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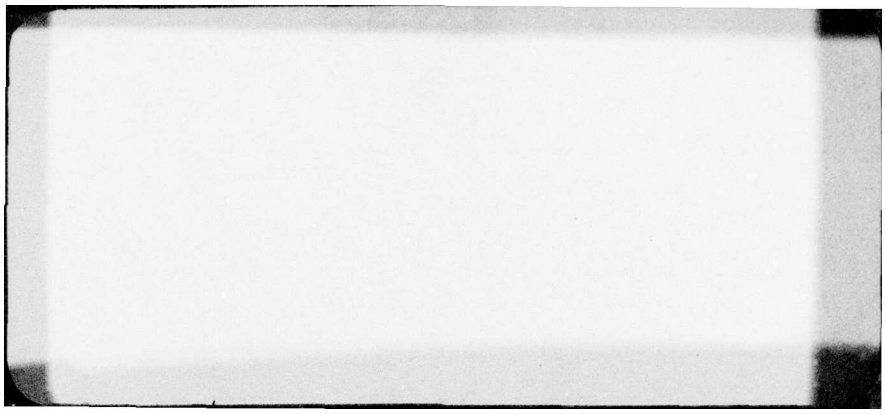

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A Job Dimension Survey was developed and administered to 102 Minutemen Missile Operation crew members, Malmstrom A.F.B., Great Falls, Montana. The study concluded that job satisfaction is a multi-dimensional concept and not all of the dimensions contribute equally, nor do they operate independently. The intrinsic dimensions of the job situation were found to be highly related to both job and organizational satisfaction while extrinsic dimensions were primarily related only to organizational (USAF) satisfaction.

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MEASUREMENT OF JOB SATISFACTION

BY

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AFOSR-71-2001

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CHAPTER I

INTRODUCTION

An approach toward gaining a better understanding of and appreciation for the research performed in the area of work and the satisfaction and dissatisfaction associated with work may be gained by historically sketching the concept of work for primitive and modern man.

Primitive man's conceptualization of work is reflected in a very prepotent survival need. During this period of man's development the immediate need for work could be defined in terms of activities being oriented toward the acquisition of food and shelter. In essence there was little differentiation, conceptually, between the dimensions of life and the dimensions of work because work was the means toward satisfying the ends of life and survival. The various aspects of the work of primitive man became prerequisite to his survival. There was a simple understood relationship between life and the motivation to work.

The conceptualization of work with regard to modern man becomes more complicated an issue. The intricacies involved, have attracted the interests and energies of poets, philosophers, psychologists and research scientists to mention

only a few. One of these (Gibran, 1923) reflects on work and the satisfactions and dissatisfactions derived thereof by writing:

> "And if you cannot work with love but only with distaste, it is better that you should leave your work and sit at the gate of the temple and take alms of those who work with joy.
>
> For if you bake bread with indifference, you bake a bitter bread that feeds but half man's hunger.
>
> And if you grudge the crushing of the grapes, your grudge distils a poison in the wine.
>
> And if you sing though as angels, and love not the singing, you muffle man's ears to the voices of the day and the voices of the night." (p.28)

The work of modern man remains, by way of enculturation, an important facet of man's life. However, the aspects of work and the needs of man have become more complex and varied in relation to his existence and survival. This complicated repetoire of needs has driven man to contemplate the relevance of work to his life. He questions whether the specific aspects of his work are satisfying, i.e.: fulfilling the needs he finds in his life or indeed, providing various means which are detrimental to the fulfillment of the needs he finds in his life, and dissatisfying.

Man, over time, has attempted, through a process of introspection, to evaluate his work in terms of his needs. It is this process which science attempts to tap in an effort to gain a better understanding of the satisfactions and dissatisfactions associated with work.

REVIEW OF THE LITERATURE

Even with the voluminous amount of research in the area of job satisfaction, the question remains, "what is job satisfaction?" A review of the literature on job satisfaction is representative of science's response to this question. Of particular interest in review, are the studies of Herzberg, Vroom, Lofquist, Porter and Kendall. Each have presented various conceptualizations of job satisfaction. These theories are considered to be most representative of major conceptualizations with regard to job satisfaction.

Two-Factor Theory

One conceptualization which perhaps has generated the most research, in addition to the most controversy is Herzberg's two-factor theory. Herzberg (1966;1959) concludes that job satisfaction is a two-dimensional construct; hence, "two-factor theory."

The data collection was based on structured, in-depth interviews of job incumbents, to determine which job events were associated, in the past, with high satisfaction and which of the job events were associated, in the past, with high dissatisfaction. Based on a content analysis of the data, qualitatively different factors were found.

One group of factors was "Satisfiers" or "motivators" which included job content factors such as achievement, recognition, advancement, responsibility, and work itself. The other group of factors labeled "dissatisfiers" or "hygienes" consisted of context type factors such as company policies and practices, interpersonal relations with co-workers,

interpersonal relations with supervisors, technical aspects of supervision, and salary and working conditions.

Postulated from the analysis was -- satisfaction is a function of both the "satisfiers" and "dissatisfiers." If the positive aspects of both the "satisfiers" and "dissatisfiers" are present at sufficient levels, then satisfaction will be high. However, if the "satisfiers" are removed, not dissatisfaction but indifference will occur. Dissatisfaction will occur only when the negative aspects of the "dissatisfiers" are present. Thus a positive condition among "dissatisfiers" constitute necessary but not adequate conditions for satisfaction.

The theory presents job satisfaction as an absolute phenomenon which emphasizes situational variables without allowing for individual differences in response to situational characteristics. The emphasis of situational variables in the two-factor theory seems to contradict a considerable amount of evidence in the field of industrial psychology. The theory has presented considerable difficulty in terms of replication. The absolute phenomenon of job satisfaction hasn't been found to be constant in terms of job aspects being classified as "satisfiers" and "dissatisfiers."

The Cornell Studies of Satisfaction

A conceptualization of job satisfaction which has been in the forefront of strategies for the study of attitudes is the Cornell Studies of Satisfaction. The studies focused attention on the concept of satisfaction, and specifically on the requirements for scientifically adequate measures of satisfaction. The strategy utilized in the development of the

Job Descriptive Index, provides an example of concern for reliability and validity which seems to have been given minimum attention in some earlier job satisfaction instruments.

Smith, Kendall, and Hulin (1969) define job satisfaction in terms of the feelings a worker has toward his job. Smith et al.(1969), states "job satisfactions are . . . a function of the perceived characteristics of the job in relation to an individual's frame of reference. Alternatives available in given situation, expectations, and experience play important roles in providing the relevant frame of reference." (p.12) Therefore, any job aspect i.e.; opportunities for promotion, has the potential to be a satisfier, dissatisfier or irrelevant in relation to the individual's frame of reference.

The Cornell Studies of Satisfaction adopted a simple strategy for the measurement of job satisfaction. A series of scales were constructed to measure job satisfaction within, both, an evaluative-general-long-term framework and a descriptive-specific-short-term framework over selected aspects of the job which were found to have a recurring contribution in the literature.

The study investigated five areas of the job, which in terms of satisfaction were considered to be of primary importance. The areas investigated were: work, pay, promotions, supervision, and co-workers. The items included in each of the areas investigated were written in check-list format, very nearly balanced in the number of favorable/unfavorable items. One reason for adopting this format was to afford the opportunity for subjects to produce somewhat separate and distin-

guishable evaluation of several aspects of their job by focusing attention on these different aspects of their job. Ease of administration was another reason for adopting this type of format.

The orthogonal rotation of the factor analysis provided support for job satisfaction being conceptualized in terms of discriminable different aspects of the job with the potential of these factors being satisfying, dissatisfying or irrelevant. Thus, job satisfaction is not an absolute phenomenon, but it is relative to the alternatives available to the individual.

Need Satisfaction

The work of Porter (1961) and Lawler and Porter (1967) represents another conceptualization of job satisfaction. The strategy used was, in essence, one which substituted perceived need satisfactions of the work environment for job satisfaction.

Along these lines Haire, Ghiselli, and Porter (1966) operationally defined need satisfaction as "The difference between the perceived fulfillment and the perceived expectation of fulfillment." (p.87) The measurement of need satisfaction is the difference between how much "there is" of a characteristic and how much there "should be," i.e.: the smaller the difference, the more need satisfaction or job satisfaction.

The taxonomy of needs used was adopted, with minor modifications, from the need classification system developed by Maslow (1954). The needs investigated were: 1) Security, 2) Social, 3) Esteem and 4) Autonomy. Under each of the needs, specific questionnaire items were used to measure these needs. For each of the questionnaire need scales, subjects were asked

to respond to three questions along a seven point scale. The questions asked under each need scale followed a strategy of asking: 1) How much of this characteristic is there now?; 2) How much of the characteristic do you think there should be?; and 3) How important is this characteristic to you?

The interpretations of Lawler and Porter (1967) contributed a major point, with regard to job satisfaction, in distinguishing between intrinsic and extrinsic rewards. This distinction between rewards is an important one. Of implied importance to this distinction is the contribution of these rewards to job satisfaction. Job satisfaction can again be described as a relative phenomenon based on the difference between perceived need fulfillment and perceived expectations with regard to need fulfillment.

Concept of Correspondence Theory

The theory of Work Adjustment was developed by Dawis, England, and Lofquist (1964) and the Industrial Relations Center at the University of Minnesota. The theory as presented by Lofquist and Dawis (1969) is based on the concept of correspondence between individual and environment. "Correspondence can be described in terms of the individual fulfilling the requirements of work environment and the work environment fulfilling the requirements of the individual." (p.45)

Correspondence suggests job satisfaction as a central theme. Job satisfaction might, generally, be defined as the degree to which the environment is fulfilling the requirements of the individual. The Minnesota Satisfaction Questionnaire

was developed to measure the extent to which the job environment met the requirements of the individual. The questionnaire consisted of statements which referred to various aspects of the job. To each statement, the respondent was asked to respond along a continuum of satisfied-dissatisfied.

The major contribution made by this theory, was the development of an instrument to measure job satisfaction in terms of the degree to which job environment is fulfilling the requirements of the individual, thereby describing job satisfaction as a phenomenon which is relative to an individual's evaluation of various aspects of the job.

Instrumentality - Expectancy Theory

The central concepts of expectancy theory as presented by Vroom (1964) are valence, instrumentality, expectancy, and force. Although all of these concepts are central to Vroom's model, only two: valence and instrumentality, are of special concern to this review. The reason for special concern being given to the concept of valence is that the term "job satisfaction" as traditionally used in industrial psychology as the conceptual equivalent of the valence of the job or work role to the person occupying said job or work role. Vroom et al. (1964) defines valence as "affective orientations toward particular outcomes."(p.15) Valence is the feelings of attraction, avoidance, or indifference toward various outcomes or states of nature.

Proposition one of Vroom's model introduces instrumentality in the formulation of job satisfaction when he states, "The valence of an outcome to a person is a monotonically

increasing function of the algebraic sum of the products of the valences of all other outcomes, and his conceptions of its instrumentality for the attainment of these other outcomes.

As extrapolated from proposition one, the conceptualization of job satisfaction is represented by the following equation:

$$JS_j = \sum_{i=1}^{a} (V_i \cdot I_{ji})$$

Where:

JS_j = satisfaction with Job (j)

V_i = valence of second-level outcome;

I_{ji} = instrumentality of Jobj for outcome i

This conceptualization represents job satisfaction as a relative phenomenon and not an absolute. This is evident because an individual's conception of the valence of an outcome may range from a (+1) to a (-1). This is then analogous to satisfaction and dissatisfaction.

It may be recognized, even from a brief review of the literature that in answering the question - "What is job satisfaction?" - science has responded by energetically investigating the nature of the concept of job satisfaction in terms of various hypothesized dynamics.

The understanding of the dynamics involved in the nature of this concept of job satisfaction is, however, by no means solidified. There are common grounds upon which continued research efforts can be based with regard to an attempted better understanding of job satisfaction. When most controversies are removed, the common grounds are reduced to two elements; 1) the dynamics of the situation, and 2) the indivi-

duals' evaluation of these dynamics.

PURPOSE OF STUDY

The termination of the U. S. military draft system has begun an era of voluntary military service. The condition of having to fill the ranks on a volunteer basis, has come to be of great concern to all branches of the military and, in the instance of this study, the United States Air Force. Of particular concern are all the attitudes associated with the retention of qualified personnel.

The ongoing research projects at the Center for Human Appraisal, Wichita State University, and other research institutions have identified job satisfactions as a primary contributor to career attitudes. Consistent with this identified relationship, an effort was made under the auspices of the Air Force Office of Scientific Research, to 1. examine the contributions of various job dimensions in conceptualizing job satisfaction, and 2. develop an instrument for the measurement of job satisfaction with an explicit rationale for interpretation in terms of selected job dimensions.

HYPOTHESES

I Job satisfaction is a multi-dimensional concept.

II All dimensions of the job contribute equally in the conceptualization of job satisfaction.

III All job dimensions function independently of each other in the conceptualization of job satisfaction.

IV Intrinsic dimensions of the job situation contribute more to job satisfaction than factors which are extrinsic to the job situation.

