Path-Goal Theory of Leader Behavior and Its Relation to Job Satisfaction as Moderated by the Intrinsic Motivation of the Task

Diane Lloyd Gillo
Western Michigan University

Follow this and additional works at: http://scholarworks.wmich.edu/dissertations
Part of the Educational Leadership Commons

Recommended Citation
http://scholarworks.wmich.edu/dissertations/2503
PATH-GOAL THEORY OF LEADER BEHAVIOR AND ITS RELATION TO JOB SATISFACTION AS MODERATED BY THE INTRINSIC MOTIVATION OF THE TASK

by

Diane Lloyd Gillo

A Dissertation Submitted to the Faculty of The Graduate College in partial fulfillment of the requirements for the Degree of Doctor of Education Department of Educational Leadership

Western Michigan University Kalamazoo, Michigan August 1982

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
The path-goal theory of leadership, based on an expectancy formulation of motivation, provides a potent schema for the investigation of the relationship between leader behavior and subordinates' satisfactions in the workplace. The inclusion of task related satisfactions has been dealt with as a contingency factor, but this study included the measurement of task design variables consistent with the task design literature.

According to the path-goal theory, leaders are effective because of their impact on subordinates' motivation, ability to perform effectively, and satisfactions. The study was designed to analyze the relationship between the independent variable of leader behavior and the dependent variable of job satisfaction as moderated by the intrinsic motivation of the task. Specifically, the study compared the relationship between leader consideration and leader initiating structure as the dimensions of the independent variable and satisfaction with work and satisfaction with supervision as the dimensions of the dependent variable.

The measurement of the task design variables provided a summary score reflecting the overall intrinsic motivating potential of the job, which was used as an index of the degree of routineness of the
job. The degree of routineness was used as the basis for a dichoto-
mous classification of jobs as either routine or nonroutine; this
classification provided the contingency factor or moderating vari-
able in the study. The correlation between leader behavior and sub-
ordinates' satisfactions for routine jobs was compared to the corre-
lation between leader behavior and subordinates' satisfactions for
nonroutine jobs.

The overall results of the study did not substantiate the gen-
eral tenets of the path-goal theory. Classification of job routine-
ness may have contributed to problems in substantiation of the the-
ory. The method of classification did not provide two distinct
classes of routine and nonroutine jobs, and this decreased variabil-
ity may have obscured any consistent results.
INFORMATION TO USERS

This reproduction was made from a copy of a document sent to us for microfilming. While the most advanced technology has been used to photograph and reproduce this document, the quality of the reproduction is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help clarify markings or notations which may appear on this reproduction.

1. The sign or “target” for pages apparently lacking from the document photographed is “Missing Page(s)”. If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure complete continuity.

2. When an image on the film is obliterated with a round black mark, it is an indication of either blurred copy because of movement during exposure, duplicate copy, or copyrighted materials that should not have been filmed. For blurred pages, a good image of the page can be found in the adjacent frame. If copyrighted materials were deleted, a target note will appear listing the pages in the adjacent frame.

3. When a map, drawing or chart, etc., is part of the material being photographed, a definite method of “sectioning” the material has been followed. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.

4. For illustrations that cannot be satisfactorily reproduced by xerographic means, photographic prints can be purchased at additional cost and inserted into your xerographic copy. These prints are available upon request from the Dissertations Customer Services Department.

5. Some pages in any document may have indistinct print. In all cases the best available copy has been filmed.
Gillo, Diane Lloyd

PATH-GOAL THEORY OF LEADER BEHAVIOR AND ITS RELATION TO
JOB SATISFACTION AS MODERATED BY THE INTRINSIC MOTIVATION
OF THE TASK

Western Michigan University

University Microfilms
International 300 N. Zeeb Road, Ann Arbor, MI 48106
PLEASE NOTE:

In all cases this material has been filmed in the best possible way from the available copy. Problems encountered with this document have been identified here with a check mark √.

1. Glossy photographs or pages ___
2. Colored illustrations, paper or print ___
3. Photographs with dark background ___
4. Illustrations are poor copy ___
5. Pages with black marks, not original copy ___
6. Print shows through as there is text on both sides of page ___
7. Indistinct, broken or small print on several pages √
8. Print exceeds margin requirements ___
9. Tightly bound copy with print lost in spine ___
10. Computer printout pages with indistinct print ___
11. Page(s) _________ lacking when material received, and not available from school or author.
12. Page(s) _________ seem to be missing in numbering only as text follows.
13. Two pages numbered ____________ . Text follows.
14. Curling and wrinkled pages ___
15. Other__________________________________________________________________________
ACKNOWLEDGMENTS

I would like to express my gratitude to my advisor, Dr. Uldis Smidchens, whose guidance during the study was invaluable. The advice of Dr. James Hill and Dr. Roger Zabik proved to be of tremendous importance to the completion of the study.

My appreciation is extended to Mr. Scrap Cox, General Manager, and Mr. Jack Henson, Assistant Personnel Manager, of the Carton and Container Division of General Foods Corporation. The assistance of Mr. George Danz, Fire Chief of the Kalamazoo Fire Fighters, is gratefully acknowledged.

And finally, I want to take this opportunity to express my gratitude to Nellie and Cindy, staff of the Educational Leadership office, for their invaluable assistance in helping me to attain my goal.

Diane Lloyd Gillo
TABLE OF CONTENTS

ACKNOWLEDGMENTS ........................................... ii
LIST OF TABLES .............................................. vi

CHAPTER
I  INTRODUCTION ............................................. 1
  Background ............................................. 1
  Statement of the Problem .............................. 6
  Conceptual Framework ................................. 8
  Research Objectives ................................. 9
  Limitations ........................................... 9
  Summary ............................................. 10

II  REVIEW OF RELATED LITERATURE ....................... 11
  Motivation ........................................... 11
    Content Theories of Motivation ................... 12
    Process Theories of Motivation ................... 15
  Job Satisfaction ...................................... 20
  Task Design .......................................... 28
  Characteristics of Leader Behavior ................. 34
  Summary ............................................. 43

III  DESIGN AND METHODOLOGY ............................... 45
  Measurement of Leader Behavior ....................... 45
  Measurement of Job Satisfaction ..................... 47
  Measurement of the Routineness of the Task ....... 51
  Pilot Study .......................................... 53
Table of Contents—Continued

CHAPTER

Sampling Procedures ........................................ 54
Data Analysis ........................................... 57

IV ANALYSIS AND INTERPRETATION OF DATA ................. 60

Classification into Routine or Nonroutine Jobs ............. 61
Analysis of Correlations Between Initiating Structure and Satisfaction Variables ........... 61
Analysis of Correlations Between Consideration and Satisfaction Variables .......... 67
Classification into Routine/Nonroutine Jobs Based on Further Separation ................... 71

V FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS ...... 73
Findings and Conclusions ................................ 73
Recommendations ........................................ 78

APPENDICES ............................................. 80

A Glossary of Terms ....................................... 81
B Hybrid Expectancy Model of Work Motivation ............. 84
C Performance-Satisfaction Model .......................... 86
D Job Characteristics Model of Work Motivation ........... 88
E LBDQ Initiating Structure Items ....................... 90
F LBDQ Consideration Items ............................ 92
G Scoring Keys for LBDQ .............................. 94
H Scored Responses in the Satisfied Direction for JDI .......... 97
I Computational Guides for Scoring Each Dimension of the JRF .......... 99

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table of Contents—Continued

APPENDICES

  J  Instrument Administered to the Supervisors ........ 101
  K  Instrument Administered to the Employees .......... 104
  L  Correlation Data for Five Facets of Job
      Satisfaction ........................................ 107
  M  Descriptive Statistics .................................. 116

BIBLIOGRAPHY .............................................. 120
LIST OF TABLES

1. Revised Weights for Direct Scoring of the JDI ........... 49
2. Item Intercorrelations and Item Validities of JDI Items ............................................ 50
3. Internal Consistencies of JDI Scales .................. 51
4. Calculation of the Motivating Potential Score (MPS) ... 52
5. Reliabilities of the JRF Scales ..................... 53
6. Location and Number of Supervisors and Employees at Each Location ................................ 54
7. Median Scores (MPS) Obtained on the JRF for Classification into Routine/Nonroutine Jobs ........ 62
8. Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 1 ...................... 62
9. Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 2 ...................... 63
10. Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 3 ....................... 63
11. Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs for All Three Locations .......... 64
12. Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 1 ...................... 67
13. Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 2 ...................... 68
14. Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 3 ...................... 68

vi

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
List of Tables—Continued

15. Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs for All Three Locations ............................................. 69
16. Summary Table of Probabilities Between Initiating Structure and Satisfactions ........................................ 74
17. Summary Table of Probabilities Between Consideration and Satisfactions ........................................ 74
18. Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 1 ........................................ 108
19. Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 2 ........................................ 109
20. Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 3 ........................................ 110
21. Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs for All Three Locations ........................................ 111
22. Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 1 ........................................ 112
23. Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 2 ........................................ 113
24. Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 3 ........................................ 114
25. Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs for All Three Locations ........................................ 115
26. Descriptive Statistics for Routine Jobs at Location 1 ........................................ 117
27. Descriptive Statistics for Nonroutine Jobs at Location 1 ........................................ 117

vii

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
List of Tables—Continued

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28.</td>
<td>Descriptive Statistics for Routine Jobs at Location 2</td>
<td>118</td>
</tr>
<tr>
<td>29.</td>
<td>Descriptive Statistics for Nonroutine Jobs at Location 2</td>
<td>118</td>
</tr>
<tr>
<td>30.</td>
<td>Descriptive Statistics for Routine Jobs at Location 3</td>
<td>119</td>
</tr>
<tr>
<td>31.</td>
<td>Descriptive Statistics for Nonroutine Jobs at Location 3</td>
<td>119</td>
</tr>
</tbody>
</table>
INTRODUCTION

Background

The "task of the manager is to make effective whatever strength there is in [the] resources—above all, in the human resources—and neutralize whatever there is of weakness. This is the only way in which a genuine whole can be created" (Drucker, 1974, p. 398). The emphasis is on effective utilization of human resources via the integration of individual needs with organizational goals, which can only be accomplished by understanding the direction, degree, and persistence of an employee's behavior as determined by his/her motivational level (Aldag & Brief, 1979, p. 2).

The term "motivation" refers to need relevant behavior, and it is generally recognized that certain characteristics of the job situation may offer fulfillment of pertinent needs. To the extent that the job fulfills these dominant needs and is congruent with expectations, it offers the potential for satisfaction (Wexley & Yukl, 1979, p. 1). Organizations have attempted to assess motivational levels in diverse ways in their desire to create motivational situations in the workplace, and thereby increase employee productivity and satisfaction. Despite its appeal as a way of explaining behavior patterns, the concept of motivation is only a hypothetical process and not directly observable (Wexley & Yukl, 1977, p. 75).
Many different theories of motivation have been advanced over the years and integration of them all proves difficult. However, they may be divided into two categories to make interpretation easier. The content, or substantive, theories of motivation are concerned primarily with identification of the variables that are linked to initiating and sustaining behavior. The process theories of motivation deal with the attempt to explain how behavior occurs. Most of the content theories developed have been "need" theories in that they attempt to identify certain pressures on the organism to act (Campbell, Dunnette, Lawler, & Weick, 1970, p. 341). But reliance on a theory of needs does not in and of itself explain why any individual will perform at a superior level rather than simply try to get by. Certain aspects of the job act jointly with individual needs to affect the degree of effort expended on the job, and it is these situational variables that provide the basis for process theories of motivation (Wexley & Yukl, 1977, p. 79).

Whether the ascribed theory is content-based or process-based, theories of motivation directly implicate choices of alternate behavior patterns and the amount of effort to be expended in that choice of behavior. Although studies in the workplace frequently use job satisfaction as a measure of the amount of motivation, job satisfaction may or may not be directly linked to behavior. Instead satisfaction is a function of rewards, which if contingent on behavior motivates the individual to expend effort in that direction (Campbell et al., 1970, p. 359). Satisfaction is thus mediated by rewards based on performance. This satisfaction resulting from a
sense of accomplishment with performance is the basis for the current conceptualization in the debate over which came first--satisfaction or performance.

Theories concerning the satisfaction-performance relationship have run the gauntlet from the human relations obsession with expecting a higher level of performance from a satisfied and grateful employee to one current conceptualization of performance as the causal and satisfaction as the dependent variable (Wexley & Yukl, 1977, p. 115). A current theory, attributable to Porter and Lawler (1968), presents all the mediating variables in a circular model with the performance-satisfaction link the most direct. Their theoretical model is an attempt to "study job attitudes concerned with satisfaction and need importance because of their assumed relationship to the employee's desire, willingness, or motivation to come to work to perform [the] job" (Porter & Lawler, 1968, p. 7).

Although the satisfaction-performance issue has not been thoroughly resolved, Schwab and Cummings (1970) advise against research wasted on further debate because the complexity of each variable necessitates individual attention. Many studies have been designed around the issue of satisfaction—to determine how satisfied employees are, to compare the job satisfaction of one group to another group, or to determine the aspect of the job perceived to be the most important to the employee. However, a general theory of job attitudes, integrating the multitude of data concerning job satisfaction, is not widely accepted (Wexley & Yukl, 1977, p. 98).
Job satisfaction is generally referred to in a global, encompassing manner which leads one to believe it refers to one variable. However, that summed measure of job satisfaction "may well mask relationships which involve only one aspect of the employee's feelings" (Smith, Kendall, & Hulin, 1969, p. 4). Rather, there is "evidence suggesting that global job satisfaction is made up of at least partially independent subcomponents" (Schwab & Cummings, 1970, p. 423). "The exact number and nature of these factors vary considerably from study to study, but the results do consistently support the multidimensional notion" (Smith et al., 1969, p. 26). An extensive review of literature on the subject indicated six "relatively independent factors: general satisfaction and morale, attitudes toward the company and its policies, satisfaction with intrinsic aspects of the job, attitudes toward the immediate supervisor, attitudes toward satisfaction of aspirations, and satisfaction with conditions of present job" (Smith et al., 1969, p. 30).

It is generally accepted that the design of a job does have significant impact on the attitudes, beliefs, and feelings of the employee (Lawler & Hall, 1970). However, that response evoked with regard to the task is not a simple response, but is moderated by individual as well as situational variables (Pierce & Dunham, 1976). Several recent studies have attempted to identify the major dimensions of the job content to identify how job satisfaction is co-determined by the content and individual traits. The most comprehensive study was designed by Hackman and Oldham (1975) who developed the job characteristics model of work motivation. The theory
suggests that positive work outcomes are forthcoming when motivating psychological states are created by five core dimensions of the job, specifically, skill variety, task identity, task significance, autonomy, and feedback. The measurement of these five core dimensions of the job yields a score that indicates the degree to which the job content may be intrinsically motivating to the individual. How an employee reacts to the job content depends on individual needs as well as on the nature of the work. Generally, employees with strong, higher order needs will be more satisfied with jobs that score high on the core dimensions (Wexley & Yukl, 1977, p. 111).

