characteristic variable of interest within this study because of its relationship to self-influencing processes. Job autonomy is the job dimension that fosters experienced responsibility and is defined as "the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out" (Hackman & Oldham, 1976). Highly autonomous jobs allow incumbents to determine the order and pacing of job tasks, specific procedures for scheduling and accomplishing those tasks, and discretion in coordination with other employees.

Supervisory Structure

Supervisory behavior remains an important factor related to organizational effectiveness. Previous research on leadership has focused on the relationship between supervisory styles and subordinate satisfaction and performance (Ohio State Leadership studies; House, 1971; Schriesheim, Murphy, & Stogdill, 1974). Initially, it appeared as though leader behavior influenced the work context by directing employee attention to specific aspects of the job and thus influencing job perceptions. However, it has been posited that the behavior of supervisors and the job characteristics are perceived by employees as related,

rather than independent (Ferris & Rowland, 1981). While a number of leadership behaviors have been studied in past research, this study directs its attention to initiating structure and tolerance of freedom. Supervisory structure will be defined as the amount of structure administered by supervisors in terms of role definition and tolerance of freedom (Stogdill, 1963). The "Initiation of Structure" dimension is defined as "[the supervisor] clearly defines own role, and lets followers know what is expected" and the "Tolerance of Freedom" dimension is defined as "[the supervisor] allows followers scope for initiative, decision, and action" (Stogdill, 1963).

Self Leadership

Leadership has typically been viewed as a top-down process in which one person (designated the "leader") influences another (the "follower") to do what the leader wants done (Manz, 1991). More recently, theories have expanded to include transactional, democratic, and motivational leadership. However, many models still fail to recognize that work attitudes and performance are directly affected by internal variables (i.e., self-leadership).

Self-leadership goes beyond these traditional theories, and even beyond self-management theory, because it addresses the "why" and "what" as well as the "how" behind behavior (Manz, 1990). It is conceptualized as a comprehensive self-

influence perspective that concerns leading oneself toward performance of naturally motivating tasks as well as managing oneself to do work that must be done but is not naturally motivating (Manz, 1986). This broader view of self-influence includes self-management strategies as well as strategies for managing the natural motivational value of the task and the patterns in one's thinking (Manz, 1983; Manz, 1986). This provides for a more active role for members within an organization.

Manz and Sims (1991) divide their self-leadership strategies into two categories: (1) behaviorally focused strategies, and (2) cognitively focused strategies. Behaviorally focused strategies concentrate mainly on effective behavior and action, and are designed to help individuals organize and direct their own work lives more effectively. Specifically, these strategies include self-goal setting, self-observation/evaluation, self-cue management, self-reward, and rehearsal (Manz & Sims, 1991). Although constructive self-punishment has also been addressed as a behavioral strategy, research and writing have generally indicated that it is not a very effective strategy for controlling our behavior because it involves negative rather than positive self-applied results (Manz, 1992). Consistent use of self-punishment may impair motivation and stifle creativity. Cognitively focused

strategies emphasize effective thinking and feeling. Specifically, these strategies include opportunity thought, finding natural rewards at work, and efficacy expectations, (Manz & Sims, 1991).

Recently, Ball, Trevino, and Sims (1991) have proposed the dimensions of self-problem solving and initiative as more comprehensive indicators of self-leadership behavior. The self-problem solving dimensions refers to spontaneous problem resolution by subordinates without supervisory intervention. Initiative refers to subordinates' assuming greater responsibility and initiating change. Cox (1992) is currently investigating these meta-dimensions and has included items in his dissertation instrument to measure these two factors. Recognizing that this is exploratory in nature, the current study also is incorporating the meta-dimensions of self-problem solving and initiative, as well as the eight self-leadership strategies originally proposed by Manz and Sims (1990).

It is important to recognize that the focus of this leadership view is on the followers who become self-leaders. Rather than imposing authority, the manager may take on the role of teacher, coach, and model (Cox, 1992). The manager's task becomes largely that of helping followers to develop the necessary skills for work, especially self-leadership, to be able to contribute more fully to the organization.

Integration of the Variables

A common theme of these three variables is the concept of "control". Deci and Ryan (1991) recognized that recent work on the psychology of control has indicated that people need to experience control over their environment or their outcomes. Lawler and Rhode (1976) pointed out that control systems try to exert influence by identifying appropriate behavior, providing means to monitor behavior that is taking place, and coordinating, rewarding, and punishing this behavior. Individual control is a variable that has been shown to play a significant role in human behavior. The extent to which an individual believes he or she can directly affect the environment has considerable impact on perceptions of that environment and reactions to it.

Spector's (1986) meta-analysis of perceived control studies found that high levels of perceived control were associated with high levels of job satisfaction. Self-leadership implies that the employee is necessarily responsible for and "in control" of his or her cognitions and behaviors. This perspective views each individual as possessing an internal self-control system (Manz, 1979). Job autonomy by definition requires employee control over work scheduling, decision-making, and the procedures to be used in carrying it out. Evidence has also indicated that the amount of control evidenced in supervisory style affects

subordinate performance and attitudes (Fleishman, 1973; Kerr and Schriesheim, 1974). A high amount of supervisory structure indicates that there is a great amount of supervisory control in directing the tasks of the employee and in defining individual roles; and very little freedom for employees to take initiatives or use their own judgment.

In the past, the two situational variables have been independently shown to relate to the dependent variables of job satisfaction and performance. To date no one has examined the interaction of self-leadership process and situational characteristics. The purpose of the current study is to examine the interactive effects of self-leadership ability and two situational characteristics on job satisfaction and employee performance. Several questions will be addressed. First, does the degree of self-leadership ability affect the amount of autonomy and the amount of supervisory structure needed by the individual to produce various work outcomes? Specifically, will job satisfaction and performance be determined by an interaction of scores on the three independent measures?

LITERATURE REVIEW

This literature review includes a brief discussion and review of two external employment characteristics of job outcomes, namely job autonomy and supervisory structure. The major focus of the literature review will be on the presentation of the internal attribute of self-leadership and its integration with the external employment characteristics.

Job Autonomy

Over the last 25 years, job design has occupied a prominent position in the research literature on organizational behavior. The current emphasis on job design is prompted by the fact that today's employees tend to bring more abilities, higher expectations, and a greater desire for self-responsibility to the workplace; specifically, employees want to be more involved with their work.

The most widely accepted contemporary perspective on task design is Hackman and Oldham's (1976) job characteristics theory (see Griffin, 1982; Hackman & Oldham, 1980; and Roberts & Glick, 1981 for more comprehensive reviews). Inspired by the initial studies of Turner and Lawrence (1965) and Hackman and Lawler (1971), Hackman and Oldham (1976) extended and refined the Job Characteristics theoretical (JCT) model. The model suggests that objective attributes of individuals' jobs primarily determine their

perceptions of and responses to tasks (Hackman & Oldham, 1976). The proposed five core job dimensions of skill variety, task identity, task significance, autonomy, and feedback are seen as prompting three psychological states (experienced meaningfulness of work, experienced responsibility for the outcomes of the work, and knowledge of results of the work activities), which in turn lead to a number of personal and work-relevant outcomes (Hackman & Oldham, 1976). It is postulated that an employee experiences positive affect to the extent that the three psychological states are present. Pierce and Dunham (1976) note that empirical research has tended to support this approach to the study of task design. Although most studies have found results generally supportive of the theory, a more recent review of the literature concluded that empirical evidence for the task design/performance correlation is weak and inconclusive and has not been as consistently demonstrated as have task design/affective response correlations (see Griffin, Welsh, Moorhead, 1981, for a review).

Loher, Noe, Moeller, and Fitzgerald (1985) conducted a meta-analysis of the job-characteristics-job satisfaction relation based on 28 studies published in the late 1970s and early 1980s to determine the "true" relation between job characteristics and job satisfaction. Results indicated a

moderate relation between job characteristics and job satisfaction. Loher, et al. (1985) found this relationship to be stronger for employees high in growth need strength (GNS). Situational characteristics appear to be more important in determining satisfaction for employees low in GNS. Although these results generally support the propositions of job characteristics theory, Loher et al. (1985) and others (Pierce & Dunham, 1976; Roberts & Glick, 1981) noted that conceptual and methodological difficulties plague empirical research on job characteristics.

In recent years, the job characteristics theory has been attacked from several angles. Controversy regarding the JCT literature has developed around the issue of whether incumbents' ratings of jobs on the JDS are based on objective characteristics of jobs or on extraneous social or personal influences. Of theoretical concern is whether or not ratings of job characteristics obtained from job incumbents on the JDS can be influenced by factors other than the objective properties of the job. Researchers need to determine the extent to which such ratings obtained from job incumbents are isomorphic with objective properties of the job (Ilgen & Hollenbeck, 1992). One theme involving objectivity deals with the effects of incumbents' characteristics and experiences on their ratings of task characteristics. To address this issue, correlations

between employees' job ratings and their personal characteristics are examined for individuals who perform the same task. Any significant correlations obtained point to a lack of objectivity. Results have remained equivocal regarding whether personal factors do or do not influence ratings (Caldwell & O'Reilly, 1982; O'Reilly, Parlette, & Bloom, 1980). Other criticisms noted in a more recent review by Griffin, Bateman, Wayne, and Head (1987) have included measurement deficiencies, inconsistent operationalization and interpretation of task design theory, and poor research designs.

An alternative perspective, in partial response to the emerging body of criticism of JCT, is the social information processing model presented by Salancik & Pfeffer (1978; see Thomas & Griffin, 1983 for a review of the literature). The social information processing (SIP) model described by Salancik & Pfeffer (1978) contends task perceptions and attitudes in the work place are as much a response to social cues in the work environment as to objective task characteristics. Pfeffer (1981) summarizes the model as follows:

First, the individual's social environment may provide cues as to which dimensions might be used to characterize the work environment... Second, the social environment may provide information concerning how the individual should weight the various dimensions-whether autonomy is more or less important than variety of skill, whether pay is more or less important than

social usefulness or worth. Third, the social context provides cues concerning how others have come to evaluate the work environment on each of the selected dimensions... And fourth, it is possible that the social context provides direct evaluation of the work setting along positive or negative dimensions, leaving it to the individual to construct a rationale to make sense of the generally shared affective reactions (p. 10).