CHAPTER II

METHODOLOGY

Instrument Development

In the development of an instrument to be used in the measurement of job satisfaction, it is first necessary to operationally define job satisfaction. Job satisfaction was operationally defined as the feelings an individual has about his job. Next is the consideration and selection of various dimensions of the job situation which are seen, across studies, as contributors to the nature of the concept of job satisfaction. Various studies concerned with the problem of the dimensionality have identified at least six factors. The six specific dimensions which were ultimately selected for measurement were those which have frequently emerged from prior research. These dimensions are:

Job Context (Wherry, 1954; Dabas, 1958; Harrison, 1961)

Job Content (Baehr, 1954; Ash, 1954; Roach, 1958; Kendall, Smith, Hulin, and Locke, 1963)

People (Roach, 1958; Twery, Schmid, and Wrigley, 1958; Kendall, Smith, Hulin, and Locke, 1963)

Supervision (Baehr, 1954; Ash, 1954; Dabas, 1958; Roach, 1958; Twery, Schmid and Wrigley, 1958; Kahn, 1960; Harrison, 1961; Kendall, Smith, Hulin and Locke, 1963)

Pay (Wherry, 1954; Ash, 1954; Dabas, 1958; Roach, 1958; Kahn, 1960; Harrison, 1961; Kendall, Smith, Hulin and Locke, 1963)

Opportunities for Promotion (Harrison, 1961; Kendall, Smith, Hulin and Locke, 1963)

The Job Dimension Survey (Appendix 1) was developed for the purpose of measuring individual attitudes toward these six

job dimensions. The Job Dimension Survey was composed of bipolar adjective scales which measured the respondents evaluation of each of the six job dimensions along continuous scales (continuous or Likert-type scales were used because these scales are desirable in terms of the factor analytic techniques to be used) which had a range of from 1 to 7. Each scale item then tentatively represented a monotonic relationship to job satisfaction. To reduce the possibility of response sets developing, randomly selected scale items were reversed in terms of their monotonic relationship. The Job Descriptive Index from the Cornell Studies of Satisfaction was utilized as a primary item pool for the selection of adjectives to be utilized in the development of scale items.

Initially there were 73 variables to be measured; 69 of the variables were of bipolar adjective type and 4 satisfaction criteria scales. The satisfaction criteria scales (Table 2) were included to enhance, through analysis, the percentage contribution of job dimensions in the conceptualization of job satisfaction and also to identify the impact of specific dimensions of the job on USAF satisfaction. The first criterion is a direct measure of general satisfaction with the job. The second criterion is a direct measure of the general satisfaction with the USAF. This second criterion scale was considered desirable due to an ancillary objective of determining the impact of job satisfaction on USAF satisfaction. The third criterion measured job satisfaction relative to respondent frame of reference based on the job alternatives available in the USAF only. The fourth criterion measured job satis-

faction relative to respondent frame of reference based on the job alternatives available outside the USAF. The last two criteria scales were designed to measure satisfaction with the job in terms of the degree to which the expectations of the respondent are being met in terms of the two different sets of alternatives.

Sample

The data collected from the job dimension survey was based on a sample (N=102) of minuteman missle operations crew members at Malmstrom AFB, Great Falls, Montana. The Job Dimension Survey (JDS) was administered to the operations crew members at pre-departure briefings and were completed on a volunteer basis during duty time. That is, the JDS was completed on the job in the context of the actual work environment. Subsequent to the completion of the instrument, they were returned to various collection points conveniently located around the base.

Statistical Techniques

Interjudge reliability was performed utilizing complete (100%) agreement among judges (N=5) as the criterion for scale item acceptance. This procedure tested for monotonic relationship of scale items to job satisfaction. Acceptance of each scale item to be included in the Job Dimension Survey was based on unanimous agreement of the judges as to the scale item polarity (Favorable-Unfavorable) in terms of satisfaction. Only scale items which met this criterion for representing a monotonic relationship to job satisfaction were included for further analysis.

To test the reliability of each of the six job dimensions measured by the Job Dimension Survey, a scoring routine was accomplished to obtain dimension scores and instrument total score. The method of rational equivalence (KR formula 20) was then used to estimate the correlation of the Job Dimension Survey with its hypothetical equivalent.

The test for validity involved the correlation of the Job Dimension Survey with one or more outside criteria. The job satisfaction and USAF satisfaction criteria (Direct Measures) were used as "external" criteria. The product-moment correlation between the Job Dimension Survey and the two satisfaction criteria tested the validity of the instrument.

Varimax rotation of factor analysis (factor analysis-BMDX72-Health Sciences Computing Facility, UCLA revised for use at Wichita State University) was incorporated in the analysis to obtain simple structure and identify discriminably different (Orthogonal) job satisfaction and USAF satisfaction which is invariant across studies. This analysis also provided factor percentage contributions to the variance of job and USAF satisfaction. Other products of the Varimax rotation of the factor analysis include: Standard Deviations; Group Means; and Pearson Product Moment Correlation Matrix.

Although many studies have indicated job satisfaction as being a function of discriminably different factors of the job, the relationship between these factors should not be regarded as independent and orthogonal. Given the distinct possibility that the factors of job satisfaction are indeed

correlated, an oblique rotation of the factor analysis was performed by way of a Maxplane Rotation of the Factor Analysis (University of Illinois Maxplane Topographical Rotation Program). The Maxplane Rotation of the Factor Analysis was used to identify the degree to which the factors are correlated.

To add clarity to the factor identity obtained from the Maxplane rotation, hand rotation of the factor analysis was performed by way of a Rotoplot program. Rotoplot is a program designed to visually guide graphical rotations of factors to obtain simple structure and optimize the hyperplane characteristics of the oblique factor analysis. (Rotoplot Program was written and developed by C. A. Burdsal and R. L. Timpe, Dept. of Psychology, Wichita State University).

A final statistical step with regard to the conceptualization of job satisfaction was computed in order to clarify the dynamics of the primary factor relationships it is necessary to continue the statistical analysis by way of second-order factor analysis. This was done by exposing the primary oblique factors to a Varimax rotation of the oblique factors. This identifies discriminably different second-order factors.

A summary of the statistical techniques and their purpose is provided in table 1.

TABLE 1

Statistic	Purpose
Interjudge Reliability	Test scale item monotonic scale relationship to job satisfaction
Method of rational equivalence	Test instrument reliability

(Table 1 Con't)

Statistic	Purpose
Pearson Produce-Moment between instrument and outside criteria	Test instrument validity.
Varimax Rotation of Factor Analysis	Obtain simple structure and identify independent instrument characteristics. Identify % contributions to job and USAF satisfaction.
Maxplane Rotation of Factor Analysis	Obtain correlated model of factor dynamics.
Rotoplot Rotation of Factor Analysis	Refine factor identity and relationship.
Second-Order factor Analysis	Consolidate dependent factor relationship.

CHAPTER III

RESULTS

Interpretation of interjudge reliability resulted in refinement of the Job Dimension Survey through the exclusion of several scale items which did not meet the test criterion. The revised form of the Job Dimension Survey (Appendix 2) consisted of 51 bipolar adjective scale items, and four satisfaction criteria items.

Item means and standard deviation by item are provided in Appendix 43. The mean responses, response frequency distribution and pearson product-moment correlation coefficient for the four satisfaction criteria are found in Table 2.

TABLE 2

Job Satisfaction Criterion I

(Direct Measure)

All things considered, I am satisfied with my present job.

	Strongly Dis-agree	Dis-agree	Disagree More than Agree	Un-Decided	Agree More than Disagree	Agree	Strongly Agree
$\bar{x}$=3.27	1	2	3	4	5	6	7
f(%)=	23	22	16	1	20	15	3

USAF Satisfaction Criterion II

(Direct Measure)

All things considered, I am satisfied with being a member of the USAF.

	Strongly Dis-agree	Dis-agree	Disagree More than Agree	Un-Decided	Agree More than Disagree	Agree	Strongly Agree
$\bar{x}$=4.78	1	2	3	4	5	6	7
f(%)=	5	5	14	11	27	28	10

Job Satisfaction Criterion III

(Relative Measure)

Consider the job opportunities in the Air Force only. In the space below, write in the best (most desirable) and the worst (least desirable) jobs you know of in the Air Force.

Best Job: _____

Worst Job: _____

Now, evaluate your current job in the Air Force in relationship to the "Best Job" and the "Worst Job" in the Air Force. Do this by placing an "X" on the following scale, somewhere between "Best Job" and "Worst Job." The position of your "X" should indicate whether your current Air Force job is more like the "Best Job" in the Air Force or more like the "Worst Job" in the Air Force.

$\bar{x}$=4.97	1	2	3	4	5	6	7	
Best Job								Worst Job
F(%)=	4.9	9.8	13.7	9.8	9.8	19.6	32.4	

****

Job Satisfaction Criterion IV

(Relative Measure)

Consider the job opportunities outside the Air Force. In the space below, write in the best (most desirable) and the worst (least desirable) jobs you know of outside the Air Force.

Best Job: _____

Worst Job: _____

Now, evaluate your current job in the Air Force in relationship to the "Best Job" and the "Worst Job" outside the Air Force. Do this by placing an "X" on the following scale, somewhere between "Best Job" and "Worst Job." The position of your "X" should indicate whether your current Air Force job is more like the "Best Job" outside the Air Force or more like the "Worst Job" outside the Air Force.

$\bar{x}$=4.81	1	2	3	4	5	6	7	
Best Job								Worst Job
F(%)=	2.0	10.7	11.8	15.7	21.6	15.7	22.5	

PEARSON r CORRELATION MATRIX
FOR SATISFACTION CRITERION

Criteria	I	II	III	IV
I	1.00			
II	.532	1.00		
III	-.7135	-.491	1.00	
IV	-.5419	-.589	.677	1.00

It is important to note from the computed mean responses and frequency distribution for the revised form of the Job Dimension Survey that 61% of the S's responded in a dissatisfied manner (negative direction from scale item midpoint) on the Job Satisfaction Criterion (direct measure) and only 24% of the S's responded in a dissatisfied manner (negative direction from scale item midpoint) on the USAF satisfaction criterion (direct measure). These percentages, coupled with a .532 (level of significance + .001) correlation coefficient between the job and USAF criteria, dramatizes again the impact of job satisfaction on USAF satisfaction. This correlation suggests that an increase in job satisfaction will increase USAF satisfaction. Even though the S's were substantially more dissatisfied with their job than they were dissatisfied with the USAF, the positive correlation identifies a significant relationship between the two criteria.

The high correlations between all satisfaction criteria measures suggest a strong relationship among the criteria measures. In addition, these correlations coupled with face validity for Criteria I and Criteria II, support the use of Criteria III and IV scales.

The varimax (orthogonal) rotation of the factor analysis (Guttman criteria of value of roots ≥ 1 was used to approximate the number of factors to be extracted), (Gorsuch, 1974) resulted in the extraction of ten factors. The factors (rotated) were identified as follows:

I Supervision
II Pay
III Work Performed
IV Technological Environment
V Promotion
VI Regional Aspects
VII People
VIII Hours of Work
IX Physical Conditions - Work Unit
X Size of Work Unit - Number of people

Scale items which loaded (salient) on the factors may be seen in Tables 3 - 12 (item directionality is parenthetically identified based on sign of factor loading).

Table 3 shows the salient loadings of items on factor 1. The items, for the most part, loaded on this factor are identified with the instrument dimension measuring various attitudes toward supervision. Factor I is, therefore identified as supervision. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of supervision.

TABLE 3

FACTOR
I

SUPERVISION

Item #	Instrument Dimension	Item Description	Factor Load
39	Supervision	(Unfair)/Fair	-.86805
29	"	Polite/(Impolite	.84916
38	"	Wise/(Foolish)	.82735
28	"	(Bad/Good	-.81035
30	"	Up to Date/(Out of Date)	.80986
36	"	(Annoying)/Helpful	-.78502
31	"	Effective/(Ineffective)	.77344
35	"	Clear Instructions/ (Confusing Instructions)	.77071
37	"	(Awkward)/Tactful	-.76086
34	"	Praises good work/ (Doesn't praise good work)	.69117
33	"	Knows job well/ (Doesn't know job)	.65608
32	"	(Doesn't tell me where I stand)/Tells me where I stand.	-.54943
19	Work Performed	(Lacks respect)/Respected	-.41062
3	Hours of Work	Convenient/(Inconvenient)	.33709

Table 4 shows the salient loadings of items on factor II. All items which loaded on this factor are related to the instrument dimension measuring various attitudes toward pay. Factor II was therefore identified as pay. This factor identifies the dynamic of satisfaction/dissatisfaction which is associated with the job dimension of pay.

TABLE 4

FACTOR
II

PAY

Item #	Instrument Dimension	Item Description	Factor Load
41	Pay	Satisfactory/(Unsatisfactory)	.92502
40	"	Adequate for Normal expenses/ (Inadequate for normal expenses)	.86816
42	"	High/(Low)	.79187
43	"	Provides for luxuries/ (Doesn't provide for luxuries)	.78750
44	"	Fair/(Unfair)	.77001

Table 5 shows the salient Loadings of items on Factor III. Most items which loaded on this factor are related to the instrument dimension measuring attitudes toward work performed. Factor III was therefore identified as work performed. This factor identifies the dynamic of satisfaction/dissatisfaction which is associated with the job dimension of work performed.

TABLE 5

FACTOR
III

WORK PERFORMED

Item #	Instrument Dimension	Item Description	Factor Load
16	Work Performed	Satisfying/(Dissatisfying)	.87500
17	"	Good/(Bad)	.79097
22	"	(Doesn't give sense of	

(Table 5 Con't)

Item #	Instrument Dimension	Item Description	Factor Load
		accomplishment)/Gives sense of accomplishment	-.77621
14	Work Performed	(Boring)/Fascinating	-.72058
15	"	Challenging/(Routine)	.68623
11	Physical Conditions	(Bad)/Good	-.48676
27	People	Happy/(Unhappy)	.43130
20	Work Performed	(Useless)/Useful	-.40220
9	Physical Conditions	Unconfining/(Confining)	.39672
21	Work Performed	Complex/(Simple)	.36359

Table 6 shows the salient loading of items on Factor IV. The items which loaded on this factor are related to various instrument dimensions. The identity of this factor was based on the fact that the highest relative factor loadings were on items related to the aspects of efficiency and practicality with regard to the instrument dimension of physical conditions of the work unit. Technology is seen to be implicity identified in terms of the items of efficiency and practicality. Factor IV was therefore identified as technological environment. This factor identifies a dynamic of satisfaction/dissatisfaction associated with the job Dimension of technological environment.