Several characteristics of tasks have been utilized as moderating variables in the study of the effects of leader behavior on subordinate satisfaction, motivation, and performance (Kerr, Schriesheim, Murphy, & Stogdill, 1974). A particularly relevant theory of leader effectiveness to the study of employee motivation is the path-goal theory of leadership. The theory not only suggests the style of behavior most appropriate situationally, but attempts to explain why it is most effective (House & Mitchell, 1974). Two dimensions of leader behavior, i.e., consideration and initiating structure, are analyzed in terms of how they may affect employee motivation. Specifically the theory studies how: (a) leader specification may clarify goal accomplishment ultimately leading to valued rewards, and (b) leader supportiveness or concern may increase the perception of value for those rewards received for goal accomplishment (Evans, 1970a). The path-goal theory becomes situational when consideration of moderating variables, specifically, personal
characteristics of subordinates or environmental pressures, are introduced (House, 1971). Characteristics of the task fall in the category of environmental pressures; however, the task variables studied as moderating variables in the path goal approach are not thoroughly consistent with the task design literature.

Statement of the Problem

A productive and satisfied work force has been the aim of organizations for many years, ever since it was recognized that the variables of performance and satisfaction were inextricably yet mysteriously connected. Many theories have been formulated over the years from an early model postulating performance as the result of satisfaction, to a current model concentrating on a sense of accomplishment with performance leading to satisfaction as moderated by individually perceived equitable rewards (Wexley & Yukl, 1977, p. 115).

The topic of job satisfaction has remained of crucial interest to individuals and organizations in their attempt to better understand motivation, attitudes, and behaviors. The attempt has involved the measurement of job satisfaction by some as an independent variable and by others as a dependent variable, plus the utilization of many diverse variables in the prediction of job satisfaction (Schwab & Cummings, 1970).

Job satisfaction is the attitude of an employee toward his/her job. The composite attitude, labeled "job satisfaction," is composed of discriminably different, independent constructs such as pay, supervision, job content, co-workers, promotions, working conditions,

Satisfaction with job content has been found to be a particularly potent variable in the consideration of job satisfaction. Simplified, low skill level, highly directive jobs can lead to low motivation, job dissatisfaction, low productivity, and other non-desirable behaviors. Whereas jobs designed to more fully reflect higher order needs enhance the affective, behavioral, and motivational potential of the job and thus increase job satisfaction (Hackman & Oldham, 1980, pp. 71-88).

Satisfaction with the supervisor is another important variable in the consideration of job satisfaction. A major proposition of the path-goal theory of leadership states that subordinates find leader behavior acceptable and satisfying to the extent that they see such behavior as either an immediate source of satisfaction or as leading to future satisfaction (House & Mitchell, 1974).

The researcher studied the path-goal theory of leader effectiveness and its relation to job satisfaction as moderated by the routineness of the task performed by the employee. Specifically, the researcher analyzed the relationship between the dimensions of leader behavior as the independent variables and the dimensions of job satisfaction as dependent variables in this study. The independent variables included leader consideration and leader initiating structure and their relationship to the dependent variables of satisfaction with work and satisfaction with supervision. Calculation of a score based on the core dimensions of the task provided a measure of the moderating variable. The moderating variable was used to
separate nonroutine, intrinsically satisfying tasks from routine tasks, and provided a method for creating a two-sample case for studying the relationship between the independent variables and the dependent variables.

Conceptual Framework

LEADER BEHAVIOR → JOB SATISFACTION

Consideration
Initiating Structure

Satisfaction with leader
Satisfaction with work

TASK DESIGN
Intrinsic Motivating Potential

Five core dimensions

Skill Variety
Task Identity
Task Significance
Autonomy
Feedback

Routine/ Nonroutine = Skill Variety Task Identity Task Significance \[ \times \text{Autonomy} \times \text{Feedback} \]

Job

3

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Research Objectives

The major objective of the study was to determine the relationship between the dimensions of leader behavior and the dimensions of job satisfaction as moderated by the degree of routineness of the task. The dimensions of the independent variable of leader behavior which were measured were consideration and initiating structure; the dimensions of the dependent variable of job satisfaction which were measured were satisfaction with work and satisfaction with supervision.

The degree of routineness of the task provided a contingency or situational factor which moderated the relationship between leader behavior and job satisfaction.

Limitations

The study was limited by the following factors:

1. The degree of routineness of the task provided a contingency factor which moderated the relationship between the dimensions of leader behavior and the dimensions of job satisfaction, but there were many more variables which may have impinged on the relationship.

2. The propositions tested in the study may have failed to include all relevant variables for a full explanation of job satisfaction.
Summary

The path-goal theory of leadership is currently a potent schemata for investigation of job satisfaction in the workplace. Situational variables have been previously investigated that included job scope and autonomy, but an incorporation of relevant task design variables was designed to provide a more complete and appropriate model of interacting variables in the job situation.

Specifically, this investigation was designed to utilize leader behavior as the independent variable to predict the dependent variable of job satisfaction, as moderated by the routineness of the task. The variable of routineness incorporated the task design variables of skill variety, task identity, task significance, autonomy, and feedback.
CHAPTER II

REVIEW OF RELATED LITERATURE

The literature reviewed in this chapter pertains to the satisfaction with work as an affective response to leader behavior as moderated by characteristics of task design. Topics specifically addressed include motivation, job satisfaction, task design, and characteristics of leader behavior.

Motivation

The motivation of individuals in the organization has been of prime importance to managers who must recognize the potential strength of their human element. Generally, an individual's motivation is concerned with (a) the direction of behavior, or choice of alternatives; (b) the amplitude, or amount of effort expended; and (c) the persistence, or duration of behavior (Campbell et al., 1970, p. 340).

There exists a plethora of theory about motivation and the term "motivation," which encompasses a multitude of variables labeled drives, needs, rewards, and so on. The approach taken by Campbell et al. (1970, pp. 340-384) seems the most logical, with the division into two groups, labeled substantive or content theories, and mechanical or process theories. Content theories are concerned with identifying specific variables present in an individual or in the relevant environment that activate and sustain behavior, whereas
process theories attempt to explain how behavior is activated, directed, sustained, and terminated.

It is important to realize that Campbell and his co-authors' process-content distinction is not a desirable qualification for a workable theory of motivation, but is proposed to facilitate understanding of the various theories (Campbell et al., 1970).

Content Theories of Motivation

The content theories of motivation, pertinent to a work related theory of motivation, to be discussed here are Maslow's need hierarchy and Herzberg's two-factor theory. Maslow's need hierarchy, probably one of the most quoted theories of motivation, proposed five basic needs common to all humans: physiological needs, safety needs, social needs, esteem needs, and the need for self-actualization. The theory proposed that "the human being is never satisfied except in a relative or one-step-along-the-path fashion, and second, that wants seem to arrange themselves in some sort of hierarchy of prepotency" (Maslow, 1970, p. 25). The theory hinged on the concepts of deprivation and gratification. Deprivation of needs focused concern on those needs which dominated the organism, and when they had been satisfied, higher needs emerged, which in turn sought gratification. "This is what we mean by saying that the basic human needs are organized into a hierarchy of relative prepotency" (Maslow, 1970, p. 39). Maslow's interpretation of this phrasing was based on gratification being as essential as deprivation in a theory of motivation, because it served to release the
organism from being dominated by lower level needs to allow higher level needs to emerge.

Maslow's theory is widely known and is therefore assumed to be well validated; however, a review of the literature by Wahba and Bridwell (1973) concluded that support for its empirical validity is limited. The review concentrated on the attempted validation of the needs classification scheme, the deprivation-dominance proposition and the gratification-activation proposition. Their analysis of studies showed no clear evidence that human needs are classified into five distinct hierarchial categories, but may be oriented into a bimodal distribution of lower and higher order needs with an independent categorization of self-actualization.

The deprivation-dominance theme inherent in Maslow yielded inconsistent results when studies were examined by the authors. Two studies showed a V-curve relationship—the higher the satisfaction or dissatisfaction, the higher the ranked importance; whereas another study correlated high satisfaction with importance of needs. The gratification-activation theme correspondingly had little or no support as tested by cross-sectional and longitudinal studies. However, most results should be qualified because of the static, correlational methods of analyzing only one small segment of a dynamic, integrated, clinically derived theory of motivation (Wahba & Bridwell, 1973).

It is important to realize that Maslow realistically interpreted his hierarchy in terms of decreasing percentages of satisfaction. As Maslow (1970) stated:
For instance, if I may assign arbitrary figures for the sake of illustration, it is as if the average citizen is satisfied perhaps 85 percent in [the] physiological needs, 70 percent in [the] safety needs, 50 percent in [the] love needs, and 10 percent in [the] self-actualization needs.

As for the concept of emergence of a new need after satisfaction of the prepotent need, this emergence is not a sudden, saltatory phenomenon, but rather a gradual emergence by slow degree from nothingness. (p. 54)

Although it may lack empirical validity, Maslow's theory is important for the work situation, because it stimulates thought about the relative gratification of lower level needs before employees can focus on higher level needs. However, too often the concentration is on substantial gratification of lower level needs with no provision for reward structures which emphasize higher level needs (Sergiovanni & Starratt, 1970, p. 157).

A content theory which maximized the differences between lower and higher level needs was the Herzberg two-factor theory, which specifically stipulated that the higher order needs operate as motivational factors, whereas the lower order needs operate as hygiene factors in the work situation (Sergiovanni & Starratt, 1970, p. 164). According to the theory, job characteristics can be grouped into two categories, the dissatisfiers or hygiene factors and the satisfiers or motivating factors, which fall into two distinct continua, are independent of each other, and are influenced by different reinforcers (Campbell et al., 1970). The presence of hygiene factors (i.e., pay, benefits, working conditions) was postulated as able to prevent the onset of job dissatisfaction, but as unable to create satisfaction. Motivational factors, in terms of responsibility,
recognition, and achievement must be present to create job satisfaction—their absence prevented an employee from experiencing the positive satisfaction that resulted from fulfillment of higher order needs, but did not result in job dissatisfaction (Sergiovanni & Starratt, 1970, p. 164).

Many studies have been conducted to test the two-factor theory with mixed results. Generally studies that employed the methods used in the original research have supported the theory, but negative evidence against the theory has been overwhelming (Campbell et al., 1970, pp. 380-381). Huizenga (1970, pp. 189-192) pointed out that the distinction between hygienes (those factors related to the doing of the job) and motivators (those factors defining the job context) was made after the data were collected in a free interview situation in which the interviewer was aware of the hypotheses under study. Huizenga, therefore, seems to be questioning the "reliability of data collected" under such conditions (Huizenga, 1970, p. 186).

Campbell et al. (1970, p. 381) have drawn a conclusion pertinent to the application of the two-factor theory. They view the Herzberg theory as useful to the extent that it generated research activity, but consider it to be an oversimplification of a multitude of factors related to job satisfaction.

Process Theories of Motivation

Process theories of motivation attempt to specify how variables interact to produce certain kinds of behavior. Two process theories
have potential relevance to organizations in the design of motivating their employees—expectancy theory and equity theory.

Expectancy theory is based on the cognitive view that an individual is aware of the consequences of possible actions and makes conscious choices among alternatives based on the value or attractiveness of the outcomes (Wexley & Yukl, 1977, p. 82). Expectancy theory probably has more support than any other cognitive theory in psychology and thus provides a strong base for incorporation into organizational psychology (Mitchell, 1974).

Vroom (1964) developed an instrumentality theory of performance based on the interaction between motivation and ability, utilizing the key concepts of expectancies, valences, outcomes, and instrumentalities. Expectancy is the belief that a particular choice of behavior will result in a work related outcome of either desirable or undesirable consequences (for example: either promotion or an accident). The degree of desirability or undesirability is the valence of the outcome, which describes the individual's preference for a certain outcome—usually due to its instrumentality for achieving other outcomes. Thus behavior leads to first level outcomes which have a certain degree of valence (are valuable) to the extent that they are instrumental in achieving second level outcomes, based on needs. There are many possible ways to combine valences and expectancies for predicting the actions that a person will take with regard to the outcome. Vroom (1964) postulated that the force to perform an act is a "monotonically increasing function of the algebraic sum of the products of the valences of all outcomes and the
strength of . . . expectancies that the act will be followed by the attainment of these outcomes" (p. 18).

Campbell et al. (1970) extended Vroom's model to include specification of "task goals" toward which work behavior is directed, examples of which include quality standards, quotas for production, loyalty to the organization, etc. A potential first level outcome contingent on accomplishment of the task goal is termed an "incentive," which becomes a "reward" when completed (Campbell et al., 1970, p. 345). A further extension postulated a more explicit distinction between first and second level outcomes by dividing individual expectancy of outcomes into two separate variables. The first expectancy involves the perceived probability estimate of reaching a goal with a specified expenditure of effort, whereas the second is based on the perception of the degree to which accomplishment of the task goal will lead to rewards. (See Appendix B for visualization of the Campbell et al. model.)

This dichotomy of expectancies was deemed necessary to make it more appropriate to an organizational setting, where many need related outcomes are contingent on performance rather than effort expenditure. For example, in the case of a salesperson, commissions do not result from the effort involved in trying to sell products, but they do result from actual sales. In this instance, rewards are perceived contingent on the accomplishment of task goals (expectancy I) so the person utilizes appropriate abilities in the effort to successfully complete task goals (expectancy II) (Campbell et al., 1970).
The research evidence does provide some support for expectancy theory, however, as in most theories of human motivation and behavior, it is inconsistent. There is obvious need for additional research on the constructs of expectancy theory, in terms of measurement of all specified independent variables and their interaction effect. The potential worth of expectancy theory lies in its focus on major classes of variables (i.e., valence, instrumentality, and expectancy) that operate in an interactive manner to motivate behavior, rather than in the simple identification of second level outcomes (needs) (Heneman & Schwab, 1972). Mitchell (1974) points out that there is some support for the inference that expectancies may motivate behavior as supported by empirical findings.

Wexley and Yukl (1977) offer several practical implications for the utilization of expectancy theory in an organization, as follows: (a) organizations should minimize undesirable outcomes that may be perceived to result from acceptable performance (i.e., accidents), (b) appropriate methods of evaluating employee performance should be developed, (c) rewards contingent on superior performance should be established, (d) effective selection and training techniques should be implemented to maximize employee expectations that they can accomplish the task goal, and (e) organizations should realize that the valence attached to need related outcomes varies individually and therefore requires incentives with high valences.

The other process theory of motivation with implications for organizations is equity theory, which has its roots in discrepancy theory. Discrepancy theory is based on the central idea that if a
discrepancy exists in the individual, that individual is motivated to reduce it (Wexley & Yukl, 1977, p. 99).

Equity theory, developed by Adams (1963), deals with the judgment by an employee of the fairness of the job situation as based on the perceived discrepancy between that person's ratio of job inputs to job outcomes and the same ratio for another person (comparison person). If the ratio between the two individuals is equal a state of equity is perceived, but if the ratios are unequal a state of inequity results which creates tension and acts as a motive to restore equity (Adams, 1963). The theory as developed by Adams postulated a number of ways an employee can act to restore equity, including leaving the job situation, distortion of perceived inputs or outcomes, changing the comparison person, or changing the ratio of inputs to outcomes.

Goodman and Friedman (1971) in their review of the literature stressed the importance of examining all the propositions in the theory, not just the inequity-performance issue. Their conclusions fall into three categories—some assumptions of the theory have relatively clear empirical support, some have tentative support due to little research or mixed results, and some assumptions have never been tested or tested in a single study with poor controls. The reviewers believe that "although the general concept of inequity has been well stated by Adams, the components of perceived inequity have not been theoretically specified in sufficient detail" (Goodman & Friedman, 1971, p. 285). The major problems concern: (a) identifying procedures by which inputs and outcomes are defined,
(b) selection and use of a comparison person, and (c) definition of selection resolution strategies for inequitable situations.