The most frequently used methodology to research the SIP model has been laboratory experiments where researchers attempt to manipulate both objective task characteristics and social information cues about the task. The dependent variables most commonly studied in association with variations in objective task characteristics and social information cues are perceived task characteristics, satisfaction, and performance. While these manipulations appear to influence satisfaction and perceived task characteristics, the effects on performance are contradictory (Thomas & Griffin, 1983).

The social information processing model has been under recent attack because investigations have been limited to the laboratory setting. Field research on the SIP model has been scarce and inconsistent; however, Griffin (1983) tested the model in a field experiment and results indicated that the social cues were just as powerful as the objective changes in altering perceptions and attitudes. However, Thomas and Griffin (1983) concluded from their meta-analysis that "none of the 10 studies serves even minimally to refute

the task attributes [job characteristics] view. Further, none of the 10 studies provides specific and exact support for the SIP framework. In fact, the majority of the research reviewed here offers more support for an overlapping viewpoint than for either of the other models" (p. 679). In support of this assertion, research is leaning toward an integration of the effects of social cues and task characteristics to explain the effects on work outcomes (Griffin, et al., 1987).

In recent years, proponents of the dispositional approach to work outcomes have increasingly questioned the assumption that changing work environments leads to changes in job attitudes and affective responses (Newton & Keenan, 1991; Schneider, 1987; Staw, Bell & Clausen, 1986; Staw & Ross, 1985). For example, Schneider (1987) argued that "the attributes of people, not the nature of the external environment, or organizational technology, or organizational structure, are the fundamental determinants of organizational behavior" (p.437). Staw and Ross (1985) argued that "many situational changes such as job redesign...may not affect individuals as intended" (p.478). From an applied perspective, the Staw and Ross (1985) conclusions, if valid, indicate a need to re-examine the value of personnel programs designed to affect worker attitudes and consequent behaviors through changes in the work environment.

The results of a study by Newton and Keenan (1991) also suggest a stronger dispositional influence, but with situational and interactive effects on job attitude variables. Their findings provided evidence of job attitude or affect stability across changes in environment although the employee responses may be conditioned by situational change. Nonetheless, Gerhart's (1987) results on dispositional factors indicate that job design agents need not be overly concerned. Evidence supported Hackman and Oldham's (1975) theory indicating that changes in situational factors remain important predictors of job satisfaction (Gerhart, 1987).

While many studies have examined the effects of job design on worker affective and behavioral outcomes, few studies have specifically focused on the job characteristic of autonomy. Early studies did find that the job must allow a worker to feel personally responsible for a meaningful portion of his or her work (Hackman & Lawler, 1971; Turner & Lawrence, 1965). Autonomy seems to be the key job characteristic that causes workers to feel personal responsibility for their work. In jobs high on measured autonomy, workers tend to feel that they own the outcomes of their work; in jobs low on autonomy, workers more often feel that successes and failures are due to the good work, or the incompetence, of other workers or the supervisor. Lawler

and Rhode (1976) recognized that it is not the objective properties of job characteristics that affect employee attitudes and behavior, but how they are experienced by the employees. Regardless of the amount of autonomy employees really have in their work, it is how much they perceive they have that affects their reactions to their jobs.

The extent to which individuals believe they can directly influence the environment impacts their perception of and reactions to that environment (Lawler & Hall, 1970; Spector, 1986). Spector (1986) conducted a meta-analysis of perceived control studies and found that high levels of perceived control were associated with high levels of job satisfaction, commitment, involvement, performance, and motivation. Similar patterns were found for autonomy and participation studies when analyzed separately (Spector, 1986). The redesign of work, undertaken and accomplished by the job incumbent, can result in a personal sense of competence, self-control, and purpose. That is, effective work design changes can be especially enhanced by eliciting them directly from those who do the work rather than by simply imposing external work design constraints (Sims & Lorenzi, 1992). Sims and Lorenzi (1992) contend that personal perceptions of self-competence, self-control, and a sense of purpose, while not observable, are nonetheless valued by employees, sometimes more than tangible rewards

and externally administered outcomes. In recognition of this view, organizational attempts to increase job satisfaction and performance generally originate in autonomous environments.

Although research has generally supported theories of job design (Aldag & Brief, 1979; Hackman & Oldham, 1975; Pierce & Dunham, 1976), several researchers have indicated that the influences of other potential moderators should be investigated, particularly their effects on behavioral outcomes (Fried & Ferris, 1987; Griffin, et al., 1987; Loher, et al., 1985). For instance, situational variables such as supervisory structure, organizational climate, and coworker relations may moderate affective and behavioral outcomes in the workplace. In addition, neither job characteristics theory nor the social information processing model recognizes that differences in individuals can at times account for a good deal of the variance in effort, performance, and attitudes in the work environment.

Supervisory Structure

One moderating variable that has been investigated at length is supervisory behavior structure (Ferris, 1983; Ferris & Rowland, 1981; Griffin, 1980; House, 1971; Kerr & Jermier, 1978). Pfeffer (1977) addressed the considerable disagreement concerning the basic dimensions of leader behavior in his review of the definition and measurement of

leadership. Several researchers have conceived leadership behavior in terms of the authority and discretion that subordinates are permitted (Heller & Yukl, 1969; Vroom & Yetton, 1973), while others have focused on leadership in terms of the closeness and punitiveness of the supervision (Day & Hamblin, 1964).

A search of over three thousand empirical studies has failed to uncover any single type of leader behavior which is consistently related to group or individual productivity (Stogdill, 1974). These results suggest that the extent to which a particular leader behavior is related to productivity is conditioned by a number of situational factors and thus the leader behavior-productivity relationship may be indirect (Schriesheim, Mowday, & Stogdill, 1979).

Fiedler's contingency model (1967) and Bowers & Seashore's (1966) theory on shared leadership were early attempts to understand the structure of the leader-situation interaction and the dynamics of the leadership process. Fiedler's model represents the first concerted attempt to apply Lewin's (1951) premise that behavior is a function of the Person x Situation interaction to leadership research (Strube & Garcia, 1981). The model holds that the effectiveness of the group or organization depends upon the proper match of situational control and leadership style as

measured by the Least-Preferred Coworker (LPC) score. Fiedler's model has been criticized for both conceptual and methodological weaknesses, including its low reliability, statistical validity, and difficulty in interpreting the LPC. In addition, the model is too static because it assumes that people have stable styles of leadership that lean either toward people-centered behaviors or toward task-centered behaviors. The underlying assumption is that since leadership style is a stable personal characteristic, it is up to the organization to match the individual to an appropriate situation. Alternative theories on the person-situation interaction perspective (e.g., peer leadership, transactional leadership, SuperLeadership) have improved on Fiedler's perspective because they consider the dynamic nature of the leader, the subordinates, and situational characteristics. One example of an alternative contingency model is Griffin's (1979) model which describes four leadership styles and assumes that leaders may vary their style to fit the situation. This dynamic perspective has been increasingly accepted in the leadership literature.

Bowers & Seashore's (1966) early study extended previous investigations of leadership behavior by suggesting that most leadership functions can be carried out by subordinates as well as managers. Sometimes the leadership functions are carried out by the supervisor, and sometimes

they are carried out by the subordinates; however, their model did not intend to imply that designated leaders are unnecessary. Recommendations for employee involvement were still novel at that time, but sound very similar to the current employee-oriented management styles of participative leadership and SuperLeadership.

The most comprehensive research program in the area of leadership has been the series of Ohio State Leadership Studies. The dimensions that emerged from the Ohio State leadership studies focused on Initiating Structure and Consideration (Halpin & Winer, 1957). These dimensions have received the most attention in the literature. The Ohio State studies have also received their share of criticism contending that the studies fail to take situational variables into account, despite the fact that the Ohio State researchers wrote that "research has indicated that leadership is to a great extent situational, and that what is effective leadership in one situation may be ineffective in another" (Fleishman, 1953; see Stogdill, 1948, for similar sentiments).

The linkage between leader-initiating structure and employee attitudes and behaviors has been examined both theoretically (House, 1971) and empirically (Kerr, Schriesheim, Murphy, & Stogdill, 1974). Leader initiating structure has been found at various times to have

significantly positive, significantly negative, and insignificant relationships with subordinate satisfaction and with leader and subordinate performance. Korman (1966) reviewed the research literature through 1964 and reported relatively small and inconsistent results concerning the usefulness of Initiating Structure to the study of leadership. However, more recent reviews by Fleishman (1973), Kerr and Schriesheim (1974), and Kerr, Schriesheim, Murphy and Stogdill (1974) led to more positive conclusions regarding the relationship to work outcomes.

House and Mitchell (1974) in their discussion of the path-goal theory of leadership, suggest that the effect of the leader's initiating structure behavior will be a function of how deficient the work environment is with regard to the provision of structure. These observations suggest that the leader's structuring behavior will not make a favorable contribution to employee attitudes and/or behavior if other aspects of the work environment (i.e., the job, the technology, or the structure of the work unit) provide sufficient structure. Ferris & Rowland (1981) proposed that the behavior of leaders constitutes one component of the job context and that it exercises influence through its impact on subordinate's perceptions of job characteristics. Consequently, Ferris and Rowland (1981) hold the assumption that the behavior of leaders and job

characteristics are perceived by employees as related rather than independent, as previously implied (House, 1971).

Focusing on leader behavior and job design, Kerr and Jermier (1978) suggested that an interaction should be expected between job characteristics and leader behavior structure. Kerr (1977) suggests that substitutes render hierarchical leadership both unnecessary and impossible in terms of the potential impact of leadership on important outcomes. Pierce, Dunham and Cummings (1984) pursued this explanation and established that technology, job, and work unit structure were found to be substitutes for leader structure. A significant focus of the investigation centered on the effects of leader structuring behavior. Except under one special circumstance, leader behavior as a source of structure did not explain additional variation in employee responses beyond that attributable to structure from the job, the technology, and the work unit. When the total amount of structure provided by the combined effects of the task, the technology, and the work unit is low, there is a stronger relationship between structuring behavior of the leader and the attitudinal reactions of the leader's subordinates.