TABLE 6

FACTOR
IV

TECHNOLOGICAL ENVIRONMENT

Item #	Instrument Dimension	Item Description	Factor Load
12	Physical Conditions	Practical/(Impractical)	.79923
13	"	Efficient/(Inefficient)	.81859
* 6	Size of work Unit	Efficient/(Inefficient)	.47756
18	Work Performed	Dignified/(Undignified)	.44440

*Secondary factor load

Table 7 shows the salient loadings of items on Factor V. The items which loaded on this factor are those that compose the instrument dimension measuring various attitudes toward promotion. Factor V is therefore identified as promotion. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of promotion.

TABLE 7

FACTOR
V

PROMOTION

Item #	Instrument Dimension	Item Description	Factor Load
51	Promotion	Endless/(Dead end)	.79474
49	"	Fair/(Unfair)	.77138
50	"	Unrestricted/(Restricted)	.68842
47	"	(Arbitrary)/Based on Ability	-.65469
46	"	(Bad)/Good	-.64962

(Table 7 Con't)

Item #	Instrument Dimension	Item Description	Factor Load
48	Promotion	(Infrequent)/Frequent	-.52060
45	"	Clear/(Confusing)	.48246

Table 8 shows the salient loadings of items on factor VI. The items loading on this factor are identified with the instrument dimension measuring various attitudes toward regional aspects. Factor VI is therefore identified as regional aspects. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of regional aspects.

TABLE 8

FACTOR
VI

REGIONAL ASPECTS

Item #	Instrument Dimension	Item Description	Factor Load
7	Regional Aspects	Good/(Bad)	.90729
8	"	(Unpleasant)/Pleasant	-.87421

Table 9 shows the salient loadings of items on Factor VII. The items that loaded on this factor are identified with the instrument dimension measuring various attitudes toward people (co-workers). Factor VII is therefore identified as people. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of people.

TABLE 9

FACTOR
VII

PEOPLE

Item #	Instrument Dimension	Item Description	Factor Load
24	People	Irresponsible/(Responsible)	.63316
23	"	Boring/(Stimulating)	.61817
25	"	(Active)/Lazy	-.58862
26	"	Unfriendly/(Friendly)	.42617
*27	"	(Happy)/Unhappy	-.39812

*Secondary factor load

Table 10 shows the salient loadings of items on factor VIII. The items that loaded on this factor are identified with the instrument dimension measuring various attitudes toward hours of work. Factor VIII was therefore identified as hours of work. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of hours of work.

TABLE 10

FACTOR
VIII

HOURS OF WORK

Item #	Instrument Dimension	Item Description	Factor Load
1	Hours of Work	Bad/(Good)	.59935
2	"	(Fair)/Unfair	-.36120
*3	"	(Convenient)/Inconvenient	-.26455

*Secondary factor load

Table 11 shows the salient loadings of items on factor IX. The items that loaded on this factor are identified with the instrument dimension measuring various attitudes toward physical conditions of the work unit. Factor IX is therefore identified as physical conditions of the work unit. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of physical conditions of the work unit.

TABLE 11

FACTOR
IX

PHYSICAL CONDITIONS OF WORK UNIT

Item #	Instrument Dimension	Item Description	Factor Load
10	Physical Conditions	Satisfactory/(Unsatisfactory)	.45904
* 9	"	Unconfining/(Confining)	.29829

*Secondary factor load

Table 12 shows the salient loadings of items on factor X. The items that loaded on this factor are identified with the instrument dimension measuring various attitudes toward size of the work unit. Factor X is identified as size of work unit (# of people). This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of size of the work unit.

TABLE 12

FACTOR
X

SIZE OF WORK UNIT

Item #	Instrument Dimension	Item Description	Factor Load
4	Size of Work Unit	Good/(Bad)	.68248
5	"	(Insufficient)/Sufficient	-.68228
6	"	Efficient/(Inefficient)	.51282

The independent nature of the factors provided, through the varimax rotation of the factor analysis, factor % contribution of factors by criterion (% contribution is obtained by squaring variable factor loadings across factors). A summary graphic representation of these factors and their contributions to criteria I and II may be seen in Appendix 4.

70.6% of the total variance of Criteria I (job satisfaction) was accounted for across the ten factors. The factor rankings (Table 13) identified two factors which contributed significantly. The factor which contributed the most was Work Performed, by way of its contribution of 47.1% to the variance of job satisfaction. Supervision was the factor which ranked second by way of its contribution of 15.1% to the variance of job satisfaction. The remainder of the factors contributed, relative to work performed and supervision, insignificantly to the variance in the job satisfaction criteria.

TABLE 13

All things considered, I am satisfied with my present job.

Strongly Disagree	Disagree	Disagree More than Agree	Un-Decided	Agree More than Disagree	Agree	Strongly Agree
1	2	3	4	5	6	7

Factor	Description	Contribution to Job Satisfaction Criterion
III	Work Performed	47.1
I	Supervision	15.1
V	Promotion	2.9
II	Pay	2.0
VIII	Hours of Work	1.9
X	Size of Work Unit - Number of people	0.7
IV	Technological Environment	0.7
VII	People	0.2
VI	Regional Aspects	0.0
IX	Physical Conditions-Work Unit	0.0
		70.6

The factor ranking for the USAF satisfaction criteria II (direct measure) is presented in Table 14. This ranking identified only one factor which significantly contributed to the variance in USAF satisfaction. The total percentage contribution of the factors to the variance in USAF satisfaction was 51.2%. The factor was work performed and it contributed 23.1% to the variance in USAF satisfaction. The contribution of the remainder of the factors to the variance in USAF satis-

faction were insignificant relative to the contribution made by work performed.

TABLE 14

All things considered, I am satisfied with being a member of the USAF.

Strongly Disagree	Disagree	Disagree More than Agree	Undecided	Agree More than Disagree	Agree	Strongly Agree
1	2	3	4	5	6	7

Factor	Description	Contribution to USAF Satisfaction Criterion II
III	Work Performed	23.1
VIII	Hours of Work	6.4
V	Promotion	5.4
IX	Physical Conditions - Work Unit	4.8
X	Size of Work Unit - Number of People	4.8
I	Supervision	4.4
VI	Regional Aspects	1.4
II	Pay	0.5
IV	Technological Environment	0.3
VII	People	0.1
		51.2

The factor contributions for the Job Satisfaction Criterion III (relative measure) are presented in Table 15. The total percentage contribution of the factors to the variance in Criterion III was 67.6%. These contributions identified only one factor which contributed significantly to the variance in this Job Satisfaction Criterion. The factor was Work Per-

formed and it contributed 44% to the variance in Job Satisfaction. The contributions of the remainder of the factors to the variance in the Job Satisfaction Criterion were insignificant relative to the contribution made by work Performed.

TABLE 15

CRITERIA III
JOB SATISFACTION

(Relative Measure)

Evaluate current job in terms of the opportunities available in the Air Force only.

Best_____Worst

Factor	% Contribution To Job Satisfaction Criterion III (Relative Measure)
1. Supervision	5.7
2. Pay	3.6
3. Work Performed	44.0
4. Technological Environment	.6
5. Promotion	1.9
6. Regional Aspects	1.7
7. People	.1
8. Hours of Work	6.7
9. Physical Conditions	.5
10. Size of Work Unit	2.8
	67.6

The factor contributions for the Job Satisfaction Criterion IV (relative measure) are presented in Table 16. The total percentage contribution of the factors to the variance in Criterion IV was 67.7%. These contributions identified

two factors which seemed to contribute significantly to the variance in this Job Satisfaction Criterion. The factor contributing the most to the variance was again work performed which contributed 27.5% to the variance. The second factor (physical conditions of the work unit) contributed 11.6% to the variance of criterion IV. The contributions of the remainder of the factors were insignificant relative to the contributions made by work performed and physical conditions.

TABLE 16

CRITERION IV
JOB SATISFACTION

(Relative Measure)

Evaluate current job in terms of the opportunities available outside the Air Force.

Best _____ Worst

Factor	% Contribution to job Satisfaction Criteria V (Relative Measure)
1. Supervision	4.6
2. Pay	3.8
3. Work Performed	27.5
4. Technological Environment	.2
5. Promotion	8.8
6. Regional Aspects	.7
7. People	.0
8. Hours of Work	2.8
9. Physical Conditions	11.6
10. Size of Work Unit	7.7
	67.7

The comparison of factor rankings seen in Table 17 identifies changes in relative factor importance between criteria: i.e., although factor IX, physical conditions of the work unit, is relatively unimportant in terms of that factor's contribution to Job Satisfaction Criteria I and II, that factor's contribution to USAF Satisfaction Criterion II and Job Satisfaction Criterion IV was important. The discrepancy of factor ranking between criteria suggests a difference in the impact these factors have on job vs. USAF satisfaction, suggesting also, in terms of these factors, a difference in the conceptualization of job and USAF satisfaction.

TABLE 17

PERCENTAGE CONTRIBUTION FACTOR RANKINGS BY CRITERIA

Factor	Criterion I	Criterion II	Criterion III	Criterion IV
1. Supervision	2	6	3	5
2. Pay	4	8	4	6
3. Work Performed	1	1	1	1
4. Technological Environment	7	9	8	9
5. Promotion	3	3	6	3
6. Regional Aspects	9	7	7	8
7. People	8	10	10	10
8. Hours of Work	5	2	2	7
9. Physical Conditions	10	4	9	2
10. Size of Work Unit	6	5	5	4

Table 18 presents a Spearman Rank correlation matrix based on the factor rankings for all criteria. Some interesting information is provided by this matrix. It can be seen that perhaps the measurement characteristics of Satisfaction Criteria IV were misidentified. The .79 correlation coefficient between USAF and job satisfaction Criteria II and IV (relative measure) implies that one of the Criteria was improperly identified. The .43 correlation coefficient between Job Satisfaction Criterion I (direct measure) and Job Satisfaction Criterion IV (relative measure) implies that one of the criteria was misidentified. These two correlations identify Job Satisfaction Criterion IV (relative measure) as the criterion which may be improperly identified. Criterion IV may in fact be more properly identified as USAF Satisfaction (relative measure).

TABLE 18

SPEARMAN RANK CORRELATION COEFFICIENT

Criteria	I	II	III	IV
I	1.00			
II	.46	1.00		
III	.82	.64	1.00	
IV	.43	.79	.43	1.00

In determining the degree of dependency between factors it was necessary to obliquely rotate the factors by way of the Maxplane rotation of the factor analysis. Subsequent to the Maxplane rotation, 5 Rotoplot rotations of the factor analysis were performed to obtain the best possible simple structure consistent with optimizing the hyperplane count at the .1

level. This analysis identified ten factors and the dependent relationships among these factors. The identity assigned to these factors are:

Factor	Identification
I	SUPERVISION
II	PAY
III	TECHNOLOGICAL ENVIRONMENT
IV	WORK PERFORMED
V	OPPORTUNITIES FOR PROMOTION
VI	REGIONAL ASPECTS
VII	PEOPLE
VIII	COMMITTMENT
IX	HOURS OF WORK
X	SIZE OF WORK UNIT - # OF PEOPLE

The factor identity as shown by the items which loaded on each factor may be seen in Tables 19-28. (Factor Pattern). (Item directionality is parenthetically identified based on sign of factor loading.)

Table 19 shows the salient loadings of items on factor I. The items loading on this factor are identified with the instrument dimension measuring various attitudes toward supervision. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the Job Dimension of Supervision.

TABLE 19

FACTOR
I

SUPERVISION

Item #	Instrument Dimension	Item Description	Factor Loading
39	Supervision	(Unfair)/Fair	-.888
35	"	Clear Instructions/ (Confusing Instructions)	.878
38	"	Wise/(Foolish)	.863
29	"	Polite/(Impolite)	.822
30	"	Up to date.(Out of date)	.818
31	"	Effective/ (Ineffective)	.784
28	"	(Bad)/Good	-.755
34	"	Praises Good Work/(Does Not Praise Good Work)	.750
33	"	Knows job/(Doesn't know Job)	.728
37	"	(Awkward)/Tactful	-.698
36	"	(Annoying)/Helpful	-.681
32	"	(Doesn't tell me)/Tells Me Where I Stand	-.542

Table 20 shows the salient loadings of items on factor II. All items loading on this factor are identified with the instrument dimension measuring various attitudes toward pay. Factor II was therefore identified as pay. This factor identifies the dynamic of satisfaction/dissatisfaction which is associated with the job dimension of pay.

TABLE 20

FACTOR
II

PAY

Item #	Instrument Dimension	Item Description	Factor Loading
41	Pay	Satisfied/(Unsatisfied)	.973
40	"	Adequate/(Inadequate)	.931
43	"	Provides for Luxuries/ (Doesn't Provide for luxuries)	.846
42	"	High/(Low)	.819
44	"	Fair/(Unfair)	.755

Table 21 shows the salient loadings of items on factor III. The items loading on this factor are related to various instrument dimensions. The identity of this factor was based on the fact that the highest relative factor loadings were on items related to the aspects of efficiency and practicality with regard to the instrument dimension of physical conditions of the work unit. Technology is seen as being implicitly identified in terms of these items of efficiency and practicality. Factor III was therefore identified as Technological Environment. This factor identifies a dynamic of satisfaction/ dissatisfaction associated with the job dimension of Technological Environment.

TABLE 21

FACTOR
III

TECHNOLOGICAL ENVIRONMENT

Item #	Instrument Dimension	Item Description	Factor Loading-
13	Work Unit-Physical Conditions	(Efficient)/Inefficient	-.883
12	"	(Practical)/Impractical	-.842
6	Size of Work Unit-# of People	(Efficient)/Inefficient	-.519
18	Work Performed	(Dignified)/Undignified	-.446
19	"	Lacks Respect/(Respected)	.311

Table 22 shows the salient loadings of items on factor IV. The highest relative factor loadings of items which loaded on this factor (in addition to all satisfaction criterion) were related to the instrument dimension measuring attitudes toward work performed. Factor IV was therefore identified as Work Performed. This factor identifies the dynamic of satisfaction/dissatisfaction which is associated with the job dimension of work performed.

TABLE 22

FACTOR
IV

WORK PERFORMED

Item #	Instrument Dimension	Item Description	Factor Loading
16	Work Performed	Satisfying/(Dissatisfying)	.977
17	"	Good/(Bad)	.873

(Table 22 Con't.)