From a theoretical perspective, equity theory has some fundamental differences from expectancy theory, particularly observable in the prediction of increased performance for overpaid hourly workers who attempt to reduce guilt feelings about their perceived inequity by working harder. Expectancy theory would not predict increased performance because performance is not related to pay; however, the reviewers suggest that there are inequity effects even though expectancy theory is probably the best predictor (Goodman & Friedman, 1971).

The implications for inequity theory are difficult to assess although the "primary contribution of the model will certainly not be in explaining performance" due to the short term effect of inequity on performance (Goodman & Friedman, 1971, p. 286). However, the theory does provide: (a) a relatively simple model to explain and predict an individual's feelings about the reward structure in an organization, (b) a model of selecting a comparison person that administrators may use in determining who to include in evaluation of reward structures by salary surveys, and (c) a theory about equitableness of rewards and their interchangeability within the system (Goodman & Friedman, 1971).

Job Satisfaction

The topic of job satisfaction has generated considerable interest and research over the years because of the inherent belief that
it should provide explanations applicable to motivation, attitudes, behaviors, and performance within the organization (Dunham, Smith, & Blackburn, 1977). The relationship between job satisfaction and performance is probably the oldest and most provocative area of study concerning behavioral implications in the organization (Greene, 1973). Three major theoretical propositions have guided the examination of the relationship, initiated by the human relationists with their emphasis on the well-being of the individual. Their position and the more than 30 studies designed to prove it, proposed that an employee who is treated well by the organization will be more satisfied and hence will be motivated to perform effectively, supposedly out of gratitude to the organization (Lawler & Porter, 1967).

Finally in 1955, a literature review by Brayfield and Crockett shocked the field with their key conclusions that: (a) an individual's satisfaction with a position in the organization does not necessarily motivate outstanding performance, and (b) productivity is probably not the primary goal of most employees and, in fact, may only be peripherally related to desired achievement of goals. They went on to hypothesize that the relationship between satisfaction and performance might not be one of cause and effect, but might be expected to occur concomitantly when the employee who views productivity as a means of attaining personal goals, reaches those goals and is satisfied with that achievement.

The importance of the position taken by Brayfield and Crockett is in the stimulation it provided for theorizing about the satisfaction-performance relationship, and many additional theories
were advanced after 1955 which concentrated on the relationship as moderated by any number of variables. "A model proposed by March and Simon in 1958 perhaps best bridges the theoretical gap between the satisfaction-performance view of the human relationists and the performance-[reward]-satisfaction view" (Schwab & Cummings, 1970, p. 415). The March and Simon model, as interpreted by Schwab and Cummings, suggested that a state of dissatisfaction, which acts as an activator for behavior, is a necessary condition for performance. The model also considered conditions in which performance may lead to satisfaction but the linkage is moderated by more variables and thus appears weaker (Schwab & Cummings, 1970).

The circularity of the March and Simon model leads to the third theoretical proposition, which is attributed to Porter and Lawler who developed it most fully (Schwab & Cummings, 1970). The model concentrates on performance as the causal variable, and satisfaction as the dependent variable, with the linkage moderated by rewards which may or may not be perceived as fair or equitable (Lawler & Porter, 1967). Later additions by Porter and Lawler to their performance-satisfaction model were designed to present the mediating variables in a circular model with the link between performance and satisfaction the most direct and the strongest (Porter & Lawler, 1968).

The theoretical model (see Appendix C for visualization of the model) developed by Porter and Lawler is an attempt "to study job attitudes concerned with satisfaction and need importance because of their assumed relationship to the employee's desire, willingness, or
motivation to come to work to perform [the] job" (Porter & Lawler, 1968, p. 7). They have attempted to develop a theory relevant to the relationship between job attitudes and job behavior which has its roots in the expectancy theory of motivation and specifies which attitudes should precede and therefore cause performance, and which should depend on performance (Porter & Lawler, 1968, p. 14).

The theory postulated that the low performance-satisfaction relationship often noted may result from rewards which have no connection to performance and therefore cannot strengthen that linkage. In order for satisfaction to influence performance, it must affect the value of rewards received which interacts with the perceived effort-reward probability to determine actual work effort. This effort is in turn moderated by role perceptions and abilities to affect performance (Schwab & Cummings, 1970).

Support for the Porter-Lawler expectancy based model of employee motivation has been mixed (Wexley & Yukl, 1977) but the value of additional satisfaction-performance theorizing is questionable. "Premature focusing on relationships between the two has probably helped obscure the fact that we know so little about the structure and determinants of each" (Schwab & Cummings, 1970, p. 430).

The focus on job satisfaction may do little to reduce the obscurity in understanding employee motivation to work, primarily because of the ambiguity in defining the issues. However, much research labeled as work motivation has used job satisfaction as the dependent variable by measuring the positive or negative aspects of an employee's attitude toward the job. To the extent that the job
meets dominant needs and reflects accurate expectations and values, it will be satisfying (Campbell et al., 1970, p. 378).

There is agreement that needs or drives generate feelings of dissatisfaction in the individual who engages in behavior to obtain whatever is necessary to satisfy the need, however there is not consistent agreement on one common classification scheme. Maslow's need hierarchy provides one method of classifying needs in order to attempt to explain individual behavior in an organization (Wexley & Yukl, 1975, p. 1).

The Herzberg two-factor theory specifically differentiates between job satisfaction and job dissatisfaction, i.e., there are two distinct continua that must be considered in maintaining satisfied employees. If hygiene factors (based on lower order needs) are absent from the job, the employee will be dissatisfied; however, the presence of hygiene factors does not guarantee satisfaction, it only negates dissatisfaction. A satisfied employee must have motivational factors present in the job, i.e., those factors that meet higher order needs. This differentiation between satisfaction and dissatisfaction as two distinct concepts emphasizes the difference between intrinsic factors based on growth or higher order needs and extrinsic factors as based on lower order needs. According to Herzberg's theory, it should be expected that intrinsic factors are the main source of satisfaction and motivation, whereas extrinsic factors are the primary source of dissatisfaction (Sergiovanni & Starratt, 1979, pp. 165-169).
The use of the terms intrinsic and extrinsic has been limited in our review up to this point, particularly because of the amount of ambiguity in the distinction of the terms. Brief and Aldag (1977) contend that the extrinsic-intrinsic dichotomy is theoretically sound, but they stress the necessity of assessment of self-attribution of motivation rather than reliance on classification of objective outcomes. Broedling (1977) traces the development of the distinction between intrinsic and extrinsic and classifies the distinction into two major types: as an individual, fairly stable personality trait, and as a changeable psychological state. When used to categorize individual differences, the distinction usually describes orientation toward work—intrinsically oriented people are more interested in job content whereas extrinsically oriented people are interested in the job context (Broedling, 1977).

The view of the intrinsic-extrinsic distinction as a psychological state may have more relevance to an analysis of job satisfaction, particularly because satisfaction may be subject to change depending on the circumstances of the situation. Broedling (1977) discusses several situational variables as a determinant of employee states: (a) the type of rewards administered by the organization and whether those rewards are contingent on performance; (b) job content, or how much of the job is intrinsically interesting; (c) job autonomy, or satisfaction derived from controlling work; and (d) leadership style, or extent of participative control over work. There is a noticeable trend in job satisfaction studies to view the joint influence of employee characteristics and job characteristics as the major
determinant of job satisfaction (Hackman & Lawler, 1971; Hackman & Oldham, 1975; Hulin & Blood, 1968). Basically the distinction between intrinsic and extrinsic may be useful in explaining why some individuals in a given situation react with behaviors that are classified as growth behaviors, while others do not (Broedling, 1977).

Expectancy theory, which explains behavior in terms of perceptions of job outcomes, is primarily a theory of extrinsic motivation which focuses on first level outcomes used to obtain second level outcomes (Vroom, 1964). However, Campbell and his associates' modification is an attempt to account for behavior based on internally as well as externally mediated task goals.

Whether one chooses to view satisfaction and dissatisfaction on the bipolar continuum or Herzberg's nonconventional two continua model, attitudes must still be identified and measured, and there exist several instruments designed for the empirical study of job satisfaction (Dunham et al., 1977). There is evidence to suggest that job satisfaction, instead of being a single variable, is actually a complex set of relatively independent components (Vroom, 1964, pp. 101-105). The Job Descriptive Index (JDI) by Smith et al., 1969), for example, has identified five components of overall satisfaction (i.e., pay, promotion, work, supervision, and co-workers); whereas the Index of Organizational Reactions (IOR, by Smith, 1976) measures eight components. The Minnesota Satisfaction Questionnaire (MSQ, by Weiss, Dawes, England, & Lofquist, 1967) and the Faces Scales (Dunham & Herman, 1975) have also been used to measure job
attitudes in relation to predicting satisfaction. Unfortunately, little has been done in the area of comparative research on content measurement of satisfaction scales, however Dunham and his associates (1977) have compared the scales for reliability, discriminant and convergent validity. They found the JDI to have the highest reliability, followed by the MSQ and the IOR (Faces not assessed). Rank ordering based on convergent validity was: MSQ, IOR, Faces, and JDI; and discriminant validity: IOR, MSQ, Faces, and JDI. It should be noted that all four methods did have some discriminant validity differences as a function of sex and job groupings.

The importance of the variety of instruments designed to measure job satisfaction point out the failure to agree on what should be included under the rubric of job satisfaction. All would probably agree that "there are several discriminably different areas of job satisfaction and measures of these subareas should be relatively independent" (Smith et al., 1969, p. 25). The measurement of global job satisfaction or the calculation of a cumulated score on subscores has been used, but "may well mask relationships which involve only one aspect of the employee's feelings" (Smith, 1969, p. 4). For example, there seems very little reason to believe that a pay increase will enhance an employee's regard for his fellow coworkers.

Satisfaction with job content or the actual work performed has been found to be particularly potent in the consideration of job satisfaction. Simplified, low skill level jobs can lead to low motivation, low productivity, and other undesirable behaviors. Jobs
designed to reflect higher order needs enhance the affective, behavioral, and motivational potential of the job and thus increase job satisfaction (Hackman & Oldham, 1980, pp. 71-88).

Satisfaction with the supervisor is another important variable in the consideration of job satisfaction. One of the major propositions of the path-goal theory is that "leader behavior is acceptable and satisfying to subordinates to the extent that the subordinates see such behavior as either an immediate source of satisfaction or as instrumental to future satisfaction" (House & Mitchell, 1974, p. 84).

For the reasons enumerated above, the primary measurements of job satisfaction when considering the path-goal theory involve utilizing satisfaction with work and satisfaction with supervision. The global construct known as job satisfaction, based on the cumulated score of all independent constructs, is provided primarily as a measure of curiosity.

Task Design

Dating from the time of the industrial revolution, organizations have been concerned with efficient methods of accomplishing tasks (Steers & Mowday, 1977). The scientific movement concentrated on the approach of jobs based on task simplification and standardization designed to minimize worker requirements and reduce training responsibilities (Dunham, 1980). In the early 1950's, organizations began to realize that the needs of their employees moderated the reaction to the characteristics of the simplified job which lead to
"dysfunctional outcomes for both the organization and the individual worker" in terms of low motivation, job dissatisfaction, low productivity, and other generalized disruptive outcomes (Pierce & Dunham, 1976). This concern for the reaction of the worker to the job, called the human relations movement, resulted in the era of horizontal enlargement to increase variety and vertical enlargement (or enrichment) to increase worker participation in the control of the job (Aldag & Brief, 1979, pp. 42-45).

Researchers first looked to a theory of motivation of needs as a basis for support of the enlargement/enrichment issue. Traditionally, money, job security, and physical working conditions had been offered to employees to satisfy their needs. But, if one considered these traditional reward systems as simply satisfying lower order needs, many higher order needs were being overlooked. Therefore, researchers felt justified in designing jobs to meet the needs for autonomy, growth, and achievement (Dunham, 1980).

The Herzberg two-factor theory of job satisfaction provided the impetus necessary for job enlargement/enrichment studies. Herzberg's theory concentrated on factors which centered in the job itself as motivators—those factors which provided opportunity for achievement, responsibility, recognition, advancement, and personal growth. Thus attention was focused on the intrinsic characteristics of the job—those factors which would lead to satisfaction. The provision for peripheral contextual factors, in the form of extrinsic benefits, was maintained simply so that the employee would not become dissatisfied (Dunham, 1980; Steers & Mowday, 1977).
The ensuing onslaught of programs that attempted to restructure jobs to increase their motivational and satisfying potential, resulted in an overextension in an opposite direction from scientific management. Most often, the early cases involved redesign of tasks for all employees, with no regard to individual differences that may moderate the desire for an enriched job. "The present viewpoint is that both job characteristics and employee individual differences must be included in a thorough treatment of work humanization" (Wanous, 1974, p. 616).

A classic study by Turner & Lawrence in 1965 measured employee perceptions of the task characteristics of variety, autonomy, responsibility, knowledge and skill, optional interaction, and required interaction (six dimensions that could be weighted to calculate a Requisite Task Attribute (RTA) Index). Their original hypothesis of a positive response to jobs rated high on RTA leading to high satisfaction was found to hold only for workers from factories located in small towns. Turner and Lawrence concluded that the individual reactions to job characteristics was moderated by cultural factors (Nemiroff & Ford, 1976).

Hulin and Blood in 1967 and 1968 conducted two studies on the importance of subcultural factors in determining worker responses to their jobs—they found alienation from traditional work norms (i.e., Protestant work ethic) and rejection of job enlargement practices to be influenced by the degree of urbanism of the work community (Hulin & Blood, 1968; Nemiroff & Ford, 1976).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Hackman and Lawler (1971) focused on higher order need strength as the most critical moderating variable between job characteristics and affective responses to the job. Their findings indicated that workers from rural backgrounds were higher in need strength and thus were more satisfied with enlarged jobs than were urban workers (thus replicating the findings by Turner & Lawrence, 1965).

Hackman and Lawler's results were partially confirmed in 1975 by Brief and Aldag, who also found a moderating effect of higher order need strength; however, the role of higher order need strength was found to be more complex. Individuals high in higher order need strength had stronger relationships between job characteristics and affective responses to the work itself, which indicated intrinsic motivation. Those individuals with relatively lower higher order need strength exhibited strong relationships between job characteristics and responses labeled extrinsic (Nemiroff & Ford, 1976).

The Job Characteristics Model of Work Motivation developed by Hackman & Oldham (1975) was based on the studies by Turner and Lawrence and Hackman and Lawler. The theory suggests that positive outcomes (high internal motivation, high work satisfaction, high performance, low absenteeism and turnover) are obtained when three "critical psychological states" are present. These three psychological states (experienced meaningfulness of work, experienced responsibility for the outcomes of the work, and knowledge of actual results of work activities) are all required for positive outcomes, and are created by the "core dimensions" of the job (see Appendix A for a definition of the terms). The measurement of the core dimensions
present in any job thus provides an index of the extent to which the job content may be deemed high in intrinsic motivating potential (Hackman & Oldham, 1975, p. 160). The meaningfulness of the work is enhanced by the dimensions of skill variety, task identity, and task significance, responsibility for work outcomes is enhanced by job autonomy, and knowledge of results is increased when a job is high on feedback (see Appendix D for visualization of the model).