Griffin (1980) found that when there is an individual-task congruence, there is probably little that the leader can and/or should do to enhance employee satisfaction. The

leader, however, may be able to enhance satisfaction when there is a poor task-individual match. The indirect test of Griffin's (1980) model which integrates individual, task design, and leader behavior variables into one framework yielded moderate support of the integration of task and leader variables. The results of this test suggested that leader behavior and task design variables taken together explain a significantly greater amount of variance in overall satisfaction and satisfaction with supervision than do either leader behavior or task design variables taken alone.

Overall, the findings indicated that the primary impact of appropriate leader behavior may be on affective rather than behavioral variables. One explanation of Griffin's (1980) is that it may be that neither task design nor leader behavior relates to productivity. An alternate interpretation is that task design and leader behavior are just two of many variables which interact to determine performance. Taken apart from these other variables, task design and/or leader behavior may not account for enough variance in productivity to reflect a significant correlation. This explanation appears the most defensible. It appears that better results apparently emerge when moderating factors are taken into account, including situational characteristics (Heller & Yukl, 1969; Pierce,

Dunham & Cummings, 1984; Vroom & Yetton, 1973), subordinate personalities (Vroom, 1959), and self-leadership ability (Manz & Sims, 1980).

Self-leadership

While there have been numerous studies concerned with the interrelationships among job characteristics and job attitudes, few studies have concerned themselves with the question of whether or not self-influence ability moderates the job characteristic-job satisfaction relationship.

Early work by Angell and DeSau (1974) tested the relationship between leadership and group process in leaderless, democratically-led, and directionally-led therapy groups. Only the leaderless group showed increases in problem-solving behavior over time. The authors attribute this to the absence of direct leader support.

Seligman and Desmond (1975) offered a historical review of leaderless group therapy that supports the observations of Angell and DeSau (1974). According to Seligman and Desmond (1975), proponents of leaderless group therapy observe that "patients are actually helped by their peers and are cast into a constructive role of 'helper'". Shared leadership increases an individual's sense of responsibility. The generalizability of this research and commentary to non-therapeutic settings cannot be assumed, although the research findings of Wheman, Goldstein, and

Williams (1977) indicated that individuals in "no-leader" groups were more likely to take risks and took risks more often. Nevertheless, it is broadly consistent with the idea that an absence of hierarchical control can promote greater personal responsibility and collaborative problem solving among followers. It is also consistent with Manz and Sims' (1990, 1991) assertion that self-leadership, with its accompanying feelings of ownership, commitment, and personal responsibility, can fill the void created by dissolving hierarchical reporting structures.

The concept of self-leadership is derived primarily from research and theory in two areas of psychology: (1) social learning theory (Bandura, 1977b), and (2) cognitive evaluation theory (Deci, 1975). Social learning theory recognizes the adaptation and change of human behavior as a complex process. Social learning theory gives attention to the three important processes of: (1) vicarious learning or modeling; (2) symbolism; and (3) self-control (Kreitner, & Luthans, 1984; Wood & Bandura, 1989). Modeling advances that complex behavior can be learned quickly through observation (e.g., subordinates can model managers). Symbolism maintains that employees can imagine solutions to problems and anticipate consequences to actions. Self-control specifies that employees can control their own behavior if they can cue it, support it, and reward or

punish it. Cognitive evaluation theory emphasizes intrinsic motivation and providing "natural" rewards. In cognitive evaluation theory, an individual's feelings of self-determination and competence are central to the experience of intrinsic motivation (Deci, 1975). Specifically, rewards that increase these intrinsic outcomes will increase intrinsic motivation and affect subsequent behavior.

Although deeply entrenched in the social learning theory of Bandura (1977b), the term itself, "self-leadership", has only been coined recently by Charles Manz (1986). More recently, Manz and Sims have studied how managers can provide these self-leadership skills for subordinates by encouraging them to develop their own self-leadership capability (Manz & Sims, 1989; Manz & Sims, 1991). This management style of "leading others to lead themselves" is referred to as "SuperLeadership" and they refer to managers who practice this as "superleaders" or "un-leaders" (Manz & Sims, 1991).

Manz and Sims (1987) have compared their self-management leader behaviors with other notable leader-behavior dimensions, including the Initiating Structure Dimensions of leadership developed by the Ohio State leadership studies program, and the more recent Leader Prototype Elicitations developed by Lord, Foti, and DeVader (1984). Although some of the leader-behavior variables

described in their research are similar to those found in the existing leadership literature, there appear to be fundamental differences in how the leader functions are carried out. In particular, there are significant distinctions in terms of the shift in source of control from the leader to the follower (Manz & Sims, 1987). In a review of current models on self-management, Mills (1983) proposed that predictability of the self-managed behavior may be realized by procedures outside the formal leadership domain.

Manz and Neck (1991) hold the view that managers, at their best, only influence the way employees manage themselves. Kerr and Jermier (1978) put this in more extreme terms by stating that certain individual, task, and organizational variables act as "substitutes for leadership," negating the hierarchical superior's ability to exert either positive or negative influence over the subordinate's attitudes and effectiveness.

Leadership substitutes, as suggested by Kerr (1977), replace or "act in the place of" a specific leader behavior. The concept of "substitutes for leadership" has been used to explain the occasional successes and frequent failures of leadership predictions. Howell and Dorfman (1981) empirically addressed Kerr and Jermier's work and found mixed results, indicating that some factors were only weak "substitutes for leadership". Only one of the substitutes

rendered leadership impossible, although several were important predictors of job satisfaction and organizational commitment. However, they did not address self-leadership or job autonomy.

Manz and Sims (1980) devoted a paper to focus on a generally neglected substitute for leadership: the capability of the subordinate to exercise self-management. They assert that self-management by individuals can be instrumental in achieving organizational goals, and can reduce the need for close supervision because it can indeed be a "substitute for leadership". Leaders within traditional frameworks have often set standards and created incentive programs in order to encourage the desired outcomes from their subordinates. Bandura (1977a) emphasizes that self-motivation, goal setting and self-evaluative reactions can serve to formulate the standards against which to evaluate performance. When individuals make self-rewarding reactions conditional on attaining a certain level of behavior, they generate self-inducements to persist in their efforts until their performances match self-prescribed standards. Perceived negative discrepancies between performance and standards create dissatisfactions that motivate corrective changes in behavior (Bandura, 1977a). Both the anticipated satisfactions of desired accomplishments and the negative appraisals of insufficient

performance thus provide incentives for action. Having accomplished a given level of performance, individuals often are no longer satisfied with it and make further self-reward contingent on higher attainments.

Although Manz (1992) asserts that all individuals have the ability to exercise self-leadership, there may be great variation in the extent to which individuals do so. Some individuals will be better candidates for self-leadership than others and may implement these faculties quite naturally in both their work and personal environments. There has been a recent emphasis on the concept of matching or "fitting" the individual with the job. Today's employees tend to bring more abilities, higher expectations, and a greater desire for freedom and self-responsibility to the workplace than did their predecessors. To match the characteristics of the job to the needs of the individual, job enrichment efforts have generally applied theories that describe how the interaction of job characteristics and individual characteristics are related to organizationally desirable outcomes.

Gustafson and Magnusson (1991) have already proclaimed the need to examine whether task characteristics moderate the relationship between patterns or profiles of dispositions and work outcomes. This allows the researcher to define individuals by a pattern or profile across a

number of variables. It has been implied that individuals with certain dispositions are better suited to particular types of job environments. Bittle and Hauenstein (1992) also concluded that the debate over the effects of dispositions and situational characteristics on job attitudes and job performance should be studied from an interactionist perspective. Just as Griffin, et al. (1987) concluded that it is logical that task characteristics and social cues interact to predict job satisfaction, it is just as likely that dispositions interact with situational determinants of job attitudes. The amount of self-leadership ability an individual has may interact with the situational determinants of the job.

The Current Study

Summary and Hypotheses

Although organizational psychologists have acknowledged that satisfaction and performance generally do not covary, numerous theories have assumed that "it is possible to achieve a world where both satisfaction and performance will be present" (Staw, 1986, p.41). As noted earlier, most employment models which attempt to predict attitudinal and behavioral outcomes emphasize the external/situational determinants of the job. These models fail to recognize that work outcomes can be directly affected by internal/dispositional variables. Little research has addressed the

interactive effects of dispositional/situational variables. This study takes the approach that an individual's response to the job is affected by person-variables, job-variables, and supervisory-variables and their interactions.

The present study examines the interactive effects of the work environment (job autonomy and supervisory structure) and a specific internal disposition (self-leadership) on job satisfaction and job performance. The first goal of the study is to determine whether there is a significant difference in job satisfaction based on a pattern of employee and employment variables. Hypotheses 1a and 1b reflect this goal and state:

Hypothesis 1a: Employees who score low on supervisory structure and high on self-leadership and job autonomy, and employees who score high on supervisory structure and low on self-leadership and job autonomy will have the highest job satisfaction.

Hypothesis 1b: Employees who score high on supervisory structure and self-leadership and low on job autonomy, and employees who score low on supervisory structure and self-leadership and high on job autonomy will have the least job satisfaction.

The second goal of the study is to determine whether there is a significant difference in job performance based on the pattern of employee and employment variables.

Hypotheses 2a and 2b reflect this goal and state:

Hypothesis 2a: Employees who score low on supervisory structure and high on self-leadership and job autonomy will have the highest evaluations on performance appraisals.

Hypothesis 2b: Employees who score low on supervisory structure and self-leadership and high on job autonomy will have the lowest evaluations on performance appraisals.

METHOD

Subjects

Respondents were 76 employees (10 men and 66 women) from two divisions of a large manufacturing organization in the mid-Atlantic region. The 76 participants represented a 77% response rate. Participants had non-exempt status and primarily represented the EEOC job categories of "Office and Clerical" and "Technicians". Demographic characteristics of the sample are presented in Table 1.

Insert Table 1 about here

Instruments

Three self-report questionnaires were used to tap the independent variables of self-leadership, job autonomy, and supervisory structure (see Appendices B-D for questionnaire items; see below for validation information and description of the independent variables). The fourth measure included in the questionnaire packet assessed the dependent variable of job satisfaction (see Appendix E for items; see below for description and validation information on the dependent variables). The second dependent variable, job performance, was obtained from the standard performance appraisal form used by the organization.

