CONCURRENT AND LONGITUDINAL CORRELATES OF CERTAIN INDICES OF JOB SATISFACTION EXAMINED WITHIN THE FRAMEWORK OF THE MOTIVATOR-HYGIENE THEORY

Thests for the Degree of M. A.
MICHIGAN STATE UNIVERSITY
Leonard James Dasho
1969

4001 A 055

ABSTRACT

CONCURRENT AND LONGITUDINAL CORRELATES OF CERTAIN INDICES OF JOB SATISFACTION EXAMINED WITHIN THE FRAMEWORK OF THE MOTIVATOR-HYGIENE THEORY

By

Leonard James Dasho

The purpose of this study was to explore the relationship between intrinsic and extrinsic job factors and certain indices of job satisfaction. The study was carried out in a medium-sized Michigan manufacturing company.

Inventories assessing job satisfaction, satisfaction with life in general, perception of and attitude toward change, supervisory behavior, and 14 psychological needs were administered to 191 employees of the company in 1958. In 1969 two of the job satisfaction inventories were readministered to 65 employees who still remained with the company. Data for the increase in yearly earnings, number of promotions, and number of raises from 1958 to 1968 were obtained for each of the 65 subjects.

The relationships between job factors and indices of job satisfaction, turnover, increase in yearly earnings,

number of raises, and number of promotions were tested by the calculation of coefficients of correlation. The scores on two of the job satisfaction inventories administered in 1958 were predicted by combinations of the other inventories administered in 1958. These combinations were then used to predict scores on the same two inventories readministered in 1969.

The results indicated that there is a positive relationship between employees' job attitudes and success on their jobs. The results also indicated that intrinsic job factors are not more highly related to job satisfaction than are extrinsic factors. The results showed no relationship between either intrinsic or extrinsic job factors and number of promotions, number of raises, turnover, and increase in yearly earnings. The results also indicated that job satisfaction is a changeable variable of short rather than long duration; it is also difficult to make accurate long-range predictions of job satisfaction.

The results of this study supported neither the motivator-hygiene theory of Frederick Herzberg nor a modification of the motivator-hygiene theory.

Thesis Committee

Dr. J. Karslake, Chairman

Dr. C. Frost

Dr. E. Jacobson

Approved: James & Kandahan Date: 14,967

CONCURRENT AND LONGITUDINAL CORRELATES OF CERTAIN INDICES OF JOB SATISFACTION EXAMINED WITHIN THE FRAMEWORK OF THE MOTIVATOR-HYGIENE THEORY

By

Leonard James Dasho

A THESIS

Submitted to

Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Psychology

1969

3597311 1-17-50

TO MY PARENTS AND WIFE

ACKNOWLEDGMENTS

Appreciation is expressed to Dr. James S.

Karslake, research advisor, for his patience and assistance. Gratitude is extended to Dr. Carl F. Frost for his guidance, and also to Dr. Eugene Jacobson.

Appreciation is expressed to the management and employees of the company where this research was conducted for their excellent cooperation.

Acknowledgment is also made of the assistance of Mr. Gerritt DeYoung in programming the data of this study.

A special word of thanks to my wife, Cyndie, for her patience and reassurance.

TABLE OF CONTENTS

		Page			
LIST (OF TABLES	v			
INTRO	DUCTION	1			
PURPOS	SE AND HYPOTHESES	4			
VARIA	BLES OF INTEREST AND THEIR MEASUREMENT	6			
PROCEDURE FOLLOWED IN DATA COLLECTION, ANALYSIS AND INTERPRETATION					
RESULI	rs	18			
DISCUSSION AND IMPLICATIONS FOR FUTURE RESEARCH 37					
BIBLIOGRAPHY					
APPENDICES					
A. MANAGEMENT LETTER TO EMPLOYEES AND INSTRUCTION TO SUBJECTS					
В.	OSU JOB SATISFACTION QUESTIONNAIRE				
C. OSU SOCIAL-FACTORS QUESTIONNAIRE					
D. SRA EMPLOYEE INVENTORY					
E. SUPERVISORY BEHAVIOR DESCRIPTION					
F. WEITZ GENERAL SATISFACTION					
G. PSYCHOLOGICAL NEEDS INVENTORY					
H. CHANGE INVENTORY					
I.	MSU PERSONAL HISTORY BLANK				
J.	FACTORS CORRELATING WITH OSU JS AND SF				
к.	SUBJECTS' SCORES AND CORRELATION MATRIX OF ALL MEASURES USED IN THE STUDY				

LIST OF TABLES

TABLE		Page
1.	Correlation Coefficients Between Measures of Job Satisfaction and Indicators of Success and Rewards on the Job	19
2.	Correlation Coefficients Between Job Factors and Job Satisfaction Question-naires	21
3.	Correlation Coefficients Between Job Factors and Turnover	24
4.	Correlation Coefficients Between Job Factors and Promotions	25
5.	Correlation Coefficients Between Job Factors and Raises	26
6.	Correlation Coefficients Between Job Factors and Increase in Earnings	28
7.	Validity and Cross-Validity Coefficients for Regression Equations for Predicting OSU JS and OSU SF	29
8.	Intercorrelations of the Questionnaires Used in the Study	31
9.	Means and Standard Deviations of the OSU JS and SF Questionnaires	32
10.	Intercorrelations Between the OSU JS and SF Questionnaires	33
11.	Variables Correlating Most Highly With OSU JS '58	34
12.	Variables Correlating Most Highly With OSU SF '58	35
13.	Variables Correlating Most Highly With SRA JS	36

INTRODUCTION

One traditional theory of job satisfaction was that if the presence of a variable in the work environment led to job satisfaction, then its absence led to job dissatisfaction. A theory of job satisfaction that is receiving a great deal of interest today is the motivatorhygiene theory of Frederick Herzberg. His theory is a two-dimensional theory in which job satisfaction variables either satisfy or dissatisfy, but not both. Herzberg, Mausner, and Snyderman (1959) found that satisfied employees considered their satisfaction a result of the job itself and not a result of factors surrounding the job. Some factors said to be directly related to the job itself were achievement, responsibility, and advancement. On the other hand dissatisfied employees considered their dissatisfaction as resulting from deficiencies in factors that were external to and surrounding the job itself. Herzberg calls the factors of the job that are intrinsic to the job and related to job satisfaction "motivators." Five variables that illustrate motivators are said to be: challenge ability, high responsibility, importance of the

job, opportunity for advancement, and voice in decisions. Some factors that are said to be extrinsic to the job are called "hygienes," and they are related to job dissatisfaction. Some of the hygienes are: salary, physical working conditions, job security, liberal fringe benefits, boss, and interpersonal relationships with fellow employees and supervisors.

The motivator-hygiene theory is two dimensional in that a variable that is related positively to job satisfaction does not cause job dissatisfaction when it is absent. It states that job satisfaction and job dissatisfaction are reactions to different kinds of job aspects and denies that any given job aspect can be instrumental to any appreciable degree in providing both job satisfaction and job dissatisfaction. Only motivators can lead to job satisfaction. Hygienes will not lead to job satisfaction, but their absence will lead to job dissatisfaction. an employee a good salary will prevent his dissatisfaction, but it will not lead to his satisfaction. The motivatorhygiene theory has been supported in studies by: Bloom and Barry (1967); Halpern (1966); Herzberg (1965); Myers (1964); Saleh (1964); and Schwartz, Jenusaitis, and Stark (1963).

However several studies intended to test Herzberg's theory have yielded other results. Studies by:

Burke (1966); Dunnette, Campbell, and Hakel (1967); Ewen, Smith, Hulin, and Locke (1966); Friedlander (1963) and (1966); Graen (1966); Hulin and Smith (1967); and Wernimont (1966) all yielded results that conflict to a certain extent with Herzberg's motivator-hygiene theory. His distinction between intrinsic and extrinsic variables of the work environment is supported, but their results indicate that the variables are uni-dimensional rather than two-dimensional. The results of these studies indicate that the intrinsic variables are really the "primary" variables. They contribute the most to both job satisfaction and job dissatisfaction. It is this modification of the motivator-hygiene theory that is to be examined in this study.

PURPOSE AND HYPOTHESES

Purpose

The purpose of this study was to examine the relation between variables of the work environment and job satisfaction. Job satisfaction was measured by various job satisfaction questionnaires and records of work success with the company such as increase in earnings, promotions, and turnover.

Hypotheses

- Favorable attitudes of the employee concerning his job will be related to greater success and rewards on the job.
- 2. Intrinsic factors (motivators) pertaining to the job will be more highly related to job satisfaction as measured by questionnaires than will extrinsic factors (hygienes).
- 3. Intrinsic factors pertaining to the job will be more highly related to a measure of job dissatisfaction (turnover) than will extrinsic factors.

- 4. Intrinsic factors pertaining to the job will be more highly related to the number of promotions received than will extrinsic factors.
- 5. Intrinsic factors pertaining to the job will be more highly related to the number of raises received than will extrinsic factors.
- 6. Intrinsic factors pertaining to the job will be more highly related to the increase in yearly earnings than will extrinsic factors.
- 7. Regression equations developed and validated on the basis of the 1958 OSU Job Satisfaction scores will cross-validate when applied to the 1969 OSU Job Satisfaction scores.
- 8. Regression equations developed and validated on the basis of the 1958 OSU Social-Factors scores will cross-validate when applied to the 1969 OSU Social-Factors scores.

VARIABLES OF INTEREST AND THEIR MEASUREMENT

Intrinsic Variables (Motivators)

- 1. Status and recognition--SRA category XII.
- Opportunity for growth and advancement--SRA category XIV.
- 3. Job demands--SRA category I.

Extrinsic Variables (Hygienes)

- 1. Working conditions -- SRA category II.
- 2. Pay--SRA category III.
- 3. Employee benefits -- SRA category IV.
- 4. Friendliness and cooperation of fellow employees-SRA category V.
- 5. Supervisor-employee interpersonal relations--SRA category VI.
- Technical competence of supervision--SRA category VIII.
- 7. Effectiveness of administration--SRA category IX.
- 8. Security of job and work relations--SRA category XI.

9. Supervisory consideration—Consideration scale of Supervisory Behavior Description.

Criterion Variables

- 1. OSU Job Satisfaction Questionnaire.
- 2. OSU Social-Factors Questionnaire.
- 3. SRA Employee Inventory Total Score.
- 4. Turnover from 1958-1968.
- 5. Number of promotions from 1958-1968.
- 6. Number of raises from 1958-1968.
- 7. Increase in yearly earnings from 1958-1968.

The instruments used were: (1) the Bullock version of the Hoppock job satisfaction scale (Appendix B); (2) a social-factors scale developed by Bullock (Appendix C); (3) the Science Research Associates Employee Inventory (Appendix D); (4) Fleishman's Supervisory Behavior Description (Appendix E); (5) a modified version of Weitz's Test of General Satisfaction (Appendix F); (6) the Individual Inventory consisting of items taken from Explorations of Personality testing psychological needs (Appendix G); and (7) a questionnaire to assess perception of and attitude toward change in the work environment (Appendix H).

Bullock's (1952) Ohio State University Job Satisfaction questionnaire (hereafter referred to as the OSU JS) consists of ten items that require the employee to

evaluate his employing organization and his job and five items that assess his behavior in regard to his job. five alternative responses to the items ranged from one assumed to indicate a high degree of satisfaction through average or non-commital responses to one assumed to be indicative of dissatisfaction. The five alternative responses were arbitrarily assigned the values 1, 2, 3, 4, and 5, with the highest value assigned to the response indicating greatest satisfaction and the lowest value to the response indicating least satisfaction. The first ten items were used by Robert Hoppock in his study of job satisfaction among teachers. The remaining five items were also measures of job satisfaction, but differed in content and form. The first three were designed by Bullock while the other two were designed by Cheek (1955). There were three possible responses to each question: "Yes," "?," "No." For some questions the answer "Yes" indicated satisfaction, while for others the answer "No" indicated satisfaction. The satisfaction response was assigned the arbitrary value 2, "?" assigned 1, and the third response 0. The highest possible score on the OSU JS is 60.

The Bullock Ohio State University Social-Factors questionnaire (hereafter referred to as the OSU SF) consisted of 24 items thought by Bullock (1952) to be

indicative of some aspect of adjustment within the family, neighborhood, informal work-group, or formal organization structure of the company. Bullock's rationale was that a worker evaluates his job in terms of its contribution to the achievement of his own personal objectives which are related to the attainment of personal adjustment in each of his several social spheres. These social spheres of significance are the family, neighborhood and community, the informal work-group, and the formal structure of the employing company; and there are correlations between job satisfaction and satisfactory personal adjustment within these social spheres. Bullock reported a Pearsonian coefficient of correlation of .77 between scores on a questionnaire of such social-factors items and his job satisfaction inventory. The 24 questions can be answered "Agree," "?," "Disagree," or "Yes," "?," "No." For some questions or statements the answer "Agree" or Yes" indicated satisfaction, and was given an arbitrary weight of 2, while "?" was scored 1 and "Disagree" or "No" was scored 0. For those questions or statements for which the response "Disagree" or "No" indicated satisfaction, the scoring weights were reversed. The maximum possible score on the OSU SF questionnaire was 48.

The SRA Employee Inventory (1952) published by the Science Research Associates was administered as a test of

general job satisfaction. The SRA consists of 76 items representing aspects of the job environment and two items measuring reaction to the inventory. The subject's overall job satisfaction score is obtained by summing the responses. Specific areas of the job situation can also be examined. The 76 items are divided into 14 job satisfaction areas. These areas are: (1) Job Demands,

- (2) Working Conditions, (3) Pay, (4) Employee Benefits,
- (5) Friendliness and Cooperation of Fellow Workers,
- (6) Supervisor-Employee Interpersonal Relations, (7) Confidence in Management, (8) Technical Competence of Supervisors, (9) Effectiveness of Administration, (10) Adequacy of Communication, (11) Security of Job and Work Relations, (12) Status and Recognition, (13) Identification with the Company, (14) Opportunity for Growth and Advancement. By summing the scores for the items in each of these categories, satisfaction with any of these areas can be determined. The highest possible total score is 78. There are three possible responses to each item: "Agree," "?," and "Disagree." For some items "Agree" indicated satisfaction, while for others "Disagree" indicated satisfaction. Only those responses indicating satisfaction were recorded on the score pad.

The Supervisory Behavior Description developed by Fleishman (1953) measures two components of supervision,

Consideration and Initiating Structure. The total inventory consists of 48 items with 28 items measuring Consideration and 20 items measuring Initiating Structure. The two components are scored by separate keys. The items ask the subject to estimate how often his supervisor exhibits certain types of behavior. The responses to the questions were usually: "Always," "Often," "Occasionally," "Once in a while," and "Seldom." The items were scored 4 to 0. Responses were scored by summing the weights for each selected alternative. A score of 112 on the 28-item Consideration scale indicated that the subject thought his immediate supervisor possessed the highest possible degree of consideration as measured by the scale. A score of 80 on the 20-item Initiating Structure scale indicated the highest level of supervisory initiating structure.

Weitz's (1952) Test of General Satisfaction was used as a measure of general life satisfaction. Subjects responded to specific items concerning: food prices, television programs, advertising methods, etc. To make the original measure more suitable to the industrial population it was revised by removing three items and adding seven items which touched upon aspects of life neglected in the original inventory. The new items dealt with religious activity, family, personal health, spare time, and indebtedness. The modified test consisted of

48 items each of which could be answered by one of four responses: "satisfied," "dissatisfied," "neutral," and "not applicable." A subject's attitude toward life was expressed by summing the number of dissatisfied responses.

The Individual Inventory developed by Neal (1960) was used to assess 14 psychological needs. This assessment device consisted of items suggested in Murray's Explorations of Personality (1938). The inventory consisted of 84 items assessing psychological needs. Each of the 14 needs is assessed by six items. The needs assessed by the inventory are: (1) Abasement, (2) Achievement, (3) Affiliation, (4) Aggression, (5) Autonomy, (6) Deference, (7) Dominance, (8) Exhibition, (9) Change, (10) Harmavoidance, (11) Nurturance, (12) Order, (13) Play, and (14) Succorance. There are six possible responses to each item: very strongly agree, strongly agree, agree, disagree, strongly disagree, and very strongly disagree. For scoring each response was assigned an arbitrary weight: VSA--5, SA--4, A--3, D--2, SD--1, VSD--0. The subject's need score for any given need is the sum of the answered item weights. It is assumed that the higher the score the higher the need. The highest possible score on any need for a subject is 30.

The measure designed to assess attitude toward change and perception of change was developed by Jacobson,

Trumbo, Cheek, and Nangle (1959). Each perception of change item was followed by five responses: "Much more," "More," "No change," "Less," and "Much less." The alternatives were scored 5, 4, 3, 2, 1 with the highest score going to the response that indicated greatest perception of change. A subject's total score for perception of change was obtained by summing the weights for the 16 items. The highest score possible for perception of change is 80. The attitude toward change items asked subjects to indicate how they felt about specific changes. There were five alternative responses to these questions also. In general they were: "Like it a lot," "Like it," "Makes no difference," "Dislike it," and "Dislike it a lot." These responses were given the weights: 5, 4, 3, 2, 1 with the highest score going to the response indicating the most favorable attitude toward change. The subject's total score for attitude toward change was obtained by summing the weights of the responses to the 22 items. The highest possible score on the attitude toward change scale is 110.