The instrument developed to test the Job Characteristics Theory, the Job Diagnostic Survey (JDS), was constructed to tap each major class of variable in the theory, i.e., core dimensions, psychological states, and growth need strength. However, the instrument does not measure actual work outcomes, but does measure affective personal reactions to the job in the form of general satisfaction, internal work motivation, and specific satisfactions (Hackman & Oldham, 1980, p. 103). A companion instrument to the JDS and one designed to be used by supervisors of the job or by outside observers is the Job Rating Form (JRF). The JRF provides measures only of the actual dimensions of the job, with none of the employee affective reactions to the job included. The JRF is identical to Sections One and Two of the Job Diagnostic Survey and provides scores of the core dimensions of skill variety, task identity, task significance, autonomy, and feedback (Hackman & Oldham, 1974).

A summary score reflecting overall motivating potential of the job is obtainable in terms of the core job dimensions, as follows:
As can be seen from the formula, an increase in any of the core dimensions will increase the MPS, but if any of the components is low, the MPS will be low. A job high in motivating potential does not cause the same reaction in all individuals, but is moderated by employee growth need strength. Those individuals who value feelings of accomplishment and growth should respond to a job high on the core dimensions, whereas individuals with low growth needs may find such a job too anxiety laden (Hackman & Oldham, 1975). The calculation of the MPS may be used as an indicator of the routineness of the task. The measurement of the core dimensions provides an index of the extent to which job content is high in intrinsic motivating potential (Hackman & Oldham, 1975). Simplified jobs which require little skill lack motivating potential and may be considered routine.

Based on an in-depth review of the literature, Pierce and Dunham (1976) concluded that "satisfaction with work is more strongly related to task design than other affective, motivational or behavioral variables" (p. 87), and that there are individual differences in the "degree to which workers desire and value intrinsic outcomes derived from expanded task design" (p. 90).

Some problems do exist with the theory and the instrument designed to test the theory. The noncompensatory formulation of MPS has been questioned, and other formulas have been calculated which hinge on whether or not low scores on some job dimensions can be
compensated for by higher scores on others. A fully compensatory, equally weighted linear model was found by Dunham (1976) to be equally as effective in explaining differences in the response to job characteristics. Neither formulation has been found to be superior, but the implications are critical in a situation in which one component must remain fixed at a low level. The question then arises as to whether or not manipulation of task components will have any effect on worker response.

The second problem involves the use of the instrument designed to test the theory. Hackman and Oldham (1980) suggest guidelines and cautions in the appendix of their book, which covers the majority of the problems noted by other researchers:

1. Job characteristics, as measured by JDS, are not independent.
2. Validity is unestablished.
3. JDS may not be appropriate for diagnosing jobs of individuals.

Characteristics of Leader Behavior

"The successful organization has one major attribute that sets it apart from unsuccessful organizations: 'dynamic and effective leadership" (Hersey & Blanchard, 1977, p. 83). There is no general agreement on the definition of leadership, but most imply that it involves a "process of exerting positive influence over other persons" (Wexley & Yukl, 1977, p. 143). Boles and Davenport (1975) defined leadership as a "process in which an individual takes
initiative to assist a group to move toward production goals that are acceptable, to maintain the group, and to dispose of those needs of individuals within the group that impelled them to join it" (p. 117). This definition is congruent with leadership as a distinct concept from management, which concentrates on the accomplishment of organizational goals. Hersey and Blanchard (1977) developed a management-oriented definition of leadership, as follows: "leadership is the process of influencing the activities of an individual or a group in efforts toward goal achievement in a given situation" (p. 84). Because the emphasis in leadership is on influencing others to accomplish organizational goals, it seems reasonable to assume that the "behavior of the immediate supervisor is another important determinant of an employee's job satisfaction" (Wexley & Yukl, 1977, p. 113).

Behavioral analysis of leadership came into vogue in the early 1950's, when researchers realized that an examination of leader traits did little to predict leader effectiveness (Hersey & Blanchard, 1977, p. 89). The multitude of potential leadership functions made identification of distinct, independent categories necessary as a prerequisite to further study. An extensive study initiated at Ohio State University in 1945 by the Bureau of Business resulted in the development of the Leader Behavior Description Questionnaire (LBDQ) (Stogdill & Coons, 1970). Based on statistical analysis of 1,500 behavior descriptions, two major factors accounted for the majority of total variance; therefore, effort was concentrated on developing short scales of the LBDQ for describing the
dimensions of consideration and initiating structure (Halpin & Winer, 1957, p. 51). Consideration refers to leader behavior characterized by "concern, understanding, warmth, and sympathy for the feelings and opinions of . . . subordinates" (Fiedler & Chemers, 1974, p. 48). Initiating structure refers to behaviors that are related to the introduction of organization, assignment of tasks, scheduling of work assignments, setting standards, and evaluating the work of subordinates (Fiedler & Chemers, 1974, p. 48).

Two other dimensions emerged in the factor analysis of leader descriptions, however the combined variance accounted for only 17% of the total. Production emphasis appeared to measure a way of motivating to get the most out of employees, whereas social awareness appeared to measure an instinctual feel for the social situation (Halpin & Winer, 1957).

There is no simple relationship between leader characteristics and subordinate satisfaction, but consideration has a more predictable effect on subordinate satisfaction than initiating structure (Wexley & Yukl, 1977, p. 113). Individuals who exhibit consideration to others are generally better liked and should have a more positive effect on subordinate satisfaction, as indicated by Halpin (1957) and Halpin and Winer (1957). Others have found a curvilinear relationship between consideration and two purported measures of job satisfaction (i.e., absenteeism and turnover) which may indicate a zone of indifference within which leader behavior has no effect on subordinate satisfaction (Fleishman & Harris, 1962; Skinner, 1969). Few studies have found a negative relationship between the two
variables, but Argyle (1958) found no positive correlation between consideration and satisfaction. Still other researchers have examined the relationship at job levels. Hemphill (1959) found consideration to be more important among lower level employees, whereas Nealey and Blood (1968) found preference for consideration to be relatively constant across different levels.

As stated previously, the relation between initiating structure and satisfaction is less predictable and yields inconsistent results. Nealey and Blood (1968) found a negative correlation at second level supervisory positions but a positive correlation at first level positions. The review by Kerr and his associates (1974) cited studies which indicate satisfaction with some leaders who are very task oriented and other studies which indicate satisfaction with non-task oriented leaders. Some studies indicated a stronger relationship between satisfaction and structure when the task was ambiguous (House, 1971) or failed to be intrinsically satisfying (House, 1971; Hunt & Liebscher, 1973).

The problem with trying to analyze consideration and structure is that they may exhibit a conjunctive relationship, which suggested to researchers that a minimal amount of each is required, and one cannot compensate for the other (Hemphill, 1957). Fleishman and Harris (1962) found that consideration had a greater effect on satisfaction than did structure, and that a leader high in consideration is able to increase structure with little increase in grievances from subordinates. Yukl (1971) found that consideration and structure did indeed interact on subordinate task motivation and
that motivation was highest when leader consideration and structure were high, but other combinations were less certain in their effect. Despite all these difficulties in the consideration-structure interpretation of leader behavior, the leadership scales are descriptive of readily identifiable behaviors, determined by factor analysis to yield two discernable dimensions and are understandable and observable traits to practicing managers (Kerr et al, 1974).

House (1971, p. 322) attempted to "reconcile and integrate the conflicting results of previous studies under a set of general propositions from which they could have been deduced" by advancing a path-goal theory of leader effectiveness. The original path-goal approach based on employee productivity as the path to goals (Georgopoulous, Mahoney, & Jones, 1957) was modified by Evans in 1970 to explain how leader behavior affects subordinate motivation and performance in different work situations. The theory, essentially derived from expectancy theory, postulated that leader behavior affects the employee's expectancy that an effort exerted to attain task goals would be successful and also the expectancy that superior performance would be instrumental in achieving desired (positively valent) outcomes. Leader behavior could affect employee motivation to the extent that: (a) the path to goal accomplishment and hence valued rewards could be clarified by leader specification of behavior, and (b) leader supportiveness and concern for the welfare of employees could increase the perception of valued rewards available for task accomplishment (Evans, 1970a).
Several modifications of the Evans' formulation have led to a more complex theory, which attempts to account for situational variables in explaining: (a) satisfaction of subordinates, (b) acceptance of the leader, and (c) expectations that effort results in effective performance which leads to rewards (House & Mitchell, 1974). Modification of the theory by House (1971) depended on the inclusion of two classes of contingency variables that may moderate the relationship between leader behavior and subordinate satisfaction, i.e., personal characteristics of the subordinates and environmental pressures that must be dealt with in accomplishing work goals. The first category of contingency factors looks at how leader behavior affects satisfaction as moderated by subordinate characteristics. Leader behavior may be viewed as acceptable to the extent that: (a) it is seen as providing satisfaction or potential satisfaction, and (b) it is not perceived as excessive in regard to the subordinate's ability with regard to accomplishment of the task (House & Mitchell, 1974).

The second category of contingency factors involves assessment of variables associated with subordinate's tasks, the formal authority system of the organization, and primary work groups, all of which may impinge on subordinate satisfaction. The theory states that: (a) leader behavior may motivate satisfaction within the job context by helping subordinates deal with frustration and uncertainty in their effort to reach valued rewards, (b) leader behavior that redundantly clarifies routine tasks is seen as restrictive and may decrease satisfaction, and (c) leader attempts to press for
productivity in dissatisfying task situations lead to resentment on the part of subordinates (House & Mitchell, 1974).

The usefulness of the modified path-goal theory of leadership is that it not only suggests the type of style that may be most appropriate situationally, but it attempts to explain why it is most effective (House & Mitchell, 1974). Illustrative of its usefulness, House (1971) attempted to reconcile the conflicting results of earlier studies, some of which were quoted previously in this section. Specifically, leader initiating structure reduces role ambiguity often associated with higher level jobs by clarifying the path toward goal attainment and increasing satisfaction; however, leader structure in lower level, routine jobs is often viewed as an imposition of external control to maintain performance of dissatisfying activities (House, 1971).

Leader consideration may be viewed as a "source of extrinsic social satisfaction and support to the employee" in a lower level job where the path to a goal might not always be easy to follow; however, in a higher level job where the path itself is intrinsically satisfying, leader behavior may have little or no effect (House, 1971, p. 326). Leader consideration may serve as a stress modifier in situations which call for high pressure for production—that is, under conditions calling for high production based on routine, non-satisfying tasks, leader structuring may be viewed as an unacceptable imposition of external control, unless high consideration makes the path easier to follow and reduces some of the stress of task accomplishment (House, 1971).
Many moderators have been found to significantly influence the relationship between leader behavior predictors and employee satisfaction, including role ambiguity, job autonomy and job scope, pressure, task related satisfaction, job level, subordinate expectations, congruence of leadership styles, subordinate's organizational independence, and leader upward influence (Kerr et al., 1974). Kerr and his associates (1974) approach the problem of studying all the variables in any given situation, by limiting themselves to situational elements which include:

1. Subordinate considerations of expertise, experience, competence, knowledge of job, hierarchial level of occupational preference, expectations of leader behavior, perceived organizational independence.

2. Supervision considerations of similarity of attitudes and behavior to those of higher management, and upward influence.

3. Task considerations of degree of time urgency, amount of physical danger, permissible error rate, presence of external stress, degree of autonomy, degree of job scope, importance and meaningfulness of work, and degree of ambiguity.

Using the elements listed above, Kerr and his associates (1974) developed propositions from their literature review and linked them to two general postulates of leadership effectiveness:

1. "The more that subordinates are dependent upon the leader for provision of valued or needed services, the higher the positive relationship will be between leader behavior measures and subordinate satisfaction and performance" (Kerr et al., 1974, p. 75). In
such cases where the need for leader initiating structure is reduced by existing specification of tasks or technological limitations, any attempt to impose structure may be viewed as redundant. Similarly, if the task itself provides intrinsic rewards, reliance on the leader to provide extrinsic satisfaction through consideration may be reduced, and at the same time focus on the task is accepted because of its intrinsic satisfaction. Further, if the task is routine and probably not intrinsically satisfying, leader consideration as an extrinsic satisfier is required (Kerr et al., 1974).

2. "The more a leader is able to provide subordinates with valued, needed, or expected services, the higher the positive relationship will be between leader behavior measures and subordinate satisfaction and performance" (Kerr et al., 1974, p. 76). If the leader is perceived to have influence on upper management, and similarly when upper management fosters consideration, leader consideration will be viewed as being able to provide organizational rewards. Further, congruence between subordinate expectations and observations of leader behavior will be positively viewed (Kerr et al., 1974).

The path-goal theory of leadership attempts to predict the contingent effectiveness of the interacting variables of leader behavior and a host of moderating variables. The results obtained in the review by Kerr et al. (1975) provide support for the theory. But some studies have failed to provide positive evidence and further studies should be designed to test the theory (Wexley & Yukl, 1977, p. 165).
Summary

On the basis of the relevant literature reviewed, the concept of the path-goal theory of motivation was used to examine the relationship between leader behavior and subordinate satisfaction, motivation, and performance. The path-goal theory, based on an expectancy formulation of motivation, was situationalized to account for contingency factors which moderated the relationship between leader behavior and employee satisfactions. The inclusion of task related satisfaction as a contingency factor was postulated as an environmental pressure that must be dealt with; however, the modification in this study included a treatment of task design variables consistent with the task design literature. The measurement of the task design variables provided a summary score reflecting the overall motivating potential of the job, which was used as an indicator of the routineness of the task.

The following theoretical propositions were based on the independent variables of leader consideration and leader initiating structure and their relationship to the dependent variables of satisfaction with work and satisfaction with supervision, as moderated by the routineness of the task.

1. The direct relationship between consideration and satisfaction with work is greater for the job that is low in intrinsic motivation (i.e., routine) than for the job that is high in intrinsic motivation (i.e., nonroutine). Consideration serves as a source of extrinsic social satisfaction and support for the employee thus
offsetting dissatisfaction with a task that is routine. Higher level jobs offer more intrinsic motivation via the path to goal accomplishment thus reducing the reliance on leader consideration as a source of support (House, 1971).

A theoretical hypothesis concerning consideration and satisfaction with supervision may be generated in the same manner.

2. The direct relationship between leader initiating structure and satisfaction with work is greater for the job that is high in intrinsic motivation (i.e., nonroutine) than for the job that is low in intrinsic motivation (i.e., routine). Leader initiating structure may clarify the path instrumentality toward goal attainment for higher level jobs which may be ambiguously defined. However, lower level jobs are routine, lack intrinsic motivation, and the path toward goal attainment is usually self-evident. Structure is generally viewed as an imposition of external control by the supervisor and serves to reduce satisfaction (House, 1971).

A theoretical hypothesis concerning initiating structure and satisfaction with supervision may be generated in the same manner.
CHAPTER III

DESIGN AND METHODOLOGY

The Path-Goal Theory of Leadership provided the framework for the study. According to the theory, leaders are effective because of their impact on subordinates' motivation, ability to perform effectively, and satisfactions. The differential effects of leader behavior on job satisfaction, as moderated by the routineness of the task, was examined. The basic study involved an analysis of the main effect of the independent variables of leader consideration and initiating structure and the dependent variables of job satisfaction, specifically satisfaction with work and satisfaction with the supervisor.

This chapter contains six sections dealing with the implementation of the study. Specifically the sections are: the measurement of leader behavior, the measurement of job satisfaction, the measurement of task routineness, the pilot study, sampling procedures, and data analysis.