An additional measure of job autonomy was conducted through the collection of objective measures of autonomy

points assigned by the organization to individual job positions. This was conducted to determine if there was convergence between the participants' self-report measures and the organizational assessment.

Procedure

Three weeks before the study began, the Director of Human Relations for each of the divisions sent a letter to all employees stating the nature of the project and support for participation. Data from each division was collected in two phases. Employees participated in the first phase of the study by completing the questionnaire packet. The second phase of the study involved the collection of recent performance appraisal data from the human relations department of each division. This was done with the assistance of a designated coordinator within the human relations department for purposes of respondent anonymity.

All data was collected on-site during working hours. Multiple sessions of morning and afternoon intervals were conducted in the first phase to accommodate the schedules of employees. Employees reported to the designated research site in groups of three to six to complete the questionnaires. Employees who failed to appear at a pre-scheduled time were asked to attend a subsequent session.

Phase I. Participants were seated according to the location of their namecards above a numerically coded

questionnaire packet. Sessions began with the researcher reading a cover letter that stated the purpose of the study was to research job characteristics and employee attitudes. The researcher assured the confidentiality of employee responses and answered any questions about the procedure at that time. The researcher instructed the participants to verify that the number on the namecard matched the number on the questionnaire to insure the correct match of responses with performance data, and then were instructed to take the card with them when the session was over and destroy it. The requested demographic information was strictly for research purposes to assess the overall results and were not used for identification purposes.

After this introductory period, participants completed the questionnaires on self-leadership, job autonomy, supervisory structure, and job satisfaction.

Phase II. Performance appraisals from the most recent quarter were obtained and recorded from the employee files of the Human Resources department in each unit for analysis purposes. This was done by a Human Resources representative who recorded the numeric performance appraisal score next to each employee's coded numbers. No identifying information such as names or departments were provided to the experimenter for the purposes of eliminating experimenter bias and to protect the employees' rights to privacy.

Independent Variables

Self-Leadership. Self-leadership was measured with the Self-Leadership Questionnaire (SLQ; Cox, 1992). The Self-Leadership Questionnaire was created by Cox (1992) with the help of Sims for the purposes of data collection and is a modified version of the Self-Leadership Behavior Items developed by Manz and Sims (1987). Answers are scored on a 5-point scale ranging from "describes me very well" to "does not describe me at all". A sample item of a behaviorally-focused strategy statement is, "I like to work towards specific goals I set for myself" (See Appendix B for SLQ items).

Preliminary factor analysis indicates that the items from Cox's instrument have a respectable loading (a low of .36 to a high of .94) on a nine-factor solution encompassing problem-solving, initiative, self-observation/evaluation, self-goal setting, self-reward, opportunity thought, efficacy expectations, natural rewards, and teamwork (J. F. Cox, personal communication, September 9, 1992). Two modifications of Cox's instrument were deemed necessary for the current study and require explanation here: first, although Cox includes a ninth factor, "teamwork" in his current research, this was eliminated in the current study because the items were not logically related to the characteristics of the current study's sample; and second,

although Cox was forced to revise his original 11-factor questionnaire to shorten its length by removing the items relating to the two additional factors of self-cue management and rehearsal, I elected to leave the two additional factors intact and included all items from the original questionnaire that comprised ten-factors (See Appendix B).

Job Autonomy. Job autonomy was measured with the autonomy subscale from the Job Diagnostic Survey (JDS; Hackman & Oldham, 1975). This dimension is measured by three items which are rated on a 7-point Likert scale. A sample item is, "The job gives me considerable opportunity for independence and freedom in how I do the work" with answers ranging from "very accurate" to "very inaccurate" (See Appendix C for JDS items). Hackman and Oldham (1975) obtained an internal reliability coefficient for 658 employees of .66. Dunham (1976, as cited in Cook, Hepworth, Wall, & Warr, 1981) presented an alpha coefficient of .73 from 784 white collar employees.

To determine whether there was a potential confounding of job autonomy perceptions with self-leadership ratings, an objective measure of job autonomy was obtained through organizational records. Job analysis procedures performed by the organization determine the number of job autonomy points (JAP) assigned to each position. Job autonomy points

were not available for the four respondents who marked "Other" as their job classification. The number of points specific to each position was correlated with employees self-report measures of job autonomy to determine if there was a convergence of ratings.

Supervisory Structure. Supervisory structure was measured with a modified form of the "Initiation of Structure" and "Tolerance of Freedom" subscales of the Leader Behavior Description Questionnaire - Form XII (LBDQ-XII; Stogdill, 1963). Each subscale consists of ten items, and answers are scored on a 5-point Likert scale ranging from "always" to "never". Sample items from the Initiating Structure and Tolerance of Freedom subscales are, "He or she encourages the use of uniform procedures" and "He or she allows me complete freedom in my work", respectively (See Appendix D for LBDQ-XII items). Stogdill (1963) presented Kuder-Richardson internal reliabilities for 185 administrative officers of .75 for Initiating Structure, and .79 for Tolerance of Freedom. Szilagyi and Keller (1976, as cited in Cook, et al., 1981) obtained a Spearman-Brown internal reliability coefficient of .87 for Initiating Structure. Unfortunately, the source publication does not show analyses of relationship among scales, nor explore scale independence (Cook, et al., 1981).

Demographic Variables

Seven demographic variables were included at the end of the questionnaire administered in Phase I (See Appendix F). The seven items include job classification, job tenure, length of employment under current supervisor, organization tenure, age, gender, and education level.

Dependent Variables

Job Satisfaction. Job satisfaction was measured with the twenty-item short form of the Minnesota Satisfaction Questionnaire (MSQ; Weiss, Dawis, England & Lofquist, 1967). Overall job satisfaction responses are scored on a 5-point Likert scale with answers ranging from "very satisfied" to "very dissatisfied". A sample item is, "The feeling of accomplishment I get from the job" (See Appendix E for MSQ items). The source presents Hoyt internal reliability coefficients yielding a median of .90 and a range from .87 to .92. Test-retest reliability is reported as .89 across one week and .70 across one year. Jermier and Berkes (1979, as cited in Cook, et al., 1981) observed a Kuder-Richardson internal reliability coefficient of .92.

Performance. Performance was determined by the most recent performance appraisal available from the respondent's employment file. This performance appraisal was developed in-house and is protected by the organization. It has been in use across all divisions for approximately 45 years. An

overall job performance score based on a 5-point Likert scale is yielded at the bottom of the appraisal form after averaging the subscales of job knowledge and skill, volume and quality of work, attendance and lateness, interpersonal relations, safety and housekeeping, and sense of responsibility.

RESULTS

Descriptive Statistics

Table 2 shows the means, standard deviations, and intercorrelations among all measures. Coefficient alpha reliabilities are presented on the diagonal. Coefficient alpha is an estimate of internal consistency based upon the analysis of the variance-covariance structure of item responses (Crocker & Algina, 1986). All but one reliability, JA, exceed .80. The low reliability of JA can be explained by the small number of items used on this scale (JDS items=3). In addition, an inspection of the data indicated there may have been a problem with respondents' inconsistent answers to the reverse-scored item.

Insert Table 2 about here

Moderated Regressions

Hypotheses were originated within the framework of the moderator model (Baron & Kenney, 1986); therefore, moderated regression was the analytical technique employed to test the hypotheses.

Hierarchical regressions were run for each dependent variable of job satisfaction and job performance to test whether there was an interaction among the person variables of self-leadership (SL) and the situation variables of job

autonomy (JA) and supervisory structure (SS). Previous studies have demonstrated that situational factors often influence performance and satisfaction responses; therefore, both situational factors of JA and SS were entered into the regression equation at Step 1. SL was entered in Step 2 to determine if the person-variable added any additional variance. The two-way interactions (SL x JA, SL x SS, JA x SS) were entered in Step 3, and the SL x JA x SS interaction was entered in Step 4. Moderated effects are indicated by the presence of a significant three-way interaction while controlling for the main effects of the predictors. Although the main effects are conceptually irrelevant in testing these hypotheses, the amount of unique variance accounted for by self-leadership, job autonomy, and supervisory structure are reported for each analysis.

A preliminary examination of the correlation matrix indicated that multicollinearity did not appear to be a problem among the predictors. However, to confirm that multicollinearity was not a problem in this study, the variance inflation factor (VIF) was included in the statistics statement for each of the moderated regression analyses. VIF measures the interrelationships among the independent variables in the model. The VIF will become large if one variable is highly related to another and affects the estimate of the relationship with the dependent

variable. If all variables were orthogonal to one another the VIF would be one. VIFs which are greater than 10 are considered to have multicollinearity, VIFs less than 6 are considered free from multicollinearity, and VIFs between 6 and 10 are considered suspect and should be examined with caution in multiple regression analyses (Montgomery & Peck, 1982). None of the VIFs in the present analyses exceeded 6; therefore, it appeared that multicollinearity was not a problem in the current study.

Hypotheses. Hypothesis 1a predicted that high (low) amounts of employee self-leadership and job autonomy and a low (high) amount of supervisory structure will interact to generate the highest job satisfaction. Hypothesis 1b predicted that high (low) amounts of employee self-leadership and supervisory structure and low (high) amount of job autonomy, will interact to produce the least job satisfaction. Moderated regression results are presented in columns 1, 2, and 3 of Table 3. R^2 for the full model predicting satisfaction was .29. As indicated in the table, the SL x JA x SS interaction was significant at the desired .05 criterion level (sig F change = .01)., indicating the data supported the hypothesized moderated effects.

Three of the four predicted interactions from Hypotheses 1(a) and 1(b) were evident as illustrated in Figure 1. Employee patterns of high SS, low JA, high SL and

employee patterns of low SS, high JA, low SL displayed the lowest levels of job satisfaction; and the employee pattern of low SS, high JA, high SL exhibited high job satisfaction. However, one unexpected pattern emerged as an indicator of the highest job satisfaction: low SS, low JA, and low SL.