PROCEDURE FOLLOWED IN DATA COLLECTION, ANALYSIS AND INTERPRETATION

These questionnaires were administered to almost the entire work force from executive to janitor of a furniture manufacturing company in western Michigan in 1958. A total of 191 employees were included in this study. The majority of the employees were of Dutch Protestant extraction and lived in the immediate vicinity, a rather small town. The battery was administered to the subjects in groups of 30. In the single test session the employees had to fill out the entire battery in addition to a personal history form (Appendix I). The administration took place on the company premises on company time. From this sample of 191, 104 were used in the present study. The reduction in the number of subjects was due to mistakes in questionnaire codings and failure of the subjects to put their names on the personal history blanks. At the time of this administration, the company's groupincentive plan had not been paying bonuses.

Out of the 104 subjects for which there was usable data 65 were still working for the company in 1969. The

rest of the subjects had died, retired, quit, or were discharged. These 65 subjects were retested on the two Bullock questionnaires, job satisfaction and socialfactors. The company management mailed to each of the subjects a letter explaining that a research group from Michigan State University was conducting a study and that the company approved of this and encouraged the subject's cooperation with the researchers. The subjects were then mailed an envelope containing a letter from the researcher, the two questionnaires, and a stamped and addressed return envelope. The letters from the researcher and the company also bore the name of a consulting psychologist with whom all of the subjects were familiar. The subjects were asked to complete the questionnaires at home and return them to the researcher. They were not asked to sign them. weeks after the initial mailing, handwritten postcards were sent to the subjects who had not returned the question-A total of 50 of the 65 subjects returned their completed questionnaires (77%). Approximately two months before this testing, the employees of this company had received the largest pay raise that they had ever received.

The company allowed the researcher to go through the personnel files and gather data on each of the 104 subjects used in this study. For those subjects who were no longer with the company, the reason for departure was

determined (death, retirement, voluntary departure, or dismissal). Total earnings for 1958 and 1968 were also obtained. The subjects' positions within the company in 1958 and 1968 (executive coded 4, supervisor coded 3, foreman coded 2, workman coded 1) were also obtained. The number of raises and promotions were also determined for each subject. With this information it was possible to determine the increase in yearly earnings for each employee, number of positions moved up from 1958 to 1968, number of raises, number of promotions, and turnover for each subject. For the measure of turnover, only those subjects who voluntarily left or were dismissed were included.

Data was recorded for each of the 104 subjects used in the study. The recorded data consisted of: the 14 job satisfaction areas and total score of the SRA, consideration and initiating structure scores for the Supervisory Behavior Description, perception of and attitude toward change scores, Weitz life satisfaction scores, Bullock job satisfaction and social-factors 1958 scores, scores for the 14 psychological needs, increase in yearly earnings from 1958 to 1968, number of raises from 1958 to 1968, number of promotions from 1958 to 1968, number of job changes from 1958 to 1968, position in 1958, position in 1968, number of positions moved up from 1958

to 1968, turnover, and department in 1958. Bullock job satisfaction and social-factors 1969 scores were recorded for the 50 subjects who cooperated in the study.

Pearson product-moment coefficients of correlation were computed between all of these factors. Point biserial coefficients of correlation were computed for turnover since it was scored dichotomously (there or not there).

Correlations were examined between satisfaction and dissatisfaction measures and job factors representing motivators and hygienes.

Regression equations were developed for predicting the 1958 OSU JS and SF scores from the 1958 battery.

These equations were then used to predict the 1969 OSU US and SF scores.

RESULTS

Hypothesis 1: Favorable attitudes of the employee concerning his job will be related to greater success and rewards on the job.

Table 1 presents the results obtained from the correlation of job satisfaction questionnaire scores and certain measures of success on the job. There were very few significant relationships between job satisfaction and number of promotions, number of positions moved up, number of raises, turnover, and increases in yearly earnings. There was very little variance for the number of promotions, raises, and turnover. Only 12 subjects received any promotions at all from 1958 to 1968, only 15 subjects left the company voluntarily or were dismissed, and most of the raises given to the employees seemed to be company-wide The small amount of variance for these factors raises. may be in part responsible for the low correlation coefficients that were obtained. These results do not seem to support hypothesis 1; however, the data obtained from the correlations of job satisfaction scores and subjects' positions within the company in 1958 and 1968 do support hypothesis 1.

TABLE 1

CORRELATION COEFFICIENTS BETWEEN MEASURES OF JOB SATISFACTION AND INDICATORS OF SUCCESS AND REWARDS ON THE JOB

Indicators of Success	osu 3s '58	Job OSU SF '58	Job Satisfaction SRA '58	no OSU JS '69	OSU SF '69
Number of promotions 1958-1969	073	.268	048	032	880.
Number of positions moved up 1958-1969	.014	.266*	• 0 4	.182	.341*
Number of raises 1958-1969	113	047	084	254	161
Increase in yearly earnings 1958-1969	051	. 225	036	.328*	.261
Turnover	008	143	092	;	!
Position in 1958	.216*	.284**	.279**	.324*	.224
Position in 1968	.243	.376**	.286*	.363**	.331*

*Significant relationship at 5% level; two-tailed tests. **Significant relationship at 1% level; two-tailed tests.

The Ns varied for most relations; refer to Appendix K for the list of Ns.

Nine out of ten of the relationships between position in 1958 or 1968 and job satisfaction scores in Table 1 were positive and significant. These results indicate that there is a significant positive relationship between employees' attitudes concerning their jobs and their success on their jobs, when success is measured by the employee's position within the company's job hierarchy. These results agree with the findings of Weissenberg (1967) and Porter (1967) that job satisfaction is highly related to the job level within the organization's hierarchy. It would seem, then that the results support hypothesis 1.

Hypothesis 2: Intrinsic factors (motivators)

pertaining to the job will be more highly related to job

satisfaction as measured by questionnaires than will

extrinsic factors (hygienes).

Table 2 presents the results obtained from the correlation of job factors with three different measures of job satisfaction. The three intrinsic job factors are categories of the SRA and eight of the nine extrinsic job factors are also categories of the SRA. The ninth extrinsic job factor, supervisory consideration, is measured by the Consideration scale of the Supervisory Behavior Description. The job factors were classified as intrinsic or extrinsic by Herzberg (1959).

CORRELATION COEFFICIENTS BETWEEN JOB FACTORS AND JOB SATISFACTION QUESTIONNAIRES TABLE 2

	Job Factors	SC SOO	N 85.	Job Satisfaction OSU SF '58 N	faction '58 N	SRA JS	. 58N
l til	Intrinsic Factors						
٦.	Status and recognition	.515**	100	.322**	85	.76**	104
• (and advancement	.587**	100	.322**	80 c	.677**	104
ກໍ	Job demands	. 404××	007	.252*	က	**8T9.	T04
EX	Extrinsic Factors						
1.	Working conditions	.328**	100	.281**	85	.628**	104
7	Рау	.554**	100	.137	85	.633**	104
ო	loyee benefits	.412**	100	.285**	82	.534**	104
4.	Friendliness and cooperation						
,	of fellow employees	.317**	100	.016	82	*386**	104
5.	Supervisor-employee	**>>	6	+	E C	100	
•	Interpetations Technical Competence of	: : : : : : : : : : : : : : : : : : :	001		n 0	01/.	* O -
		.445**	100	.125	85	.655**	104
7.	Effectiveness of						
	administration	**605.	100	.295**	85	.719**	104
œ	Security of job and						
	work relations	.527**	100	.381**	85	.772**	104
•	Supervisory consideration	.224*	94	.363**	82	.156	94

*Significant relationship at 5% level; one-tailed tests.

**Significant relationship at 1% level; one-tailed tests.

The correlations between the job factors and the SRA Total Score were very high, since the SRA Total Score is merely the summation of its 14 categories; and 11 of the 14 categories were used as job factors. The correlations between job factors and the OSU JS were higher than the correlations between job factors and the OSU SF. This was expected because the items in the OSU JS and SRA assess employees' attitudes toward their jobs specifically, while the items in the OSU SF assess employees' attitudes concerning the social factors surrounding their jobs.

Due to the general nature of hypothesis 2 it is difficult to test statistically. It is possible to test for significant differences between two correlation coefficients, but it is difficult to use such a technique with such a listing of correlation coefficients. The motivator-hygiene theory is also a general theory. It states that motivators in general are related to job satisfaction, while there is no relationship between hygienes and job satisfaction. Since this is the case the relationships between job satisfaction and intrinsic and extrinsic job factors presented in Table 2 must be examined as a whole. If intrinsic job factors are highly related to job satisfaction, and extrinsic factors are not related to job satisfaction, we would expect to find significant positive relationships between job satisfaction measures

and intrinsic job factors; however, we would not expect to find significant positive relationships between extrinsic job factors and job satisfaction measures. Table 2 shows the correlation coefficients between job satisfaction measures and intrinsic and extrinsic job factors. Significant positive relationships are found between both intrinsic and extrinsic job factors and job satisfaction questionnaires. Hypothesis 2 does not seem to be supported by the results of the study.

Hypothesis 3: Intrinsic factors pertaining to the job will be more highly related to a measure of job dissatisfaction (turnover) than will extrinsic factors.

Table 3 presents results obtained from the correlation of attitudes concerning intrinsic and extrinsic job factors and turnover from 1958 to 1968. For the measure of turnover, subjects were rated 2 for remaining with the company and 1 for leaving voluntarily or being dismissed. The significant negative correlation between Opportunity for Growth and Advancement and turnover might be explained by the fact that the 104 subjects scored the lowest on this category of the SRA and that only 15 of the subjects left the company or were dismissed. This means that the prevailing relationship was a low score on Opportunity for Growth and Advancement and a high rating on turnover (remaining with the company). The low magnitude of the

relationships and the lack of turnover do not warrant the acceptance of this hypothesis. It seems that hypothesis 3 is not supported by the data.

TABLE 3

CORRELATION COEFFICIENTS BETWEEN JOB
FACTORS AND TURNOVER

	Job Factors	Turnover	
Int	rinsic Factors		
1. 2. 3.	Opportunity for growth and advancement	202 235* 000	
Extrinsic Factors			
1. 2. 3. 4. 5. 6. 7. 8. 9.	Employee benefits Friendliness and cooperation of fellow employees Supervisor-employee interpersonal relations Technical competence of supervision Effectiveness of administration	055 .114 .069 037 041 .057 087 135	

^{*}Significant relationship at 5% level; one-tailed tests.

N = 80

Hypothesis 4: Intrinsic factors pertaining to the job will be more highly related to the number of promotions received than will extrinsic factors.

Table 4 presents the results obtained from the correlation of attitudes concerning intrinsic and extrinsic job factors and the number of promotions received from 1958 to 1968. No significant relationships were found between any of these variables. Hypothesis 4 is not supported by the findings of this study.

TABLE 4

CORRELATION COEFFICIENTS BETWEEN JOB
FACTORS AND PROMOTIONS

سيب	Job Factors	Number of Promotions 1958-1968	
Int	rinsic Factors		
1.	Status and recognition	003	
	Opportunity for growth and		
	advancement	.000	
3.	Job demands	011	
Extrinsic Factors			
1.	Working conditions	.008	
2.	Pay	19	
3.	Employee benefits	018	
4.	Friendliness and cooperation of		
	fellow employees	.107	
5.	Supervisor-employee		
	interpersonal relations	018	
6.	Technical competence of		
_	supervision	097	
7.		.031	
8.		4.	
	relations	.012	
9.	Supervisory consideration	.088	
	·		

Hypothesis 5: Intrinsic factors pertaining to the job will be more highly related to the number of raises received than will extrinsic factors.

Table 5 presents the results obtained from the correlation of attitudes concerning intrinsic and extrinsic job factors and the number of raises received from 1958 to

TABLE 5

CORRELATION COEFFICIENTS BETWEEN JOB
FACTORS AND RAISES

	Job Factors	Number of Raises 1958-1968	
Int	rinsic Factors		
1.	Status and recognition	169	
2.	Opportunity for growth and		
	advancement	045	
3.	Job demands	.075	
Extrinsic Factors			
1.	Working conditions	084	
2.	Pay	.004	
	Employee benefits	062	
4.	Friendliness and cooperation of		
	fellow employees	028	
5.	Supervisor-employee		
	interpersonal relations	103	
6.	Technical competence of		
	supervision	130	
7.		062	
8.			
	relations	074	
9.	Supervisory consideration	.114	

1968. Hypothesis 5 is not supported by the results of this study. No significant relationships were found between any of these variables.

Hypothesis 6: Intrinsic factors pertaining to the job will be more highly related to the increase in yearly earnings than will extrinsic factors.

Table 6 presents the results obtained from the correlation of attitudes concerning intrinsic and extrinsic job factors and the increase in yearly salary from 1958 to 1968. There is only one significant relationship found in Table 6. An extrinsic job factor, the Supervisory consideration scale of the Supervisory Behavior Description, is significantly related to the increase in yearly earnings. All of the other correlations are very low. None of the intrinsic job factors are related significantly to increase in yearly earnings. The results of the study do not support hypothesis 6.

Hypothesis 7: Regression equations developed and validated on the basis of the 1958 OSU Job Satisfaction scores will cross-validate when applied to the 1969 OSU Job Satisfaction scores.

Hypothesis 8: Regression equations developed and validated on the basis of the 1958 OSU Social-Factors scores will cross-validate when applied to the 1969 OSU Social-Factors scores.

TABLE 6

CORRELATION COEFFICIENTS BETWEEN JOB FACTORS AND INCREASE IN EARNINGS

	Job Factors	Increase in Earnings 1958-1968
Int	rinsic Factors	
1.	Status and recognition Opportunity for growth and	.014
	advancement	.035
3.	Job demands	.079
Ext	rinsic Factors	
1.	Working conditions	11
2.	Pay	077
	Employee benefits	.064
	Friendliness and cooperation of	
	fellow employees	.142
5.		
	interpersonal relations	.042
6.	Technical competence of	
	supervision	105
7.	Effectiveness of administration	075
8.	Security of job and work	
	relations	063
9。	Supervisory consideration	.242*

^{*}Significant relationship at 5% level; one-tailed tests.

N = 65

Table 7 shows the validity and cross-validity coefficients for the regression equations used in the prediction of the OSU JS and SF scores. All of the 1958 measures were used to predict the 1958 criterion.

TABLE 7

VALIDITY AND CROSS-VALIDITY COEFFICIENTS FOR REGRESSION EQUATIONS FOR PREDICTING OSU JS AND OSU SF

Predictors	Validity	Cross-Validity
	<u>0</u>	osu js
SRA Total Score	0.80*	0.264**
	<u>c</u>	OSU SF
SRA Total Score, Consideration,		
Initiating Structure	0.66*	0.407*

^{*}Significant at 1% level; two-tailed tests.

----- Significantly different from each other.

N = 50

Measures were dropped out of the equation until the best predictor or predictors were left. The entire battery predicted the OSU JS 1958 scores with a validity coefficient of 0.83, while the SRA Total Score alone predicted the OSU JS 1958 scores with a validity coefficient of 0.80. As a result only the SRA Total Score was used to predict the OSU JS scores, while the SRA Total Score and the Consideration and Initiating Structure scales of the Supervisory Behavior Description were used to predict the OSU SF scores. The regression equations for predicting criterion scores on the basis of the inventory scores were as follows:

^{**}Not significantly different from zero.

OSU JS = 0.423X(SRA) + 22.15OSU SF = 0.209X(SRA) + 0.273X(Cons.) + 0.325X(Init.St.) - 9.18

The SRA score predicted the OSU JS score for 1958 very accurately; however it did not predict the 1969 score for the OSU JS significantly. The cross-validity coefficient was positive, but it was not significantly different from zero. There was also a significant difference between the validity and cross-validity coefficients for the OSU JS questionnaires. The results of the study do not support hypothesis 7.

The regression equation for the prediction of the OSU SF scores predicted the OSU SF 1958 scores significantly at the 1% level. It also predicted the OSU SF 1969 scores significantly at the 1% level. There was no significant difference between the validity and cross-validity coefficients for the OSU SF questionnaires. The results of the study do support hypothesis 8.

employed in this study with every other inventory employed in this study (with the exception of the psychological needs inventory which did not yield a total inventory score). The highest correlation coefficient obtained (.74) is that between OSU JS 1958 and SRA Total Score both of which are summary measures of job satisfaction.

TABLE 8

INTERCORRELATIONS OF THE QUESTIONNAIRES USED IN THE STUDY

x1	X2	Х3	X4	X5	9x	X7	8X	6X	x10
X1	**08*	.74**	.22*	.05	13	.13	.22*	.42**	.42**
x2		.38**	*36**	.22*	.26*	.31**	03	*30*	**68.
x 3			.16	.01	19	.15	.11	.26	.38**
X4				.08	05	12	60	.27	.20
X5					17	90.	.16	90	.07
9x						12	04	.07	15
X7							.01	.19	.22
8 X								.15	90.
6X									.72**
X10									

*Significant relationship at 5% level; two-tailed tests. **Significant relationship at 1% level; two-tailed tests.