Measurement of Leader Behavior

The Leader Behavior Description Questionnaire (LBDQ) provides a technique for the description of the behavior of designated leaders in formal organizations. Each respondent (i.e., subordinate) indicates the frequency she or he perceives the leader to engage in each type of behavior by marking one of five adverbs: always, often,
occasionally, seldom, or never. The responses are obtained from the leader's immediate work-group, and are scored on two dimensions of leader behavior (Halpin, 1957).

The two fundamental dimensions of leader behavior, initiating structure and consideration, were identified by early Ohio State leadership studies to account for the majority of variance in leader descriptions (Halpin & Winer, 1957). Initiating structure refers to the leader's behavior in delineating the relationship between himself and his subordinates, and in establishing well-defined channels of communication and ways of getting the job done. According to the items on the LBDQ, initiating structure includes behavior in which the supervisor makes his attitudes clear to the group, defines the roles of each member, assigns tasks, schedules far ahead, and establishes specific ways of getting things done (Evans, 1970b). For a list of the items in the Initiating Structure Scale, see Appendix E.

The second dimension of leader behavior, consideration, refers to behavior indicative of mutual trust and respect in the relationship between the leader and subordinates (Halpin & Winer, 1957). It is important to note that this dimension does not simply reflect the superficial "pat-on-the-back" kind of human relations behavior (Evans, 1970b, p. 96). According to the items on the LBDQ, consideration includes behavior in which the supervisor listens to group members, backs up members in their actions, allows subordinates more participation in decision making, and encourages more two-way communication (Evans, 1970b). For a list of the items in the Consideration Scale, see Appendix F.
Although several forms of the LBDQ are available, the short form consisting of 40 items was chosen as the instrument for this study. Only 30 of the 40 items are scored; 15 for each of the two dimensions of leader behavior. The 10 unscored items have been retained in the questionnaire to keep the conditions of administration similar to the conditions of standardization of the instrument.

The score for each dimension is the sum of the scores assigned to responses marked on each of the 15 items in the dimension. The possible range of scores on each dimension is 0 to 60. The estimated reliability by the split-half method is .83 for the initiating structure scores and .92 for the consideration scores, when corrected for attenuation (Halpin, 1957, p. 1). The scoring keys for each dimension are located in Appendix G.

**Measurement of Job Satisfaction**

The Job Descriptive Index (JDI) was chosen as the instrument for measuring the dependent variable of job satisfaction in this study. The proposition advanced by Smith et al. (1969) was to offer a more complex formulation for job satisfaction rather than a measure simply of "good" conditions. This approach was deemed appropriate to measure a variable assumed to be dependent on leader behavior.

Smith et al. (1969) define job satisfactions as "feelings or affective responses to facets of the situation" (p. 6). These feelings are hypothesized to be associated with perceived differences between what are expected as fair and reasonable returns and what
are experienced in relation to alternatives in certain situations. Their relation to behavior depends on the expectation the individual has in relation to what the form of behavior brings him in achieving the goals he has accepted (Smith et al., 1969, p. 6).

The JDI measures satisfactions with five areas of a job: the type of work, the supervision, the co-workers on the job, the pay, and the opportunity for advancement or promotion. The authors believe that the various aspects of satisfaction can, and should, be maintained as separate facets. They found that the five areas were discriminably different, despite the positive intercorrelation between scales (Smith et al., 1969, p. 151). Each area must be measured separately if substantial understanding is to be achieved. The authors recommend that none of the scales should be replaced by a single, global measure, although "the global measure added information in its own right" (Smith et al., 1969, p. 151).

Although the entire JDI was administered in this study, and scores obtained for each of the five areas of job satisfaction, only satisfaction with the type of work and satisfaction with supervision were considered as dependent variables in the analysis of data. The summed total of all five facets (a global satisfaction score) was included primarily for interest. The values for all five areas of job satisfaction are included in Appendix L.

For each area of satisfaction, there is a list of adjectives or short phrases. The respondent is instructed to indicate whether each phrase applies to the particular facet of his job. In dealing with the area of satisfaction with work, if a particular word
applies to his work he is asked to write "Y" (Yes) beside the word. If the word does not apply to his work, he is asked to write "N" (No) beside the word; and if he cannot decide, he writes "?".

The scoring method for direct scoring of the JDI represents a departure from traditional methods of scoring. Traditionally, the "?" response would be assumed to lie halfway between the positive and negative responses to an item. However, on the basis of five industrial samples, the authors concluded that the ? response was more indicative of dissatisfaction than satisfaction. They assigned the ? a weight of 1 instead of 2, and a dissatisfied response a weight of 0 (Smith et al., 1969, p. 79). Table 1 illustrates the revised weighting system for direct scoring of the JDI.

Table 1
Revised Weights for Direct Scoring of the JDI

<table>
<thead>
<tr>
<th>Response</th>
<th>Revised weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes to a positive item</td>
<td>3</td>
</tr>
<tr>
<td>No to a negative item</td>
<td>3</td>
</tr>
<tr>
<td>? to any item</td>
<td>1</td>
</tr>
<tr>
<td>Yes to a negative item</td>
<td>0</td>
</tr>
<tr>
<td>No to a positive item</td>
<td>0</td>
</tr>
</tbody>
</table>

Appendix H shows the scored responses in the satisfied direction for each item in the JDI.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
The authors of the JDI reported that "discriminable scores were obtained from measures directed toward several aspects of the job, and that several methods of measurement applied to the same aspect show substantial agreement" (Smith et al., 1969, p. 48). Table 2 shows the item intercorrelations and item validities of the JDI items based on comparison with another measure of satisfaction shown to have convergent and discriminant validity (i.e., Faces Scale by Dunham & Herman, 1975, and referred to in Chapter II).

Table 2
Item Intercorrelations and Item Validities of JDI Items

<table>
<thead>
<tr>
<th>Scale</th>
<th>Median item intercorrelation</th>
<th>Range</th>
<th>Median item validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>.25</td>
<td>-.16 to .63</td>
<td>.44</td>
</tr>
<tr>
<td>Supervision</td>
<td>.29</td>
<td>-.16 to .78</td>
<td>.50</td>
</tr>
<tr>
<td>Pay</td>
<td>.29</td>
<td>-.08 to .58</td>
<td>.40</td>
</tr>
<tr>
<td>Promotions</td>
<td>.45</td>
<td>.18 to .76</td>
<td>.52</td>
</tr>
<tr>
<td>Co-workers</td>
<td>.30</td>
<td>-.10 to .66</td>
<td>.35</td>
</tr>
</tbody>
</table>

The test-retest estimate values of .45 to .75 are considered relatively low by the authors. The explanation stems from the fact that the company underwent a major change during the time period of measurement (Smith et al., 1969, pp. 73-75).

Table 3 presents the internal consistencies of the JDI scales by the Random Split-Halves Method.
Table 3

Internal Consistencies of JDI Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Correlation of Random Split-Halves</th>
<th>Correlations corrected by Spearman-Brown Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>.73</td>
<td>.84</td>
</tr>
<tr>
<td>Supervision</td>
<td>.77</td>
<td>.87</td>
</tr>
<tr>
<td>Promotions</td>
<td>.75</td>
<td>.86</td>
</tr>
<tr>
<td>Pay</td>
<td>.67</td>
<td>.80</td>
</tr>
<tr>
<td>Co-workers</td>
<td>.78</td>
<td>.88</td>
</tr>
</tbody>
</table>

Measurement of the Routineness of the Task

The Job Rating Form of the Job Diagnostic Survey (Hackman & Oldham, 1974) provided the necessary instrumentation to classify jobs as either routine or nonroutine.

The Job Rating Form measures the characteristics of the focal job as viewed by individuals who do not work on that job. The JRF provides measures only of the job dimensions, and does not attempt to measure affective responses to the job. The intent of the Job Rating Form is to provide a reliable assessment of the job itself by providing a means to obtain measures of the core dimensions. The measurement of the core job dimensions, specifically skill variety, task identity, task significance, autonomy, and feedback, provide a method of obtaining a score which reflects the overall "motivating potential of a job." Appendix I presents the computational guide
used for scoring the JRF for each of the five core job dimensions. The core dimensions are then used in the calculation of the motivating potential score (MPS), as shown in Table 4.

Table 4
Calculation of the Motivating Potential Score (MPS)

<table>
<thead>
<tr>
<th>Skill Variety</th>
<th>Task Identity</th>
<th>Task Significance</th>
<th>3 X Autonomy X Feedback</th>
</tr>
</thead>
</table>

The motivating potential score (MPS) obtained for jobs at each location provided a method of classification into routine or non-routine jobs. Specifically, each supervisor whose behavior was being evaluated by an employee, completed the Job Rating Form as an assessment of that employee's job. The intent was to obtain as objective a description of the job as possible. The motivating potential score of the jobs at each location were calculated from the five core job dimensions obtained from the JRF, and were arrayed in ascending order to obtain the median score. Those jobs with a motivating potential score below the median were classified as routine, whereas those with a motivating potential score above the median were classified as nonroutine.

Table 5 presents the internal consistency reliabilities of each of the scales measured by the Job Rating Form. Also included in the table for each scale is the "median off-diagonal correlation," intended to be a reflection of the discriminant validity of the items.
The off-diagonal correlation is the median correlation of the items scored on a given scale with all of the items scored on different scales of the same type. Thus, the median off-diagonal correlation for task identity is the median correlation of all items measuring task identity with all the items measuring the other four job dimensions (Hackman & Oldham, 1974, p. 18).

Table 5
Reliabilities of the JRF Scales

<table>
<thead>
<tr>
<th>Job dimensions</th>
<th>Internal consistency reliability</th>
<th>Median off-diagonal correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill variety</td>
<td>.71</td>
<td>.19</td>
</tr>
<tr>
<td>Task identity</td>
<td>.59</td>
<td>.12</td>
</tr>
<tr>
<td>Task significance</td>
<td>.66</td>
<td>.14</td>
</tr>
<tr>
<td>Autonomy</td>
<td>.66</td>
<td>.19</td>
</tr>
<tr>
<td>Feedback from job</td>
<td>.71</td>
<td>.19</td>
</tr>
</tbody>
</table>

Pilot Study

A pilot study conducted at a small industrial plant was used to confirm the decision to use a short form of the Leader Behavior Description Questionnaire and to check out the procedures to be followed during the collection of the data. The original 100-item LBDQ, plus the JDI for job satisfaction, presented a formidable instrument for many on-line employees. The short form of the LBDQ actually served the purposes of the study better due to the increased number
of consideration and initiating structure items.

Sampling Procedures

The original intent of the study was to obtain a sample of 40 supervisors from a single company. Three to five employees per supervisor would then be selected based on the scores obtained on the Job Rating Form. The purpose was to maximize differences in the routineness versus nonroutineness of the employees' jobs.

Although the original intent was never fully accomplished, a total of 58 supervisors and 169 employees represented the total sample size of the study. The difficulty of obtaining a sample of sufficient size at any one location led to utilization of three locations for the study. Table 6 presents the number of supervisors and the number of employees at each location.

Table 6
Location and Number of Supervisors and Employees at Each Location

<table>
<thead>
<tr>
<th>Location</th>
<th>No. of supervisors</th>
<th>No. of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>66</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>54</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>58</strong></td>
<td><strong>169</strong></td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Although the selection of employees was never deemed appropriately a simple random sample due to the attempt to maximize differences in routine versus nonroutine jobs, the sampling attempt was to produce a stratified random sample. By attempting to involve every supervisor in the organization, the number of subordinates under each supervisor may be reduced to a manageable number (i.e., 3-5).

Location 1 represented a sample of firefighters, equipment operators, and paramedics from the Kalamazoo, Michigan, fire department. The number of supervisors represented 20 out of a total of 27 captains and lieutenants in charge of seven stations during three shifts. Employee sample size of 66 represented approximately half of all firefighters, equipment operators, and paramedics at all stations (total 117). Inclusion in the sample was strictly on a volunteer basis for both the supervisors and their subordinates. Subordinate participation was elicited on the day chosen for completion of the instrument with no provision for absence (i.e., no makeup).

The method of division into routine and nonroutine jobs was based on the Job Rating Form filled out by each supervisor in the fire department who participated in the study. The JRF provided motivating potential scores for the jobs of all subordinates who participated in the study. An artificial dividing line was created by locating the median score and assigning those jobs with scores below the median to the routine category and those above to the nonroutine category.

Location 2 represented the Carton and Container Division of General Foods in Saratoga Springs, New York. The main criterion for
supervisor participation in the study was the supervision of employees; therefore, the 22 supervisors represented many supervisory levels in the Carton and Container Division. Due to the different levels involved, especial care had to be taken to avoid duplication of any supervisor as a subordinate rating his/her supervisor.

Although supervisory participation was requested by the General Manager, employee participation was strictly on a volunteer basis. Because the study was conducted on company time, enough manpower was needed on the line to maintain productivity in the plant. The sample size of 54 represented the attempt to achieve at least three employees per supervisor.

Location 3 represented the Carton and Container Division of General Foods in Battle Creek, Michigan. As at Location 2, supervisory participation was requested but employee participation was strictly voluntary. The sample size of 49 represented the attempt to achieve at least three employees per supervisor.

The division of jobs into routine versus nonroutine at both Locations 2 and 3 were conducted in the same manner as at Location 1. The Job Rating Form, filled out by the supervisor about subordinates' jobs, provided motivating potential scores for the jobs of all subordinates who participated in the study. An artificial dividing line based on the median score categorized routine and nonroutine jobs.
Data Analysis

The theoretical hypotheses presented in the summary of Chapter 2 provide a basis for the decision to analyze the data using the null hypothesis of no difference between two population correlation coefficients. The hypothesis will be tested using two sample correlation coefficients using data from two independent samples (Hinkle, Wiersma, & Jurs, 1979, p. 223).

Following are the null and alternative hypotheses for each set of correlation coefficients:

- \( H_0: \rho_r = \rho_{nr} \) \( \rho_r \) = correlation between consideration and satisfaction with work for routine jobs
- \( H_a: \rho_r > \rho_{nr} \) \( \rho_{nr} \) = correlation between consideration and satisfaction with work for nonroutine jobs

NOTE: The directionality of the alternative hypothesis indicates that the study tested whether the correlation between consideration and satisfaction with work for the routine job was higher than the correlation between consideration and satisfaction with work for the nonroutine job.

Similarly, hypotheses were derived for satisfaction with the boss.

- \( H_0: \rho_r = \rho_{nr} \) \( \rho_r \) = correlation between consideration and satisfaction with the boss for routine jobs
- \( H_a: \rho_r > \rho_{nr} \) \( \rho_{nr} \) = correlation between consideration and satisfaction with the boss for nonroutine jobs

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
\( H_0: \rho_r = \rho_{nr} \quad \rho_r = \text{correlation between initiating structure and satisfaction with work for routine jobs} \)

\( H_a: \rho_r < \rho_{nr} \quad \rho_{nr} = \text{correlation between initiating structure and satisfaction with work for nonroutine jobs} \)

**NOTE:** The directionality of the alternative hypothesis indicates that the study tested whether the correlation between initiating structure and satisfaction with work for the routine job was lower than the correlation between initiating structure and satisfaction with work for the nonroutine job.

Similarly, hypotheses were derived for satisfaction with the boss.