Table 3 results also show that the situational variables account for a significant amount of variance in job satisfaction ($R^2 = .10$, $p < .05$), with job autonomy accounting for most of the variance. SL alone did not add any unique variance; however, two of the three two-way interactions (SL x JA, JA x SS) displayed an interaction, and the hypothesized interaction of interest (SL x JA x SS) was significant at $p < .05$.

Insert Table 3 about here

The second goal of the study attempted to determine whether there was a significant difference in employee performance based on a pattern of employee and employment variables. Hypothesis 2a predicted that high amounts of employee self-leadership and job autonomy and a low amount of supervisory structure will interact to produce the highest evaluations on performance appraisals. In addition, Hypothesis 2b predicted that low amounts of employee self-leadership and supervisory structure and a high amount

of job autonomy will interact to produce the lowest evaluations on performance appraisals. Moderated regression results are presented in columns 1, 2, and 3 of Table 4. R^2 for the full model was .24. As indicated in the table, the SL x JA x SS interaction was not significant for performance evaluations (sig F change = .06). Thus, the data did not support the hypothesized moderated effects. The illustrated interactions in Figure 2 show that the hypothesized interaction for high performance (low SS, high JA, high SL) was a good deal higher relative to the hypothesized interaction for low performance (low SS, high JA, low SL), but did not account for the highest and lowest absolute values of performance. The highest performance measures were evidenced by low SS, low JA, low SL. High SS, low JA, low SL exhibited the lowest performance measures.

Table 4 results also show that the situational variables account for a significant amount of variance in performance ($R^2 = .09$, $p < .05$), with supervisory structure appearing most influential. Self-leadership on its own added a significant amount of variance in performance evaluations (change in $R^2 = .05$, $p < .05$). Table 4 indicates that none of the interactions were significant; however, the SL x JA x SS interacted in the hypothesized directions but did not satisfy the .05 criterion level of significance (sig F change = .06).

Insert Table 4 about here

Additional Analyses

Subgroup Analysis. Additional analyses were conducted by selecting out the subgroups identified in the hypotheses and testing mean differences for satisfaction and performance. Subjects were classified as high or low on the three predictors of SL, JA, and SS by using a median split to create the comparison groups. A t-test was conducted to test the hypotheses that employees in the groups who have measures of low (high) SS, high (low) JA, and high (low) SL will have significantly higher measures of job satisfaction than employees in the groups that score high (low) on SS and SL and low (high) on JA.

Twenty-eight participants were members of the two groups hypothesized to have the highest job satisfaction, while 19 participants were members of the two groups hypothesized to have the least job satisfaction. Mean scores for job satisfaction were 3.75 and 3.45, respectively. There was a significant difference between the hypothesized groups scores on job satisfaction ($F = 1.54, p < .05$).

Another t-test was conducted to test the hypothesis that the group of employees who score low on SS and high on

SL and JA will have higher performance appraisal evaluations than the group of employees who score low on SS and SL and high on JA. Sixteen participants were members of the group hypothesized to have the highest performance ratings, while 11 participants were members of the group hypothesized to have the lowest performance ratings. Mean scores for performance were 4.63 and 4.46, respectively. Differences between groups on performance ratings were not significant ($F = 1.09$, ns).

Analyses with Job Autonomy Points. Because of the low correlation between the self-reported job autonomy measure and the objective measure provided by the organization (.22), separate analyses were executed that substituted job autonomy points (JAP) for the JDS measure in the regression equation. Although associations varied in terms of strength, the patterns using either the JDS measure or the JAP measure remained the same. In testing satisfaction, JAP captured most of the variance in Step 1, and SL failed to add a significant amount of unique variance at Step 2. Similar to the equation using the JA measure in Step 3, the SL x JAP interaction was marginally significant but the SL x JAP x SS interaction in Step 4 of the equation was not significant (sig F change = .68).

In the test of employee performance, SS once again accounted for the majority of the variance at Step 1. SL

did not have a main effect of its own in Step 2, and again, there were no significant two- or three-way interactions for performance at Step 3 or Step 4.

In determining whether the JDS measure of autonomy or the autonomy points awarded by the organization should be used as the measure in the equation, a number of factors were taken into consideration. A major problem with the autonomy points was their date of issue. Many jobs had not been analyzed in a number of years, and had questionable accuracy according to the HR representative. Another flaw with the use of job autonomy points was that the individual positions' points were averaged to create the number of job autonomy points assessed to each job classification listed in the demographic section. Because of the dubious nature of the reliability of the organization's point system, it was determined that the JDS measure supplied by the individual employees provided the most accurate measure of autonomy.

DISCUSSION

The interactionist perspective views behavior and performance as arising from and being maintained through a dynamic, reciprocal interchange between individuals and their environments (Gustafson & Mumford, in press). The conceptual model tested in this research predicted that a certain dispositional characteristic and two situational characteristics will jointly influence the constructs of employee satisfaction and performance.

Overall, support for the experimental hypotheses was mixed, but promising. The success of the present study in establishing a significant three-way interaction among the dispositional variable of self-leadership and the situational variables of job autonomy and supervisory structure was encouraging, particularly in light of the relatively small sample size.

The current study's investigation of the effects of the variables on job satisfaction revealed that in addition to the hypothesized interactions, one unexpected pattern emerged as an indicator of high job satisfaction: low SL, low JA, and low SS. This was not predicted to account for the highest job satisfaction, but is quite plausible when one considers the sample used in this particular study. The respondents consisted mostly of administrative workers and lab technicians who may be most satisfied at work with jobs

that do not make heavy demands of them and vice versa. The most satisfied employees in these two organizational units are the workers with low self-leadership ability who are in positions that do not require a great deal of job autonomy and who have supervisors who do not place heavy structural demands upon them. Put more simply, it appears that the happiest workers in the non-exempt category at this organization are the employees who do not have a great deal of responsibility or supervisory monitoring.

The hypothesized interaction for high performance (low SS, high JA, high SL) was a good deal higher relative to the hypothesized interaction for low performance (low SS, high JA, low SL), but did not account for the highest and lowest absolute values of performance. The predicted interactions for high and low performance accounted for the second highest and the second lowest performance appraisal ratings, respectively, as illustrated in Figure 2. Most importantly, Figure 2 indicates that, similar to the highest satisfaction results, employees who have low amounts of self-leadership ability, job autonomy, and supervisory structure receive the highest performance appraisal ratings. Consequently, the employees who do not stand out as self-leaders and do not require a great deal of direction, but simply perform the duties assigned to them, receive the highest performance ratings from their supervisors.

Surprisingly, employees with low self-leadership ability, low job autonomy, and high supervisory structure received the lowest performance appraisal ratings. One may submit that the ratings may be a function of the supervisor, rather than the employee or job variables. Put more bluntly, supervisors may give higher ratings to the employees who are able to perform the required tasks without a great deal of structure and/or direction from their immediate supervisors. Those employees who do require more attention from their supervisors may be remembered at appraisal time as requiring more supervision, and this may be reflected in their performance ratings. This is only speculation, however, because although the reported results indicated that the predicted interactions may have been present for performance, the statistical conclusions were not strong enough to support the stated hypotheses.

One explanation for the marginal significance is the low amount of power available in the study. Although a sample size of 76 is adequate for the study, it borders the minimum number of subjects required for a significant three-way interaction. It is quite plausible that only a few more participants may have made the difference in the study's conclusions for performance.

Other considerations must be taken into account in the explication of the present study's results. For instance,

the data were obtained from one organization and a great deal of reliance was placed on perceptual measures. Given the self-report nature of this research, one might argue that common method variance is a limitation of the current study. When variance methods are related to one another, and they all derive from the same method of measurement, the positive correlation may be due to the method and not the construct (Campbell & Fiske, 1959). This artifact of measurement may bias results when relations are explored among constructs measured by the same method (Spector, 1987).

In an attempt to limit the threat of common method variance, objective performance appraisals recorded by supervisors were obtained from the employees' files. In addition, as stated earlier, an objective measure of job autonomy was obtained from organizational records and identical analyses were obtained which substituted the points for the self-report measure. Although method variance does not appear to be a major problem, it may serve to explain the stronger results for job satisfaction than employee performance.

Leniency in supervisory ratings of employees' performance appraisals may also have been a problem for this study. Ninety-five percent of the entire sample received a performance appraisal score of a 4 or 5 on a 5-point Likert-

type scale. As the purpose of the study was to make predictions of individual variance in satisfaction and performance based on the independent variables, it is very difficult to obtain significant findings when there is no variance in the given scores. The skewed performance rating distribution may be one reason for the marginal results obtained for employee performance. Murphy and Cleveland (1991), however, believe that ratings that show normal distributions, large standard deviations across rates and dimensions and low intercorrelations among dimensions, are not necessarily better measures than ratings that show all of the traditional rater errors.

Finally, the characteristics of this particular sample may be different from average workforce populations. Given that this particular organization was the corporate headquarters of a large, well-established, international conglomerate that utilized a traditional hierarchical leadership style, generalization to organizations with more innovative types of leadership and job design would be impossible. In addition, the sample was made up of non-exempt personnel, in which 36% of them had been employed with the company for over 10 years. This type of homogenous sample may be too isolated to be generalizable even to the remaining units within the company. Future research should certainly look into other samples, particularly exempt

personnel, who may find interactions between their own self-leadership ability and their established environment to be vastly more critical in determining their satisfaction and performance.

Implications and Future Research

Industrial/organizational psychology has witnessed a surge of research involving dispositional versus situational models that account for individual differences in job outcomes such as satisfaction and performance (Bittle & Hauenstein, in press; Gustafson & Mumford, in press; Newton & Keenan, 1991; Staw, Bell, & Clausen, 1986). This implies that individuals with certain dispositions are better suited to particular types of job environments. Under this assumption, one would predict that job satisfaction and job performance would be augmented if employees were placed in positions which correspond to their own self-leadership capabilities.

Future research should consider the concept that different levels of individual characteristics, such as self-leadership, interact with situational variables to produce various work outcomes. If there does appear to be an interaction between the effects of employment characteristics and self-leadership, then this implies the need to consider both situational and self-leadership factors when designing organizational interventions.