X6Life Satisfaction (N = 101)	X7Perception of Change (N = 86)	X8Attitude Toward Change (N = 87)	(05 = N) 69' SC USO6X	X100SU SF '69 (N = 50)
X1OSU JS '58 (N = 100)	X2OSU SF '58 (N = 85)	X3SRA Total Score (104)	X4Consideration (N = 94)	X5Initiating Structure (N = 94)

The OSU SF inventory correlates significantly with every measure used in the study with the exception of the Attitude Toward Change inventory.

Table 9 presents mean scores and standard deviations for the 1958 and 1969 groups on the OSU JS and SF inventories. Table 10 presents the correlations between the OSU JS and SF Questionnaires for 1958 and 1969.

There were no significant differences between the means of the 1958 and 1969 OSU JS inventories and between the means of the 1958 and 1969 OSU JS inventories; however, the correlations between the 1958 and 1969 OSU JS and SF inventories were respectively only 0.421 and 0.39.

TABLE 9

MEANS AND STANDARD DEVIATIONS OF THE OSU JS
AND SF QUESTIONNAIRES

	OS	J JS	ost	J SF
Subjects	Mean	S.D.	Mean	S.D.
1958 test (N = 104)	47.3	6.9	36.3	6.7
1958 test for the Ss in the 1969 study				
(N = 50)	45.8	8.2	36.1	7.6
1969 test (N = 50)	47.2	5.9	36.7	8.7

No significant difference between the means within the OSU JS and within the OSU SF.

TABLE 10

INTERCORRELATIONS BETWEEN THE OSU JS
AND SF QUESTIONNAIRES

	OSU JS '58	OSU SF '58	OSU JS '69	OSU SF '69
OSU JS '	58	.301**	.421**	.423**
OSU SF '	58		.298*	.390**
OSU JS '	69			.722**

^{*}Significant relationship at 5% level; two-tailed tests.

**Significant relationship at 1% level; two-tailed tests.

The Ns varied for most relations; refer to Appendix K for the list of Ns.

These results seem to indicate that although as a group the subjects remained at the same overall level of job satisfaction between 1958 and 1969, there was a good deal of individual shifting in job satisfaction.

The correlation between the 1958 OSU JS and SF was only 0.30, while Bullock (1952) reported a correlation of 0.77 between the two measures. However the correlation between the 1969 OSU JS and SF was 0.72, which is considerably closer to Bullock's results.

Table 11 shows the six variables used in this study that correlated most highly with the OSU JS 1958 inventory. All six of these variables are categories of the SRA

Employee Inventory. The three job factors that correlated most highly with the OSU JS 1958, Identification with the Company, Confidence in Management, and Adequacy of communication are not included as job factors by Herzberg, although it would seem that they might be classified as job factors. It does seem that they are highly related to job satisfaction.

TABLE 11

VARIABLES CORRELATING MOST HIGHLY WITH OSU JS '58

	Variables	osu js
1.	Identification with the companySRA category 13	.708*
2.	Confidence in managementSRA category 7	.632*
3.	Adequacy of communicationSRA category 10	.595*
4.	Opportunity for growth and advancementSRA category 14	.587*
5.	PaySRA category 3	.554*
6.	Job SecuritySRA category 11	.527*

^{*}Significant relationship at 1% level; two-tailed tests.

N = 100

Table 12 shows the five variables used in this study that correlated most highly with the OSU SF 1958 inventory. Four of the five are categories of the SRA, while the other variable is the Consideration scale of the Supervisory Behavior Description. The two factors

correlating most highly with the OSU SF are extrinsic job factors.

TABLE 12

VARIABLES CORRELATING MOST HIGHLY WITH OSU SF '58

	Variables	osu sf
1.	Security of jobSRA category ll	.381*
2.	ConsiderationConsideration Scale of Supervisory Behavior Description	.363*
3.	Confidence in managementSRA category 7	.339*
4.	Status and recognitionSRA category 12	.322*
5.	Opportunity for growth and advancementSRA category 14	.322*

*Significant relationship at 1% level; two-tailed tests.

N = 85

Table 13 shows the six variables used in this study that correlated most highly with the SRA Total Score. Status and Recognition was the only intrinsic job factor out of the six variables. Again, Confidence in Management, Adequacy of Communication, and Identification with the Company are all highly related to job satisfaction.

TABLE 13

VARIABLES CORRELATING MOST HIGHLY WITH SRA JS

	Variables	SRA JS
1.	Confidence in managementSRA category 7	.789*
2.	Security of jobSRA category 11	.772*
3.	Adequacy of communicationSRA category 10	.768*
4.	Status and recognitionSRA category 12	.760*
5.	Identification with the companySRA category 13	.749*
6.	Effectiveness of administrationSRA category 9	.719*

^{*}Significant relationship at 1% level; two-tailed tests.

N = 104

DISCUSSION AND IMPLICATIONS FOR FUTURE RESEARCH

The results of this study do not support the modification of the motivator-hygiene theory that classifies intrinsic factors of the job as primary variables and extrinsic factors as secondary variables. The results do not support the original motivator-hygiene theory of Frederick Herzberg either; extrinsic as well as intrinsic job factors influence job satisfaction.

Herzberg's listing of job factors important for job satisfaction (motivators) did not include such factors as: identification with the company, confidence in management, and adequacy of communication. Tables 11, 12, and 13 indicate that these factors are highly related to job satisfaction. These factors do not seem to be intrinsic to the job itself, but rather, they seem to be extrinsic factors. These three factors appear to be highly related to the three measures of job satisfaction used in this study.

Some of the results of this study might agree with the findings of Friedlander (1963) and (1964) who used

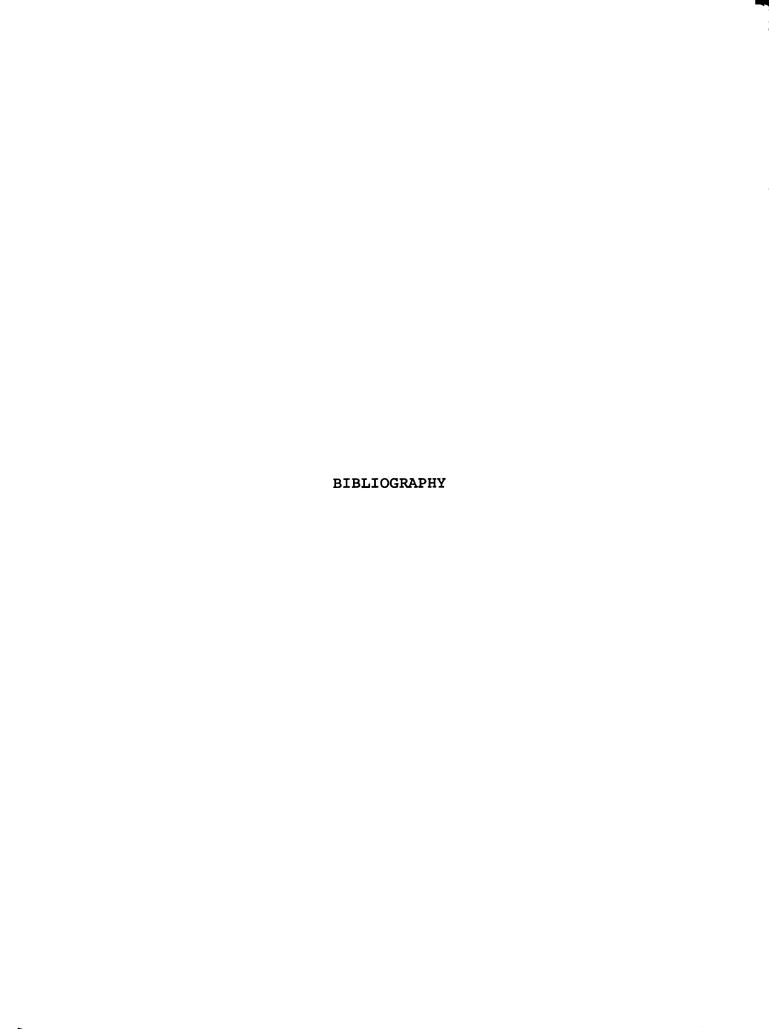
factor analysis of Herzberg's 16 job factors to find three broad factors. These three factors were: Social Environment, Intrinsic Self-Actualizing Work, and Recognition through Advancement. These three factors operate as a hierarchy rather than dimensions. He found for high performing workers Intrinsic Self-Actualizing Work was the most important factor, while Recognition through Advancement was second and Social Environment was the least. low performing workers he found Social Environment was the most important factor, Intrinsic Self-Actualizing Work the second, and Recognition through Advancement the third. Social Environment included interpersonal, social, and technical aspects or work group, conditions, job security, and managerial policies. Intrinsic Self-Actualizing Work included development and growth of the individual, challenging assignments, a feeling of achievement in the work, and opportunity for freedom. Recognition through Advancement included signs of advancing in the organization, and increased responsibility that generally accompany tangible evidence of recognition such as increased salary and advancement.

A possibility for future research would be a study employing factor analysis. In such a study one should be able to determine which of the job factors were the most important contributors to job satisfaction.

Another possibility for future research would be a study of the 50 subjects used in this study that would involve interviewing the subjects to determine significant factors that might have contributed to individual's increases or decreases in scores on the OSU SF and JS questionnaires for 1958 and 1969. Such a study might make it possible to determine which factors are most important: private life, intrinsic factors of the job, or extrinsic factors.

In summary the findings of this study indicate the following:

- Employee's attitudes concerning their jobs are related to their subsequent successes on their jobs.
- Both intrinsic and extrinsic job factors contribute to job satisfaction.
- 3. Job attitudes as expressed on job satisfaction questionnaires are not of lasting duration.
- 4. The prediction of job satisfaction from other inventories results in rather low cross-validity coefficients after an intervening period of a number of years.



BIBLIOGRAPHY

- Bloom, R. and Barry, J. Determinants of work attitudes among Negroes. <u>Journal of Applied Psychology</u>, 1967, 51, 291-294.
- Bullock, R. Social factors related to job satisfaction. Columbus, Ohio, The Bureau of Business Research, College of Commerce and Administration, The Ohio State University. Research Monograph, No. 70, 1952.
- Burke, R. Relative contributions of motivators and hygienes to satisfying and dissatisfying job situations. Journal of Industrial Psychology, 1966, 4, 1-6.
- Carroll, B. Job satisfaction. Ithaca, New York: New York State School of Industrial and Labor Relations, Cornell University. Key Issues Series No. 3, 1969.
- Cheek, G. A psychometric study of two indices of job satisfaction. Unpublished master's dissertation, Michigan State University, 1955.
- Dunnette, M., Campbell, J., and Hakel, M. Factors contributing to job satisfaction and job dissatisfaction in six occupational groups. Organizational Behavior and Human Performance, 1967, 2, 143-174.
- Edwards, A. Statistical Methods. (Second Edition)
 New York: Holt, Rinehart and Winston, Inc., 1967.
- Ewen, R., Smith, P., Hulin, C., and Locke, E. An empirical test of the Herzberg two-factor theory. <u>Journal of Applied Psychology</u>, 1966, 50, 544-550.
- Fleishman, E. The description of supervisory behavior.

 Journal of Applied Psychology, 1953, 36, 1-6.

- Friedlander, F. Underlying sources of job satisfaction.

 Journal of Applied Psychology, 1963, 47, 246-250.
- Friedlander, F. Motivators to work and organizational performance. <u>Journal of Applied Psychology</u>, 1966, 50, 143-152.
- Halpern, G. Relative contributions of motivator and hygiene factors to overall job satisfaction.

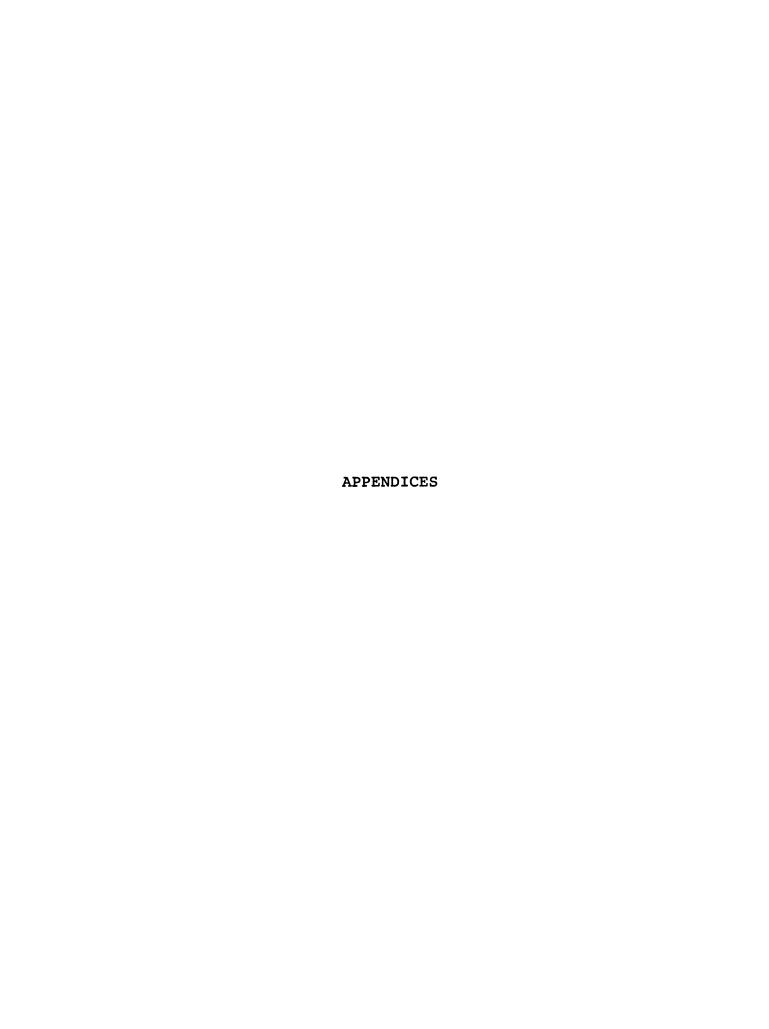
 Journal of Applied Psychology, 1966, 50, 198-200.
- Herzberg, F. The motivation to work among Finnish supervisors. Personnel Psychology, 1965, 18, 393-402.
- Herzberg, F., Mausner, B., Peterson, R., and Capwell, D.

 Job Attitudes: Review of Research and Opinion.

 Psychological Service of Pittsburgh, 1957.
- Herzberg, F., Mausner, B., and Snyderman, B. The Motivation to Work. New York: John Wiley and Sons, Inc., 1959.
- Hoppock, R. Job Satisfaction. New York: Harper and Brothers, 1935.
- Hulin, C. and Smith, P. An empirical investigation of two implications of the two-factor theory of job satisfaction. Journal of Applied Psychology, 1967, 51, 396-402.
- Jacobson, E., Trumbo, D., Cheek, G., and Nangle, J.

 Employee attitudes toward technological change
 in a medium sized insurance company. Journal
 of Applied Psychology, 1959, 43, 349-354.
- Murray, H. Explorations in Personality. New York: Oxford University Press, 1938.
- Myers, M. S. Who are your motivated workers? Harvard Business Review, 1964, 42, 73-88.
- Neal, G. An exploratory study of the relationship of psychological needs and general satisfaction to job satisfaction. Unpublished dissertation proposal, Michigan State University, 1960.

- Porter, L. and Mitchell, V. Comparative study of need satisfactions in military and business hierarchies. Journal of Applied Psychology, 1967, 51, 139-144.
- Saleh, S. A study of attitude change in the preretirement period. <u>Journal of Applied Psychology</u>, 1964, 48, 310-312.
- Schwartz, M., Jenusaitis, E., and Stark, H. Motivational factors among supervisors in the utility industry. Personnel Psychology, 1963, 16, 45-53.
- Science Research Associates. General Manual for the Employee Inventory. (Third Edition) Chicago: Science Research Associates, 1952.
- Weissenberg, P. Psychological differentiation and job satisfaction. Unpublished doctoral dissertation, Cornell University, 1967.
- Weitz, J. A neglected concept in the study of job satisfaction. <u>Personnel Psychology</u>, 1952, 5, 201-205.
- Wernimont, P. Intrinsic and extrinsic factors in job satisfaction. Journal of Applied Psychology, 1966, 50, 41-50.



APPENDIX A

Dear :

Ten years ago Michigan State University Research Team conducted a survey regarding our satisfaction with our jobs. The report was positive in all respects at that time. Many changes have occurred with us and with our company since that time. Now the Industrial Research Team of the University is interested in finding out from the people who are still with ______ how they see their jobs today. Leonard Dasho, a graduate student working with Jack Frost, is doing this study as a part of his requirements for the Masters Degree.

As you know, we have cooperated with this type of research because as an organization we are interested in finding out about ourselves and how our people look at their jobs. This study will give us a unique opportunity to look at ourselves over a ten year span of time and to see how we evaluate our jobs today as compared to 1958. We believe it will be most worthwhile for us to cooperate.

Leonard Dasho and Jack will be writing those of us who participated ten years ago and requesting us to complete the same forms as we feel about our jobs today. We hope you will take the time to assist them. Leonard Dasho will write a report for all of us as well as give the company a copy of his Masters Thesis.

Sincerely,

Dear Employee:

Ten years ago you participated in a survey regarding your job. Your cooperation helped Gloria Cheek and Dick Passine to gain valuable experience and to earn their Masters Degrees.