Item #	Instrument Dimension	Item Description	Factor Loading
22	Work Performed	(No accomplishment)/ Accomplishment	-.776
54	Job Satisfaction	Best/(Worst)	.761
52	"	(No)/Yes	-.741
15	Work Performed	Challenging/(Routine)	.675
14	"	(Boring)/Fascinating	-.656
55	USAF Satisfaction	Best/(Worst)	.614
53	"	(No)/Yes	-.576
11	Work Unit	(Bad)/Good	-.512
10	"	Satisfactory/(Unsatisfactory)	.450
9	"	Unconfining/(Confining)	.382
20	Work Performed	(Usless)/Useful	-.316

Table 23 shows the salient loadings of items on factor V, with the exception of one, all items loaded on this factor are related to the instrument dimension measuring attitudes toward opportunities for promotion. Factor V was therefore identified as Opportunities For Promotion. This factor identifies the dynamic of satisfaction/dissatisfaction which is associated with the job dimension of promotion.

TABLE 23

FACTOR
V

OPPORTUNITIES FOR PROMOTION

Item #	Instrument Dimension	Item Description	Factor Loading
50	Promotion	Unrestricted/(Restricted)	.873
51	"	Endless/(Dead End)	.861
49	"	Fair/(Unfair)	.773
46	"	(Bad)/Good	-.663
47	"	(Arbitrary)/Based on Ability	-.630
45	"	Clear/(Confusing)	.528
48	"	(Infrequent)/Frequent	-.466
21	Work Performed	(Complex)/Simple	-.351

Table 24 shows the salient loadings of items on factor VI. The items loading on this factor are identified with the instrument dimension measuring attitudes toward regional aspects. Factor VI is therefore identified as Regional Aspects. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimensions of regional aspects.

TABLE 24

FACTOR
VI

REGIONAL ASPECTS

Item #	Instrument Dimension	Item Description	Factor Loading
7	Regional Aspects	Good/(Bad)	.913
8	"	(Unpleasant)/Pleasant	-.886

Table 25 shows the salient loadings of items on factor VII. The items loading on this factor are identified with the instrument dimension measuring various attitudes toward people (co-workers). Factor VII is therefore identified as people. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of people(co-workers).

TABLE 25

FACTOR
VII

PEOPLE

Item #	Instrument Dimension	Item Description	Factor Loading
23	People	Boring/(Stimulating)	.767
24	"	Irresponsible/(Responsible)	.762
25	"	(Active)/Lazy	-.716
26	"	Unfriendly/(Friendly)	.503
27	"	(Happy)/Unhappy	-.469

Table 26 shows the salient loadings of items on factor VIII. This factor identifies contradictions of item directionality: i.e., USAF Satisfaction criteria loads as positive, while people loads as negative. This relationship implies committment. Therefore this factor is identified as USAF committment. This factor identifies the dynamic of committment non-committment associated with USAF Satisfaction.

TABLE 26

FACTOR
VIII

COMMITTMENT

Item #	Instrument Dimension	Item Description	Factor Loading
*55	Criterion IV USAF Satisfaction	(Best)/Worst	-.453
45	Promotion	Clear/(Confusing)	.412
50	"	Unrestricted/(Restricted)	.400
53	Criterion II USAF Satisfaction	No/(Yes)	.381
32	Supervision	(Doesn't tell me)/Tells Me	-.348
26	People	(Unfriendly)/Friendly	-.281
9	Work Unit-Physical Conditions	Unconfining/(Confining)	.251

*See results for change in measuring characteristics of this criterion.

Table 27 shows the salient loadings of items on factor IX. The items loading primarily on this factor are identified with the instrument dimension measuring attitudes toward hours of work. Factor IX is therefore identified as Hours of Work. This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of hours of work.

TABLE 27

FACTOR
IX

HOURS OF WORK

Item #	Instrument Dimension	Item Description	Factor Loading
1	Hours of Work	(Bad)/Good	-.660
10	Work Unit-Physical Conditions	Satisfactory/(Unsatisfactory)	.556
2	Hours of Work	Fair/(Unfair)	.448
3	"	Convenient/(Inconvenient)	.320
9	Work Unit-Physical Conditions	Unconfining/(Confining)	.304

Table 28 shows the salient loadings of items on factor X. The items primarily loading on this factor are identified with the instrument dimension measuring attitudes toward size of work unit (# of people). Factor X is therefore identified as Size of Work Unit (# of people). This factor identifies the dynamic of satisfaction/dissatisfaction associated with the job dimension of size (# of people) of the work unit.

TABLE 28

FACTOR
X

SIZE OF WORK UNIT - # OF PEOPLE

Item #	Instrument Dimension	Item Description	Factor Loading
4	Size of Work Unit-# of people	Good/(Bad)	.669
5	"	(Insufficient)/Sufficient	-.609

(Table 28 Con't)

Item #	Instrument Dimension	Item Description	Factor Loading
6	Size of Work Unit-# of people	Efficient/(Inefficient)	.535
45	Promotion	Clear/(Confusing)	.418
48	"	Infrequent/(Frequent)	.393

The hyperplane count by factor may be found in Appendix 5. Table 29, below, presents the factor cosines (correlations) between primary (oblique) factors.

TABLE 29

	1	2	3	4	5	6	7	8	9	10
1	1.00									
2	.101	1.00								
3	-.342	-.254	1.00							
4	.507	.255	-.340	1.00						
5	.219	.342	-.204	.202	1.00					
6	.055	.089	-.235	.184	.198	1.00				
7	-.319	-.133	.264	-.567	-.233	-.148	1.00			
8	-.085	-.187	.147	-.066	-.379	-.223	.245	1.00		
9	.421	.170	-.403	.153	.003	.218	-.220	-.160	1.00	
10	-.023	.232	-.278	-.103	.133	.098	-.170	-.443	.368	1.00

For purposes of interpretating the relationships among the factors, it was necessary to continue the factor analysis to obtain second-order factors. This was done by accomplishing a Varimax (orthogonal) rotation of the (oblique) factor analysis. The interpretation of this analysis is based on a compounding of the interpretations made for the oblique primary factors.

The orthogonal rotation of the second-order factor analysis (Guttman criteria of value of roots ≥ 1 was used to approximate the number of factors to be extracted) resulted

in the extraction of two factors. The two factors were identified as (1) Intrinsic Job Satisfaction, and (2) Extrinsic Job Satisfaction. Table 30 presents the Primary factor composition of the two Second-order factors.

TABLE 30

INTRINSIC JOB SATISFACTION

Factor	Factor Loading (reflected sign)
(4) Work Performed	.89214
(1) Supervision	.60879
(7) People	.55329
(3) Technological Environment	.43255

EXTRINSIC JOB SATISFACTION

Factor	Factor Loading (reflected sign)
(10) Size of Work Unit	.77279
(8) committment	.56743
(9) Hours of Work	.40543
(2) Pay	.32679
(5) Promotion	.32403
(6) Regional Aspects	.25540

The second-order factors are identified in terms of the primary factors which loaded on the second-order factors. The first second-order factor contained the primary factors of Work Performed, Supervision, People, and Technological Environment. The identity which was then assigned to this factor was Intrinsic Satisfaction because the primary factors which loaded on this second-order factor were composed of items which were related to Intrinsic dimensions of the job. The second, second-order factor was assigned the identity of Extrinsic Satisfaction because the primary factors which loaded on this second-order factor were composed of items

which were related to extrinsic dimension of the job.

The reliability and validity by instrument dimension was performed based on the items included in the revised form of the Job Dimension Survey. Table 31 shows the results of the reliability and validity tests.

TABLE 31

JOB DIMENSION SURVEY
TEST RELIABILITY (DuBois, 1965)
(KR Formula 20)

SUBSCALE	Rxx
JOB CONTEXT	.834
WORK PERFORMED	.883
PEOPLE	.771
SUPERVISION	.943
PAY	.940
PROMOTION	.869

JOB DIMENSION SURVEY
TEST VALIDITY

SUBSCALE	CRITERION I (Direct Measure) JOB SATISFACTION r	CRITERION II (Direct Measure) USAF SATISFACTION r
JOB CONTEXT	.447	.348
WORK PERFORMED	.717	.442
PEOPLE	.450	.320
SUPERVISION	.562	.348
PAY	.209	.133
PROMOTION	.350	.317
TOTAL	.694	.478

CHAPTER IV

DISCUSSION

The literature has identified job satisfaction as a multidimensional concept. Many dynamics have been hypothesized in investigating the nature of the concept of job satisfaction. The dynamics of the situation and the individual's evaluation of these dynamics were seen from prior research to be "common grounds" upon which an investigation into the conceptualization of job satisfaction could be made.

The purposes of this study were: 1) to develop an instrument for the measurement of job satisfaction, with an explicit rationale for interpretation in terms of selected job dimensions and, 2) examine the contributions of various job dimensions in the conceptualization of job satisfaction. In addition to these purposes, there was an ancillary purpose of determining the relationship between job and organizational (USAF) satisfaction. This purpose was desirable because of the organizational uniqueness of the United States Air Force for whom this study was conducted.

The Job Dimension Survey was systematically developed in fulfilling the purposes of this study. The Job Dimension Survey measured six a priori dimensions of the job which have frequently emerged from prior research. These six dimensions were: 1) Job Context, 2) Job Content, 3) People (co-workers), 4) Supervision, 5) Pay, and, 6) Opportunities for Promotion. Bipolar adjective scales were used to measure the respondents'

evaluation of each of the six selected job dimensions. In addition four "external" criteria scales were used to measure general satisfaction with the job and the USAF. The final form of the Job Dimension Survey may be seen in Appendix 2.

Subsequent to the Job Dimension Survey being administered to 102 minuteman missile operation crew members at Malmstrom AFB, Great Falls, Montana, the data was subjected to factor analysis. The factor analysis was accomplished in three stages: 1) Orthogonal Rotation of the Factor Analysis (Varimax), 2) Oblique Rotation of the Factor Analysis (Maxplane/Rotoplot), 3) Orthogonal Second-Order Factor Analysis (Varimax).

First, a Varimax rotation of the factor analysis was accomplished. This stage of the analysis allowed discriminably different factors to be investigated in terms of simple structure which should be invariant across studies. It also provided the information necessary to conceptualize job satisfaction in terms of discriminably different factor contributions.

Ten factors were statistically extracted from the Job Dimension Survey with the Varimax rotation of the factor analysis. These factors and their percentage contribution to job and USAF satisfaction may be seen in Tables 13 and 14.

The rankings of these factors with regard to 1) Job Satisfaction, and, 2) USAF Satisfaction identified Work Performed as the factor which, when compared to the other factors, contributed the most to the variance of Job Satisfaction and USAF satisfaction. In addition, all four satisfaction criteria

had salient loadings on the Work Performed factor.

Given the distinct possibility that factors of job satisfaction are indeed, correlated and not orthogonal, an oblique rotation of the factor analysis was performed by way of a Maxplane rotation of the factor analysis. This analysis was used to identify the degree to which the factors were correlated. To add clarity to the factor identity obtained from Maxplane, hand rotation was performed by way of Rotoplot. Rotoplot is a program designed to visually guide graphical rotations of factors to obtain simple structure and optimize the hyperplane characteristics of the oblique factor analysis.

The factors identified in this stage of the analysis were:

FACTOR	IDENTIFICATION
I	SUPERVISION
II	PAY
III	TECHNOLOGICAL ENVIRONMENT
IV	WORK PERFORMED
V	OPPORTUNITIES FOR PROMOTION
VI	REGIONAL ASPECTS
VII	PEOPLE
VIII	COMMITTMENT
IX	HOURS OF WORK
X	SIZE OF WORK UNIT-#OF PEOPLE

A particular uniqueness, added in this analysis, was the identification of Factor VIII as Committment. The committment which was identified was particularly related to

USAF, or organizational, satisfaction. This may be implicitly related to the strategic mission characteristics of the sample.

In order to interpret the relationships among these factors, it was necessary to continue the factor analysis to obtain second-order factors. This was done by performing a Varimax rotation of the oblique factor analysis. The interpretation of this analysis is based on a synthesis of the interpretations made for the oblique primary factors. The two factors extracted were identified as Intrinsic Satisfaction and Extrinsic Satisfaction, respectively (see table 30).

Factor I was identified as Intrinsic Satisfaction because the primary oblique factors which loaded on this factor were: 1) Work Performed, 2) Supervision, 3) People, and, 4) Technological Environment. The characteristic which was common to these primary factors is that they are seen to be under the control of the individual. Therefore, this factor was identified as Intrinsic Satisfaction.

Factor II was identified as Extrinsic Satisfaction because the primary oblique factors that loaded on this factor were: 1) Size of Work Unit, 2) Committment, 3) Hours of Work, 4) Pay, 5) Opportunities for Promotion, and, 6) Regional Aspects. The characteristic which was common to these primary factors is that they are seen to be under the control of the organization. Therefore, this factor was identified as Extrinsic Satisfaction.

Any practical value which may be made of this study rests with the reliability and validity of the instrument which was used to collect the data. The reliability of the

Job Dimension Survey was based on the method of rational equivalence (using KR Formula 20) to estimate the correlation of a dimension of the Job Dimension Survey with its hypothetical equivalent. This method of testing reliability is appropriate, given the internally consistent items of each job dimension. It can be seen from Table 31 of the results that the dimensions of the job as measured by the Job Dimension Survey exhibit high reliability.

In addition, the reliability of the instrument can be enhanced by utilizing the factor structure which was identified in the Varimax rotation of the factor analysis. This is appropriate, given the homogeneous (simple structure) characteristics of the factors.

Test validity of the Job Dimension Survey was used to test whether the instrument actually measures what it is supposed to measure. The technique which was used, was the correlations of total Job Dimension scores to "external" Job and USAF Satisfaction Criteria I and II (direct measure). This technique, although it doesn't appeal to a statistical approach to validity, does appeal to a logical approach to measure instrument validity, given the face validity of these two criteria.