\( H_0: \rho_r = \rho_{nr} \quad \rho_r = \text{correlation between initiating structure and satisfaction with boss for routine jobs} \)

\( H_a: \rho_r < \rho_{nr} \quad \rho_{nr} = \text{correlation between initiating structure and satisfaction with boss for nonroutine jobs} \)

The hypothesis test of two population correlation coefficients will be tested using a probability of .05 for committing a Type I error. The formula utilized is as follows:

\[
z = \frac{(z_{r1} - z_{r2}) - (z_{p1} - z_{p2})}{s_{z_{r1} - z_{r2}}}\]

where:

\[
s_{z_{r1} - z_{r2}} = \sqrt{\frac{1}{n_1 - 3} + \frac{1}{n_2 - 3}}\]

(standard error)

In each case, the correlation coefficient obtained for each sample (r) must undergo transformation via Fisher's log to maintain
a sampling distribution that is normal. This is necessary due to
the increasing skewness of the distribution as the absolute sample
correlation coefficient increases. Fisher's log transformation,
represented as \( Z_r \) in the formula, corrects this problem, and results
in a sampling distribution that is nearly normal for any value of
the correlation coefficient (Hinkle et al., 1979, p. 223).
CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

The purpose of this study was to analyze the relationship between the independent variable of leader behavior and the dependent variable of subordinates' satisfactions for routine versus nonroutine jobs. Specifically, the study compared the Pearson r correlation between the dimension of leader initiating structure and employee satisfaction as a two-sample case for routine versus nonroutine jobs. The study also compared the correlation between the dimension of leader consideration and employee satisfaction as a two-sample case for routine versus nonroutine jobs.

The following items were included in the analysis of job satisfaction: satisfaction with work and satisfaction with boss, with global job satisfaction included for general interest. Each dimension of leader behavior was correlated with each dimension of job satisfaction.

The two-sample case was obtained by classification of jobs as either routine or nonroutine and comparing the correlations between leader behavior and employee satisfactions. Classification into routine or nonroutine was based on the score derived from the Job Rating Form of the Job Diagnostic Survey. The scores obtained for each job were arranged in ascending order for each location with those below the median assigned to the routine category and those scores above the median assigned to the nonroutine category.
The probabilities obtained for the comparison of correlations were based on a one-tailed test of the significant difference between correlations. A one-tailed test was deemed to be appropriate for the analysis of each two-sample case. The correlation between initiating structure and job satisfaction was hypothesized to be greater for nonroutine jobs; whereas the correlation between consideration and job satisfaction was hypothesized to be greater for routine jobs than nonroutine jobs.

**Classification into Routine or Nonroutine Jobs**

As stated in the introduction to this chapter, the two-sample case was obtained by classification of jobs into either routine or nonroutine. Classification was based on the score derived from the Job Rating Form of the Job Diagnostic Survey. The scores obtained for each job were arranged in ascending order, with those below the median assigned to the routine category and those scores above assigned to the nonroutine category. Table 7 presents the median scores for all three locations separately and the median MPS score for all three locations combined.

**Analysis of Correlations Between Initiating Structure and Satisfaction Variables**

The values for Pearson r correlations between initiating structure and the satisfaction variables are presented in Tables 8-11. The correlations between initiating structure and satisfaction with work, satisfaction with the boss, and job satisfaction in general...
Median Scores (MPS) Obtained on the JRF for Classification into Routine/Nonroutine Jobs

<table>
<thead>
<tr>
<th>Location</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>129.93</td>
</tr>
<tr>
<td>2</td>
<td>143.20</td>
</tr>
<tr>
<td>3</td>
<td>155.80</td>
</tr>
<tr>
<td>All three locations</td>
<td>142.05</td>
</tr>
</tbody>
</table>

Table 8
Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 1

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 33)</th>
<th>For nonroutine jobs (n = 33)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>-.256</td>
<td>.296</td>
<td>.0143*</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.205</td>
<td>.348</td>
<td>.2743</td>
</tr>
<tr>
<td>Job satisfaction (in general)</td>
<td>-.158</td>
<td>.300</td>
<td>.0344*</td>
</tr>
</tbody>
</table>

*p < .05.
Table 9
Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 2

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 27)</th>
<th>For nonroutine jobs (n = 27)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>.124</td>
<td>.422</td>
<td>.1314</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.719</td>
<td>.720</td>
<td>.4960</td>
</tr>
<tr>
<td>Job satisfaction (in general)</td>
<td>.551</td>
<td>.655</td>
<td>.2912</td>
</tr>
</tbody>
</table>

Table 10
Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 3

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 24)</th>
<th>For nonroutine jobs (n = 24)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>-.073</td>
<td>.084</td>
<td>.3015</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.385</td>
<td>-.220</td>
<td>.9808</td>
</tr>
<tr>
<td>Job satisfaction (in general)</td>
<td>.491</td>
<td>.052</td>
<td>.9441</td>
</tr>
</tbody>
</table>
Table 11
Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs for All Three Locations

<table>
<thead>
<tr>
<th>Leader initiating structure</th>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 84)</th>
<th>For nonroutine jobs (n = 85)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Satisfaction with work</td>
<td>.034</td>
<td>.256</td>
<td>.0735</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with boss</td>
<td>.538</td>
<td>.280</td>
<td>.9772</td>
</tr>
<tr>
<td></td>
<td>Job satisfaction (in general)</td>
<td>.356</td>
<td>.377</td>
<td>.4404</td>
</tr>
</tbody>
</table>

are presented in columns for routine and nonroutine jobs.

The correlations between initiating structure and job satisfaction were hypothesized to be greater for nonroutine jobs than for routine jobs. The probabilities presented in each table reflect this one-tailed test of the significance between two correlations.

Table 8 presents the correlations between initiating structure and the satisfaction variables for routine versus nonroutine jobs at Location 1.

As indicated in Table 8, the positive correlation between initiating structure and satisfaction with work for the nonroutine job is significantly greater than the negative correlation obtained for the routine job.
The positive correlation between initiating structure and satisfaction with boss for the nonroutine job is greater than the positive correlation obtained for the routine job, but not at the specified level of significance.

The positive correlation between initiating structure and job satisfaction for the nonroutine job is significantly greater than the negative correlation obtained for the routine job.

Table 9 presents the correlations between initiating structure and the satisfaction variables at Location 2.

As indicated in Table 9, the positive correlation between initiating structure and satisfaction with work for the nonroutine job is greater than the positive correlation obtained for the routine job, but not at the specified level of significance.

Similarly, the positive correlations between initiating structure and satisfaction with boss, and job satisfaction for nonroutine jobs are greater than the positive correlations obtained for the routine jobs, but not at the specified level of significance.

Table 10 presents the correlations between initiating structure and the satisfaction variables for routine versus nonroutine jobs at Location 3.

As indicated in Table 10, the positive correlation between initiating structure and satisfaction with work for the nonroutine job is greater than the negative correlation obtained for the routine job, but not at the specified level of significance.

The negative correlation between initiating structure and satisfaction with boss for the nonroutine job is less than the positive
correlation obtained for the routine job, thus presenting a value in
the opposite direction from the hypothesized difference.

The positive correlation between initiating structure and job
satisfaction for the nonroutine job is less than the positive corre­
lation obtained for the routine job, thus presenting a value in the
opposite direction from the hypothesized difference.

Table 11 presents the correlations between initiating structure
and the satisfaction variables for routine versus nonroutine jobs at
all three locations. Classification into routine and nonroutine
jobs was handled the same way as with the individual locations. The
scores obtained from the Job Rating Form for all data were arranged
in ascending order with those above the median assigned to the non­
routine category and those below the median assigned to the routine
category.

As indicated in Table 11, the positive correlation between ini­
tiating structure and satisfaction with work for the nonroutine job
is greater than the positive correlation obtained for the routine
job, but not at the specified level of significance.

The positive correlation between initiating structure and sat­
isfaction with boss for the nonroutine job is less than the positive
correlation obtained for the routine job, thus presenting a value in
the opposite direction from the hypothesized difference.

The positive correlation between initiating structure and job
satisfaction for the nonroutine job is greater than the positive
correlation obtained for the routine job, but not at the specified
level of significance.
Analysis of Correlations Between Consideration and Satisfaction Variables

The values for Pearson r correlations between consideration and the satisfaction variables are presented in Tables 12-15. The correlations between consideration and satisfaction with work, with the boss, and job satisfaction in general are presented in columns for routine and nonroutine jobs.

Table 12

Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 1

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 33)</th>
<th>For nonroutine jobs (n = 33)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>.083</td>
<td>.249</td>
<td>.7450</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.839</td>
<td>.603</td>
<td>.0217*</td>
</tr>
<tr>
<td>Job satisfaction (in general)</td>
<td>.451</td>
<td>.421</td>
<td>.4443</td>
</tr>
</tbody>
</table>

*p < .05.

The correlations between consideration and job satisfaction were hypothesized to be greater for routine jobs than for nonroutine jobs. The probabilities presented in each table reflect this one-tailed test of the significance between two correlations.
### Table 13

Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 2

<table>
<thead>
<tr>
<th>Leader consideration</th>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 27)</th>
<th>For nonroutine jobs (n = 27)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Satisfaction with work</td>
<td>.224</td>
<td>.376</td>
<td>.7190</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with boss</td>
<td>.801</td>
<td>.796</td>
<td>.3085</td>
</tr>
<tr>
<td></td>
<td>Job satisfaction (in general)</td>
<td>.626</td>
<td>.662</td>
<td>.5832</td>
</tr>
</tbody>
</table>

### Table 14

Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 3

<table>
<thead>
<tr>
<th>Leader consideration</th>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 24)</th>
<th>For nonroutine jobs (n = 25)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Satisfaction with work</td>
<td>.304</td>
<td>.720</td>
<td>.9744</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with boss</td>
<td>-.752</td>
<td>.844</td>
<td>.8078</td>
</tr>
<tr>
<td></td>
<td>Job satisfaction (in general)</td>
<td>.761</td>
<td>.811</td>
<td>.6664</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs for All Three Locations

Table 12 presents the correlations between consideration and the satisfaction variables for routine versus nonroutine jobs at Location 1.

As indicated in Table 12, the positive correlation between consideration and satisfaction with the boss for the routine job is significantly greater than the positive correlation obtained for the nonroutine job.

The positive correlation between consideration and job satisfaction for the routine job is greater than the positive correlation obtained for the nonroutine job, but not at the specified level of significance.

The positive correlation between consideration and satisfaction with work for the routine job is less than the positive correlation...
obtained for the nonroutine job, thus presenting a value in the opposite direction from the hypothesized difference.

Table 13 presents the correlations between consideration and the satisfaction variables for routine versus nonroutine jobs at Location 2.

As indicated in Table 13, the positive correlation between consideration and satisfaction with the boss for the routine job is greater than the positive correlation obtained for the nonroutine job, but not at the specified level of significance.

The positive correlations between consideration and satisfaction with work, and job satisfaction for routine jobs are lower than the positive correlations obtained for nonroutine jobs, thus presenting values in the opposite direction from the hypothesized differences.

Table 14 presents the correlations between consideration and the satisfaction variables for routine versus nonroutine jobs at Location 3.

As indicated in Table 14, the positive correlation between consideration and satisfaction with work for the routine job is less than the positive correlation obtained for the nonroutine job, thus presenting a value in the opposite direction from the hypothesized difference.

Similarly, the positive correlations between consideration and satisfaction with the boss, and job satisfaction for routine jobs are lower than the positive correlations obtained for the nonroutine jobs, thus presenting values in the opposite direction from the
hypothesized differences.

Table 15 presents the correlations between consideration and the satisfaction variables for routine versus nonroutine jobs at all three locations. Classification into routine and nonroutine jobs was handled the same way as with the individual locations.

As indicated in Table 15, the positive correlation between consideration and satisfaction with the boss for the routine job is greater than the positive correlation for the nonroutine job, but not at the specified level of significance.

The positive correlations between consideration and satisfaction with work, and job satisfaction for routine jobs are lower than the positive correlations obtained for the nonroutine jobs, thus presenting values in the opposite direction from the hypothesized differences.

Classification into Routine/Nonroutine Jobs
Based on Further Separation

Classification into routine and nonroutine jobs based on the median score of degree of routineness did not provide results which substantiated the general tenets of the path-goal theory. Therefore, an analysis of the data was performed utilizing further separation of routine and nonroutine jobs. The continuum of degree of routineness which provided the basis for classification, was divided into thirds. The lower third was assigned the classification of routine, the upper third the classification of nonroutine, with the middle third omitted. Even with this wider separation between routine and
nonroutine jobs, the general tenets of the theory were not substantiated.
CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter includes a discussion of the study in two sections: (a) discussion of the findings and conclusions and (b) recommendations for further study.

Findings and Conclusions

The purpose of this study was to examine the relationship between supervisory behavior and subordinate satisfactions as moderated by the design of the task. Specifically, the study analyzed the relationship between the dimension of leader initiating structure and employee satisfactions as a two-sample case for routine versus nonroutine jobs. The study also analyzed the relationship between the dimension of leader consideration and employee satisfactions as a two-sample case for routine versus nonroutine jobs. The overall results of the study were not clear and did not substantiate the general tenets of the study, although several hypotheses were substantiated. Tables 16 and 17 present summary data obtained in the study.

Summary Table 16 indicated that the proposition of the direct relationship between initiating structure and satisfaction with work being stronger for the nonroutine job than for the routine job was supported only at Location 1. The fact that the relationship was not supported at the other locations indicated that the employee
Table 16
Summary Table of Probabilities Between Initiating Structure and Satisfactions

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>Location 1</th>
<th>Location 2</th>
<th>Location 3</th>
<th>All locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>.0143*</td>
<td>.1314</td>
<td>.3015</td>
<td>.0735</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.2743</td>
<td>.4960</td>
<td>.9808</td>
<td>.9772</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>.0344*</td>
<td>.2912</td>
<td>.9441</td>
<td>.4404</td>
</tr>
</tbody>
</table>

*p < .05.

Table 17
Summary Table of Probabilities Between Consideration and Satisfactions

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>Location 1</th>
<th>Location 2</th>
<th>Location 3</th>
<th>All locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>.7450</td>
<td>.7190</td>
<td>.9744</td>
<td>.9881</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.0217*</td>
<td>.3085</td>
<td>.8078</td>
<td>.4681</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>.4443</td>
<td>.5832</td>
<td>.6664</td>
<td>.8554</td>
</tr>
</tbody>
</table>

*p < .05.
with the nonroutine job did not appreciate structuring by the supervisor. According to the path-goal theory, structuring by the supervisor is intended to reduce the ambiguity of the nonroutine job and to clarify the path toward goal attainment, but may be viewed as excessive external control over the routine job.

The general lack of support for the proposition may be attributable to several explanations. First, the structuring performed by the supervisor may not have been of sufficient quality or quantity to reduce the ambiguity of the nonroutine job. The anxiety caused by that constant ambiguity may have shown up in dissatisfaction on the part of the nonroutine employees.

Second, the assumption that the nonroutine job is defined as ambiguous may be a basic fallacy of the path-goal theory. Routine tasks, associated with most jobs, may have reduced the ambiguity in the nonroutine job to such an extent that the employee viewed structuring as nonessential, excessive control over his job.

Another explanation may be attributed to the use of the median score to create an artificial dichotomy of routine and nonroutine jobs for comparison of the relationship between leader behavior and subordinates' satisfactions. The method did not provide two distinct classes of routine and nonroutine jobs, but provided one class based on the degree of routineness. The division into routine and nonroutine based on the degree of routineness probably did not create enough of a distinction to offer general support for the theory.
Summary Table 16 indicated that the proposition of the direct relationship between initiating structure and satisfaction with the supervisor being stronger for the nonroutine job than for the routine job, was not supported at all. The supervisor who helps reduce the ambiguity of the nonroutine situation by structuring should be regarded as an asset. The lack of significance in the relationship raised the question of whether the employees realized that their supervisor can offer help in the nonroutine situation. Quite possibly the employee in the nonroutine job may concentrate on his job to the exclusion of the realization of other factors involved.