Today I am working on my Masters Degree in Industrial Psychology. In considering interesting and important problems to study, I decided it would be most worthwhile to evaluate how you people feel about your job today in 1969—some ten years later. As one of the progressive companies, has made many changes. We would like to find out how you feel about these factors now. We need to learn how people think of their jobs today and if they feel differently about their jobs today than in 1958. We are requesting the cooperation of only those people who were working at _______ ten years ago.

The value of this study depends upon the sincerity and care with which you fill out the questions. We realize that this is somewhat of an imposition, but it is only by such studies that valuable insights can be obtained.

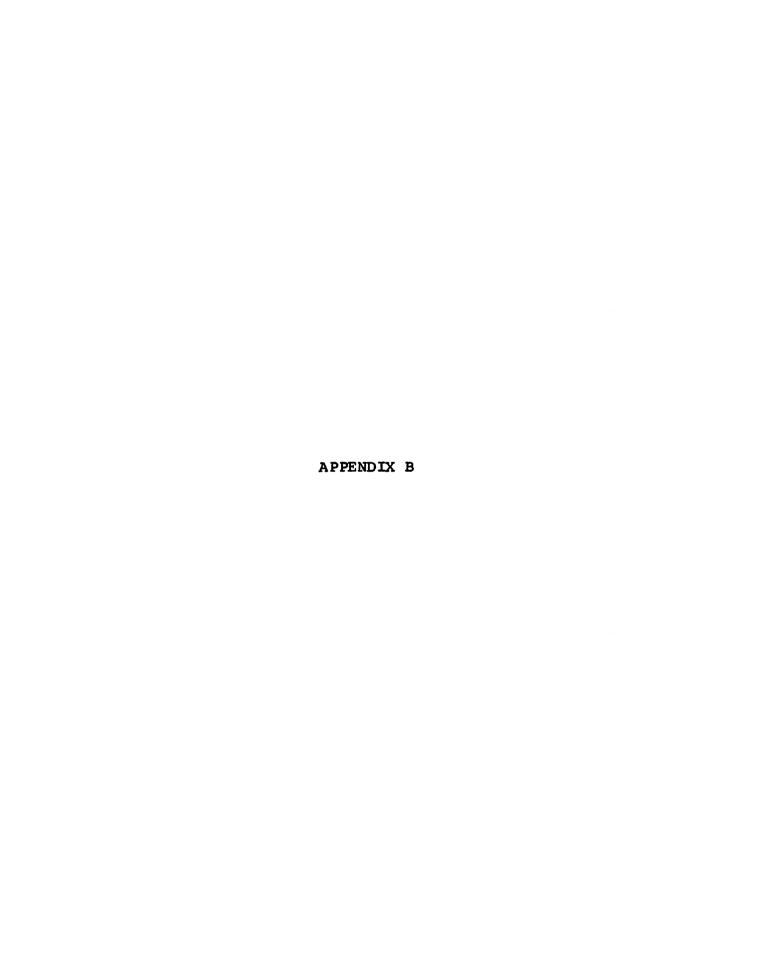
The answers that you give will be seen only by myself and the Computer Center Staff at the University. No one connected in any way with ______ will see or use any of the individual questions. Your answers will be held in the strictest confidence and the results of the study will be tabulated and reported in the thesis on a group basis only.

We have enclosed an addressed and stamped envelope for you to use in returning the questionnaires to us. We would appreciate your filling them out and returning them as soon as possible. We shall sincerely appreciate your cooperation.

Sincerely,

Leonard Dasho

Field Study Staff Dr. C. F. Frost



You	r name
on t	The following statements will help you to describe how you, about your job. Think about your experience while working the job and check those statements which most accurately and estly answer these questions.
-	Place a check mark in front of the statement which best tells how good a job you have. A. The job is an excellent one, very much above the average. B. The job is a fairly good one. C. The job is only average. D. The job is not as good as average in this kind of work. E. The job is a very poor one, very much below the average.
\ \frac{1}{2}	Place a check mark in frontof the statement which best describes your feelings about your job. A. I am very satisfied and happy on this job. B. I am fairly well satisfied on this job. C. I am neither satisfied nor dissatisfied it is just average. D. I am a little dissatisfied on this job. E. I am very dissatisfied and unhappy on this job.
- - -	Check one of the following statements to show how much of the time you are satisfied with your job. A. Most of the timeB. A good deal of the timeC. About half the timeD. OccasionallyE. Seldom.
	Place a check mark in front of the statement which best tells what kind of an organization it is to work for. A. It is an excellent organization to work for one of the best organizations I know of. B. It is a good organization to work for but not one of the best. C. It is only an average organization to work for. Many others are just as good. D. It is below average as an organization to work for. Many others are better.

5.	Place a check mark in front of the statement which best tells how your feelings compare with those of other people you know. A. I dislike my job much more than most people dislike theirs. B. I dislike my job more than most people dislike theirs. C. I like my job about as well as most people like theirs. D. I like my job better than most people like theirs. E. I like my job much better than most people like theirs.
6.	Place a check mark in front of the statement which best tells how you feel about the work you do on your job. A. The work I do is very unpleasant. I dislike itB. The work I do is not pleasantC. The work is just about average. I don't have any feeling about whether it is pleasant or notD. The work is pleasant and enjoyableE. The work is very enjoyable. I very much like to do the work called for on this job.
7.	Check one of the following which best describes any general conditions which affect your work or comfort on this job. A. General working conditions are very bad. B. General working conditions are poor not so good as the average for this kind of job. C. General working conditions are about average, neither good nor bad. D. In general, working conditions are good, better than average. E. General working conditions are very good, much better than average for this kind of job.
8.	Check one of the following statements which best tells how you feel about changing your job. A. I would quit this job at once if I had anything else to doB. I would take almost any other job in which I could earn as much as I am earning here. C. This job is as good as the average and I would just as soon have it as any other job but would change jobs if I could make more money. D. I am not eager to change jobs but would do so if I could make more money. E. I do not want to change jobs even for more money because
	this is a good one.

- 9. Suppose you had a very good friend who is looking for a job in your line of work and you know of a vacancy in this organization which your friend is well qualified to fill. Would you:

 A. Recommend this job as a good one to apply for?
 B. Recommend this job but caution your friend about its shortcomings?
 C. Tell your friend about the vacancy but not anything else, then let him decide whether to apply or not?
 D. Tell your friend about the vacancy but suggest that he or she look for other vacancies elsewhere before applying?
 E. Try to discourage your friend from applying by telling the bad things about the job?
- 10. On the line below, place a check mark to show how well satisfied you are with this job. You may place your mark anywhere on the line either above one of the statements or between them.

• · · · · · · · · · · · · · · · · · · ·	•	•	•	•	
Completely	More	About	More	Completely	-
dissatisfied	dissatisfied	half	satisfied	satisfied	
	than	and half	than		
	satisfied		dissatisfied		

The next five questions may be answered in the following way:

Draw a circle around "Yes" if your answer is "yes", or a circle around "No" if your answer is "no". If you don't know or are not sure draw a circle around the question mark.

Circle only one answer for each question.

- Yes ? No ll. Since working here, have you had any pay raise or promotion?
- Yes ? No 12. Have you ever recommended this organization or a job with this organization to one of your friend.
- Yes ? No 13. Since working here, have you registered with an employment agency or applied for a job with any other organization?
- Yes ? No 14. Since working here, have you had any grievance in connection with your job?
- Yes ? No 15. Have you ever tried to transfer to another job or department?



YOUR OPINIONS

Instructions: In response to each of the following statements, encircle the alternative which best expresses your own opinion.

For example: If you were uncertain as to whether or not the presence of this company in your city was a good thing you would indicate this in answer to the question as follows:

EXAMPLE:

The presence of this company in our city Agree ? Disagree is a good thing.

Encircle the alternatives that best express your opinions in each of the following statements:

1.	This company performs a worthwhile service.	Agree	?	Disagree
2.	The work which employees do for this company has nothing special about it to make it any more or less interesting than the same kind of work for any other company.	Agree	?	Disagree
3.	Suggestions which employees may have for changing the working conditions or work routine are welcomed and seriously considered by supervisors and department heads.	Agree	?	Disagree
4.	Regulations and rules regarding work routine are fully as liberal and generous as they should be.	Agree	?	Disagree
5.	The company makes me feel the importance of my work to the organization as a whole.	Agree	?	Disagree
6.	I believe that this company has a good reputation for quality of products and			

concern for customer satisfaction.

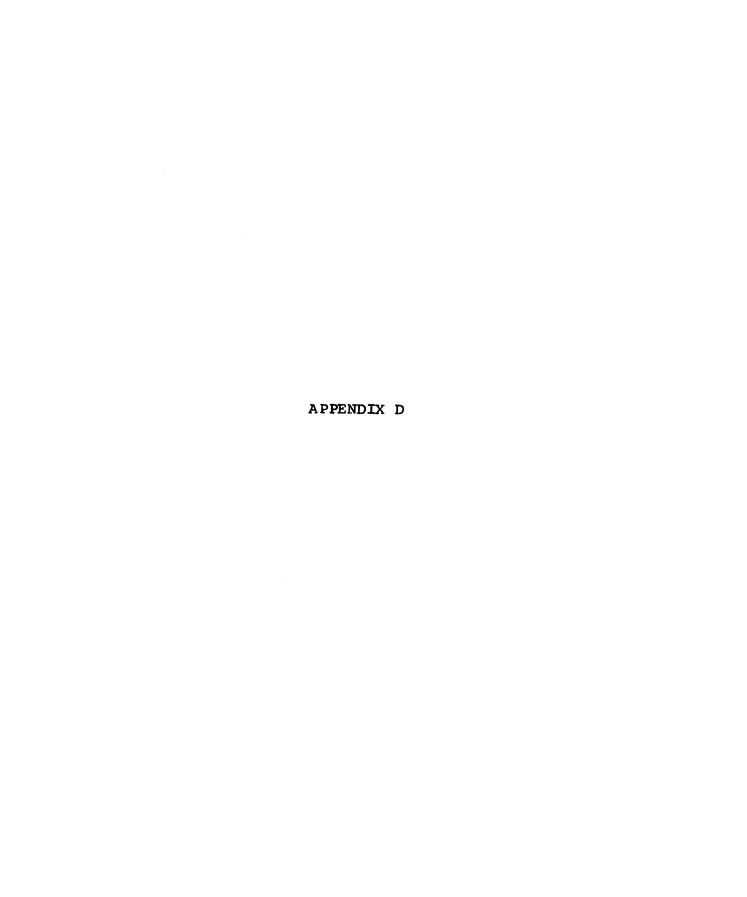
7. Wages here are not always equal for jobs of the same importance or difficulty.

Agree ? Disagree

Agree ? Disagree

8.	I feel freer to discuss work problems with fellow workers than with my foreman or	_		-
	supervisor.	Agree	?	Disagree
9.	If I moved to another house about 15 miles farther from work I would probably look for another job closer to home.	Agree	?	Disagree
10.	It wouldn't bother me if a fellow worker made an unreasonable complaint about the company.	Agree	?	Disagree
11.	If a friend was looking for a job this company would be the first place I would recommend.	Agree	?	Disagree
12.	Have you had to be extra nice to a foreman to get a fair deal?	Yes	?	No
13.	Do most of your friends think this is a good job?	Yes	?	No
14.	Do the members of your family think this is a good job for you?	Yes	?	No
15.	Does this job give you a chance to make the best success you are mapable of?	Yes	?	No
16.	Is your work usually interesting?	Yes	?	No
17.	Do you generally know how well your supervisors think you are getting along on the job?	Yes	?	No
18.	Do your supervisors or department heads generally tell you in advance about any changes that affect you or your work?	Yes	?	No
19.	Is good work generally recognized and commended or rewarded by supervisors or department heads?	Yes	?	No
20.	Have you felt that it would have been all right for you to go in and talk with any of the department heads or executives about something you didn't like?	Yes	?	No

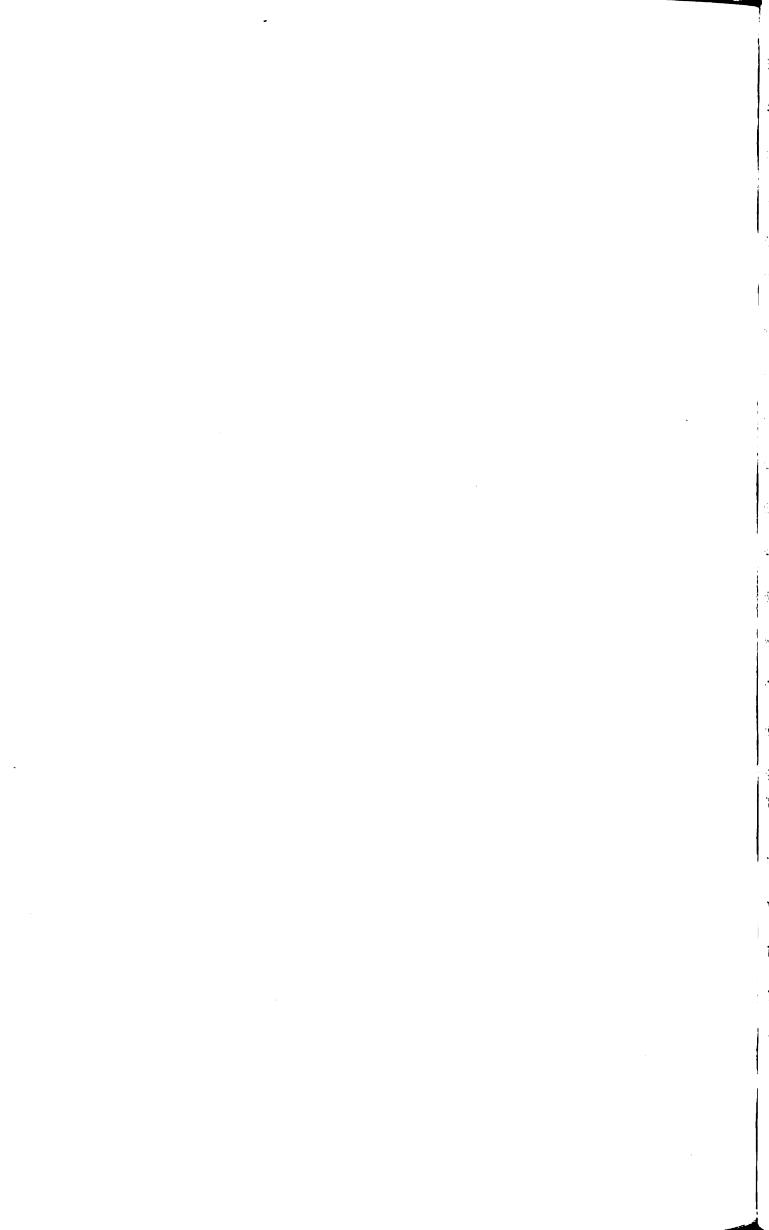
21. Do the neighbors where you live treat you as Yes ? No though they were glad to have you there? 22. Do the people who run the company exert much effort to make you feel that you are No an important part of the company? ? Yes 23. Do you feel that your supervisors have any personal interest in you or your Yes ? No success? 24. Before you took this job was it explained clearly to you in advance by the person who employed you? ? No Yes



SRA Employee Inventory

Your company would like to know what you think about your job, your pay, your boss, and the company in general. This Inventory is designed to help you tell us your ideas and opinions quickly and easily without signing your name. This booklet contains a number of statements. All you have to do is to mark a cross by each statement to show how you feel. It is easy to do and you can be completely frank in your answers.					
Read each statement carefully and decide how you feel about it. You will agree with some statements, and you will disagree with others. You may be undecided about some. To help you express your opinion, three possible answers have been placed beside each statement: I would rather work in a large city than in a small town.					
Choose the answer most like your own opinion and mark a cross in the box under it.					
For example:					
This person feels he wants to work in a large city: I would rather work in a large city than in a small town					
This person wants to work in a small town: I would rather work in a large city than in a small town					
This person can't decide between a large city and a small town: I would rather work in a large city than in a small town					
This is not a test. There are no "right" answers and no "wrong" answers. It is your own, honest opinion that we want.					
Work rapidly but entropy and spend too much time on any one statement. If you cannot decide about a statement, mark the "?" box, and go on to the next statement. Some of the statements may not be worded exactly the way you would like them. However, answer them the best way you can. Be sure to mark every statement. Leave no blanks. Mark only one answer for each statement. If you make a mistake, do NOT erase your mark. Put a circle around the cross inside the box like this , and mark a cross in the correct box.					
Do not make any marks in this booklet. Do not sign your name on the Answer Pad. Be sure to fill in the blanks for general information on the back of the Answer Pad. This information will be used only to make the results more meaningful. It will not be used to find out which Answer Pad is yours. Please turn now to the back of the Answer Pad and fill in the general information.					
When you have file to see that you have marked every statement. If you think anything has been left out, or if there is any special thing that is worrying you about your work, please write or print your comments in the space provided on the Answer Pad. When you are finished, remove the Answer Pad from the booklet and drop your Answer Pad in the hellet have					

Go on to the next page



53.	My job is often dull and monotonous
54.	There is too much pressure on my job
55.	Some of the working conditions here are annoying
56.	I have the right equipment to do my work
57.	My pay is enough to live on comfortably
58.	I'm satisfied with the way employee benefits are handled here
59.	The company's employee benefit program is O.K
60.	The people I work with are very friendly
61.	My boss really tries to get our ideas about things
62.	My boss ought to be friendlier toward employees
63.	My boss lives up to his promises
64.	Management here has a very good personnel policy
65.	Management ignores our suggestions and complaints
66.	My boss knows very little about his job
	My boss knows very little about his job
67.	
67. 68.	My boss has the work well organized
67. 68. 69.	My boss has the work well organized This company operates efficiently and smoothly
67.68.69.70.	My boss has the work well organized This company operates efficiently and smoothly Management really knows its job They have a poor way of handling employee complaints
67.68.69.70.71.	My boss has the work well organized
67.68.69.70.71.72.	My boss has the work well organized
67.68.69.70.71.72.73.	My boss has the work well organized
67.68.69.70.71.72.73.74.	My boss has the work well organized
67.68.69.70.71.72.73.74.75.	My boss has the work well organized. This company operates efficiently and smoothly. Management really knows its job
 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 	My boss has the work well organized. This company operates efficiently and smoothly. Management really knows its job. They have a poor way of handling employee complaints here. You can say what you think around here. You always know where you stand with this company. When layoffs are necessary, they are handled fairly. I am very much underpaid for the work that I do. I'm really doing something worthwhile in my job.