Self-leadership suffers from the same weaknesses as many other constructs because of the researcher's inability to determine what exactly is driving the behavior. Self-leadership is not observed directly, but is inferred by scale measurement and observations of certain behavior patterns. It may be misleading to assume that the behavior stems from an internalization of the construct of interest (self-leadership) when it may simply be the result of employee compliance with organizational norms and expectations. An additional criticism germane to self-leadership theory as a norm-based theory is that the theory is difficult to disprove. It would be a rigorous undertaking for a skeptic to substantiate the claim that an individual's behaviors are the result of the external environment rather than the cognitions involved in a self-influence perspective.

Although Manz (1992) asserts that all individuals have the ability to exercise self-leadership, it is impossible to determine whether employees are demonstrating these behaviors because of the internalized norms of self-leadership or because of the extrinsic rewards offered by the organization for exhibiting the afore-mentioned leadership behaviors of goal-setting, cue-setting, problem-solving, etc. Although the definition of self-leadership encompasses the performance of naturally motivating tasks as well as work that is not intrinsically motivating, it

remains questionable as to how one can isolate the effects of self-leadership and separate the effects of extrinsic reward systems from intrinsic motivation.

However, the practical use of the intervention has not been excessively challenged by investigators. Several researchers strongly believe that self-leadership strategies do exist, and can be learned (Manz & Sims, 1989; Weiss, 1977; Bandura, 1986). In particular, Manz and Sims have developed a management-focused process called "SuperLeadership" consisting of seven specific steps in which the leader's task becomes a process of helping employees master self-leadership skills. The first comprehensive exposition of SuperLeadership (Manz & Sims, 1989) was designed to offer a pragmatic plan of action for practicing managers rather than to specify a tightly constructed psychological theory. Sims and Lorenzi (1992) described SuperLeadership as a "loosely connected, rather than a tight, precise, theoretical model... In fact, it might be more precise to call [SuperLeadership] a perspective rather than a theory" (p. 26).

Viewing SuperLeadership as "an approach to leadership that emphasizes a shift from employee dependence on external management to independence" (Manz & Sims, 1990, p. 68) implies that management training programs may be modified to incorporate strategies for assisting subordinates to become

self-leaders, as well as instructing managers in developing their own self-leadership strategies. Job redesign programs may also benefit by first taking individual characteristics into consideration before determining whether certain jobs should be enriched. Also, management training programs such as Situational Leadership, Managing Relationships at Work, and Interaction Management, may find it valuable to teach managers and supervisors how to appropriately select and apply various leadership styles when interacting with subordinates.

Further research is needed to determine whether there are existing relationships among task design, individual, and leader behavior variables as they relate to satisfaction and performance. In this particular study, a simplifying assumption was made that the variables act in a simple linear fashion to predict outcomes when, in fact, the true relationships may have been more complex. In order to determine the exact linkages between variable combinations and work outcomes, LISREL linear analysis may be an additional useful tool for future research.

New strategies for obtaining individual information, combined with the traditional methods of gathering information about the job and its environment, may be useful in developing human resource and management interventions organizations. Previous research has indicated that

benefits to both the organization and the employee may include increased performance, innovation and productivity gains, and higher levels of employee satisfaction, commitment, motivation, and capability. The current study supported the complex network of individual, task design, and leader behavior variables in predicting job satisfaction; however, given that the current study has failed to give clear support for performance outcomes, more research is needed to ascertain definitive conclusions regarding its relevance to human resource practices.

Conclusions

The present study contributes to the current literature in that it is the first study known to the author which has addressed the joint influences of self-leadership and situational variables of the job on employee satisfaction and performance. The present results provide empirical evidence that supports an interaction among these variables for job satisfaction. However, more research needs to be done to identify the explicit combination of both individual and situational variables, rather than one over another, in predicting the work outcomes of satisfaction and performance. This may provide valuable information for various human resource functions which would benefit from the matching of individuals to ideal environments.

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APPENDIX A
COVER LETTER TO EMPLOYEES

RESEARCH QUESTIONNAIRE

This questionnaire is part of a research study on job characteristics and employee satisfaction in the workplace. I am interested in how you view your job, especially the roles played by you and your supervisor.

On the following pages, you will find several questions related to these topics. Most of the questions are concerned with your role in the workplace and the characteristics of your job. There are no trick questions and I think you will find this questionnaire both stimulating and interesting. All I ask is that you try to answer as honestly and as candidly as possible. This is NOT a test; there are no right or wrong answers. You will undoubtedly find some redundancy in the questions. This is deliberate and is done for statistical reasons. Do not bother to go back over the previous questions.

Each questionnaire booklet has been assigned a code number for statistical purposes. It goes without saying that under no circumstances will your individual responses be made available to anyone in the XXXXXXXXXX organization. For the sake of your anonymity, please use the seal provided to seal your questionnaire and place the completed questionnaire in the drop box when you have finished. The questionnaires will be taken back to the university for analysis, and then, will be destroyed. Information from the questionnaire will be compiled into an overall report that will be discussed with XXXXXXXXXX employees, but individual responses will NOT be a part of that report. This is strictly a research project and will have no direct impact on you and your work.

This research project has been approved by the Human Subjects Committee of the Department of Psychology and by the Institutional Review Board of Virginia Tech.

This survey provides some time for you to seriously think about your work, your job, your supervisor, and yourself. It provides an opportunity for you to express your feelings, good or bad, without fear of embarrassment.

In advance, I wish to thank you for your participation in this study. It is through your cooperation in studies like these that we can all advance our understanding of how people can work together in the corporate environment.

Heather Roberts
Virginia Polytechnic Institute
and State University
Blacksburg, Virginia

APPENDIX B
SELF-LEADERSHIP QUESTIONNAIRE

SELF LEADERSHIP QUESTIONNAIRE

- 1.) READ each item carefully. Statements in this section of the questionnaire refer to yourself.
- 2.) DECIDE how accurately each statement appears to describe you.
- 3.) DRAW a circle around one of the five letters (A B C D E) following the statement indicating how true or untrue you believe each statement to be of you.

- A - if the statement is **definitely not true** of you;
- B - if the statement is **not true** of you;
- C - if you are **uncertain** whether this statement describes you;
- D - if the statement is **true** of you;
- E - if the statement is **definitely true** of you.

PLEASE CIRCLE ONLY ONE LETTER

- 4.) REMEMBER: Keep the statement in mind when deciding how accurate you feel the statement describes you.
- 5.) Be **FRANK** and **HONEST**. Give a true picture of what best reflects your position regarding the statement. Your individual responses will never be seen by any _____ employee.

Self-Goal Setting

1. I define the goals myself.
11. I set goals for myself.
20. I set goals for my own performance.
29. I define goals for myself.

Self-Observation and Evaluation

2. I judge how well I am performing.
12. I know how my performance stands.
21. I try to keep track of how well I'm doing while I work.
30. I keep track of my progress on tasks I am working on.

Rehearsal

3. I practice difficult or important tasks before I actually do them.
13. I practice (either physically or mentally) a new task before I do it the first time.
22. I go over a new task before I actually begin the task.
31. I think about how I am going to do a job before I begin the job.
39. I practice in my mind how I will do difficult tasks ahead of time.
47. I rehearse how I will deal with a challenge before I actually face the challenge.
50. I rehearse how I will do something new or difficult.

Self-Reward

4. I reward myself with something I like when I have successfully completed a major task.
14. I give myself a pat on the back when I meet a new challenge.
23. I reward myself for doing a good job.
32. I feel good about myself when I perform well.
40. I treat myself to something I enjoy when I do a task especially well.

Finding Natural Rewards

5. I seek out activities in my work that I enjoy doing.
15. I find my own favorite ways to get work done.
24. I take time to do work tasks that I like to do.
33. I do my work in ways that I enjoy rather than just trying to get it over with.
41. I do tasks at work that make me feel good about myself.

Opportunity Thoughts

- 6. I look for the opportunities contained in problems I face.
- 16. I view unsuccessful performance as a chance to learn.
- 25. I think of problems at work as opportunities rather than obstacles.
- 34. I think about how challenges at work can be met, rather than why they cannot.
- 42. I think about eventual success rather than possible failure.

Efficacy Expectations

- 7. I think I can do very well in my work.
- 17. I think I am capable of high performance.
- 26. I expect that I will perform well.
- 35. I have confidence in my ability to meet challenges at work.
- 43. I am sure that I am capable of overcoming almost any obstacle at work.

Self-Cue Management

- 8. I set up my own work area to help me focus my attention on my work.
- 18. I remove things from my work area if I feel they distract my attention.
- 27. I manage my immediate work environment so that it stimulates my performance.
- 36. I use reminders to focus my attention on important tasks, goals, or work behaviors.
- 44. I use reminders to help me remember things I need to do.

Self-Problem Solving

- 9. I solve my own problems without being dependent on solutions from above.
- 37. I find solutions to my problems at work without my supervisor's direct input.
- 45. I search for solutions to my problems on the job without supervision.
- 48. I solve problems when they pop up without always getting my supervisor's stamp of approval.

Initiative

10. I take initiatives on my own.
19. I use opportunities to take initiative on my own.
28. I use opportunities to take on new responsibilities.
38. I assume responsibilities on my own.
46. I make improvements in how I do my work on my own initiative without being told to do so.
49. I think of new ways of doing things on my own initiative.

APPENDIX C
JOB AUTONOMY QUESTIONNAIRE

JOB AUTONOMY QUESTIONNAIRE (JDS ITEMS)

The following questionnaire asks you to describe your job as objectively as you can.

- 1.) READ each question carefully.
- 2.) THINK objectively about how this describes your job.
- 3.) DRAW a circle around **one** of the letters (A B C D E F G) underneath the question to show the answer you have selected.
- 4.) REMEMBER: Keep the question in mind when deciding **how you would describe your job.**
- 5.) Be **FRANK** and **HONEST**. Give an **ACCURATE** description of your job.

2. How much *autonomy* is there in your job? That is, to what extent does your job permit you to decide *on your own* how to go about doing the work?

A-----	B-----	C-----	D-----	E-----	F-----	G-----
Very little; the job gives me almost no personal "say" about how and when the work is done.			Moderately; many things are standard- ized and not under my control but I can make some decisions about the work.			Very much; the job gives me almost complete re- sponsibility for deciding how and when the work is done.