The total Job Dimension Survey with its correlation of .694 with the Job Satisfaction Criterion I (direct measure), identifies the Job Dimension Survey as an instrument which measures Job Satisfaction, at least as operationally defined by this study.

To a lesser degree, as indicated by the correlation of

total Job Dimension Survey to the USAF Satisfaction criteria II (direct measure), the instrument is also measuring USAF Satisfaction. The lower validity of the instrument in terms of USAF satisfaction, given that the Job Dimension Survey was developed to measure job satisfaction in terms of the specific dimensions of the job situation which the instrument was to measure, is understandable.

The validity of the instrument was also enhanced through the orthogonal factor analysis. This added support to the instrument validity is found in the 70.6% contribution of the factors to the variance in the Job Satisfaction criteria I (direct measure).

CHAPTER V

CONCLUSIONS

The preceding summary discussion suggests various conclusions which may be drawn with regard to the hypothesized nature of the concept of job satisfaction.

Hypothesis I stated that job satisfaction is a multidimensional concept. Hypothesis II stated that all dimensions of the job contribute equally in the conceptualization of job satisfaction. The Varimax rotation of the factor analysis was performed specifically to test these hypotheses. The interpretation of the Varimax rotation accepted the first hypothesis with the identification of ten discriminably different factors which contributed 70.6% to the variance of job satisfaction. With regard to the second hypothesis the Varimax rotation identified factor percentage contributions to the variance in job satisfaction. These factor percentage contributions rejected hypothesis II due to the significant differences of factor percentage contributions.

Hypothesis III posited that the various dimensions that constitute job satisfaction operate independent of each other. An oblique factor analysis was performed to test this hypothesis. The oblique factor analysis rejected this hypothesis because relevant factor cosines (correlations) among these factors, indeed, identified various primary oblique factors as being correlated: e.g.) a factor cosine of -.567 between Work Performed and People (co-workers). It is, however, interesting to note that the factor structure of the

oblique factor analysis was relatively the same as in the orthogonal factor analysis. Therefore, these dimensions are discriminably different. However, they don't function independently in the conceptualization of job satisfaction.

Hypothesis IV stated that intrinsic dimensions of the job situation contribute more to job satisfaction than factors which are extrinsic to the job situation. The second-order factor analysis tested and accepted this hypothesis. The acceptance of this hypothesis is based on the composition of the primary oblique factors that loaded on the second-order factors. With regard to this, it should be noted that Work Performed loaded .89214 on second-order factor I and the primary factor of work performed contained the highest loadings for all of the satisfaction criteria. Therefore it may be interpreted that second-order factor I, identified as Intrinsic Satisfaction, is highly related to both job and organizational (USAF) satisfaction. Additionally it should be noted with regard to second-order factor II - Extrinsic Satisfaction that none of the primary oblique factors which loaded on this factor contained relevant job satisfaction criteria loadings. However, the oblique primary factor of commitment contained highly relevant loadings for (USAF) organizational satisfaction criteria.

Given the preceding interpretations, hypothesis IV was not only accepted but expanded to read: Intrinsic dimensions of the job situation are highly related to both job and organization satisfaction while Extrinsic dimensions of the job are primarily related to organizational (USAF) satis-

faction.

The conclusions of the study may be summed up in four statements: 1) Job satisfaction is a multi-dimensional concept; 2) Job dimensions contribute in varying degrees to the conceptualization of job satisfaction; 3) Job dimensions function dependently in the conceptualization of job satisfaction; and, 4) Intrinsic dimensions of the job situation are highly related to both job and organizational satisfaction while Extrinsic dimensions of the job situation are primarily related to organizational satisfaction.

IMPLICATIONS

The implications of this study are primarily theoretical and embodied in the degree to which the concept of job satisfaction is clarified. Prior research has added controversy upon controversy in attempting to understand the concept of job satisfaction. These controversies rest largely in debates of replication due to differing methodological strategies. The constructs of job satisfaction are, however, consistently identifiable and were used in this study for the purpose of adding clarity to complexity. This was systematically accomplished by taking the dynamics of job satisfaction which had been identified in research by Herzberg, Vroom, Kendall, Smith, Hulin and Locke, Porter and Lawler, Lofquist and Dawis; and adding to the identification of these dynamics the relationships among these dynamics. The relationships among these dynamics, in the form of intrinsic and extrinsic second-order factors do indeed add clarity to the concept of job satisfaction. As Lawler and Porter (1967) suggested in

the identification of intrinsic and extrinsic reward systems, the concept of job satisfaction may be clarified by way of interrelationships among job dynamics into intrinsic and extrinsic satisfactions.

In addition to identifying dynamics of Intrinsic and Extrinsic satisfaction, the findings of this study also suggest that: 1) satisfaction associated with extrinsic dimensions of the job are related to organizational (USAF) satisfaction and, 2) satisfaction associated with intrinsic dimensions of the job are related to both job and organizational satisfaction. The implication of this is that in the development of job and/or organization satisfaction, the intrinsic dimensions of the job should receive the highest priority in decisions relating to the job situation.

LIMITATIONS

This study was the first step in a programmatic research effort to be conducted by the Center for Human Appraisal, Wichita State University, to theoretically investigate the dynamics of job satisfaction. It isn't atypical, given the nature of this study, that limitations be identified in terms of, 1) sample, and, 2) instrument validity.

To remove the possible effects of limitations arising from methodological design, it will be necessary to undertake several additional research steps. The first step will be to administer the instrument to a much larger sample which includes samples from both military and civilian populations. The second step will be to search and find job and organizational satisfaction criteria which are indeed external: i.e.,

performance and retention. The third step will be to generate normative tables for comparative purposes. This third step is by no means final, for research is a never ending cycle of limitations.

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APPENDIX
I

ORIGINAL FORM OF JOB DIMENSION SURVEY

JOB DIMENSION SURVEY

CENTER FOR HUMAN APPRAISAL

WICHITA STATE UNIVERSITY

AS A MEMBER OF THE U.S. AIR FORCE YOUR ATTITUDES AND OPINIONS ABOUT YOUR JOB IN THE MILITARY ARE IMPORTANT. THE PURPOSE OF THIS SURVEY IS TO ELICIT YOUR CANDID EVALUATION OF VARIOUS DIMENSIONS OF YOUR CURRENT AIR FORCE JOB. PARTICIPATION IN THIS RESEARCH IS STRICTLY VOLUNTARY AND INDIVIDUAL ANONYMITY IS GUARANTEED.

I

Think of your job context (the environment in which you work). What is it like? Then circle the number along each scale which best represents your description of the following factors.

HOURS OF WORK

Bad	1----2----3----4----5----6----7	Good
Fair	1----2----3----4----5----6----7	Unfair
Convenient	1----2----3----4----5----6----7	Inconvenient
Too long	1----2----3----4----5----6----7	Too short
Regular	1----2----3----4----5----6----7	Irregular

SIZE OF WORK UNIT (number of people)

Good	1----2----3----4----5----6----7	Bad
Too large	1----2----3----4----5----6----7	Too small
Insufficient	1----2----3----4----5----6----7	Sufficient
Efficient	1----2----3----4----5----6----7	Inefficient

REGIONAL ASPECTS (Geographical Location)

Good	1----2----3----4----5----6----7	Bad
Unpleasant	1----2----3----4----5----6----7	Pleasant
Isolated	1----2----3----4----5----6----7	Convenient

WORK UNIT (Physical Conditions)

Unconfining	1----2----3----4----5----6----7	Confining
Satisfactory	1----2----3----4----5----6----7	Unsatisfactory
Bad	1----2----3----4----5----6----7	Good
Practical	1----2----3----4----5----6----7	Impractical
Efficient	1----2----3----4----5----6----7	Inefficient

II

Think of the work that you perform. Then circle the number along each scale which best approximates your description of work on your present job.

Boring	1----2----3----4----5----6----7	Fascinating
Challenging	1----2----3----4----5----6----7	Routine
Satisfying	1----2----3----4----5----6----7	Dissatisfying
Good	1----2----3----4----5----6----7	Bad
Dignified	1----2----3----4----5----6----7	Undignified
Lacks respect	1----2----3----4----5----6----7	Respected
Useless	1----2----3----4----5----6----7	Useful
Clear	1----2----3----4----5----6----7	Confusing
Complex	1----2----3----4----5----6----7	Simple
Doesn't give sense of accomplishment	1----2----3----4----5----6----7	Gives sense of accomplishment

III

Think of the majority of the people that you work with now or the people you meet in connection with your work. Then circle the number along each scale which best approximates your description of people on your present job.

Unpredictable	1----2----3----4----5----6----7	Predictable
Boring	1----2----3----4----5----6----7	Stimulating
Slow	1----2----3----4----5----6----7	Fast
Unambitious	1----2----3----4----5----6----7	Ambitious
Irresponsible	1----2----3----4----5----6----7	Responsible
Active	1----2----3----4----5----6----7	Lazy
Disloyal	1----2----3----4----5----6----7	Loyal
Unfriendly	1----2----3----4----5----6----7	Friendly
Disrespectful	1----2----3----4----5----6----7	Respectful
Happy	1----2----3----4----5----6----7	Unhappy

IV

Think of the kind of supervision that you get on your job. Then circle the number along each scale which best approximates your description of supervision on your present job.

Dull	1----2----3----4----5----6----7	Intelligent
Lazy	1----2----3----4----5----6----7	Active
Bad	1----2----3----4----5----6----7	Good
Polite	1----2----3----4----5----6----7	Impolite
Up to date	1----2----3----4----5----6----7	Out of date
Effective	1----2----3----4----5----6----7	Ineffective
Doesn't tell me where I stand	1----2----3----4----5----6----7	Tells me where I stand
Never around when needed	1----2----3----4----5----6----7	Always around when needed
Knows job well	1----2----3----4----5----6----7	Doesn't know job
Praises good work	1----2----3----4----5----6----7	Doesn't praise good work
Clear instructions	1----2----3----4----5----6----7	Confusing instructions
Annoying	1----2----3----4----5----6----7	Helpful
Awkward	1----2----3----4----5----6----7	Tactful
Nervous	1----2----3----4----5----6----7	Relaxed
Wise	1----2----3----4----5----6----7	Foolish
Unfair	1----2----3----4----5----6----7	Fair

V

Think of the pay you get now. Then circle the number along each scale which best approximates your description of your present pay.

Adequate for normal expenses	1----2----3----4----5----6----7	Inadequate for normal expenses
Satisfactory	1----2----3----4----5----6----7	Unsatisfactory
Good	1----2----3----4----5----6----7	Bad
Underpaid	1----2----3----4----5----6----7	Overpaid
High	1----2----3----4----5----6----7	Low
Provides for luxuries	1----2----3----4----5----6----7	Doesn't provide for luxuries
Fair	1----2----3----4----5----6----7	Unfair

VI

Think of the opportunities for promotion that you have now. Then circle the number along each scale which best approximates your description of promotion opportunities.

Clear	1----2----3----4----5----6----7	Confusing
Bad	1----2----3----4----5----6----7	Good
Irregular	1----2----3----4----5----6----7	Regular
Arbitrary	1----2----3----4----5----6----7	Based on ability
Infrequent	1----2----3----4----5----6----7	Frequent
Fair	1----2----3----4----5----6----7	Unfair
Unlimited	1----2----3----4----5----6----7	Limited
Unrestricted	1----2----3----4----5----6----7	Restricted
Endless	1----2----3----4----5----6----7	Dead end

VII

Rank the following (1 thru 6) in terms of the worst and best job realistically available to you. ("1" being most important in determining the worst/best job and "6" being least important in determining worst/best job.

WORST		BEST	
People	_____	People	_____
Pay	_____	Pay	_____
Promotion	_____	Promotion	_____
The work itself	_____	The work itself	_____
Supervision	_____	Supervision	_____
Context of work	_____	Context of work	_____

In terms of your present job; Rank the following: (1 thru 6) ("1" representing what you like about your job most and "6" representing what you dislike about your job.)

PRESENT	
People	_____
Pay	_____
Promotion	_____
The work itself	_____
Supervision	_____
Context of work	_____

J S S

How much do you agree or disagree with the following statements? Mark your answer by circling the number of the response which most closely corresponds to your feelings.

I. *All things considered, I am satisfied with my present job.*

Strongly Disagree	Disagree	Disagree More than Agree	Un-Decided	Agree More than Disagree	Agree	Strongly Agree
1	2	3	4	5	6	7

Ia. *All things considered, I am satisfied with being a member of the USAF.*

Strongly Disagree	Disagree	Disagree More than Agree	Un-Decided	Agree More than Disagree	Agree	Strongly Agree
1	2	3	4	5	6	7

****

II. Consider the job opportunities *in the Air Force only.* In the spaces below, write in the best (most desirable) and the worst (least desirable) jobs you know of in the Air Force.

Best Job: _

Worst Job: _

Now, evaluate your current job in the Air Force in relationship to the "Best Job" and the "Worst Job" in the Air Force. Do this by placing an "X" on the following scale, somewhere between "Best Job" and "Worst Job". The position of your "X" should indicate whether your current Air Force job is more like the "Best Job" in the Air Force or more like the "Worst Job" in the Air Force.

Best Job _____ Worst Job

****

III. Consider the job opportunities *outside the Air Force.* In the spaces below, write in the best (most desirable) and the worst (least desirable) jobs you know of outside the Air Force.

Best Job: _

Worst Job: _

Now, evaluate your current job in the Air Force in relationship to the "Best Job" and the "Worst Job" outside the Air Force. Do this by placing an "X" on the following scale, somewhere between "Best Job" and "Worst Job". The position of your "X" should indicate whether your current Air Force job is more like the "Best Job" outside the Air Force or more like the "Worst Job" outside the Air Force.