Write your comments

in the space provided on the back of the Answer Pad.

ANSWER PAD

for the

SRA Employee Inventory

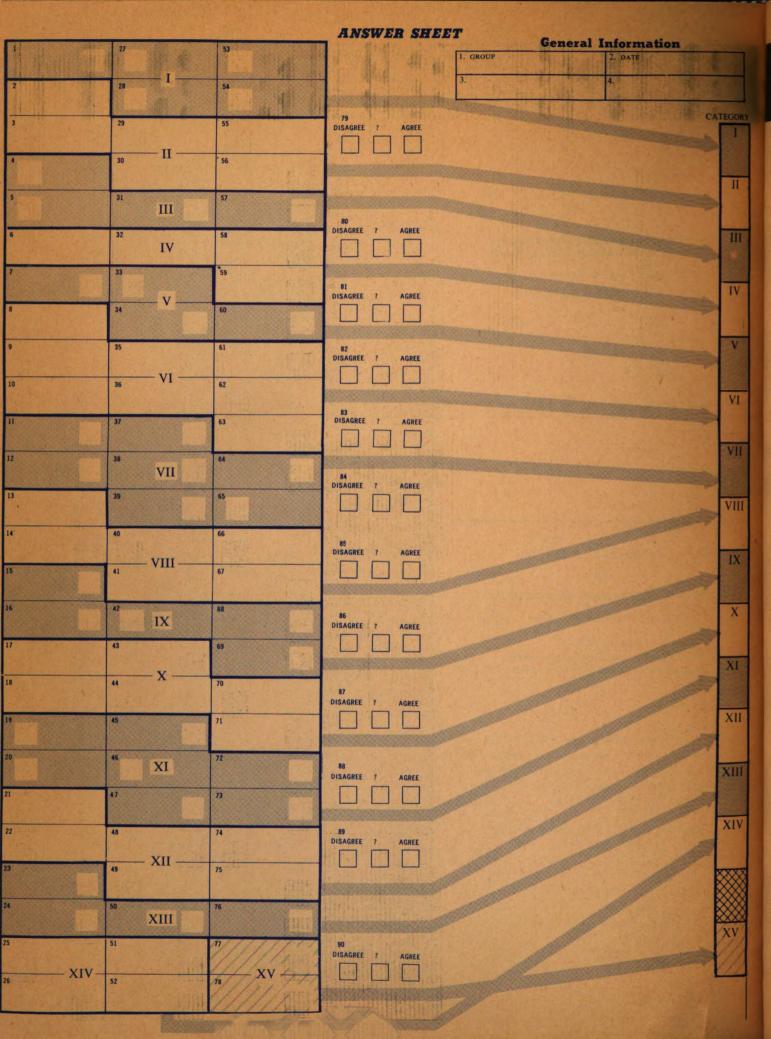
FORM AH

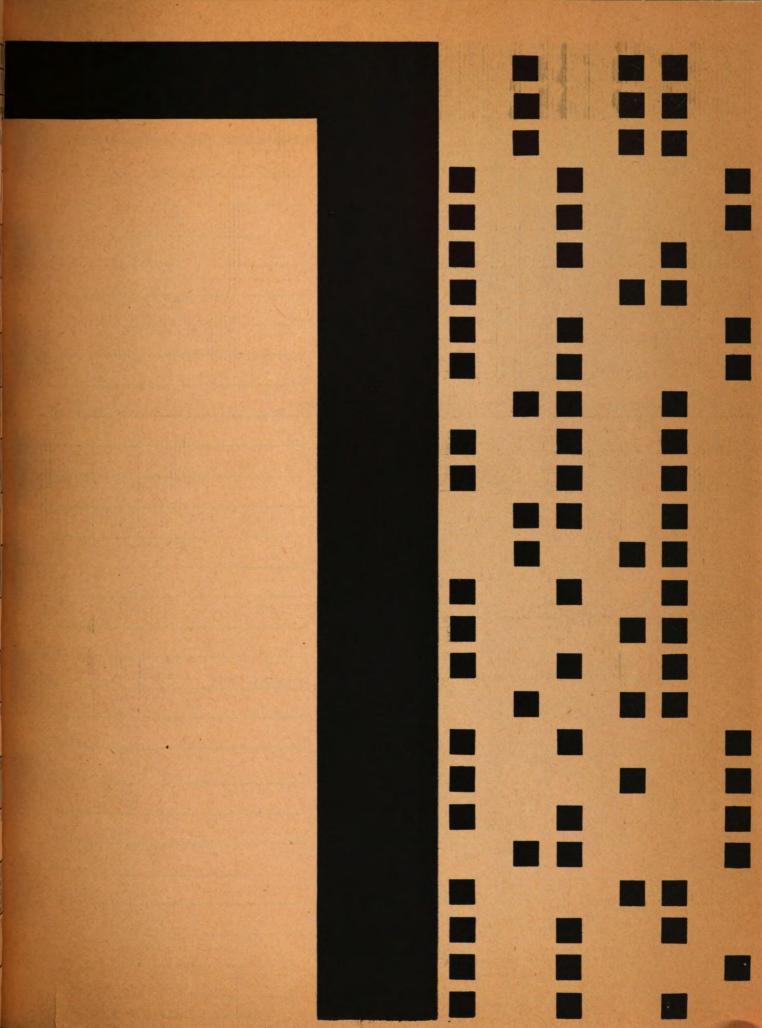
Prepared by
The Employee Attitude Research Group,
The Industrial Relations Center of the University of Chicago

Published by SCIENCE RESEARCH ASSOCIATES, INC., 57 West Grand Avenue, Chicago 10, Illinois. Copyright, 1951, by Industrial Relations Center, University of Chicago. All rights reserved. Copyright under the International Copyright Union. Printed in U.S.A. Patent Pending.

Please use number 7-1582 when reordering this answer pad.

4		3		2		1
Do not mark the spaces in this	AGREE	? DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE
column unless you are told to	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	7 DISAGREE
do so.						
AGREE 7 DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE	AGREE	? DISAGREE
	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	7 DISAGREE
	Ш				Ш	
	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	7 DISAGREE
AGREE ? DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE
	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	? DISAGREE
AGREE ? DISAGREE	AUNCE				Adnet	DISAGREE
	AGREE	7 DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE
	AGREE	7 DISAGREE	AGREE	7 DISAGREE	AGREE	? DISAGREE
AGREE ? DISAGREE						
	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	? DISAGREE
AGREE ? DISAGREE	AGREE	? DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE
	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	? DISAGREE
AGREE ? DISAGREE	AGREE	? DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE
AGREE ? DISAGREE	AGREE	7 DISAGREE	AGREE	? DISAGREE	AGREE	7 DISAGREE
	AGREE	? DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE
	10055		L COURT	0,00000		ЦЦ
AGREE 7 DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE
	AGREE	? DISAGREE	AGREE	7 DISAGREE	AGREE	? DISAGREE
	AGREE	? DISAGREE	AGREE	7 DISAGREE	AGREE .	? DISAGREE
AGREE 7 DISAGREE						
	AGREE	7 DISAGREE	AGREE	7 DISAGREE	AGREE	? DISAGREE
	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	? DISAGREE
AGREE ? DISAGREE						
	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	? DISAGREE
AGREE 7 DISAGREE	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	? DISAGREE
D D D						
	AGREE	? DISAGREE	AGREE	? DISAGREE	AGREE	7 DISAGREE
	AGREE	7 DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE
	40000	? DISAGREE	1000		ACCES.	
AGREE 7 DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE
	AGREE	7 DISAGREE	AGREE	7 DISAGREE	AGREE	7 DISAGREE

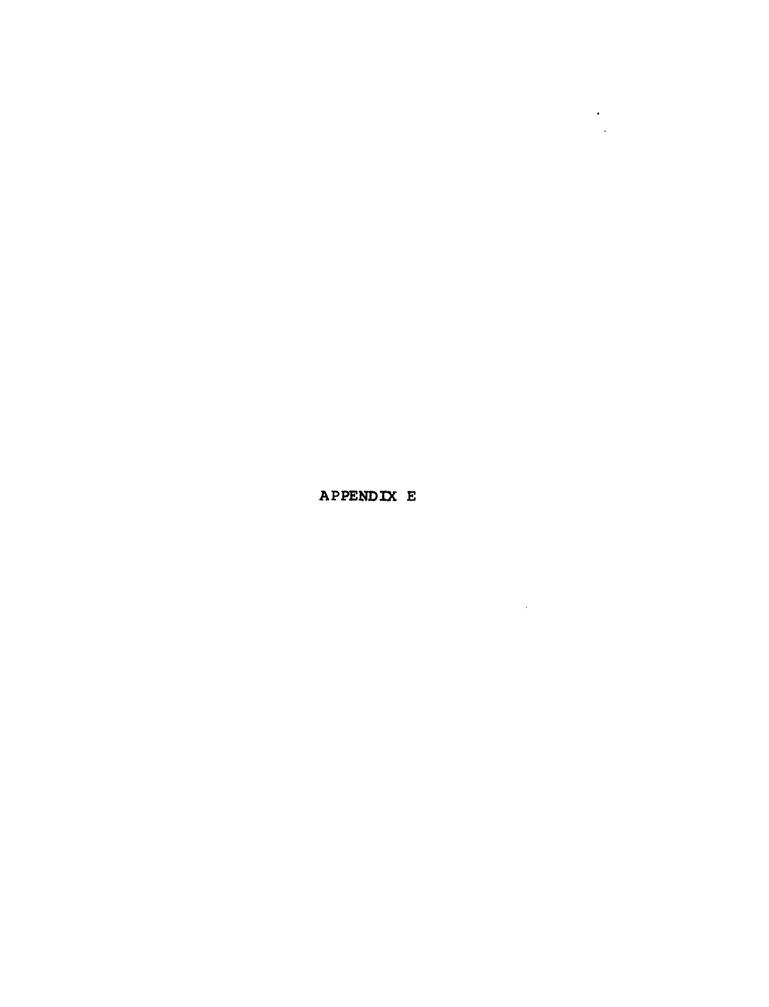




General Information

To remove Answer Pad, lift here

	1. GROUP	2. date
	3.	4.
		-,
	Please write y	your comments here.
		,
	-	
		,
		
Do not write in this space.		
Do not write in this space.		
	-	
	-	



SUPERVISORY BEHAVIOR DESCRIPTION

<u>Instructions</u>: In response to each of the following statements, encircle the alternative which best describes how often your immediate supervisor does what that item says.

<u>For Example</u>: If your immediate supervisor always insists that people in his work group wear safety glasses you would indicate this in answer to the question as follows.

EXAMPLE: HE INSISTS THAT PEOPLE IN HIS GROUP WEAR SAFETY GLASSES.

1. always 2. often 3. occasionally 4. seldom 5. never

Now, encircle the alternatives that best reflect how often your immediate supervisors behave as described in each of the following statements:

- 1. HE IS EASY TO UNDERSTAND.
 - 1. always 2. often 3. ocasionally 4. seldom 5. never
- 2. HE ENCOURAGES OVERTIME WORK.
 - 1. a great 2. fairly 3. to some 4. comparatively 5. not at deal much degree little all
- 3. HE TRIES OUT HIS NEW IDEAS.
 - 1. often 2. fairly 3. occasionally 4. once in 5. very much a while seldom
- 4. HE BACKS UP WHAT PEOPLE IN HIS WORK GROUP DO.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 5. HE CRITICIZES POOR WORK.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 6. HE DEMANDS MORE THAN WE CAN DO.
 - 1. often 2. fairly 3. occasionally 4. once in 5. very much a while seldom
- 7. HE REFUSES TO GIVE IN WHEN PEOPLE IN THE WORK GROUP DISAGREE WITH HIM.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 8. HE EXPRESSES APPRECIATION WHEN ONE OF US DOES A GOOD JOB.
 - 1. always 2. often 3. occasionally 4. seldom 5. never

- 9. HE INSISTS THAT PEOPLE UNDER HIM FOLLOW STANDARD WAYS OF DOING THINGS IN EVERY DETAIL.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 10. HE HELPS PEOPLE IN THE WORK GROUP WITH THEIR PERSONAL PROBLEMS.

 1. often 2. fairly 3. occasionally 4. once in 5. very
 often a while seldom
- 11. HE IS SLOW TO ACCEPT NEW IDEAS.

 1. always 2. often 3. occasionally 4. seldom 5. never
- 12. HE IS FRIENDLY AND CAN BE EASILY APPROACHED.

 1. always 2. often 3. occasionally 4. seldom 5. never
- 13. HE GETS THE APPROVAL OF THE WORK GROUP ON IMPORTANT MATTERS BEFORE GOING AHEAD.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 14. HE RESISTS CHANGES IN WAYS OF DOING THINGS.

 1. a great 2. fairly 3. to some 4. comparatively 5. not a deal much degree little all
- 15. HE ASSIGNS PEOPLE UNDER HIM TO PARTICULAR TASKS.

 1. always 2. fairly 3. occasionally 4. seldom 5. never much
- 16. HE STRESSES BEING AHEAD OF COMPETING WORK GROUPS.

 1. a great 2. fairly 3. to some 4. comparatively 5. not a deal much degree little all
- 17. HE CRITICIZES A SPECIFIC ACT RATHER THAN A PARTICULAR INDIVIDUA:
 1. always 2. often 3. occasionally 4. seldom 5. never
- 18. HE LETS OTHERS DO THEIR WORK THE WAY THEY THINK BEST.

 1. always 2. often 3. occasionally 4. seldom 5. never
- 19. HE DOES PERSONAL FAVORS FOR THE MEN UNDER HIM.

 1. often 2. fairly 3. occasionally 4. once in 5. very

 much

 a while seldom
- 20. HE EMPHASIZES MEETING OF DEADLINES.

 1. a great 2. fairly 3. to some 4. comparatively 5. not a deal much degree little all
- 21. HE SEES THAT A WORKER IS REWARDED FOR A JOB WELL DONE.

 1. always 2. often 3. occasionally 4. seldom 5. never

- 22. HE TREATS PEOPLE UNDER HIM WITHOUT CONSIDERING THEIR FEELINGS.

 1. always 2. often 3. occasionally 4. once in 5. very
 a while seldom
- 23. HE INSISTS THAT HE BE INFORMED ON DECISIONS MADE BY THE PEOPLE UNDER HIM.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 24. HE OFFERS NEW APPROACHES TO PROBLEMS.
 - 1. often 2. fairly 3. occasionally 4. once in 5. very often a while seldom
- 25. HE TREATS ALL WORKERS UNDER HIM AS HIS EQUALS.
 1. always 2. often 3. occasionally 4. seldom 5. never
- 26. HE IS WILLING TO MAKE CHANGES.

 1. always 2. often 3. occasionally 4. seldom 5. never
- 27. HE ASKS SLOWER PEOPLE TO GET MORE DONE.

 1. often 2. fairly 3. occasionally 4. once in 5. very often a while seldom
- 28. HE CRITICIZES PEOPLE UNDER HIM IN FRONT OF OTHERS.

 1. often 2. fairly 3. occasionally 4. once in 5. very often a while seldom
- 29. HE STRESSES THE IMPORTANCE OF HIGH MORALE AMONG THOSE UNDER HIM.

 1. a great 2. fairly 3. to some 4. comparatively 5. not at
 deal much degree little all
- 30. HE TALKS ABOUT HOW MUCH SHOULD BE DONE.

 1. a great 2. fairly 3. to some 4. comparatively 5. not at
 deal much degree little all
- 31. HE "RIDES" THE PERSON WHO MAKES A MISTAKE.

 1. often 2. fairly 3. occasionally 4. once in 5. very
 often a while seldom
- 32. HE WAITS FOR PEOPLE UNDER HIM TO PUSH NEW IDEAS BEFORE HE DOES.