The relationship between initiating structure and job satisfaction in general presented inconsistencies which may be attributed to the measurement of global job satisfaction. As the authors of the JDI have indicated, the global measure is not a reliable assessment, but is presented mainly out of curiosity.

Summary Table 17 indicated no overall support for the proposition that the direct relationship between consideration and employee satisfaction was stronger for the routine job than for the nonroutine job. Consideration on the part of the supervisor supposedly serves as a source of extrinsic social satisfaction and support for the employee, which offsets dissatisfaction with a routine task. Higher level jobs, which offer more intrinsic motivation, should reduce employee reliance on leader support.

The implications of the results indicated that the proposition was not working well at all, and this may have several explanations. First, the consideration exhibited by the supervisors at each of the
locations may not have been genuine enough or of sufficient quantity to offset dissatisfaction with the routine job.

Second, the assumption that the nonroutine job had sufficient intrinsic motivating potential to significantly reduce employee reliance on leader support may be fallacious. The nonroutine job may be considered by the employee as simply less routine than other jobs.

The general state of the economy may have contributed to the lack of significant results. Job satisfaction may have been so low and so variable among employees that it obscured any consistent results in the study.

The type of organization in which the study was carried out may have influenced the results. The employees at Location 1, including firefighters, equipment operators, and paramedics, were being pressed into acceptance of a joint firefighter-police officer contract that was not being universally accepted and was creating much dissatisfaction among employees.

The employees at Location 3 were members of a union shop, and operated on a fixed schedule at all times during the day. On the other hand, the employees at Location 2 were not members of a union shop and operated on a more flexible schedule. Although the employees at Location 3 earn a greater salary, other working conditions may have affected the results, especially when the study considered the design of the task as a moderating variable.
Recommendations

Although every aspect of the study was analyzed previous to its inception, several methodological miscalculations must be considered before any similar study is conceived.

1. Sample selection could not be considered random or stratified at any location. Better control over the sampling procedures is recommended, which may lead to more consistent results.

2. The use of the LBDQ (Leader Behavior Description Questionnaire) proved a problem to many employees who found it too general to explain their supervisor's behavior. A specifically designed instrument may prove to offer more consistent results.

3. The use of the JDI (Job Descriptive Index) proved a problem with its alternative answer of "?". Many employees would have preferred a category of "maybe" or "not sure."

4. The use of the JRF (Job Rating Form) to classify routine and nonroutine jobs created many difficulties in the study:
   a. In an effort to reduce the complexity of the instrument, the employee was not asked to rate his own job. Each supervisor was asked to objectively rate the job of each employee; however, a great deal of variability was found in ratings of the same job. The almost perfect ratings of one supervisor about the characteristics of the jobs in his group, led to exclusion of his employees in the study.
   b. Supervisor subjectivity led to some jobs being judged very low on job characteristics, even though they were titled...
as supervisory jobs. Supervisory perceptions may interfere with the objective rating of jobs.

More consistent, reliable results may be obtained if the JRF is administered to the supervisor at the same time that the Job Diagnostic Survey is administered to the employee occupying that job. The JDS is the form used to permit the employee a chance to rate his own job.

5. The dichotomous division into routine and nonroutine jobs, based on the degree of routineness, may be questioned. It may be better to examine all the jobs in an organization, and to include only those jobs which maximize the difference between routine and nonroutine jobs.

6. The assumption that the nonroutine job is ambiguous and intrinsically motivating may be fallacious. If that assumption proves to be fallacious, then the entire structure of the path-goal theory may need to be revised.
**Autonomy**: The degree to which the job provides freedom and independence to the employee in scheduling and carrying out the workload (Hackman & Oldham, 1975, p. 162).

**Consideration**: Degree to which a leader acts in a warm and supportive manner and shows concern for subordinates (Hemphill, 1957, p. 75).

**Enlargement of the job**: Horizontal enlargement to increase the variety of tasks (Dunham, 1980, p. 389).

**Enrichment of the job**: Vertical enlargement to increase the worker's participation in organizational policy (Dunham, 1980, p. 389).

**Extrinsic work motivation**: Cognitive state reflecting the extent to which the worker attributes the force of task behaviors to expecting to receive an extrinsic outcome (Brief & Aldag, 1977, p. 497).

**Extrinsic outcome**: Object or event received following the completion of a set of task behaviors dependent on a source external to the person (Brief & Aldag, 1977, p. 497).

**Higher order needs**: Those needs that relate to the higher levels in Maslow's need hierarchy, particularly esteem and self-actualization. (Maslow, 1970).

**Hygiene factors**: Extrinsic factors that relate to the job context, and are based on lower order needs (Sergiovanni & Starratt, 1979, p. 164).

**Initiating structure**: Degree to which a leader defines and structures his/her own role and the roles of subordinates toward the...
attainment of formal goals (Hemphill, 1957, p. 75).

**Intrinsic work motivation**: Cognitive state reflecting the extent to which the worker attributes the force of task behaviors to outcomes derived from the content of the task itself, rather than the expectation of an external reward (Brief & Aldag, 1977, p. 497).

**Intrinsic outcome**: Object or event received during or following the completion of task behaviors which are self-mediated in that the involvement of a source external to the situation is not required (Brief & Aldag, 1977, p. 497).

**Lower order needs**: Those needs that relate to the lower levels in Maslow's need hierarchy, particularly physiological, safety, and social (Maslow, 1970).

**Motivational factors**: Specifically those factors that relate to higher order needs, and intrinsically motivate employees (Sergiovanni & Starratt, 1979, p. 164).

**Prepotency**: Concept that individuals must meet basic needs before progressing to their higher order needs (Maslow, 1970).

**Skill variety**: The degree to which a job requires different skills and talents in carrying out the various activities or tasks (Hackman & Oldham, 1975, p. 161).

**Task identity**: The degree to which the job requires completion of a visible portion of the work (Hackman & Oldham, 1975, p. 161).

**Task significance**: The degree to which the job has substantial impact on others, either in the immediate organization or externally (Hackman & Oldham, 1975, p. 161).
Appendix B

Hybrid Expectancy Model of Work Motivation
HYBRID EXPECTANCY MODEL OF WORK MOTIVATION
(Vroom, 1964; Campbell et al., 1970)
Appendix C

Performance-Satisfaction Model
PERCEPTIONS OF ROLE SATISFACTION

PERCEIVED EQUITABLE ABILITIES AND REWARDS

PERFORMANCE (FULFILLMENT) -> SATISFACTION

PERCEIVED EFFORT-REWARD PROBABILITY

ROLE PERCEPTIONS

PERFORMANCE (ACCOMPLISHMENT)

EFFORT -> VALUE OF REWARD

ABILITIES AND TRAITS

PERFORMANCE + SATISFACTION MODEL
(Porter & Lawler, 1968, p. 17)
JOB CHARACTERISTICS MODEL OF WORK MOTIVATION
(Hackman & Oldham, 1975)
Items in the Initiating Structure Scale
of the LBDQ

Item
No.

2. He makes his attitudes clear to the group.

4. He tries out his new ideas with the group.

7. He rules with an iron hand.

9. He criticizes poor work.

11. He speaks in a manner not to be questioned.

14. He assigns group members to particular tasks.

16. He schedules the work to be done.

17. He maintains definite standards of performance.

22. He emphasizes the meeting of deadlines.

24. He encourages the use of uniform procedures.

27. He makes sure that his part in the organization is understood by all group members.

29. He asks that group members follow standard rules and regulations.

32. He lets group members know what is expected of them.

35. He sees to it that group members are working up to capacity.

39. He sees to it that the work of group members is coordinated.
Appendix F

LBDQ Consideration Items
## Items in the Consideration Scale of the LBDQ

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>He does personal favors for group members.</td>
</tr>
<tr>
<td>3</td>
<td>He does little things to make it pleasant to be a group member.</td>
</tr>
<tr>
<td>6</td>
<td>He is easy to understand.</td>
</tr>
<tr>
<td>8</td>
<td>He finds time to listen to group members.</td>
</tr>
<tr>
<td>12</td>
<td>He keeps to himself.*</td>
</tr>
<tr>
<td>13</td>
<td>He looks out for the personal welfare of individual group members.</td>
</tr>
<tr>
<td>18</td>
<td>He refuses to explain his actions.*</td>
</tr>
<tr>
<td>20</td>
<td>He acts without consulting the group.*</td>
</tr>
<tr>
<td>21</td>
<td>He backs up the members in their actions.</td>
</tr>
<tr>
<td>23</td>
<td>He treats all group members as his equals.</td>
</tr>
<tr>
<td>26</td>
<td>He is willing to make changes.</td>
</tr>
<tr>
<td>28</td>
<td>He is friendly and approachable.</td>
</tr>
<tr>
<td>31</td>
<td>He makes group members feel at ease when talking to them.</td>
</tr>
<tr>
<td>34</td>
<td>He puts suggestions made by the group into operation.</td>
</tr>
<tr>
<td>38</td>
<td>He gets group approval on important matters before going ahead.</td>
</tr>
</tbody>
</table>

*These items are scored in reverse.*
Appendix G

Scoring Keys for LBDQ
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Always</th>
<th>Often</th>
<th>Occasionally</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>22</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>27</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>29</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>32</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>35</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>39</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
### Scoring Key for Consideration

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Always</th>
<th>Often</th>
<th>Occasionally</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>12*</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18*</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20*</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>26</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>28</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>31</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>34</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>38</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

*Items scored in reverse.*
Appendix H

Scored Responses in the Satisfied Direction for JDI
### JOB DESCRIPTIVE INDEX

1. For each item under each scale (work, pay, etc.) please put one of the following alternatives in the space to the left of each item:

- If the item APPLIES: Mark Y (for yes)
- If the item DOES NOT APPLY: Mark N (for no)
- If you CANNOT DECIDE: Mark 3 (for don't know)

**PLEASE RESPOND TO EVERY ITEM**

<table>
<thead>
<tr>
<th>MY WORK</th>
<th>MY Boss</th>
<th>MY CO-WORKERS</th>
<th>MY PAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fascinating</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Routine</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Satisfying</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Satisfying</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Boring</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Creative</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Respected</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Hot</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Pleasant</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Useful</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Tiresome</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Healthful</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Challenging</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>On your feet</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Unpleasant</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Knows job well</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Unfair promotions</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Dead-end job</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Busy</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Busy</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Endless</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Leaves me on my own</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Gives sense of</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Accomplishment</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Accomplishment</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Around when needed</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Lazy</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

- **Income adequate for normal expenses**
- **Satisfactory profit sharing**
- **Barely live on income**
- **Bad**
- **Income provides luxuries**
- **Insecure**
- **Less than I desire**
- **Highly paid**
- **Underpaid**
- **Promotions**
- **Good opportunity for advancement**
- **Opportunity somewhat limited**
- **Promotion on ability**
- **Dead-end job**
- **Good chance for promotion**
- **Unfair promotion policy**
- **Infrequent promotions**
- **Regular promotions**
- **Fairly good chance for promotion**
Appendix I

Computational Guides for Scoring Each Dimension of the JRF
You are asked to rate the characteristics of the following job:

Please keep in mind that the questions refer to the job listed above, and not to your own job.

In the following sections you will find several different kinds of questions about the job listed above. Specific instructions are given at the start of each section. Please read them carefully. It should take you no more than 10 minutes to complete the entire questionnaire. Please move through it quickly.

### SECTION ONE

This part of the questionnaire asks you to describe the job listed above as objectively as you can. Try to make your descriptions as accurate and as objective as you possibly can.

A sample question is given below.

A. To what extent does the job require a person to work with mechanical equipment?

<table>
<thead>
<tr>
<th>Very little</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Very much</th>
</tr>
</thead>
</table>

You are to circle the number which is the most accurate description of the job listed on the front page.

If, for example, the job requires a person to work with mechanical equipment a good deal of the time—but also requires some paperwork—you might circle the number six, as was done in the example above.

1. To what extent does the job require a person to work closely with other people (either "client," or people in related jobs in the organization)?

<table>
<thead>
<tr>
<th>Very little</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Very much</th>
</tr>
</thead>
</table>

deal with other people is not at all necessary.

2. How much autonomy is there in the job? That is, to what extent does the job permit a person to decide on his or her own how to do the work?

<table>
<thead>
<tr>
<th>Very little</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Very much</th>
</tr>
</thead>
</table>

Job gives a person almost no personal "say" about how and when the work is done.

3. To what extent does the job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

| The job is only a tiny part of the overall piece of work; the results of the person's activities cannot be seen in the final product or service. | 1 | 2 | 3 | 4 | 5 | 6 | 
| The job is a moderate-sized "chunk" of the overall piece of work; the person's own contribution can be seen in the final outcome. |  |  |  |  |  |  | 
| The job involves doing the whole piece of work from start to finish; the results of the personal activity are easily seen in the final product or service. |  |  |  |  |  |  | 

4. How much variety is there in the job? That is, to what extent does the job require a person to do many different things at work, using a variety of his or her skills and talents?

| Very little; the job requires the person to do the same routine things over and over again. | 1 | 2 | 3 | 4 | 5 | 6 | Very much; the job requires the person to do many different things using a number of skills and talents. | 
| Moderate variety |  |  |  |  |  |  | 

5. In general, how significant or important is the job? That is, are the results of the person's work likely to significantly affect the lives or well-being of other people?

| Not at all significant; the outcomes of the work are not likely to affect anyone in any important way. | 1 | 2 | 3 | 4 | 5 | 6 | Highly significant; the outcomes of the work can affect other people in very important ways. | 
| Moderately significant |  |  |  |  |  |  | 

6. To what extent do managers or co-workers let the person know how well he or she is doing on the job?

| Very little; people almost never let the person know how well he or she is doing. | 1 | 2 | 3 | 4 | 5 | 6 | Very much; managers or co-workers provide the person with almost constant "feedback" about how well he or she is doing. | 
| Moderately; sometimes people may give the person "feedback"; other times they may not. |  |  |  |  |  |  | 

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
To what extent does doing the job itself provide the person with information about his or her work performance? That is, does the actual work ITSELF provide clues about how well the person is doing—aside from any "feedback" co-workers or supervisors may provide?

<table>
<thead>
<tr>
<th>Very little; the job itself is set up so a person could work forever without finding out how well he or she is doing.</th>
<th>Moderately; sometimes doing the job provides &quot;feedback&quot; to the person; sometimes it does not.</th>
<th>Very much; the job is set up so that a person gets almost constant &quot;feedback&quot; as he or she works about how well he or she is doing.</th>
</tr>
</thead>
</table>

### SECTION TWO

Listed below are a number of statements which could be used to describe a job. You are to indicate whether each statement is an accurate or an inaccurate description of the job listed on the front page. Once again, please try to be as objective as you can in deciding how accurately each statement describes the job.