Best Job _____ Worst Job

****

APPENDIX
II

REVISED FORM OF JOB DIMENSION SURVEY

JOB DIMENSION SURVEY

Center For Human Appraisal
Wichita State University

AS A MEMBER OF THE U.S. AIR FORCE YOUR ATTITUDES AND OPINIONS ABOUT YOUR JOB IN THE MILITARY ARE IMPORTANT. THE PURPOSE OF THIS SURVEY IS TO ELICIT YOUR CANDID EVALUATION OF VARIOUS DIMENSIONS OF YOUR CURRENT AIR FORCE JOB. PARTICIPATION IN THIS RESEARCH IS STRICTLY VOLUNTARY AND INDIVIDUAL ANONYMITY IS GUARANTEED.

Consider *your job context (the environment in which you work)*. What is it like? Then circle the number along each scale which best represents your description of the following factors.

HOURS OF WORK

Bad	1----2----3----4----5----6----7	Good
Fair	1----2----3----4----5----6----7	Unfair
Convenient	1----2----3----4----5----6----7	Inconvenient

SIZE OF WORK UNIT (number of people)

Good	1----2----3----4----5----6----7	Bad
Insufficient	1----2----3----4----5----6----7	Sufficient
Efficient	1----2----3----4----5----6----7	Inefficient

REGIONAL ASPECTS (Geographical Location)

Good	1----2----3----4----5----6----7	Bad
Unpleasant	1----2----3----4----5----6----7	Pleasant

WORK UNIT (Physical Conditions)

Unconfining	1----2----3----4----5----6----7	Confining
Satisfactory	1----2----3----4----5----6----7	Unsatisfactory
Bad	1----2----3----4----5----6----7	Good
Practical	1----2----3----4----5----6----7	Impractical
Efficient	1----2----3----4----5----6----7	Inefficient

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Consider the *work that you perform*. Then circle the number along each scale which best approximates your description of work on your present job.

Boring	1----2----3----4----5----6----7	Fascinating
Challenging	1----2----3----4----5----6----7	Routine
Satisfying	1----2----3----4----5----6----7	Dissatisfying
Good	1----2----3----4----5----6----7	Bad
Dignified	1----2----3----4----5----6----7	Undignified
Lacks respect	1----2----3----4----5----6----7	Respected
Useless	1----2----3----4----5----6----7	Useful
Complex	1----2----3----4----5----6----7	Simple
Doesn't give sense of accomplishment	1----2----3----4----5----6----7	Gives sense of accomplishment

Consider the people that you work with on a regular basis. Then circle the number along each scale which best approximates *your description of people on your present job*.

Boring	1----2----3----4----5----6----7	Stimulating
Irresponsible	1----2----3----4----5----6----7	Responsible
Active	1----2----3----4----5----6----7	Lazy
Unfriendly	1----2----3----4----5----6----7	Friendly
Happy	1----2----3----4----5----6----7	Unhappy

Consider the supervision you receive on your job. Then circle the number along each scale which best approximates your description of *supervision on your present job*.

Bad	1----2----3----4----5----6----7	Good
Polite	1----2----3----4----5----6----7	Impolite
Up to date	1----2----3----4----5----6----7	Out of date
Effective	1----2----3----4----5----6----7	Ineffective
Doesn't tell me where I stand	1----2----3----4----5----6----7	Tells me where I stand
Knows job well	1----2----3----4----5----6----7	Doesn't know job
Praises good work	1----2----3----4----5----6----7	Doesn't praise good work
Clear instructions	1----2----3----4----5----6----7	Confusing instructions
Annoying	1----2----3----4----5----6----7	Helpful
Awkward	1----2----3----4----5----6----7	Tactful
Wise	1----2----3----4----5----6----7	Foolish
Unfair	1----2----3----4----5----6----7	Fair

Consider your *present pay*. Then circle the number along each scale which best approximates your description of the pay you are presently receiving.

Adequate for normal expenses	1----2----3----4----5----6----7	Inadequate for normal expenses
Satisfactory	1----2----3----4----5----6----7	Unsatisfactory
High	1----2----3----4----5----6----7	Low
Provides for luxuries	1----2----3----4----5----6----7	Doesn't provide for luxuries
Fair	1----2----3----4----5----6----7	Unfair

Consider the *opportunities for promotion* that your job provides. Then circle the number along each scale which best approximates your description of promotion opportunities.

Clear	1----2----3----4----5----6----7	Confusing
Bad	1----2----3----4----5----6----7	Good
Arbitrary	1----2----3----4----5----6----7	Based on ability
Infrequent	1----2----3----4----5----6----7	Frequent
Fair	1----2----3----4----5----6----7	Unfair
Unrestricted	1----2----3----4----5----6----7	Restricted
Endless	1----2----3----4----5----6----7	Dead end

****

In this section various statements are presented. Your task is to determine the extent to which you agree or disagree with each statement. Mark your answer by circling the number of the response which most closely corresponds to your feelings.

All things considered, I am satisfied with my present job.

Strongly Disagree	Disagree	Disagree More than Agree	Un-Decided	Agree More than Disagree	Agree	Strongly Agree
1	2	3	4	5	6	7

All things considered, I am satisfied with being a member of the USAF.

Strongly Disagree	Disagree	Disagree More than Agree	Un-Decided	Agree More than Disagree	Agree	Strongly Agree
1	2	3	4	5	6	7

****

Consider the job opportunities *in the Air Force only*. In the spaces below, write in the best (most desirable) and the worst (least desirable) jobs you know of in the Air Force.

Best Job: _____

Worst Job: _____

Now, evaluate your current job in the Air Force in relationship to the "Best Job" and the "Worst Job" in the Air Force. Do this by placing an "X" on the following scale, somewhere between "Best Job" and "Worst Job". The position of your "X" should indicate whether your current Air Force job is more like the "Best Job" in the Air Force or more like the "Worst Job" in the Air Force.

Best Job _____ Worst Job

****

Consider the job opportunities *outside the Air Force*. In the spaces below, write in the best (most desirable) and the worst (least desirable) jobs you know of outside the Air Force.

Best Job: _____

Worst Job: _____

Now, evaluate your current job in the Air Force in relationship to the "Best Job" and the "Worst Job" *outside the Air Force*. Do this by placing an "X" on the following scale, somewhere between "Best Job" and "Worst Job". The position of your "X" should indicate whether your current Air Force job is more like the "Best Job" outside the Air Force or more like the "Worst Job" outside the Air Force.

Best Job _____ Worst Job

****

BACKGROUND INFORMATION

1) Male ____ Female ____ 2) Date of Birth _____

3) Married ____ Single ____ Divorced ____ Separated ____

4) Education: (Circle the highest year of schooling that you have completed)

4 5 6 7 8	9 10 11 12	13 14 15 16	16+
Grade School	High School	College	College Post-Grad.

5) Rank _____ 6) Time in Grade _____

7) Date of Entry (USAF) _____ 8) AFSC _____

9) Length of time in present AFSC _____

10) Length of time at present duty station _____

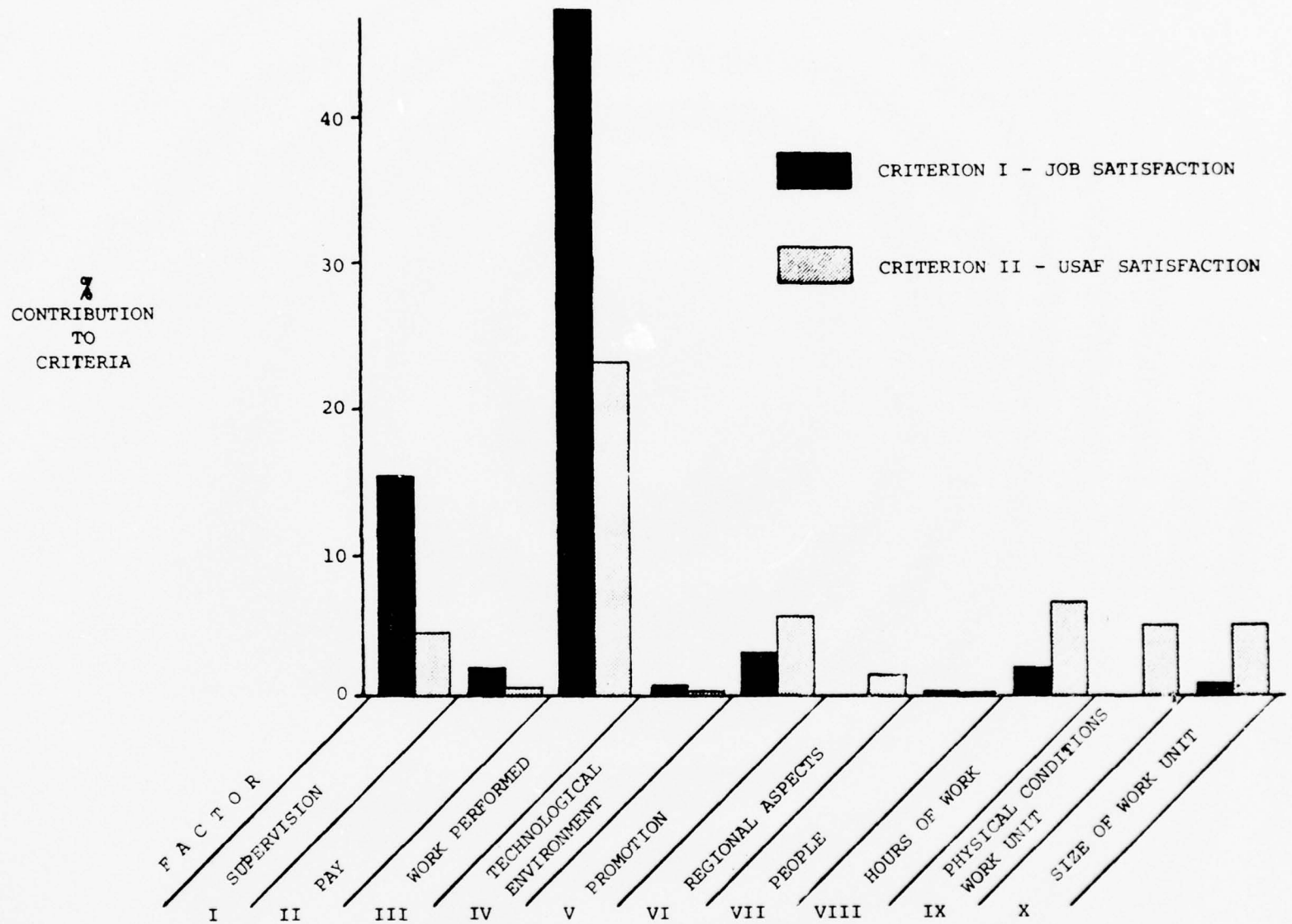
APPENDIX
III

ITEM MEANS AND STANDARD DEVIATIONS

VARIABLE #	MEAN	STANDARD DEVIATION	VARIABLE #	MEAN	STANDARD DEVIATION
1	3.4	1.8	29	4.1	1.6
2	4.2	1.5	30	4.5	1.8
3	5.3	1.6	31	4.6	1.7
4	3.3	1.9	32	3.9	1.7
5	4.3	1.9	33	4.3	1.9
6	3.4	1.8	34	4.4	1.8
7	3.2	2.1	35	4.1	1.6
8	4.7	1.8	36	3.1	1.7
9	6.3	1.1	37	3.5	1.6
10	4.7	1.5	38	4.4	1.5
11	3.2	1.6	39	3.6	1.8
12	3.9	1.7	40	2.5	1.4
13	3.8	1.7	41	2.8	1.5
14	2.1	1.4	42	3.8	1.1
15	5.5	1.7	43	3.8	1.5
16	5.1	1.6	44	3.4	1.4
17	4.6	1.6	45	4.3	1.8
18	4.2	1.6	46	3.8	1.5
19	3.5	1.8	47	3.0	1.3
20	5.3	1.5	48	3.2	1.2
21	3.9	1.9	49	4.4	1.3
22	2.5	1.8	50	5.4	1.2
23	3.9	1.3	51	4.5	1.2
24	4.9	1.5	52	3.2	1.9
25	3.7	1.5	53	4.7	1.5
26	5.2	1.3	54	4.9	1.9
27	4.8	1.6	55	4.8	1.7
28	3.4	1.7			

APPENDIX
IV

GRAPHIC REPRESENTATION OF FACTOR CONTRIBUTIONS
TO JOB AND USAF SATISFACTION


%
CONTRIBUTION
TO
CRITERIA
40
30
20
10
0
CRITERION I - JOB SATISFACTION
CRITERION II - USAF SATISFACTION
FACTOR
I SUPERVISION
II PAY
III WORK PERFORMED
IV TECHNOLOGICAL ENVIRONMENT
V PROMOTION
VI REGIONAL ASPECTS
VII PEOPLE
VIII HOURS OF WORK
IX PHYSICAL CONDITIONS
X WORK UNIT
SIZE OF WORK UNIT

APPENDIX
V

OBLIQUE FACTOR HYPERPLANE COUNT

HYPERPLANE COUNT

FACTOR	.20 %	.10 %	.05 %
1	74	65	40
2	89	81	52
3	85	54	30
4	76	65	30
5	81	72	45
6	96	76	47
7	85	74	45
8	81	70	36
9	83	69	41
10	87	74	41