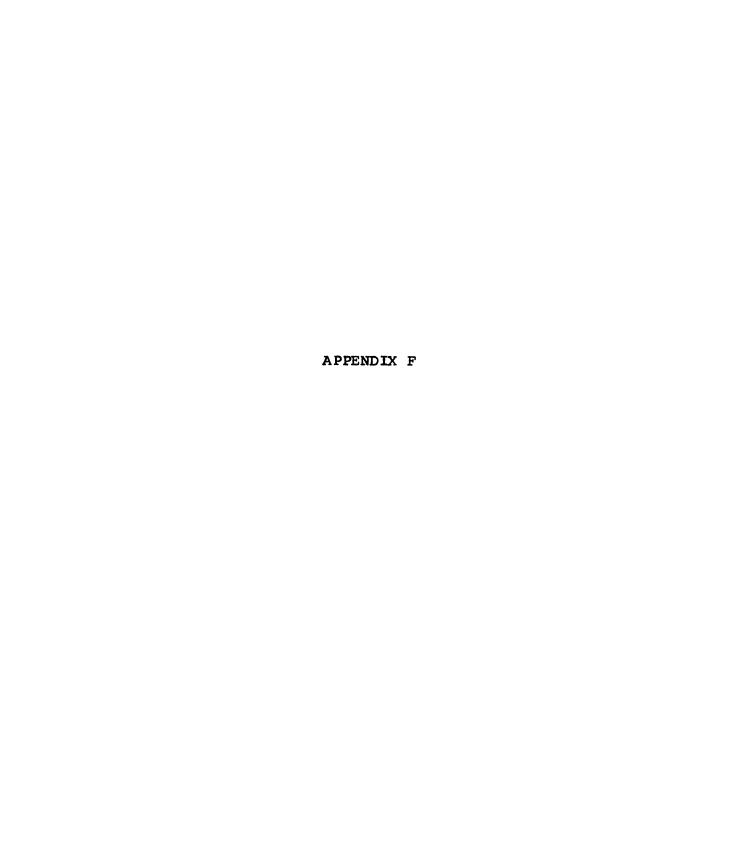
 1. always 2. often 3. occasionally 4. seldom 5. never
- 33. HE RULES WITH AN IRON HAND.
 1. always 2. often 3. occasionally 4. seldom 5. never
- 34. HE TRIES TO KEEP THE MEN UNDER HIM IN GOOD STANDING WITH THOSE IN HIGHER AUTHORITY.

 1. always 2. often 3. occasionally 4. seldom 5. never
- 35. HE REJECTS SUGGESTIONS FOR CHANGES.

 1. always 2. often 3. occasionally 4. seldom 5. never

- 36. HE CHANGES THE DUTIES OF PEOPLE UNDER HIM WITHOUT FIRST TAKKING IT OVER WITH THEM.
 - 1. often 2. fairly 3. occasionally 4. once in 5. very often a while seldom
- 37. HE DECIDES IN DETAIL WHAT SHALL BE DONE AND HOW IT SHALL BE DONE.
 1. always 2. often 3. occasionally 4. seldom 5. never
- 38. HE SEES TO IT THAT PEOPLE UNDER HIM ARE WORKING UP TO THEIR LIMITS.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 39. HE STANDS UP FOR PEOPLE UNDER HIM EVEN THOUGH IT MAKES HIM UNPOPULAR.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 40. HE MAKES THOSE UNDER HIM FEEL AT EASE WHEN TALKING WITH HIM.

 1. always 2. often 3. occasionally 4. seldom 5. never
- 41. HE PUTS SUGGESTIONS THAT ARE MADE BY THE MEN UNDER HIM INTO OPERATION.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 42. HE REFUSES TO EXPLAIN HIS ACTIONS.
- 43. HE EMPHASIZES THE AMOUNT OF WORK.
 - 1. a great 2. fairly 3. to some 4. comparatively 5. not at deal much degree little all
- 44. HE ASKS FOR SACRIFICES FROM HIS MEN FOR THE GOOD OF THE ENTIRE DEPARTMENT.
 - 1. often 2. fairly 3. occasionally 4. once in 5. very often a while seldom
- 45. HE ACTS WITHOUT CONSULTING THE MEN UNDER HIM FIRST.
- 46. HE "NEEDLES" PEOPLE UNDER HIM FOR GREATER EFFORT.
- 47. HE INSISTS THAT EVERYTHING BE DONE HIS WAY.
 - 1. always 2. often 3. occasionally 4. seldom 5. never
- 48. HE ENCOURAGES SLOW-WORKING PEOPLE TO GREATER EFFORT.
 - 1. often 2. fairly 3. occasionally 4. once in 5. very often a while seldom



OPINION INVENTORY

Instructions: Indicate by drawing a circle around the appropriate letter at the right whether you are satisfied, dissatisfied, or neutral concerning the items listed below.

If you are more satisfied than dissatisfied encircle the "S". If you are more dissatisfied than satisfied encircle the "D". If you are neither satisfied nor dissatisfied encircle the "N". If an item does not apply draw a line through all three letters. Circle only one letter for each item.

EXZ	AMPLE: Peanut butter sandwiches	•	•	 •	•	.(<u>s</u>	D	N
1.	The city in which you live	•	•	 •	•	•	s	D	N
2.	The house or apartment where you live .	•	•	 •	•		s	D	N
3.	The area of the city where you live	•	•	 •	•	•	s	D	N
4.	The high school you attended	•	•	 •	•	•	s	D	N
5.	The climate where you live	•	•	 •	•	•	s	D	N
6.	The movies being produced	•	•	 •	•	•	s	D	N
7.	Local political situation	•	•	 •	•	•	s	D	N
8.	National political situation	•	•	 •	•	•	s	D	N
9.	Our foreign policy	•	•	 •	•	•	s	D	N
10.	Your last job	•	•	 •	•	•	s	D	N
11.	Food prices	•	•	 •	•	•	s	D	N
12.	Today's automobiles	•	•	 •	•	•	S	D	N
13.	Opportunities to get ahead	•	•	 •	•	•	s	D	N
14.	Local newspapers	•	•	 •	•	•	s	D	N
15.	Automobile prices	•	•	 •	•	•	s	D	N
16.	The last suit you bought	•	•	 •	•	•	s	D	N
17.	The amount of time you have for recreat	io	ı	 •	•	•	S	D	N
18.	Your last boss		•	 •	•	•	s	D	N

20.	Your first name	D	N
21.	The people you know	D	N
22.	Radio programs	D	N
23.	Television programs	D	N
24.	Local speed limits	D	N
25.	The way people drive	D	N
26.	The way local traffic is handled	D	N
27.	Your present job	D	N
28.	Advertising methods	D	N
29.	The way you were raised	D	N
30.	Telephone service	D	N
31.	Income tax	D	N
32.	Public transportation	D	N
33.	General public attitude toward voting S	D	N
34.	The school your child is attending	D	N
35.	Restaurant food	D	N
36.	Sales tax	D	N
37.	Women's clothing styles	D	N
38.	Yourself	D	N
39.	The amount of time spent with your family S	D	N
40.	Popular music	D	N
41.	Book censorship	D	N
42.	Movie censorship	Œ	N
43.	The religious training of your children S	D	N
44.	Your telephone number	D	N
45.	Your family	D	N

46.	The t	thought	of	life	a	fte	r	de	atł	נ	•	•	•	•	•	•	•	•	•	•	s	D	N
47.	Insta	allment	bu	ying	•		•		•	•	•	•	•	•	•	•	•	•	•	•	s	D	N
48.	Your	persona	al	healt	h				•	•	•	•	•	•	•	•	•	•	•	•	s	D	N
C	•		_	_						_		_											
Sum	s		5	um D					S	Sun	ı N	Ι_						Su	m	DF	, —		



INDIVIDUAL INVENTORY

NAME	DF	PARTMENT	r				
Instructions: On the next ments which people use to feel about everyday happen how you feel about each of	describe	themsel	Lves a . We	and in are i	dicat	e how	they
Please indicate how closely following way:	y you ag	gree witl	n eacl	n stat	ement	in th	e
 If you "VERY STRONGL' letters "VSA". 	Y AGREE"	' with a	state	ement	encir	cle th	e
2. If you "STRONGLY AGRI "SA".	E E " with	n a state	ement	encir	cle t	he let	ters
3. If you "AGREE" with	a statem	ment enci	ircle	the 1	etter	"A"•	
4. If you "DISAGREE" wi	th a sta	atement e	encir	cle th	e l e t	ter "D	•
5. If you "STRONGLY DISA letters "SD".	AGREE" w	vith a st	tateme	ent en	circl	e the	
If you "VERY STRONGL" the letters "VSD".	Y DISAGE	REE" with	n a st	tateme	nt en	circle	
Please mark your answer to	every s	statemeni	t.				
WORK AS RAPIDLY AS YOU CAN	•						
For Example: If you like might have answered the for	-				_	_	
I LIKE PEANUT BUTTER SANDW	ICHES.	VSA	SA	A	D	SD	VSD
Or, it you were to strongly you might have encircled to	_				_	tateme	nt
I WANT TO BE SURE THAT I DOWNER HARDER THAN ANYONE ELS		VSA	SA	A	D	SD	VSD
Turn the page and begin.	Work as	rapidly	as yo	ou can	l.		

Indicate how closely you agree with each statement.

1.	I LIKE TO HAVE PEOPLE WATCH ME DO THE THINGS I DO WELL.	VSA	SA	A	D	SD	VSD
2.	I ENJOY ANYTHING IF IT IS A CHANGE.	VSA	SA	A	D	SD	VSD
3.	I THINK THAT I WOULD BE TIMID AND AFRAID IF I WERE CHALLENGED TO A FIGHT.	VSA	SA	A	D	SD	VSD
4.	I MAKE AN EFFORT NOT TO HURT THE FEELINGS OF THOSE PEOPLE HELPING ME OR WORKING FOR ME.	VSA	SA	A	D	SD	VSD
5.	I AM SOMEWHAT BOTHERED WHEN MY DAILY HABITS ARE DISTURBED BY UNFORESEEN EVENTS.	VSA	SA	A	D	SD	VSD
6.	I USUALLY TELL MY FRIENDS ABOUT MY DIFFICULTIES AND MISFORTUNES.	VSA	SA	A	D	SD	VSD
7.	I FEEL THAT IF I DIDN'T HAVE TO MAKE A LIVING I'D SPEND A LOT OF TIME IN THE PURSUIT OF ALL KINDS OF PLEASURES.	VSA	SA	A	D	SD	VSD
8.	WHEN SOMETHING GOES WRONG I AM MORE APT TO BLAME MYSELF THAN TO BLAME THE OTHER FELLOW.	V SA	SA	A	D	SD	VSD
9.	I WORK HARD AT THE JOB I'M DOING NOW INSTEAD OF DREAMING ABOUT THE FUTURE.	E V SA	SA	A	D	SD	VSD
10.	IF POSSIBLE, I HAVE MY FRIENDS WITH ME WHERE-EVER I GO.	VSA	SA	A	D	SD	VSD
11.	I PROTEST SOMETIMES, WHEN A PERSO STEPS IN FRONT OF ME IN A WAITING LINE.		SA	A	D	SD	VSD
12.	I WANT INDEPENDENCE AND LIBERTY MORE THAN ANYTHING ELSE.	VSA	SA	A	D	SD	VSD
13.	I FEEL NERVOUS AND ANXIOUS IN THE PRESENCE OF MY SUPERVISORS.	E VSA	SA	A	D	SD	VSD
14.	I SET DIFFICULT GOALS FOR MYSELF, AND I ATTEMPT TO REACH THEM.	, VSA	SA	A	D	SD	VSD

15.	I BECOME VERY ATTACHED TO MY FRIENDS.	VSA	SA	A	D	SD	VSD
16.	WHEN A FRIEND OF MINE ANNOYS ME, I TELL HIM WHAT I THINK OF HIM.		SA	A	D	SD	VSD
17.	I AM APT TO CRITICIZE WHOEVER HAPPENS TO BE IN AUTHORITY.	VSA	SA	A	D	SD	VSD
18.	I EXPRESS MY ENTHUSIASM AND RESPECT FOR THE PEOPLE I ADMIRE.	VSA	SA	A	D	SD	VSD
19.	I ENJOY ORGANIZING OR DIRECTING THE ACTIVITIES OF A GROUP, TEAM, CLUB, OR COMMITTEE.	, VSA	SA	A	D	SD	VSD
20.	I USUALLY FOLLOW INSTRUCTIONS AND DO WHAT IS EXPECTED OF ME.	ND VSA	SA	A	D	SD	VSD
21.	I ARGUE VIGOROUSLY FOR MY POINT OF VIEW AGAINST OTHERS.	VSA	SA	A	D	SD	VSD
22.	I ACT ON THE PRINCIPLE THAT A MAN WILL NEVER GET AHEAD UNLESS HE BLOWS HIS OWN HORN FROM TIME TO TIME.	VSA	SA	A	D	SD	VSD
23.	I FREQUENTLY START NEW PROJECTS WITHOUT WAITING TO FINISH WHAT I HAVE BEEN DOING.	VSA	SA	A	D	SD	VSD
24.	I FEAR CERTAIN THINGS, SUCH AS LIGHTNING, HIGH PLACES, ROUGH WATER, FLYING, DRIVING FAST, ETC.	VSA	SA	A	D	SD	VSD
25.	I AM ALWAYS READY TO GIVE OR LEND THINGS TO OTHERS.	VSA	SA	A	D	SD	VSD
26.	I RESPECT CUSTOM, AND I DON'T CARE FOR UNTRIED CHANGES.	VSA	SA	A	D	SD	VSD
27.	I LIKE SYMPATHY WHEN I AM SICK OR DEPRESSED.	VSA	SA	A	D	SD	VSD
28.	WHEN I AM WORKING, I SPEND A GOOD DEAL OF TIME PLANNING AND THINKING ABOUT FUTURE PLEASURES	.VSA	SA	A	D	SD	VSD

29.	THERE ARE TIMES WHEN I ACT LIKE A COWARD.	VSA	SA	A	D	SD	VSD
30.	WHEN MY INTERESTS ARE AT STAKE, I CONCENTRATE ONLY UPON MY JOB AND FORGET MY OBLIGATIONS TO OTHERS.	VSA	SA	A	D	SD	VSD
31.	I FEEL THAT FRIENDSHIP IS MORE IMPORTANT THAN ANYTHING ELSE.	VSA	SA	A	D	SD	VSD
32.	I GET INTO A FIGHTING MOOD WHEN THE OCCASION SEEMS TO DEMAND IT.	VSA	SA	A	D	SD	VSD
33.	I DON'T PAY ANY ATTENTION TO UNNECESSARY RULES.	VSA	SA	A	D	SD	VSD
34.	I OFTEN SEEK THE ADVICE OF EXPERIENCED OR OLDER PERSONS AND FOLLOW IT.	VSA	SA	A	D	SD	VSD
35.	I FIND IT RATHER EASY TO LEAD A GROUP AND MAINTAIN DISCI- PLINE.	VSA	SA	A	D	SD	VSD
36.	I AM PLEASED TO BE CALLED UPON FOR A STORY OR A SPEECH.	VSA	SA	A	D	SD	VSD
37.	NEW PLACES, NEW PEOPLE, AND NEW IDEAS APPEAL TO ME A LOT.	VSA	SA	A	D	SD	VSD
38.	SOMETIMES I FEAR THAT I MAY BE INJURED IN AN ACCIDENT.	VSA	SA	A	D	SD	VSD
39.	I ENJOY PUTTING MY OWN AFFAIRS ASIDE TO DO SOMEONE A FAVOR.	VSA	SA	A	D	SD	VSD
40.	I FIND THAT MANY OF MY LIKES AND FEELINGS ABOUT THINGS HAVE REMAINED THE SAME OVER THE YEARS.	VSA	SA	A	D	SD	VSD
41.	I FEEL VERY UNEASY AND UNCERTAINMEN I AM SUDDENLY FACED BY A CRITICAL SITUATION.	N VSA	SA	A	D	SD	VSD

42.	I SPEND A FAIR PROPORTION OF MY TIME AMUSING MYSELF.	VSA	SA	A	D	SD	VSD
43.	I AM MORE APT TO GIVE IN THAN TO CONTINUE A FIGHT.	VSA	SA	A	D	SD	VSD
44.	I ENJOY COMPLETE RELAXATION ONLY WHEN IT FOLLOWS THE SUCCESSFUL COMPLETION OF A SIZABLE PIECE OF WORK.		SA	A	D	SD	VSD
45.	I ENJOY COOPERATING WITH OTHERS MORE THAN WORKING BY MYSELF.	VSA	SA	A	D	SD	VSD
46.	I OFTEN DISREGARD THE PERSONAL FEELINGS OF OTHER PEOPLE.	VSA	SA	A	D	SD	VSD
47.	I DO WHATEVER I THINK IS BEST REGARDLESS OF WHAT OTHERS THINK.	VSA	SA	A	D	SD	VSD
48.	I ACCEPT SUGGESTIONS RATHER THAI INSISTING ON WORKING THINGS OUT IN MY WAY.	N Vsa	SA	A	D	SD	VSD
49.	I USUALLY INFLUENCE OTHERS MORE THAN THEY INFLUENCE ME.	VSA	SA	A	D	SD	VSD
50.	I TALK RATHER FREELY ABOUT MY- SELF, EVEN TO CASUAL FRIENDS.	VSA	SA	A	D	SD	VSD
51.	I COULD PICK UP AND MOVE AWAY FROM MY HOME, MY PARENTS, AND MY FRIENDS AND SUFFER FEW REGRETS.	VSA	SA	A	D	SD	VSD
52.	I AM CONSCIOUS OF A VAGUE FEAR OF DEATH.	VSA	SA	A	D	SD	VSD
53.	PEOPLE ARE APT TO TELL ME THEIR INNERMOST SECRETS AND TROUBLES.	VSA	SA	A	D	SD	VSD
54.	I FIND THAT REGULAR HOURS AND A REGULAR ROUTINE SUIT ME BEST.	VSA	SA	A	D	SD	VSD
55.	I GET QUITE DISCOURAGED WHEN THINGS GO WRONG.	VSA	SA	A	D	SD	VSD