<table>
<thead>
<tr>
<th>The job requires a person to use a number of complex or sophisticated skills.</th>
<th>Very inaccurate 1</th>
<th>Mostly inaccurate 2</th>
<th>Slightly inaccurate 3</th>
<th>Uncertain 4</th>
<th>Slightly accurate 5</th>
<th>Mostly accurate 6</th>
<th>Very accurate 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>The job requires a lot of cooperative work with other people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The job is arranged so that a person does not have the chance to do an entire piece of work from beginning to end.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Just doing the work required by the job provides many chances for a person to figure out how well he or she is doing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The job is quite simple and repetitive.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The job can be done adequately by a person working alone—without talking or checking with other people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The supervisors and co-workers on this job almost never give a person any &quot;feedback&quot; about how well he or she is doing the work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>This job is one where a lot of other people can be affected by how well the work gets done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The job denies a person any chance to use his or her personal initiative or discretion in carrying out the work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Supervisors often let the person know how well they think he or she is performing the job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The job provides a person with the chance to finish completely any work he or she starts.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The job itself provides very few clues about whether or not the person is performing well.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>The job gives a person considerable opportunity for independence and freedom in how he or she does the work.</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>The job itself is not very significant or important in the broader scheme of things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

### GENERAL INFORMATION ABOUT SUPERVISOR

1. What is your name?

2. What is your own job title?

3. How long have you been in your present position? (Check one)

   | 0 - 1/2 yr. | 3 - 5 yrs. |
   | 1/2 - 1 yr. | 5 - 10 yrs. |
   | 1 - 2 yrs. | 10 or more yrs. |
Appendix K

Instrument Administered to the Employees
LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE

Below is a list of items that may be used to describe the behavior of your supervisor. Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. Each item should be considered as a separate description. Its only purpose is to make it possible for you to describe, as accurately as you can, the behavior of your supervisor.

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

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

a. READ each item carefully.

b. THINK about how frequently the leader engages in the behavior described by the item.

c. DECIDE whether he (A) always, (B) often, (C) occasionally, (D) seldom or (E) never acts as described by the item.

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

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

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

<table>
<thead>
<tr>
<th>EXAMPLE: He often acts as described</th>
<th>Always</th>
<th>Often</th>
<th>Occasionally</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAMPLE: He never acts as described</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>EXAMPLE: He occasionally acts as described</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>

1. Does personal favors for group members.

2. Makes his/her attitudes clear to the group.

3. Does little things to make it pleasant to be a member of the group.

4. Tries out his/her new ideas with the group.

5. Acts as the real leader of the group.

6. Is easy to understand.

7. Rules with an iron hand.

8. Finds time to listen to group members.

9. Criticizes poor work.

10. Gives advance notice of changes.

11. Speaks in a manner not to be questioned.

12. Keeps to himself/herself.

13. Looks out for the personal welfare of individual group members.

14. Assigns group members to particular tasks.

15. Is the spokesperson of the group.

16. Schedules the work to be done.


18. Refuses to explain his/her actions.

19. Keeps the group informed.

20. Acts without consulting the group.

21. backs up the members in their actions.

22. Emphasizes the meeting of deadlines.

23. Treats all group members as his/her equals.

24. Encourages the use of uniform procedures.

25. Seeks what he/she asks for from his/her superiors.

26. Is willing to make changes.

27. Makes sure that his/her part in the organization is understood by group members.

28. Is friendly and approachable.

29. Asks that group members follow standard rules and regulations.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
| Faits to tak# necessary action. | A | B | C | D | E |
| Makes group members feel at ease when talking with them. | A | B | C | D | E |
| Lets group members know what is expected of them. | A | B | C | D | E |
| Speaks as the representative of the group. | A | B | C | D | E |
| Puts suggestions made by the group into operation. | A | B | C | D | E |
| Sees to it that group members are working up to capacity. | A | B | C | D | E |
| Lets other people take away his/her leadership in the group. | A | B | C | D | E |
| Seeks to be representative of the welfare of the group. | A | B | C | D | E |
| Seeks to be representative of the welfare of the group. | A | B | C | D | E |
| Sees to it that the work of group members is coordinated. | A | B | C | D | E |
| Keeps the group working together as a team. | A | B | C | D | E |

**JOB DESCRIPTIVE INDEX**

1. For each item under each scale (work, pay, etc.) please put one of the following alternatives in the space to the left of EACH ITEM:

If the item APPLIES ......... Mark Y (for yes)

If the item DOES NOT APPLY ......... Mark N (for no)

If you CANNOT DECIDE ......... Mark ? (for don't know)

Please respond to every item:

<table>
<thead>
<tr>
<th>MY WORK</th>
<th>MY BOSS</th>
<th>MY CO-WORKERS</th>
<th>MY PAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fascinating</td>
<td>Asking for advice</td>
<td>Stimulating</td>
<td>Income adequate for normal expenses</td>
</tr>
<tr>
<td>Routine</td>
<td>Hard to please</td>
<td>Boring</td>
<td>Satisfactory profit sharing</td>
</tr>
<tr>
<td>Satisfying</td>
<td>Impolite</td>
<td>Ambitious</td>
<td>Barely live on income</td>
</tr>
<tr>
<td>Boring</td>
<td>Praises good work</td>
<td>Stupid</td>
<td>Bad</td>
</tr>
<tr>
<td>Good</td>
<td>Tactful</td>
<td>Responsible</td>
<td>Insecure</td>
</tr>
<tr>
<td>Creative</td>
<td>Influential</td>
<td>Fast</td>
<td>Income provides luxuries</td>
</tr>
<tr>
<td>Respected</td>
<td>Up-to-date</td>
<td>Intelligent</td>
<td>Less than I desire</td>
</tr>
<tr>
<td>Hot</td>
<td>doesn't supervise enough</td>
<td>Easy to make</td>
<td>Highly paid</td>
</tr>
<tr>
<td>Pleasant</td>
<td>Quick-witted</td>
<td>Talks too much</td>
<td>Underrated</td>
</tr>
<tr>
<td>Useful</td>
<td>Tense</td>
<td>Fair</td>
<td>My promotions</td>
</tr>
<tr>
<td>Tiresome</td>
<td>Tense</td>
<td>Smart</td>
<td>Good opportunity for advancement</td>
</tr>
<tr>
<td>Healthful</td>
<td>Tense</td>
<td>Lazy</td>
<td>Opportunity somewhat limited</td>
</tr>
<tr>
<td>Challenging</td>
<td>Annoying</td>
<td>Unpleasant</td>
<td>Promotion on ability</td>
</tr>
<tr>
<td>On your feet</td>
<td>Stubborn</td>
<td>No privacy</td>
<td>Dead-end job</td>
</tr>
<tr>
<td>Frustrating</td>
<td>Knows job well</td>
<td>Active</td>
<td>Good chance for promotion</td>
</tr>
<tr>
<td>Simple</td>
<td>Easy</td>
<td>Narrow interests</td>
<td>Unfair promotion policy</td>
</tr>
<tr>
<td>Endless</td>
<td>Intimate</td>
<td>Loyal</td>
<td>Infrequent promotion policy</td>
</tr>
<tr>
<td>Gives sense of accomplishment</td>
<td>Leaves me on my own</td>
<td>Hard to meet</td>
<td>Regular promotions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fairly good chance for promotion</td>
</tr>
</tbody>
</table>

**BIOGRAPHICAL BACKGROUND**

1. Sex: Male | Female |
2. Age: Under 30 | 30 - 39 | 40 - 49 | 50 - 59 | 60 or older |
3. Education (check one):
   - Grade School
   - Some High School
   - High School Degree
   - Some Business College or Technical School Experience
   - Business College or Technical School Degree
   - College Degree
   - Master's or Higher Degree
4. What is your brief job title?

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Appendix L

Correlation Data for Five Facets of Job Satisfaction
Table 18

Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 1

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 33)</th>
<th>For nonroutine jobs (n = 33)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>-.256</td>
<td>.296</td>
<td>.0143*</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.205</td>
<td>.348</td>
<td>.2743</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>-.214</td>
<td>.388</td>
<td>.0075*</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>-.166</td>
<td>-.330</td>
<td>.7517</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>-.163</td>
<td>-.060</td>
<td>.3409</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>-.158</td>
<td>.300</td>
<td>.0344*</td>
</tr>
</tbody>
</table>

* $p < .05.$
Table 19
Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 2

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 27)</th>
<th>For nonroutine jobs (n = 27)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>.124</td>
<td>.422</td>
<td>.1314</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.719</td>
<td>.720</td>
<td>.4960</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>.463</td>
<td>.468</td>
<td>.4920</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>.273</td>
<td>.363</td>
<td>.3632</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>.234</td>
<td>.379</td>
<td>.2877</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>.551</td>
<td>.655</td>
<td>.2912</td>
</tr>
</tbody>
</table>
Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 3

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 24)</th>
<th>For nonroutine jobs (n = 25)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>-.073</td>
<td>.084</td>
<td>.3015</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.385</td>
<td>-.220</td>
<td>.9808</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>.568</td>
<td>.298</td>
<td>.8665</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>-.124</td>
<td>.306</td>
<td>.0735</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>.275</td>
<td>-.115</td>
<td>.9032</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>.491</td>
<td>.052</td>
<td>.9441</td>
</tr>
</tbody>
</table>

Table 20

Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 3

Leader initiating structure

Satisfaction variables | For routine jobs (n = 24) | For nonroutine jobs (n = 25) | Probability |
-----------------------|---------------------------|-------------------------------|-------------|
Satisfaction with work | -.073                     | .084                          | .3015       |
Satisfaction with boss | .385                      | -.220                         | .9808       |
Satisfaction with co-workers | .568                      | .298                          | .8665       |
Satisfaction with pay | -.124                     | .306                          | .0735       |
Satisfaction with promotions | .275                      | -.115                         | .9032       |
Job satisfaction | .491                      | .052                          | .9441       |
Table 21

Correlation Between Initiating Structure and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs for All Three Locations

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 84)</th>
<th>For nonroutine jobs (n = 85)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>.034</td>
<td>.256</td>
<td>.0735</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.538</td>
<td>.280</td>
<td>.9772</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>.240</td>
<td>.461</td>
<td>.0537</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>.059</td>
<td>-.095</td>
<td>.8365</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>.111</td>
<td>.104</td>
<td>.5160</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>.356</td>
<td>.377</td>
<td>.4404</td>
</tr>
</tbody>
</table>
Table 22
Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 1

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 33)</th>
<th>For nonroutine jobs (n = 33)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>.083</td>
<td>.249</td>
<td>.7450</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.839</td>
<td>.603</td>
<td>.0217*</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>.092</td>
<td>.285</td>
<td>.7823</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>.001</td>
<td>-.365</td>
<td>.0681</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>.066</td>
<td>.297</td>
<td>.8328</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>.451</td>
<td>.421</td>
<td>.4443</td>
</tr>
</tbody>
</table>

*p < .05.
Correlation Between Consideration and Satisfaction
Variables Compared for Routine Versus Nonroutine Jobs at Location 2

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>Leader consideration</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>For routine jobs</td>
<td>For nonroutine jobs</td>
<td>Probability</td>
</tr>
<tr>
<td></td>
<td>(n = 27)</td>
<td>(n = 27)</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with work</td>
<td>.224</td>
<td>.376</td>
<td>.7190</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.801</td>
<td>.796</td>
<td>.3085</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>.442</td>
<td>.520</td>
<td>.6443</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>.273</td>
<td>.422</td>
<td>.7224</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>.321</td>
<td>.268</td>
<td>.4207</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>.626</td>
<td>.662</td>
<td>.5832</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table 24
Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs at Location 3

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 24)</th>
<th>For nonroutine jobs (n = 25)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>.304</td>
<td>.720</td>
<td>.9744</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.752</td>
<td>.844</td>
<td>.8078</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>.165</td>
<td>.330</td>
<td>.7190</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>.025</td>
<td>-.013</td>
<td>.4483</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>.593</td>
<td>.635</td>
<td>.5871</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>.761</td>
<td>.811</td>
<td>.6664</td>
</tr>
</tbody>
</table>
Table 25
Correlation Between Consideration and Satisfaction Variables Compared for Routine Versus Nonroutine Jobs for All Three Locations

<table>
<thead>
<tr>
<th>Satisfaction variables</th>
<th>For routine jobs (n = 84)</th>
<th>For nonroutine jobs (n = 85)</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>.199</td>
<td>.506</td>
<td>.9881</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>.806</td>
<td>.802</td>
<td>.4681</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>.251</td>
<td>.427</td>
<td>.8980</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>.084</td>
<td>-.199</td>
<td>.0344*</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>.282</td>
<td>.322</td>
<td>.6103</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>.567</td>
<td>.668</td>
<td>.8554</td>
</tr>
</tbody>
</table>

*p < .05.
Appendix M

Descriptive Statistics
### Table 26
Descriptive Statistics for Routine Jobs at Location 1
\((n = 33)\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>31.636</td>
<td>9.769</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>37.879</td>
<td>12.569</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>39.818</td>
<td>11.719</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>10.727</td>
<td>5.119</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>8.182</td>
<td>7.585</td>
</tr>
<tr>
<td>Satisfaction (in general)</td>
<td>128.242</td>
<td>28.662</td>
</tr>
</tbody>
</table>

### Table 27
Descriptive Statistics for Nonroutine Jobs at Location 1
\((n = 33)\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>36.273</td>
<td>7.755</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>45.909</td>
<td>6.952</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>40.485</td>
<td>11.298</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>12.252</td>
<td>6.815</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>9.424</td>
<td>7.186</td>
</tr>
<tr>
<td>Satisfaction (in general)</td>
<td>144.333</td>
<td>21.349</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
### Table 28

Descriptive Statistics for Routine Jobs at Location 2

(n = 27)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>29.259</td>
<td>12.072</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>36.741</td>
<td>14.633</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>31.519</td>
<td>13.746</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>15.037</td>
<td>6.192</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>9.148</td>
<td>7.882</td>
</tr>
<tr>
<td>Satisfaction (in general)</td>
<td>121.704</td>
<td>39.470</td>
</tr>
</tbody>
</table>

### Table 29

Descriptive Statistics for Nonroutine Jobs at Location 2

(n = 27)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>34.852</td>
<td>11.989</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>42.000</td>
<td>10.224</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>37.000</td>
<td>12.764</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>16.296</td>
<td>5.031</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>10.148</td>
<td>8.448</td>
</tr>
<tr>
<td>Satisfaction (in general)</td>
<td>140.296</td>
<td>35.787</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table 30
Descriptive Statistics for Routine Jobs at Location 3
(n = 24)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>32.625</td>
<td>8.637</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>39.167</td>
<td>10.933</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>39.875</td>
<td>9.975</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>22.250</td>
<td>3.915</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>8.333</td>
<td>6.027</td>
</tr>
<tr>
<td>Satisfaction (in general)</td>
<td>142.260</td>
<td>21.240</td>
</tr>
</tbody>
</table>

Table 31
Descriptive Statistics for Nonroutine Jobs at Location 3
(n = 25)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with work</td>
<td>31.680</td>
<td>11.884</td>
</tr>
<tr>
<td>Satisfaction with boss</td>
<td>35.320</td>
<td>13.388</td>
</tr>
<tr>
<td>Satisfaction with co-workers</td>
<td>36.280</td>
<td>11.487</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>20.880</td>
<td>4.177</td>
</tr>
<tr>
<td>Satisfaction with promotions</td>
<td>10.360</td>
<td>8.062</td>
</tr>
<tr>
<td>Satisfaction (in general)</td>
<td>134.520</td>
<td>35.389</td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY


Evans, M. G. The effects of supervisory behavior on the path-goal relationship. *Organizational Behavior and Human Performance, 1970, 5*(3), 277-298. (a)


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.


Van de Ven, A. H., & Delbecq, A. L. *A task contingent model of work unit design.* Reproduction draft.