APPENDIX
VI

PEARSON r CORRELATION MATRIX

	1	2	3	4	5
1	1.00000				
2	-0.48980	1.00000			
3	-0.43830	0.37184	1.00000		
4	-0.12698	0.25298	0.16594	1.00000	
5	0.05654	-0.27025	-0.16705	-0.65334	1.00000
6	0.03254	0.20870	0.09579	0.46122	-0.58119
7	-0.29281	0.13187	0.17557	0.09393	-0.15000
8	0.25691	-0.17294	-0.16038	-0.06683	0.12697
9	-0.32639	0.29930	0.27379	0.11055	0.01642
10	-0.50799	0.46745	0.41837	0.36279	-0.24936
11	0.46512	-0.41217	-0.31769	-0.18880	0.21129
12	-0.31163	0.30570	0.20030	0.29565	-0.32252
13	-0.21108	0.26173	0.17873	0.35012	-0.39988
14	0.28455	-0.16425	-0.33960	-0.02211	-0.04049
15	-0.26507	0.17436	0.24793	0.02355	0.02564
16	-0.31271	0.17315	0.29088	0.08045	-0.03203
17	-0.36287	0.21172	0.31754	0.12058	-0.05867
18	-0.27572	0.39070	0.28846	0.22942	-0.19260
19	0.40777	-0.39174	-0.40948	-0.21059	0.27561
20	0.12499	-0.24668	-0.13009	-0.24932	0.21676
21	0.01193	0.04121	0.14803	-0.23050	0.17741
22	0.32956	-0.20409	-0.36175	-0.08144	0.04351
23	0.18253	-0.20291	-0.19220	-0.09967	0.11780
24	0.23568	-0.33966	-0.29553	-0.16200	0.25841
25	-0.16470	0.13209	0.26355	0.09953	-0.11115
26	0.18800	-0.13152	-0.24044	-0.11396	0.12695
27	-0.21590	0.29777	0.29728	0.20746	-0.14442
28	0.44194	-0.39039	-0.30680	-0.12130	0.04826
29	-0.48770	0.42324	0.40683	0.30401	-0.15059
30	-0.48014	0.34130	0.35922	0.20168	-0.25249
31	-0.31382	0.21415	0.32746	0.04494	-0.01700
32	0.11834	-0.24065	-0.16745	-0.01605	-0.00317
33	-0.33169	0.31906	0.34060	0.10148	-0.19342
34	-0.30996	0.17621	0.37489	0.01271	-0.02631
35	-0.27064	0.25048	0.22689	0.12615	0.00390
36	0.43587	-0.39267	-0.31613	-0.14218	0.02182
37	0.42360	-0.27259	-0.32711	-0.11865	0.07204
38	-0.38068	0.34532	0.38924	0.09298	-0.00679
39	0.37734	-0.29951	-0.32067	-0.12651	0.05204
40	0.06154	0.06933	0.06241	0.13828	-0.21262
41	-0.01632	0.16001	0.12059	0.17808	-0.20727
42	0.04361	0.05548	0.06482	0.06554	-0.12433
43	-0.00565	0.09005	0.04113	0.10705	-0.11050
44	-0.10005	0.18324	0.08511	0.05708	-0.17212
45	-0.14825	0.17938	0.18810	0.28035	-0.22881
46	0.21366	-0.16318	-0.08606	-0.03395	0.09429
47	0.27169	-0.11309	-0.12726	0.05071	0.10732
48	0.21600	-0.10262	-0.13979	0.01969	0.02814
49	-0.10565	0.01358	0.04906	0.03348	-0.11191
50	-0.09706	0.18022	0.20909	0.12179	-0.07746
51	-0.16033	0.17470	0.04721	0.15098	-0.11153
52	0.41976	-0.24203	-0.37210	-0.10424	0.08561
53	0.34018	-0.22159	-0.21007	-0.20809	0.13737
54	-0.42610	0.34535	0.45513	0.15426	-0.22940
55	-0.32577	0.20695	0.20542	0.20901	-0.28623

	6	7	8	9	10
6	1.00000				
7	0.10271	1.00000			
8	-0.19695	-0.84377	1.00000		
9	-0.05921	0.18740	-0.15627	1.00000	
10	0.15392	0.26246	-0.15048	0.50899	1.00000
11	-0.20234	-0.33154	0.30758	-0.50878	-0.70991
12	0.40463	0.12392	-0.12405	0.28685	0.60582
13	0.50434	0.14574	-0.17056	0.20087	0.50889
14	-0.06165	-0.10949	0.11199	-0.53335	-0.35102
15	0.02620	0.11490	-0.10593	0.36868	0.36999
16	0.01894	0.15153	-0.09776	0.42293	0.44033
17	0.03262	0.19882	-0.13481	0.45906	0.53915
18	0.25354	0.13110	-0.14597	0.30640	0.40145
19	-0.21795	-0.23635	0.23470	-0.33454	-0.47075
20	-0.20652	-0.07973	0.03607	-0.15055	-0.30428
21	-0.00138	-0.01937	0.03902	0.23472	0.13759
22	-0.09849	-0.12558	0.12967	-0.45346	-0.45502
23	-0.09813	-0.03479	0.10343	-0.23745	-0.17419
24	-0.20930	-0.09211	0.12944	-0.08709	-0.16769
25	-0.03221	0.06387	0.01350	0.26018	0.17284
26	-0.04278	-0.09306	0.07903	-0.11407	-0.34182
27	0.14935	0.20392	-0.15838	0.36726	0.46798
28	-0.05811	-0.10827	0.13363	-0.45819	-0.46410
29	0.13453	0.06164	-0.08128	0.35885	0.45211
30	0.12916	0.13081	-0.11676	0.35050	0.43457
31	0.06459	0.05434	-0.03610	0.41770	0.43562
32	0.13842	-0.03562	-0.00323	-0.33499	-0.34253
33	0.17112	0.10635	-0.18850	0.17459	0.27669
34	-0.06297	0.15230	-0.10749	0.29614	0.33735
35	0.00483	0.05184	-0.04374	0.27343	0.36488
36	0.01548	0.01907	0.03454	-0.45017	-0.41667
37	-0.02575	-0.04981	0.10045	-0.44525	-0.41549
38	0.00344	-0.01593	-0.06763	0.32977	0.40931
39	-0.02187	-0.00074	-0.00321	-0.29914	-0.39087
40	0.14955	0.06440	-0.08982	-0.03093	0.19182
41	0.16710	0.08827	-0.12662	-0.01039	0.26500
42	0.08533	-0.03224	0.00243	0.06241	0.18535
43	-0.02089	0.06718	-0.09572	0.01810	0.16625
44	0.20000	0.10606	-0.14170	0.05074	0.28419
45	0.21790	0.21847	-0.12658	0.16120	0.34018
46	-0.06515	-0.20478	0.20907	-0.11839	-0.24271
47	0.02709	-0.25903	0.19735	-0.19467	-0.16442
48	-0.02151	-0.14546	0.11531	-0.21995	-0.20788
49	0.03254	0.17561	-0.20764	0.17856	0.11763
50	-0.02147	0.00022	0.04865	0.23119	0.21927
51	0.07326	0.04433	-0.03181	0.16060	0.20547
52	-0.06362	-0.14660	0.11740	-0.34227	-0.53565
53	-0.05431	-0.22776	0.20503	-0.18582	-0.26316
54	0.10909	0.22421	-0.21954	0.31313	0.45916
55	0.13881	0.20408	-0.18190	0.21707	0.20918

	11	12	13	14	15
11	1.00000				
12	-0.59150	1.00000			
13	-0.49561	0.79039	1.00000		
14	0.45389	-0.24162	-0.12628	1.00000	
15	-0.41447	0.23617	0.05924	-0.73765	1.00000
16	-0.51206	0.17157	0.04041	-0.70131	0.67174
17	-0.55754	0.28718	0.22546	-0.66514	0.55298
18	-0.44135	0.50624	0.42594	-0.42356	0.30413
19	0.55302	-0.43380	-0.38086	0.44339	-0.39740
20	0.30476	-0.35212	-0.33337	0.22062	-0.27468
21	-0.11832	-0.03893	-0.03911	-0.42279	0.39284
22	0.49336	-0.29609	-0.20310	0.72726	-0.59588
23	0.25734	-0.08161	-0.04981	0.34040	-0.29037
24	0.18446	-0.15521	-0.12994	0.20446	-0.24561
25	-0.12325	-0.01738	-0.12164	-0.27395	0.17968
26	0.32179	-0.17830	-0.13088	0.21879	-0.24667
27	-0.35110	0.26006	0.17928	-0.45417	0.38101
28	0.47417	-0.29939	-0.21777	0.32582	-0.30818
29	-0.33032	0.28508	0.31027	-0.25708	0.22800
30	-0.42384	0.37103	0.31972	-0.33498	0.30211
31	-0.41192	0.36595	0.24475	-0.46524	0.45255
32	0.33543	-0.07269	-0.10802	0.14858	-0.26898
33	-0.34642	0.28736	0.22869	-0.30236	0.25193
34	-0.32110	0.11793	0.06461	-0.36948	0.24236
35	-0.29512	0.20004	0.08698	-0.33989	0.33301
36	0.43034	-0.25908	-0.21469	0.41529	-0.32628
37	0.43382	-0.32205	-0.24569	0.42105	-0.30955
38	-0.36936	0.21028	0.12893	-0.45778	0.43183
39	0.38545	-0.29126	-0.22324	0.35616	-0.33320
40	-0.06568	0.14086	0.05653	0.02001	0.04881
41	-0.16445	0.23624	0.11165	0.02348	0.03992
42	-0.10094	0.30553	0.19750	-0.01048	0.08405
43	-0.08802	0.19909	0.08979	-0.05439	0.09554
44	-0.26633	0.36891	0.27474	-0.05693	0.09040
45	-0.27844	0.21097	0.16574	-0.05303	0.09740
46	0.37317	-0.21807	-0.30010	0.08627	-0.14715
47	0.20389	-0.11714	-0.16907	0.09419	-0.02384
48	0.20471	-0.20257	-0.21852	0.14714	-0.13910
49	-0.25435	0.11847	0.14222	-0.09593	-0.01835
50	-0.12159	0.10745	0.19409	-0.00338	-0.11576
51	-0.17514	0.15400	0.17795	-0.01666	0.00852
52	0.57224	-0.33888	-0.27437	0.48003	-0.52073
53	0.35005	-0.16562	-0.13532	0.29476	-0.33204
54	-0.52959	0.27816	0.23240	-0.52457	0.46135
55	-0.35179	0.29131	0.23328	-0.36455	0.37998

	16	17	18	19	20
16	1.00000				
17	0.78175	1.00000			
18	0.39459	0.52676	1.00000		
19	-0.43700	-0.49599	-0.73249	1.00000	
20	-0.37420	-0.37418	-0.46880	0.25932	1.00000
21	0.33169	0.26117	0.20142	-0.16809	-0.15677
22	-0.72751	-0.67761	-0.47679	0.50489	0.35263
23	-0.45091	-0.41116	-0.42552	0.27767	0.32857
24	-0.27076	-0.24390	-0.36195	0.31570	0.41341
25	0.28356	0.35073	0.30953	-0.22669	-0.27004
26	-0.36494	-0.32368	-0.37172	0.28420	0.36445
27	0.47230	0.52415	0.52087	-0.45217	-0.33703
28	-0.36487	-0.42222	-0.37989	0.47982	0.15154
29	0.22141	0.30936	0.38967	-0.48097	-0.10169
30	0.28559	0.31319	0.42644	-0.58106	-0.11935
31	0.39495	0.45400	0.43316	-0.49760	-0.21379
32	-0.25346	-0.32426	-0.27473	0.30270	0.12648
33	0.26446	0.29558	0.34626	-0.42225	-0.12496
34	0.31395	0.32725	0.26162	-0.43181	-0.08864
35	0.23973	0.25678	0.20805	-0.24968	-0.14999
36	-0.34894	-0.40026	-0.41485	0.47230	0.19199
37	-0.39377	-0.41014	-0.37354	0.45436	0.19835
38	0.42398	0.42321	0.40100	-0.47790	-0.15325
39	-0.33426	-0.36273	-0.36413	0.48232	0.15239
40	0.01989	-0.04667	0.05180	-0.08244	-0.15486
41	0.02322	-0.04178	0.07747	-0.13318	-0.16535
42	0.00922	-0.01529	0.16436	-0.18103	-0.13206
43	0.08396	-0.02608	0.18523	-0.28298	-0.10325
44	0.12998	0.11242	0.24108	-0.25558	-0.22455
45	0.12476	0.16929	0.25455	-0.33501	-0.11458
46	-0.17845	-0.25437	-0.26159	0.29323	0.14281
47	-0.03350	-0.09371	-0.13289	0.19904	0.04998
48	-0.16337	-0.17686	-0.30031	0.32745	0.00812
49	0.09601	0.16828	0.28308	-0.31448	-0.12747
50	-0.04296	0.08131	0.15857	-0.16021	-0.02173
51	0.11090	0.15044	0.33610	-0.34920	-0.16604
52	-0.71267	-0.69590	-0.44351	0.51024	0.40794
53	-0.52705	-0.40896	-0.25140	0.36205	0.33349
54	0.56203	0.63168	0.47784	-0.53568	-0.39343
55	0.43957	0.41149	0.38142	-0.45932	-0.39895

Unfair 1----2----3----4----5----6----7 Fair

	21	22	23	24	25
21	1.00000				
22	-0.44034	1.00000			
23	-0.27371	0.40878	1.00000		
24	-0.10136	0.23061	0.48617	1.00000	
25	0.09145	-0.24690	-0.48926	-0.49032	1.00000
26	-0.10928	0.28426	0.43551	0.39085	-0.26029
27	0.16279	-0.46188	-0.37757	-0.34619	0.43085
28	-0.20527	0.33761	0.25752	0.26179	-0.14865
29	0.15165	-0.29134	-0.16893	-0.28152	0.11553
30	0.18568	-0.37478	-0.19510	-0.28879	0.15912
31	0.31360	-0.48577	-0.29583	-0.26388	0.21178
32	-0.30174	0.21906	0.13088	0.08949	-0.10379
33	0.13756	-0.30111	-0.23090	-0.30627	0.19777
34	0.24086	-0.23437	-0.17204	-0.16840	0.32312
35	0.25605	-0.20513	-0.14480	-0.12637	0.21279
36	-0.21937	0.37865	0.29895	0.17072	-0.16856
37	-0.20050	0.33269	0.35452	0.24457	-0.22176
38	0.28245	-0.40276	-0.40381	-0.30771	0.25569
39	-0.21378	0.30537	0.19226	0.23948	-0.13814
40	0.08833	-0.07001	-0.03193	-0.14575	0.03083
41	0.10434	-0.09755	-0.00028	-0.12373	-0.00024
42	0.03221	-0.05814	0.07349	-0.00550	-0.07159
43	0.08776	-0.15767	0.03751	-0.02133	-0.02878
44	0.11627	-0.22081	-0.04247	-0.07400	0.01933
45	0.02220	-0.19337	-0.10342	-0.12905	0.07003
46	-0.06501	0.13780	0.20662	0.17598	0.03329
47	-0.02493	0.15472	0.19146	0.17070	-0.20935
48	-0.06257	0.31954	0.16587	0.07382	-0.10880
49	-0.08203	-0.22747	-0.10908	-0.10791	0.19506
50	-0.11329	-0.05302	0.00343	-0.13155	0.07001
51	-0.16077	-0.14445	-0.15137	-0.24628	0.16600
52	-0.28497	0.65127	0.30644	0.34579	-0.25170
53	-0.00533	0.40930	0.28418	0.27455	-0.21453
54	0.24092	-0.58808	-0.24553	-0.27732	0.24082
55	0.11717	-0.49431	-0.21636	-0.32879	0.20358