56.	I PREFER THE COMPANY OF AMUSING, FUN-LOVING PEOPLE.	VSA	SA	A	D	SD	VSD
57.	I AM HUMBLE AND APOLOGETIC WHEN I HAVE DONE WRONG.	VSA	SA	A	D	SD	VSD
58.	I WORK LIKE A SLAVE AT EVERY- THING I UNDERTAKE UNTIL I AM SATISFIED WITH THE RESULT.	VSA	SA	A	D	SD	VSD
59.	I BECOME BOUND BY STRONG LOYALTIES TO FRIENDS AND GROUPS TO WHICH I BELONG.	VSA	SA	A	D	SD	VSD
60.	I ENJOY A GOOD HOT ARGUMENT.	VSA	SA	A	D	SD	VSD
61.	I AM NOT ABLE TO DO MY BEST WORK WHEN I AM IN A SUBORDINATE POSITION.	VSA	SA	A	D	SD	VSD
62.	I SEE THE GOOD POINTS RATHER THAN THE BAD POINTS OF THE PERSONS WHO ARE MY BOSSES.	VSA	SA	A	D	SD	VSD
63.	WHEN I AM WITH ANOTHER PERSON I USUALLY MAKE THE NECESSARY DECISIONS.	VSA	SA	A	D	SD	VSD
64.	I FEEL DISSATISFIED WHEN I RE- MAIN UNNOTICED.	VSA	SA	A	D	SD	VSD
65.	I FIND THAT MY LIKES AND DISLIKE CHANGE QUITE OFTEN.	S VSA	SA	A	D	SD	VSD
66.	I AM AFRAID OF PHYSICAL PAIN.	VSA	SA	A	D	SD	VSD
67.	I SYMPATHIZE WITH PEOPLE MORE THAN I BLAME THEM.	VSA	SA	A	_ D	SD	VSD
68.	I FIND THAT MONOTONY DOESN'T UPSET ME.	VSA	SA	A	D	SD	VSD
69.	I FEEL LONELY AND HOMESICK WHEN I AM IN A STRANGE PLACE.	VSA	SA	A	D	SD	VSD
70.	I SEEK AMUSEMENT AS AN ANTIDOTE FOR WORRY.	VSA	SA	A	D	SD	VSD

71.	SOMETIMES I AM DEPRESSED BY FEELINGS OF MY OWN UNWORTHI-						
	NESS.	VSA	SA	A	D	SD	VSD
72.	I ENJOY WORK AS MUCH AS PLAY.	VSA	SA	A	D	SD	VSD
73.	I GO OUT OF MY WAY JUST TO BE WITH MY FRIENDS.	VSA	SA	A	D	SD	VSD
74.	I TRY TO GET MY OWN WAY REGARD LESS OF OTHERS.	- VSA	SA	A	D	SD	VSD
75.	I GET STUBBORN WHEN OTHERS TRY TO BOSS ME AROUND.	VSA	SA	A	D	SD	VSD
76.	I AM CAPABLE OF PUTTING MYSELF IN THE BACKGROUND AND WORKING ENTHUSIATICALLY FOR A PERSON I ADMIRE.	VSA	SA	A	D	SD	VSD
	1.0.11.0.	VUA	DA	A	D	JD .	VOD
77.	I WOULD LIKE TO BE A LEADER AND SWAY OTHERS TO MY OPINION.		SA	A	D	SD	VSD
78.	I AM RATHER SUCCESSFUL AT ENTE	R- VSA	SA	A	D	SD	VSD
79.	I AM QUICK TO THROW OUT THE OLIDEAS AND ACCEPT NEW IDEAS.	D VSA	SA	A	D	SD	VSD
80.	I TEND TO GET RATHER UNEASY WH I AM ALONE IN AN EMPTY HOUSE A NIGHT.		SA	A	D	SD	V SD
•							
81.	I PRAISE OR OTHERWISE ENCOURAGE PEOPLE WHO ARE DEPRESSED.		SA	A	D	SD	VSD
82.	I PREFER TO ASSOCIATE WITH MY OLD FRIENDS INSTEAD OF GOING OUT AND MEETING NEW PEOPLE.	VSA	SA	A	D	SD	VSD
83.	I "FEEL OUT" THE OPINIONS OF OTHERS BEFORE MAKING A DECI- SION.	VSA	SA	A	D	SD	VSD
84.	I CULTIVATE AN EASY-GOING HUMOROUS ATTITUDE TOWARD LIFE.	VSA	SA	A	D	SD	VSD

ı



CHANGE INVENTORY

GO THROUGH THESE QUESTIONS QUICKLY. CHOOSE THE ONE ANSWER THAT COMES CLOSEST TO THE WAY THAT YOU FEEL. PLACE A CHECK MARK () IN THE SPACE IN FRONT OF YOUR CHOICE. PLEASE TRY TO ANSWER EVERY QUESTION.

1.	Check the one statement that best describes the rate at which changes are taking place in the world today.
	 Much more rapidly than before. Somewhat more rapidly than before. At about the same rate as before. Somewhat less rapidly than before. Much less rapidly than before.
2.	How do you feel about this?
	l. I like it very much2. I like it3. It makes no difference to me4. I dislike it5. I dislike it very much.
3.	In general, new developments in machines and processes for handling work:
	 1. Benefit all of the people. 2. Benefit most of the people. 3. Benefit some of the people. 4. Benefit only a few people. 5. Benefit only a very few people.
4.	At what rate do you feel new developments in machines and methods for doing work are taking place.
	 1. Much less rapidly than is desirable. 2. Somewhat less rapidly than is desirable. 3. At about the ideal rate. 4. Somewhat more rapidly than is desirable. 5. Much more rapidly than is desirable.
5.	If I could do as I pleased, I would change the kind of work I do every few months.
	1. I strongly agree2. I agree a little3. I neither agree nor disagree4. I disagree a little5. I strongly disagree.

6.			efer to stay with a job I know I can handle than to one where most things would be new to me.
		2. 3. 4.	I strongly agree. I agree a little. I neither agree nor disagree. I disagree a little. I strongly disagree.
7.			nes caused workers to change jobs within the company t two years?
		$\frac{2}{3}$.	Yes, to a very large extent. Yes, to a rather large extent. Yes, to a moderate extent. Yes, to a slight extent. No, not at all.
8.	How	do you	feel about this?
		2.	I like it very much. I like it. It makes no difference to me. I dislike it. I dislike it very much.
9.			ances that a machine will cause you to do different or job greater or less than for most jobs in the company
		2. 3. 4.	Much greater than for most jobs. Somewhat greater than for most jobs. Greater than some, less than others. Somewhat less than for most jobs. Much less than for most jobs.
10.	How	do you	feel about this?
		2. 3. 4.	I like it very much. I like it. It makes no difference to me. I dislike it. I dislike it very much.

11. In general, how much change t the way you do your present j	akes place from time to time in ob.
1. Much more change the 2. Somewhat more change 3. About the same amout 4. Somewhat less change to 5. A lot less change to	e than for most jobs. Int of change as for most jobs. The than for most jobs.
12. How do you feel about this?	
l. I dislike it very m 2. I dislike it. 3. It makes no differe 4. I like it. 5. I like it very much	ence to me.
13. The trouble with most jobs is things in one way and then the	that you just get used to doing ey want you to do them differently.
l. I strongly agree2. I agree a little3. I neither agree nor4. I disagree a little5. I strongly disagree	•
14. I like a job were I know that same way from one week to the	I will be doing my work about the next.
l. I strongly agree2. I agree a little3. I neither agree nor4. I disagree a little5. I strongly disagree	
INSTRUCTIONS:	
On the next page you w	vill find a list of statements about

On the next page you will find a list of statements about aspects of your job. You are asked to answer two questions about each aspect. "Has this aspect of your job changed in the past six months?" (Question "A"), and "How do you feel about this change (or lack of change) in this aspect of your job?" (Question "B")

1. If you had the same job here six months ago, compare the way your job is now with the way it was six months ago.

- 2. If you had a different job here six months ago, compare your present job with the job you had six months ago.
- 3. If you haven't worked here at least six months, indicate any changes which have occurred in your job since you came to work here.

Example: Suppose the statement had to do with hours of work. If you are working more hours now ("A") and don't like it ("B"), you would check the spaces like this:

QUESTION "A"

OUESTION "B"

How has this aspect of your job changed in the past six months?

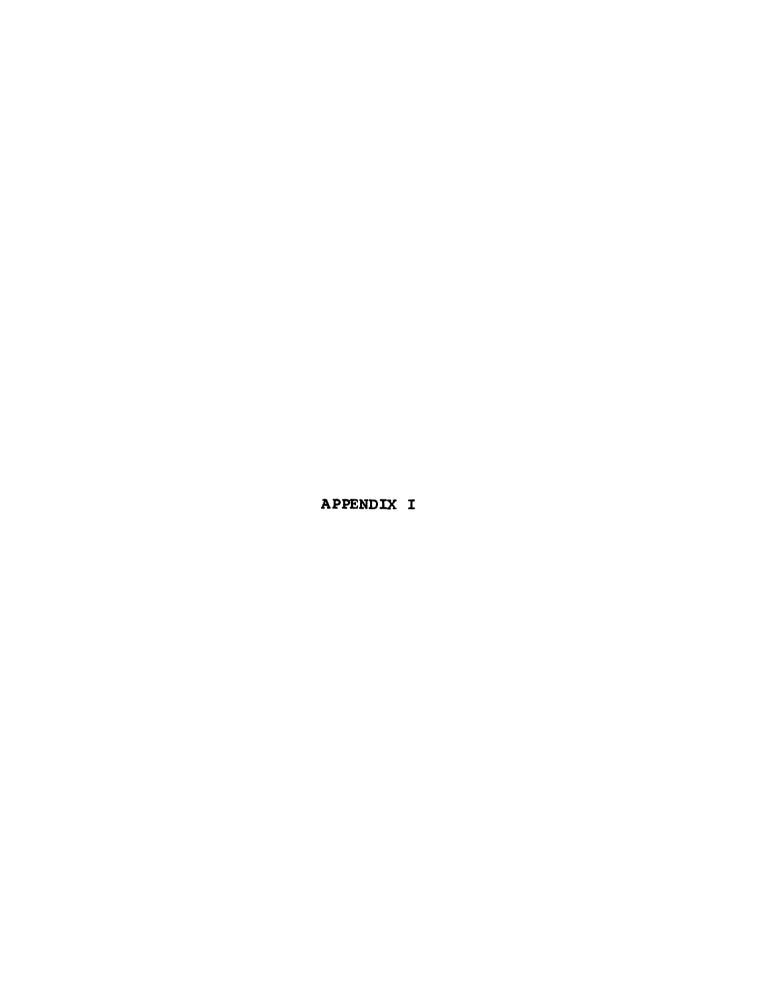
How do you feel about this change (or lack of change) in your job?

much				much	like			dis-
more	more	no	less	less	a	don't	dis-	like
now	now	change	now	now	lot like	care	like	a lot

The hours
I work
on my
job...

QUESTION "B"	How do you feel about this change (or lack of change) in your job?	like like don't dis- dislike it a it care like it a lot lot									
QUESTION "A"	How has this aspect of your job changed in the past six months?	much morenolessmuchmorenowchangenowlessnownownow			ped						
ANSWER QUESTIONS "A" AND "B" FOR EACH OF	ratements		1. The amount of variety in my work	2. The amount of work required on my job	3. The degree of accuracy demanded by my job	4. My control over the pace of my work	5. The importance of my job for the company	6. The amount of supervision I get on my job	7. The amount of skill needed on my job	8. The amount of responsibility demanded by my job	9. The degree to which my work is interesting

AND "B" FOR EACH OF THESE STATEMENTS 10. The amount of security I feel on my job	How has changed much mo more no now	this aspect of your job in the past six months? re no less much w change now less now	of you six mo less now	r job nths? much less now	How do (or 1st it a lot	O you 1 ack of like it	feel about f change) in don't dis care lik	"B" out thi dis- like	How do you feel about this change (or lack of change) in your job? like like don't dis- dislike it a lot lot lot lot lot lot
12. The amount of pay I get on my job									



MSU PERSONAL HISTORY BLANK

Instructions: Answer all of the following questions. You may use either pen or pencil. Please print your answers. Your answers will be used for research purposes only, and they will not be seen by any management representative. * * * * * * * * * * * * * * * * * * *
1. WHAT IS YOUR NAME? (Last) (First) (Middle) ("Mickname")
2. WHERE DO YOU WORK?
3. IN WHAT DEPARTMENT DO YOU WORK?
4. WHAT IS YOUR JOB TITLE?
5. WHO IS YOUR DIRECT SUPERVISOR THERE? * * * * * * * * * * * * * * * * * * *
6. HOW OLD ARE YOU? 7. WHAT IS YOUR SEX? Male Female (Circle one) 8. ARE YOU (Circle one) Single Married Divorced Separated Widowed
9. IF MARRIED, HOW LONG HAVE YOU BEEN MARRIED?
10. HOW MANY DEPENDENTS DO YOU HAVE?
11. HOW MANY YEARS OF SCHOOLING HAVE YOU FINISHED? (Circle the highest grade completed) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 or over (Grade School) (High School) (College) (Post Graduate)
12. WHAT SCHOOL DO YOUR CHILDREN ATTEND?
13. WHAT CHURCH DO YOU ATTEND?
14. I WOULD DESCRIBE MY HEALTH AS: (Circle one) Poor Fair Good Very Good Excellent * * * * * * * * * * * * * * * * * * *
15. HOW LONG HAVE YOU WORKED FOR THE COMPANY?
16. HOW MANY TIMES HAVE YOU CHANGED DEPARTMENTS SINCE WORKING HERE?
17. HOW LONG HAVE YOU WORKED IN YOUR PRESENT DEPARTMENT?
18. HOW MANY TIMES HAVE YOU CHANGED JOBS WITHIN YOUR PRESENT DEPARTMENT?

19. DO YOU CONSIDER YOUR JOB AS: (Circle one)

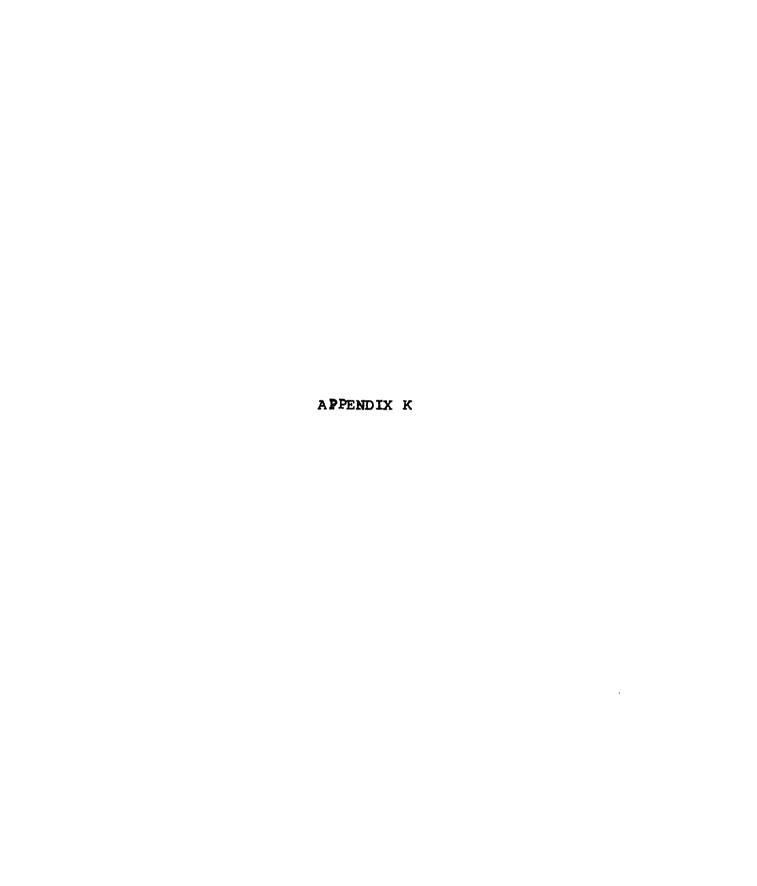
Unskilled Semi-skilled Skilled

20. HOW MANY DIFFERENT PLACES DID YOU WORK BEFORE YOU WERE EMPLOYED BY YOUR PRESENT EMPLOYER?

APPENDIX J

Factors		OSU Soc-Fac '58
SRA 1	.464**	.252**
SRA 2	.328**	.281 **
SRA 3	.554	.137
SRA 4	.412	.285**
SRA 5	.317**	.016
SRA 6	.466	.309
SRA 7	.632**	.339
SRA 8	.445	.125
SRA 9	.509**	. 295**
SRA 10	. 595**	.269*
SRA 11	. 527**	.381**
SRA 12	.515**	.322**
SRA 13	.708.	.268*
SRA 14	.587	.322**
SRA TOTAL	.738**	.385**
Consideration SBD	.224*	.363
Initiating Structure SBI	053	.363 .217*
Perception of Change	.127	.21/**
Attitude to Change	*	.312**
Life Satisfaction	.219	028
OSU SF	130 **	247
OSU JS	.301	
		.301**
Abasement	.051	.011
Achievement	.197	.143
Affiliation	.049	 06
Aggression	06	 235 [*]
Autonomy	063	223 [*]
Deference	.025	.066
Dominance	.115	.074
Exhibition	005	048
Change	018	058
Harm-avoidance	014	176
Nurturance	.16	.213
Order	194	196
Play	177	273*
Succorance	051	147
Increase in yearly earni	ings_ 051	.225 °
Number of raises	113	047
Number of promotions	073	.268
Number of job changes	.077	.145
Position in 1958	.216*	.284**
Position in 1968	.243	.284 .376 <u>*</u> *
Positions moved up		.3/6
Turnover	.014	.266*
Department in 1958	008	143
OSU JS 1969	062 **	010
OSU SF 1969	.421 **	. 298**
Retirement	.423	.390
	168	074
* Significant rel		level; two-tailed tests