- 1.) READ each statement carefully.
- 2.) THINK objectively about whether each statement is an *accurate* or an *inaccurate* description of your job. Please try to be as objective as you can in deciding how accurately each statement describes your job--regardless of whether you like or dislike your job.
- 3.) DRAW a circle around **one** of the letters (A B C D E F G) following the statement to show the answer you have selected.
 - A - Very Inaccurate
 - B - Mostly Inaccurate
 - C - Slightly Inaccurate
 - D - Undecided
 - E - Slightly Accurate
 - F - Mostly Accurate
 - G - Very Accurate
- 4.) REMEMBER: Keep the statement in mind when deciding **how accurate the statement is in describing your job.**
- 5.) Be **FRANK** and **HONEST**. Give an **ACCURATE** appraisal of your job.

2. The job denies me any chance to use my personal initiative or judgment in carrying out the work.
4. The job gives me considerable opportunity for independence and freedom in how I do the work.

APPENDIX D
SUPERVISORY STRUCTURE QUESTIONNAIRE

SUPERVISORY STRUCTURE QUESTIONNAIRE (LBDQ-XII ITEMS)

- 1.) READ each item carefully.
- 2.) THINK about how frequently your supervisor engages in the behavior described by the statement.
- 3.) DRAW a circle around **one** of the five letters (A B C D E) following the statement to show the answer you have selected.
 - A - Always
 - B - Often
 - C - Occasionally
 - D - Seldom
 - E - Never
- 4.) REMEMBER: Keep the statement in mind when deciding how frequently your supervisor acts as described in the statement.
- 5.) Be FRANK and HONEST. Give a true picture of your supervisor's behavior. Your individual responses will never be seen by any employee.

Initiating Structure Subscale

This is how often my supervisor...

1. Lets me know what is expected of me.
3. Encourages the use of uniform procedures.
5. Tries out his or her ideas on me.
7. Makes his or her attitudes clear to me.
9. Decides what should be done and how it shall be done.
11. Assigns me to particular tasks.
13. Makes sure that his or her role is understood by me.
15. Schedules the work to be done.
17. Maintains definite standards of performance.
19. Asks that I follow standard rules and regulations.

Tolerance of Freedom Subscale

This is how often my supervisor...

2. Allows me complete freedom in my work.
4. Permits me to use my own judgment in solving problems.
6. Encourages me to take initiative.
8. Lets me do my work the way I think best.
10. Assigns a task, then lets me handle it.
12. Turns me loose on a job, and lets me go to it.
14. Is reluctant to allow me any freedom of action.
16. Allows me a high degree of initiative.
18. Trusts me to exercise good judgment.
20. Permits me to set my own pace.

APPENDIX E
JOB SATISFACTION QUESTIONNAIRE

JOB SATISFACTION QUESTIONNAIRE (MSQ ITEMS)

- 1.) READ each item carefully.
- 2.) DECIDE how satisfied you feel about the aspect of your job described by the statement.
- 3.) DRAW a circle around one of the five letters (A B C D E) following the statement to show the answer you have selected.
 - A - Very Dissatisfied
 - B - Dissatisfied
 - C - Undecided
 - D - Satisfied
 - E - Very Satisfied
- 4.) REMEMBER: Keep the statement in mind when deciding how satisfied you feel about that aspect of your job.
- 5.) Be FRANK and HONEST. Give a true picture of your feelings for your job.

On my present job, this is how I feel about...

1. The amount of time I am kept busy on my job.
2. The amount of time I work alone on the job.
3. The opportunity to do different things on my job from time to time.
4. The prestige my job has outside the company.
5. The way my supervisor handles his or her people.
6. The competence of my supervisor in making decisions.
7. Being able to do things to which I do not personally object.
8. The stability my job offers.
9. The chance to do things for other people.
10. The opportunity to supervise others.
11. The chance to do something that makes use of my abilities.
12. The company policies are put into practice.
13. My pay for the amount of work I do.
14. The chances for advancement.
15. The freedom to use my own judgment.
16. The chance to try my own methods of doing the job.
17. The working conditions.
18. The way my co-workers get along with each other.
19. The recognition I get for doing a good job.
20. The feeling of accomplishment I get from the job.

APPENDIX F
DEMOGRAPHIC INFORMATION

DEMOGRAPHIC INFORMATION

Please answer the following questions by selecting the best answer that describes you.

1. Which classification best describes your job?
 - 1) hourly
 - 2) salary, non-exempt
 - 3) salary, exempt

2. How long have you worked at your current job title?
 - 1) less than 1 year
 - 2) 1-3 years
 - 3) 4-6 years
 - 4) 7-10 years
 - 5) 10+ years

3. How long have you worked with your current supervisor?
 - 1) less than 1 year
 - 2) 1-3 years
 - 3) 4-6 years
 - 4) 7-10 years
 - 5) 10+ years

4. How long have you worked for _____?
 - 1) less than 1 year
 - 2) 1-3 years
 - 3) 4-6 years
 - 4) 7-10 years
 - 5) 10+ years

5. Into which age range do you fall?
 - 1) less than 20 years old
 - 2) 20-29 years
 - 3) 30-39 years
 - 4) 40-49 years
 - 5) 50+ years

6. Please indicate your gender.
 - 1) male
 - 2) female

7. Which category best represents your educational attainment?
 - 1) less than 8th grade
 - 2) 8th-12th grade
 - 3) high school degree
 - 4) some college or technical school training
 - 5) college or technical school degree (i.e., BA, BS, BBA)
 - 6) some graduate school training
 - 7) graduate degree (i.e., MBA, MA, MS, Ph.D)

TABLES

Table 1

Demographic Characteristics of Sample

GENDER		CURRENT JOB TENURE	
Female	87%	< 1 year	13%
Male	13%	1-3 years	38%
		4-6 years	20%
		7-10 years	17%
		10+ years	12%
AGE		TIME WITH SUPERVISOR	
< 20	0%	< 1 year	13%
20-29	14%	1-3 years	47%
30-39	28%	4-6 years	21%
40-49	29%	7-10 years	12%
50+	29%	10+ years	7%
EDUCATION LEVEL		ORGANIZATIONAL TENURE	
< 8th grade	0%	< 1 year	3%
8th-12th grade	7%	1-3 years	26%
High school degree	29%	4-6 years	16%
Some college or technical school	53%	7-10 years	20%
College degree	7%	10+ years	36%
Some graduate school	5%		
Graduate degree	0%		
JOB CLASSIFICATION			
Executive Secretary	1%	Specialist	8%
Adminis. Assistant	9%	Coordinator	16%
Adminis.Secretary A	21%	Maintenance	0%
Adminis.Secretary B	8%	Lab Technician	8%
Payroll/Senior Accounting Clerk	3%	Adminis.Support (i.e. (reception, typist)	17%
Accts Payable Clerk	4%	Other	5%

Table 2

Descriptive Statistics; Intercorrelation, and Internal Consistencies for Measures

	Mean	SD	1	2	3	4	5	6	7	8
1. SL	3.92	0.38	(.91)							
2. JA	5.60	1.23	.04	(.63)						
3. JAP	171.39	40.81	.02	.22	(--)					
4. IS	3.11	0.68	.14	-.16	.12	(.80)				
5. TF	4.17	0.63	.24*	.52**	.14	-.08	(.90)			
6. SS	4.94	0.96	-.06	-.46**	-.01	.76**	.71**	(.83)		
7. SAT	3.68	0.58	.07	.31**	.40**	.14	.30**	-.10	(.88)	
8. PERF	4.40	0.59	.23*	.22	.17	-.00	.45**	-.29*	.42**	(--)

Note: N = 76 for all measures except number 3. N = 72 for measure number 3. Coefficient alpha for each measure appears in the parentheses. SL-Self Leadership, JA=Job Autonomy, JAP=Job Autonomy Points, IS=Initiating Structure, TF=Tolerance of Freedom, SS=Supervisory Structure (created by combining the IS and TF subscales), SAT=Job Satisfaction, PERF=Performance

* p < .05 ** p < .01

Table 3

Moderated Regression Results for Job Satisfaction

		R ^{2a}	Beta ^b
Step 1:	JA SS	.10*	.34** .06
Step 2:	SL	.00	.06
Step 3:	SLxJA SLxSS JAxSS	.11*	3.89* - 0.35 1.31*
Step 4:	SLxJAxSS	.07*	-21.19*

Note: JA=Job Autonomy, SS=Supervisory Structure, SL=Self-Leadership

^a R² = change in R² for steps 2, 3, and 4

^bBETA = independent contribution of the variable at each step in the equation.