** Significant relationship at 1% level: two-tailed tests



ITEM CODE NUMBERS FOR CORRELATION MATRIX

```
1 SUBJECT NUMBER
                                46 Department in 1958
 2 SRA 1
                                47
                                    osu Js 1969
 3 SRA 2
                                48 OSU SF 1969
 4 SRA 3
                                49 Retirement status
 5 SRA 4
6 SRA 5
7 SRA 6
8 SRA 7
9 SRA 8
10 SRA 9
11 SRA 10
12 SRA 11
13 SRA 12
14 SRA 13
15 SRA 14
16 SRA TOTAL SCORE
17 CONSIDERATION, SUPERVISORY BEHAVIOR DESCRIPTION
18 INITIATING STRUCTURE, SUBERVISORY BEHAVIOR DESCRIPTION
19 PERCEPTION OF CHANGE
20 ATTITUDE TOWARD CHANGE
21 WEITZ LIFE SATISFACTION
22 OSU JS 1958
23 OSU SF 1958
24 Murray NEED: ABASEMENT
25 Murray NEED: ACHIEVEMENT
26 Murray NEED: AFFILIATION
27 Murray NEED: AGGRESSION
28 Murray NEED: Autonomy
29 Murray NEED: Deference
30 Murray NEED: Dominance
31 Murray NEED: Exhibition
32 Murray NEED: Change
33 Murray NEED: Harm-avoidance
34 Murray NEED: Nurturance
35 Murray NEED: Order
36 Murray NEED: Play
37 Murray NEED: Succorance
   INCREASE IN YEARLY EARNINGS FROM 1958 to 1908
39
   NUMBER OF RAISES FROM 1958 to 1968
40 Number of promotions from 1958 to 1968
41
   Number of job changes from 1958 to 1968
42
   Position in 1958
43 Position in 1968
44 Number of positions moved up 1958 to 1968
```

45 Turnover

N'S FOR EACH ITEM

ITEM CODE NUMBER	N
1	104
2-16	104
17+18	94
1 9+ 20	86
21	101
22	100
23	85
24-37	98
38	65
39	60
40	60
41	60
42	104
43	65
44	65
45	80
46	85
47	50
48	50
49	88

RESPONDENT SCORES ON INVENTORIES

SUB	_16_	_17_	18	19	_20_	_21_			47	_48_
1	51	71	42	19	61	04	51	36		
2	69	89	35	17	58	16	48	40	59	44
3	65	87	44	26	57	11	51	47	55	41
4	70	84	46	21	52	17	54	42	55	47
5	78	79	33	19	56	12	5 7	45	51	47
6	70	70	30	23	48	17	53	38	39	19
7	66			23	55	13	48	35	54	43
8	73	87	26	22	53	03	54	42	52	47
9	62	82	37	25	57	19	49	45		
10	63	82	43	20	57	13	51	34	49	37
11	71	72	36	23	39	11	54	37	51	48
12	68	94	39	22	51	05	51	44	41	27
13	43	7 0	44	13	52	09	44	39	51	46
14	52	83	48	22	57	11	44	46	51	43
15	78	90	37	11	59	03	60	41	46	40
16	75	74	39	19	54	06	50	46		
17	67	74	43	15	56	09	49	43	46	39
18	70	80	29	15	58	05	53	44	54	48
19	52	72	36	16	52	0 7	46	22		
20	74	72	35	17	54	15	52	30		
21	42	76	42	21	58	17	44	41	55	46
22	66	83	31	13	48	06	52	32		
23	73	66	29	20	62	04	54	44	53	45
24	58	71	43	15	65	03	49	45		
25	60	60	24	16	54	17	50	19	56	43
26	57	46	46	15	62	05	36		38	28
27	76	81	43	14	57	04	55	41		
28	34	93	39	25	54	11	32	37	48	42
29	43			12	51	37	48	41		
30	52	85	43	15	44	09	49	42		
31	68	68	39	23	57	10				
32	52	55	38	14	52	16	42	21	38	12
33	65	89	40			14	43	31		
34	40	51	23	17	55	11	44	27		
35 36	55 53	102	52	09	56	11	46	38		
36 27	51 25					07	46			
37 30	35	94	36	21	47	07	43	36	38	38
38	69 53	79 65	41			14	52	37	53	42
39 40	52 61	65 50	39	14	49	02	43	31		
40	61	58	44	18	46	02	55 46	48		44
41	58 53	67 53	47	18	47	05	46	38	50	44
42	57 60	53	44	21	44	07	34	 26	42	35
43	69	88 73	40	10	61 53	11	52 30	36		
44	51	73	36	10	53	15	39	18	-	
45	76	112	51	15	48	05	52	48		

SUB	16	17	18	19	20	_21_	_22_	_23_	47	48_
46	44	79	40	14	46	05	43	36		
47	69	88	39	17	46	10	54	39		
48	59	62	36	17	5 3	80	54	3 5		
49	65	97	36	17	54	10	5 3	42		
50	66	72	41	14	54	13	5 3	38	51	38
51	45	86	34	20	47	04	42	48		
52	72			14	48	10	53	45	51	43
53	38	91	22			16	46	28	51	36
54	58	78	33	14	55	13	50	36		
55	43	86	44		46	05	41	31		
56	42	69	56			09	44	33		
57 50	50	69	33	15	56	10	47	26	43	31
58 59	47 67	64	35 30		40	12	43	20	42	24 25
60	59	100 76	28 44	15	48	05 10	56	39	53	35 40
61	66	81	33	13 16	50 45	18 21	43 54	32 38	42	40
62	71	75	31	12	63	11	5 2	40		
63	58	74	33	11	52	13	49	29		
64	68	7 9	39	25	61	05	54	40		
65	68	90	35	18	47	07	54	42	52	38
66	58	78	25	13	53	13	45		49	43
67	69	87	34			08	53	41		
68	27	94	42	16	42	10	24	48	43	33
69	51	91	36	14	51	09	5 3	36		
70	78	7 5	50	26	51	14	53	42	46	45
71	50	75	44	10	40		38	32	51	44
72	51					07	39	34	39	29
73	70	99	5 7	20	59	05	59	3 6		
74	38	68	40			11	46		42	36
75	18	76	41	10	55	20	24	22	45	21
76	26	89	44	20	52	09	41	40	51	25
77	69	88	51	18	59	04	57	40		
78	64					11	47			
79	46			18	46	21	45			
80	30	100	4.6				46		40	
81 82	65 24	100	46			05 05		46	43	29
83	34 67	84 67	33	16	53	05 03	36 40	29	45	38
84	75	90	40 50	18	59	02	48	38		
85	73 67	72	36	18 16	50 50	0 3 07	58 50			
86	41	93	35	21	50 57	0 <i>7</i> 05	39	33	52	 38
87	32	69	41	16	5 6	17	47	20		
88	71	81	42	20	61	04	55	34	45	42
89	60	101	56	15	66	17	56	40		7 2
90	38	79	30	15	49		27		36	25
		• •								

SUB	<u>16</u>	<u>17</u>	18_	<u> 19</u>	20	21	22	_23_	_47_	48
91	74					03	50			
92	73	75	30	14	48	80	45	28	36	28
93	50					05	43	31		
94	35	50	45	14	64	18		16	44	37
95	46	55	32			16	42		39	19
96	46	98	38	17	51	13	47	29	45	31
97	63	102	31	13	47	18	46	38		
98	46	76	22	20	42	13	41			
99	48	36	49	17	54	06	39			
100	68	82	46	25	50	07	49			
101	40	73	46	14	48	04	43			
102	59	68	29			19	36			
103	74	88	30	17	46	16	52	32		
104	70	90	49			10	50	44		

CORRELATION MATRIX

										80.	.61	.63	.83	.60	.84	.13	90.	.12	.11	.04	.70	. 29	0.167	. 22	.05	.08	
									8	.71	.49	.49	.68	.47	.74	.15	.05	8	.17	.17	. 54	.27	0.310	.14	.04	Φ	
								8	39	46	34	.47	.43	.47	.63	.14	.02	8	.02	.15	.53	60.	-0.031	.02	.05	0.010	
							9	. 55	.68	.79	. 59	. 50	.73	. 50	8	.05	.16	.17	.12	.17	.63	.34	0.238	.15	10	-0.048	
						00.	. 44	.57	.33	.45	.55	.63	.51	.66	.72	.09	.11	.04	.04	. 21	. 54	.34	-0.041	.03	. 20	.16	
					80.	.36	.19	.27	.30	.20	. 19	.37	. 20	.46	.44	.17	.17	.08	.19	.01	.49	1.0	0.291	.07	.03	~	
				00.	.26	.35	.45	. 24	.43	.50	.57	. 59	.49	.32	.63	90.	.01	. 25	.01	.15	.41	.31	0.052	90.	. 21	m	
			8	.31	.34	.57	. 53	.51	.41	.57	. 39	. 58	. 56	. 56	.70	.16	.08	.12	.13	.02	.62	.19	0.137	.08	.31	.02	
		8	0.406	.47	.19	.39	.54	.37	.61	. 56	.51	.48	.48	.40	. 69	.12	.09	.02	.03	.31	.35	. 26	.40	.07	7	-0.015	
•	00	0.598	.30	. 59	.49	.33	.41	.19	.42	.47	.62	. 55	.49	.48	99.	.18	.03	9	00.	. 24	. 54	.33	σ	.27	.05	.01	
5	-0.371	27	28	41	18	22	42	36	. 22	47	23	42	34	45	.45	8	8	w	.12	.02	.40	o	90.	.08	CO	8	
_	- N	m	4	2	9	7	œ	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	5 6	27	

11

10

თ

ω

9

Ŋ

ന

~

_	.04	.12	.04	.04	.08	0.301	90.	. 23	00.	.11	.04	.08	.16	.41	.33	.01	9	. 25	. 19	.19	8	11	
0.	.12	.01	.03	.08	. 24	0.221	.04	. 22	.13	.04	.05	90.	. 19	.16	.19	.18	90.	. 21	90.	.09	90.	10	
15	. 21	.05	.19	.04	.19	0.051	.18	.13	.08	.12	. 28	90.	.15	. 24	.18	.01	8	.03	.03	.30	8	თ	
.01	15	1	.03	10.	60.	0.213	.04	. 20	.0.	1	1	9	10	38	.33	.04	8	. 24	.12	.18	9	ω	
90	21	07	38	14	30	0.178	0,	15	9	8	.27	90.	14	29	. 24	.0	8	60	. 20	.37	8	7	
-0.259	0	0	0	0	٥.	0.002	0	۲.	0	Τ.	0	0.	٦.	7	7	0	0	٥.	~		٥.	ø	
8	12	12	11	02	40	0.105	11	. 23	9	.07	.12	.05	.03	. 28	. 28	10	8	18	. 22	30	00.	ĸ	
\sim	. 22	8	16	0.5	.02	0.156	1	.17	.15	.0	14	.21	.05	.33	. 28	.03	8	.16	.25	38.	9.	4	
8	34	0	21	9	9	0.039	0	21	02	10	10	02	14	10	10	60	8	14	60	.25	9	m	
00	12	13	02	15	03	0.154	8	30	90,	.05	8	9	8	.21	.21	10	8	.18	.32	32	8	7	
28	02	38	90	11	13	-0.379	. 23	.37	. 22	. 24	.15	. 20	98.	.68	.69	.27	8	.17	44	40	8	н	

	27.	.03	-0.030 -0.117 0.044 0.225	.14 .14 .04 .19
00	.39	. 06 . 07 . 01 . 03	0.156 0.166 0.192 -0.054 0.025	. 03
.00	089.	.05 .01 .05 .15	0.110 0.147 0.147 0.111 0.077	.05 .09 .01
00.90	. 21 . 37 . 15 . 00	.17	0.213 0.213 -0.204 0.075	. 37 . 18 . 39 . 17
.00.13	.15	. 08 . 02 . 08 . 08	0.188 0.145 -0.196 0.189	.03 .04 .27 .13
.00 .09 .21 .13	.10 .43 .00 .16	. 36 . 39 . 09	-0.115 -0.099 -0.233 -0.101	.02 .02 .28 .07
1.000 0.004 -0.083 0.192 0.044	. 80 . 40 . 21 . 13	. 14 . 03 . 19 . 19	.	. 27 . 00 . 04 . 18
1.000 0.768 0.190 -0.183 0.195	96.00.	010.07	13	. 27 . 04 . 10 . 11
1.000 0.589 0.833 -0.103 0.002 0.146	. 31 . 18 . 14	. 03 . 09 . 07		
1.000 1.000 0.611 0.808 0.002 -0.001 -0.310	. 68 . 06 . 09		30	.01.31.31
1.000 0.603 0.634 0.772 0.302 -0.115 -0.023	. 59 . 43 . 14 . 18	. 13 . 05 . 13 . 04	17 17 05 14 12	2 2 2

22	21	20	19	18	17	16	15	14	13	12	
000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	000.0	49
0.423	-0.146	0.065	0.218	0.066	0.192	0.376	0.380	0.329	0.303	0.309	48
0.421	0.073	0.153	0.192	-0.061	0.274	0.264	0.377	0.280	0.219	0.194	47
-0.088	-0.114	-0.288	0.051	0.141	0.277	-0.170	-0.068	-0.197	-0.083	-0.107	46
000.0	000.0	00000	00000	000.0	000.0	000.0	0000	000.0	000.0	000 0	45
0.034	0.051	0.065	0.260	0.161	0.079	0.085	0.112	0.022	-0.010	0.111	44
0.308	0.106	0.089	0.522	0.028	0.149	0.371	0.420	0.328	0.304	0.281	43
0.375	0.060	0.096	0.435	-0.047	0.154	0.415	0.456	0.382	0.375	0.295	42
0.080	-0.260	0.328	-0.043	0.169	0.004	0.130	0.086	0.140	0.104	0.150	41
-0.100	-0.183	0.005	0.115	0.210	0.164	-0.077	0.021	-0.068	-0.078	-0.022	40

	00. 13. 42.	-0.214 -0.172 -0.129 -0.011 -0.196	. 00 . 01 . 00 . 00
O	10 10 06 29 08	0.313 0.061 -0.045 -0.185 0.367 0.352	32 00
00.		0.049 -0.018 -0.082 -0.294 0.074 0.137	. 03 . 03 . 15 . 00
O 10 4	22 19 45 45	0.490 0.083 -0.017 -0.164 0.589 0.589	30
00.	30.36		
00 20 11 11 11 11 11 11 11 11 11 11 11 11 11	47 03 21 28 12	-0.322 -0.322 -0.422 -0.187 -0.416	
		0.013 -0.225 -0.215 -0.215 -0.002	
0 2 2 2 1 6 1	0 6 6 6	0.024 0.113 0.044 0.031 -0.154 0.123	2
1.000 0.454 -0.222 0.041 0.456 0.033	36 38 60 60 60 60 60 60 60 60 60 60 60 60 60		00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1.000 0.318 0.182 -0.110 0.061 -0.118	1181.29	0 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.000 -0.014 -0.042 0.000
1.000 0.190 0.209 -0.103 -0.258 0.013 0.0127	39 39 22 28 28 28) W U U U U U U U U U U U U U U U U U U U	33 39 60 53
22	34 35 36 36	0 6 6 4 4 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4

			. 000	0.000 0.000	.007 0.	.363 0.	.331 0.	.000	43 44				
		Č	1.000 0.893		•	•	•	•	42				
		•	0.070		•	•	•	000.0	41				
		1.000		• •	•	•	•	0.000	40				
	Č	0.379			•	•	•	0.000	39				
	0,1		14.	40	0	r)	4	٠.	38			00000	49
	1.000	-0.089 -0.174 -0.062	-0.298	0.000	•	•	-0.323	0.000	37		1,000	000.0	48
-		0.027				•	•	0.000	36		1.000 0.722	•	47
1.000	0.194	-0.142 -0.017	-0.323	000.0	•	-0.164	•	000.0	%	•	0.088	•	46
1.000		0.200			•	0.383	•	000.0	34	0.000		•	45
8 8 6 4 5 4	337	40 41 41	4 4 4	44 45	46	47	48	49		45 46			