N = 76

* p < .05 ** p < .01

Table 4

Moderated Regression Results for Job Performance

		R ^{2a}	Beta ^b
Step 1:	JA SS	.09*	.11 - 0.24
Step 2:	SL	.05*	.21*
Step 3:	SLxJA SLxSS JAxSS	.06	3.00 2.30 1.13
Step 4:	SLxJAxSS	.04	-15.59

Note: JA=Job Autonomy, SS=Supervisory Structure, SL=Self-Leadership

^a R² = change in R² for steps 2, 3, and 4

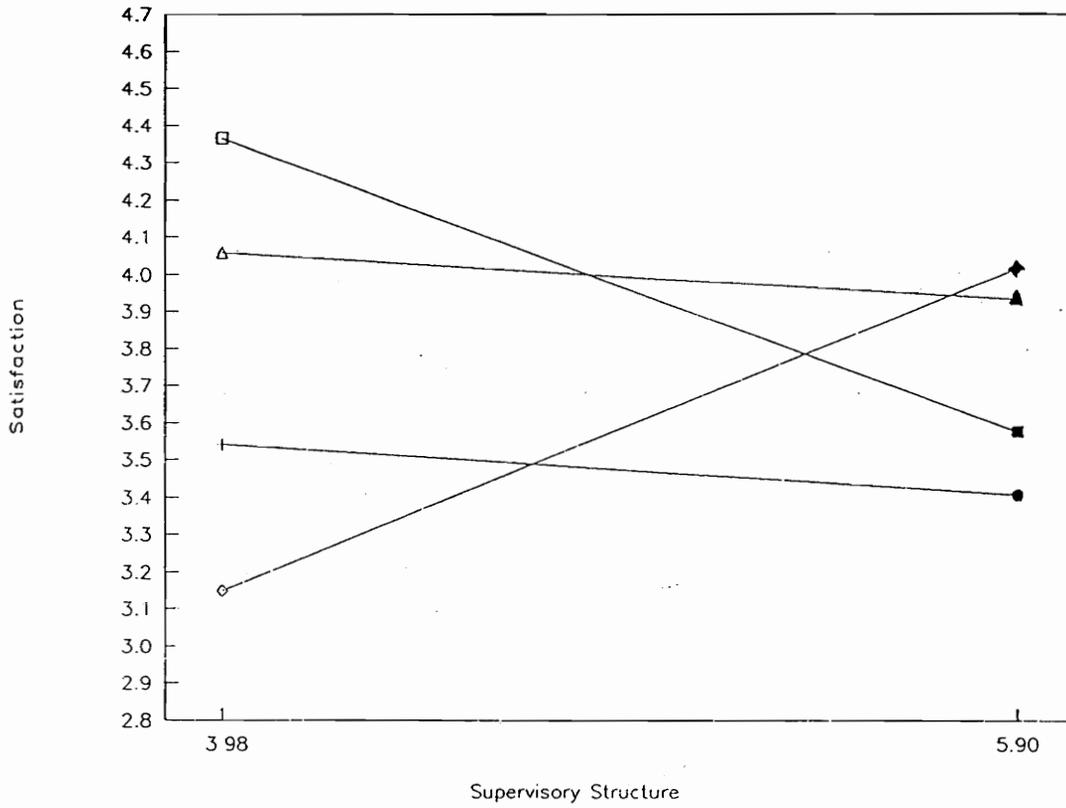
^bBETA = independent contribution of the variable at each step in the equation.

N = 76

* p < .05 ** p < .01

FIGURES

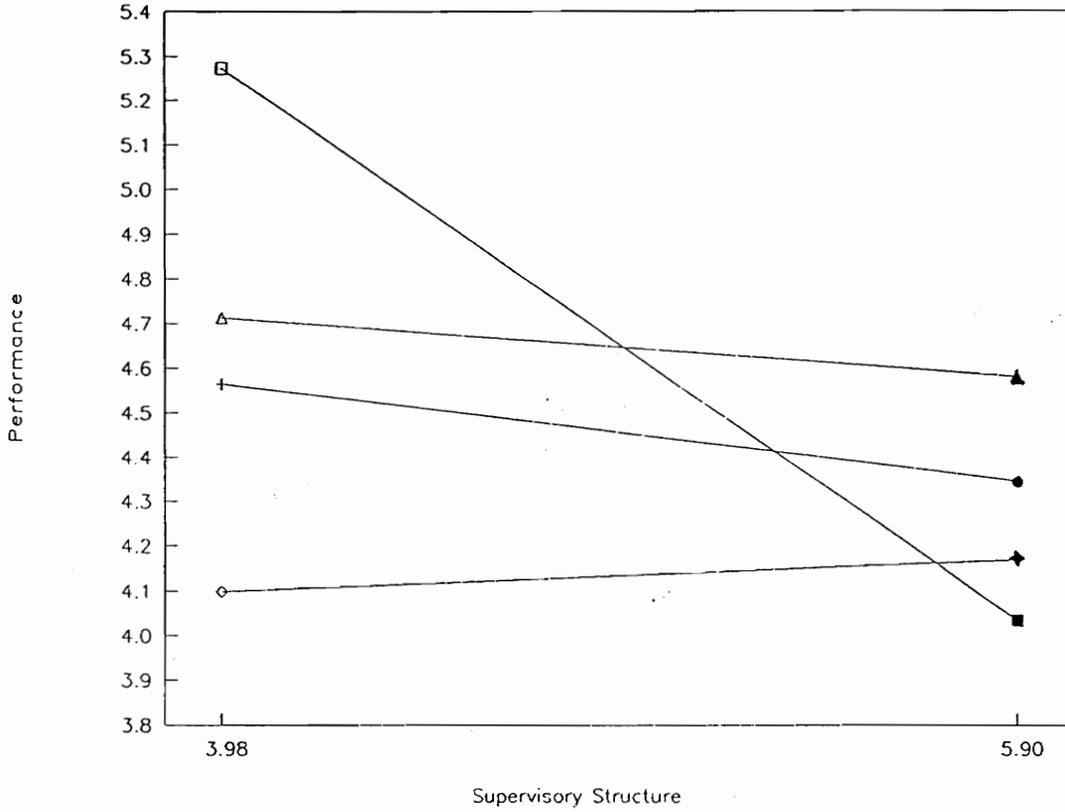
Effects on Job Satisfaction



- SL(-1 SD) / JA(-1 SD)
- △ SL(+1 SD) / JA(+1 SD)
- ⊕ SL(+1 SD) / JA(-1 SD)
- ⊖ SL(-1 SD) / JA(+1 SD)
- SL(-1 SD) / JA(-1 SD)
- ▲ SL(+1 SD) / JA(+1 SD)
- SL(+1 SD) / JA(-1 SD)
- ◆ SL(-1 SD) / JA(+1 SD)

Figure 1. Interaction Effects on Job Satisfaction

Effects on Job Performance



- SL(-1 SD) / JA(-1 SD)
- △ SL(+1 SD) / JA(+1 SD)
- ⊕ SL(+1 SD) / JA(-1 SD)
- ◇ SL(-1 SD) / JA(+1 SD)
- SL(-1 SD) / JA(-1 SD)
- ▲ SL(+1 SD) / JA(+1 SD)
- SL(+1 SD) / JA(-1 SD)
- ◆ SL(-1 SD) / JA(+1 SD)

Figure 2. Interaction Effects on Employee Performance

VITA

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Department of Psychology
Virginia Polytechnic Institute
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Blacksburg, Virginia 24061
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EDUCATION:

Virginia Polytechnic Institute and State University
Blacksburg, Virginia
Master of Science Degree in Psychology, May 1993.
Concentration: Industrial/Organizational Psychology

**Thesis Title: The Role of Self-Leadership and
Employment Characteristics in Predicting Job
Satisfaction and Performance**

Loyola College

Baltimore, Maryland
Bachelor of Arts Degree in Psychology, May 1991.
Graduated Cum Laude with a 3.6 average on a 4.0 scale.

HONORS/AWARDS:

Dean's List, Psi Chi, National Merit Commended
Student, Cum Laude distinction at graduation, Teaching
Scholarship at Virginia Tech

**PROFESSIONAL
EXPERIENCE:**

Blue Cross and Blue Shield of Maryland
Corporate Headquarters - Owings Mills, Maryland
Organizational Development Intern - July/Aug 1992
- Created a feedback and action planning workshop for
HR personnel and management as part of the enterprise-
wide employee survey process.
- Developed the feedback manual to accompany the
workshop (materials available upon request).

Bell-Atlantic Corporation - Arlington, Virginia
Test Administrator - January 1992

- Administered concurrent validation selection test to
approximately 100 of the randomly sampled employees at
the C & P location in Baltimore, Maryland

**PROFESSIONAL
EXPERIENCE:
(continued)**

McCormick & Company, Inc.
Corporate Headquarters - Hunt Valley, Maryland
Human Relations Intern - May 1990 to Aug 1991
 - Assisted Director, Human Relations and Human Relations Specialists in daily, monthly, and annual activities.
 - Responsibilities included compiling organizational charts, EEOC information, monthly safety reports, COBRA reports, Critical Indicator information.
 - Organized the corporate division of the scholarship program, executive physicals, adopt-a-school program, TQM luncheons, and Management Staff Data Reports.
 - Assisted in the development of a preliminary orientation program for new employees and encouraged updated job descriptions and performance appraisals.

**TEACHING/ADVISING
EXPERIENCE:**

Virginia Polytechnic Institute and State University
Graduate Assistant in Advising - Jan 1992 to present
 - Served as an academic and career advisor to 800 undergraduate students within the psychology department.
 - Administered presentations and workshops for students applying to graduate school.
 - Recruited prospective students from area high schools.
 - Coordinated and compiled student records on mainframe and dBase computer programs.
 - Supervised undergraduate research assistants.

Graduate Teaching Assistant - Aug 1991 to Dec 1991
 - Teaching duties included two introductory psychology laboratories of approximately 45 students each.
 - Responsibilities included lesson planning, fostering discussion among students, assigning essays and outside experiments, and administering tests.

**RESEARCH
EXPERIENCE:**

Virginia Polytechnic Institute and State University
 Thesis Research - Roseanne J. Foti, Ph.D (Chair)
 Designed and implemented a field study to assess self-leadership ability, job characteristics, and supervisory characteristics on job satisfaction and performance.

Loyola College
 Research Assistant - Richard H. Franke, Ph.D
 Assisted faculty member in analyzing gender gaps in aptitude test scores.

POSTER SESSION

PRESENTATIONS: Franke, R. H., & Roberts, H. E. (February, 1991).
Gender gap in aptitude test scores: Exploratory analysis of possible determinants. Poster session presented at the annual meeting of AAAS, Washington, DC.

RELEVANT**COURSEWORK:**

Organizational Psychology I and II
 Industrial Psychology I and II
 Social Cognition and Decision Making
 Organizational Behavior
 Employee Selection and Performance Appraisal
 Human Resource Management
 Research Methods
 General Statistics
 Multiple Regression Analysis
 Multivariate Methods of Analysis

ACTIVITIES**AND INTERESTS:**

Student Member of the American Psychological Association
 Student Member of the Society for Industrial-Organizational Psychology
 Student Member of the Virginia Psychological Association
 Member of the Society for Human Resource Management
 Member of the National Association for Female Executives
 Member of National Psi Chi
 Research in self-leadership theory, leadership prototypes, autonomous workgroups, job design, employee participation, and total quality management.
 Computer literacy with such software packages as WordPerfect 5.1, Microsoft Word and Word for Windows, Lotus 1-2-3, dBASE, SPSS-X, and SAS

Heather Elise Roberts