	26	27	28	29	30
26	1.00000				
27	-0.35746	1.00000			
28	0.11826	-0.33639	1.00000		
29	-0.13486	0.26544	-0.78448	1.00000	
30	-0.11645	0.28247	-0.70018	0.78187	1.00000
31	-0.11507	0.38032	-0.73854	0.68568	0.81114
32	0.10331	-0.14532	0.55896	-0.53842	-0.43624
33	-0.09926	0.29464	-0.57609	0.55409	0.63844
34	-0.10279	0.25176	-0.58774	0.56750	0.60163
35	-0.12479	0.25214	-0.60114	0.64418	0.59924
36	0.12852	-0.29738	0.74841	-0.73879	-0.69275
37	0.19130	-0.25505	0.69201	-0.70615	-0.67927
38	-0.23894	0.37783	-0.72541	0.67291	0.68317
39	0.16619	-0.28748	0.77290	-0.77422	-0.76531
40	-0.30040	-0.02045	0.00319	0.04326	0.00010
41	-0.20306	-0.00046	-0.04422	0.10331	0.02751
42	-0.09608	-0.06994	0.06518	0.05511	0.01295
43	-0.11886	0.08935	-0.01022	0.11120	0.10263
44	-0.12536	0.01444	-0.07451	0.07650	0.11212
45	-0.21384	0.26537	-0.31808	0.48802	0.42618
46	0.24756	-0.08505	0.23312	-0.27832	-0.34107
47	0.11416	-0.15448	0.25744	-0.29251	-0.37366
48	-0.00068	-0.16494	0.20985	-0.19626	-0.28448
49	-0.11831	0.18465	-0.20565	0.23001	0.36984
50	-0.12239	0.18867	-0.23425	0.37106	0.26702
51	-0.12673	0.20054	-0.27380	0.35092	0.39889
52	0.32654	-0.40864	0.53763	-0.43255	-0.47924
53	0.17607	-0.22306	0.30255	-0.26980	-0.31195
54	-0.25058	0.39173	-0.39937	0.36196	0.36374
55	-0.16412	0.25460	-0.27504	0.31244	0.40574

	31	32	33	34	35
31	1.00000				
32	-0.48998	1.00000			
33	0.61061	-0.39408	1.00000		
34	0.58837	-0.42644	0.57475	1.00000	
35	0.57764	-0.47840	0.52951	0.59663	1.00000
36	-0.65697	0.46192	-0.47885	-0.48936	-0.65107
37	-0.68081	0.42842	-0.46265	-0.57725	-0.63397
38	0.73888	-0.46247	0.67302	0.56004	0.68454
39	-0.78205	0.47321	-0.63236	-0.61177	-0.65627
40	0.00961	-0.03070	-0.10530	0.01565	0.02938
41	0.01240	-0.03981	0.05573	0.03483	0.11489
42	0.03331	-0.01314	-0.03678	-0.04346	0.01176
43	0.04940	-0.07640	0.04266	0.13812	0.12264
44	0.08594	-0.05451	0.10256	0.08305	0.04299
45	0.39994	-0.41004	0.35150	0.33299	0.37167
46	-0.36707	0.34190	-0.31366	-0.20598	-0.15325
47	-0.33502	0.20084	-0.35631	-0.27398	-0.20749
48	-0.26276	0.07315	-0.26008	-0.14392	-0.03607
49	0.33764	-0.18307	0.31255	0.19687	0.10015
50	0.26372	-0.24296	0.22057	0.17900	0.16503
51	0.38651	-0.23851	0.32469	0.20823	0.15667
52	-0.55322	0.34704	-0.43344	-0.37374	-0.35755
53	-0.30622	0.14598	-0.28795	-0.29900	-0.21826
54	0.36369	-0.25521	0.28862	0.34991	0.23521
55	0.38796	-0.21298	0.38480	0.28557	0.20069

	36	37	38	39	40
36	1.00000				
37	0.80686	1.00000			
38	-0.70338	-0.68928	1.00000		
39	0.77807	0.78307	-0.78804	1.00000	
40	0.12885	0.01909	0.02871	-0.01420	1.00000
41	0.07643	-0.01343	0.07616	-0.06602	0.85567
42	0.06791	-0.03261	-0.01821	-0.03700	0.65009
43	0.02431	-0.02892	0.10925	-0.09408	0.63895
44	0.03221	-0.03085	-0.01767	-0.05367	0.63613
45	-0.19854	-0.32352	0.31074	-0.41944	0.27281
46	0.17533	0.25410	-0.28309	0.33994	-0.18628
47	0.22521	0.24421	-0.25879	0.33363	-0.09936
48	0.21762	0.16886	-0.19878	0.22441	-0.03151
49	-0.21698	-0.26818	0.17740	-0.32207	0.11678
50	-0.21409	-0.27353	0.17285	-0.34073	0.09916
51	-0.23360	-0.24755	0.25633	-0.35246	0.11483
52	0.48369	0.46191	-0.54733	0.53805	-0.14532
53	0.28789	0.33457	-0.34660	0.32106	-0.03497
54	-0.37280	-0.35168	0.30802	-0.36089	0.16680
55	-0.25779	-0.31197	0.29104	-0.35562	0.13978

	41	42	43	44	45
41	1.00000				
42	0.70861	1.00000			
43	0.71108	0.70861	1.00000		
44	0.72220	0.68051	0.66774	1.00000	
45	0.29489	0.20050	0.25267	0.22163	1.00000
46	-0.22575	-0.19695	-0.19610	-0.33583	-0.50466
47	-0.20283	-0.23860	-0.22610	-0.33093	-0.36590
48	-0.13333	-0.25527	-0.24201	-0.28510	-0.30768
49	0.15195	0.25543	0.23943	0.36435	0.48937
50	0.13821	0.09262	0.03493	0.12403	0.49793
51	0.18157	0.17501	0.15639	0.26360	0.45080
52	-0.20979	-0.12278	-0.11996	-0.27994	-0.26850
53	-0.08933	-0.10244	-0.13015	-0.22160	-0.21911
54	0.23155	0.12761	0.17972	0.37350	0.26668
55	0.18627	0.25663	0.21253	0.37647	0.30938

	46	47	48	49	50
46	1.00000				
47	0.57913	1.00000			
48	0.38773	0.58153	1.00000		
49	-0.57529	-0.59869	-0.46095	1.00000	
50	-0.50358	-0.47891	-0.34051	0.51675	1.00000
51	-0.60994	-0.51745	-0.44441	0.66722	0.64218
52	0.33849	0.23220	0.26484	-0.29267	-0.13982
53	0.25686	0.24827	0.29856	-0.22446	-0.10326
54	-0.25691	-0.23679	-0.23742	0.25117	0.13303
55	-0.28627	-0.35654	-0.24358	0.35688	0.13047

	51	52	53	54	55
51	1.00000				
52	-0.31465	1.00000			
53	-0.34711	0.53207	1.00000		
54	0.24030	-0.71350	-0.49164	1.00000	
55	0.40885	-0.54190	-0.58928	0.67768	1.00000

APPENDIX
VII

ORTHOGONAL ROTATED FACTOR MATRIX

	FACTOR				
	1	2	3	4	5
VARIABLE					
1	-0.37813	0.03289	-0.23830	-0.16099	-0.04731
2	0.32645	0.09423	0.09677	0.26290	-0.01186
3	0.33709	0.07010	0.24134	0.09519	-0.02718
4	0.10034	0.07458	0.03282	0.25557	0.00552
5	-0.03483	-0.13744	0.01599	-0.30901	-0.04037
6	0.00970	0.09185	-0.01193	0.47756	-0.04537
7	-0.00732	0.02461	0.13474	0.04101	0.09663
8	-0.03109	-0.05764	-0.07027	-0.09276	-0.04215
9	0.31673	-0.04030	0.39672	0.19832	0.08588
10	0.34873	0.19260	0.40351	0.42485	0.04265
11	-0.30267	-0.07971	-0.48676	-0.44044	-0.10336
12	0.20694	0.19606	0.18318	0.79923	0.03499
13	0.14258	0.07157	0.07570	0.81859	0.13205
14	-0.29371	0.03018	-0.72058	-0.11707	0.09375
15	0.26873	0.05312	0.68623	0.04465	-0.13441
16	0.19806	0.00700	0.87500	-0.03683	-0.01223
17	0.23155	-0.08302	0.79097	0.13203	0.08338
18	0.27726	0.07634	0.38814	0.44440	0.17362
19	-0.41062	-0.12860	-0.39648	-0.34751	-0.16970
20	-0.03807	-0.13695	-0.40220	-0.21132	-0.04743
21	0.24534	0.12865	0.36359	-0.04727	-0.18122
22	-0.21447	-0.07279	-0.77621	-0.16712	-0.06516
23	-0.16783	0.03959	-0.35108	-0.01338	-0.07416
24	-0.19090	-0.06345	-0.18697	-0.01865	-0.08834
25	0.13310	-0.03313	0.25634	-0.15540	0.09956
26	-0.05336	-0.17923	-0.29749	-0.04786	-0.07915
27	0.21129	-0.05402	0.43130	0.15765	0.10320
28	-0.81035	0.02627	-0.20609	-0.10932	-0.07755
29	0.84916	0.05353	0.06048	0.12022	0.14214
30	0.80986	0.00195	0.14280	0.19842	0.21301
31	0.77344	-0.01355	0.31473	0.14833	0.21471
32	-0.54943	-0.04343	-0.18392	0.04653	-0.16266
33	0.65608	-0.02788	0.13093	0.10158	0.19740
34	0.69117	0.04238	0.18311	-0.10664	0.07480
35	0.77071	0.08306	0.11495	-0.06157	-0.03830
36	-0.78502	0.11432	-0.22764	-0.14733	-0.04950
37	-0.76086	0.02313	-0.22496	-0.11329	-0.09958
38	0.82735	0.02685	0.25226	-0.01032	0.03426
39	-0.86805	-0.02459	-0.17617	-0.06107	-0.19168
40	-0.02862	0.86316	0.00798	-0.04659	0.01220
41	0.03110	0.92502	0.00055	0.02366	0.05170
42	-0.04427	0.79187	0.03251	0.18930	0.14771
43	0.05934	0.78750	0.05082	0.04822	0.09533
44	-0.02638	0.77001	0.16230	0.22090	0.22766
45	0.37452	0.23690	0.06045	0.01589	0.48246
46	-0.21332	-0.18214	-0.12243	-0.11998	-0.64962
47	-0.24644	-0.17493	-0.00597	-0.02138	-0.65469
48	-0.12872	-0.12658	-0.14970	-0.18585	-0.52060
49	0.16400	0.14386	0.09365	0.05518	0.77138
50	0.22919	0.04029	-0.08733	0.04665	0.68842
51	0.22202	0.09527	0.06259	0.04800	0.79474
52	-0.38340	-0.14024	-0.69653	-0.09262	-0.17160
53	-0.20875	-0.06088	-0.48073	0.05761	-0.23304
54	0.23955	0.18991	0.66264	0.08057	0.14118
55	0.21649	0.19567	0.52531	0.04796	0.29717

VARIABLE	6	7	8	9	10
1	-0.25191	0.07600	0.59935	-0.03862	0.03172
2	0.11446	-0.21974	-0.36120	0.13399	0.15592
3	0.14376	-0.20624	-0.26455	0.10432	0.06916
4	0.01921	-0.06889	-0.08253	0.14241	0.68248
5	-0.11578	0.14319	0.02202	0.06518	-0.68228
6	0.13017	-0.11938	0.21724	-0.13934	0.51282
7	0.90729	0.00794	-0.05811	0.06927	0.06054
8	-0.87421	0.04841	0.02642	0.06295	-0.02883
9	0.10910	-0.04432	-0.10715	0.29829	-0.17916
10	0.13063	-0.00883	-0.25172	0.45904	0.11454
11	-0.26211	-0.01096	0.15212	-0.22432	-0.03120
12	0.03384	0.00788	-0.07545	0.02855	0.10937
13	0.07152	0.04280	-0.01696	0.01734	0.20587
14	-0.06611	0.12320	-0.08978	0.01165	0.16681
15	0.05798	-0.05569	0.09311	-0.01548	-0.08176
16	0.03977	-0.11343	-0.00939	0.04822	0.02525
17	0.06723	-0.12698	-0.04168	0.15659	0.01106
18	0.01861	-0.39420	0.00908	-0.02667	0.04386
19	-0.15319	0.19788	0.09835	0.07535	-0.07171
20	0.05891	0.30788	0.01254	0.00698	-0.24095
21	-0.02519	-0.10276	0.28539	-0.01144	-0.27094
22	-0.04425	0.12215	-0.02246	0.03858	0.07631
23	-0.02275	0.61817	-0.06264	0.00928	0.00117
24	-0.04464	0.63316	0.10418	0.09363	-0.23224
25	0.00365	-0.58862	-0.09239	0.03792	0.04513
26	-0.02999	0.42617	-0.00581	-0.24540	-0.09235
27	0.11679	-0.39812	0.03327	0.19229	0.08275
28	-0.06822	0.03574	0.10377	-0.08725	0.00075
29	0.01196	-0.01556	-0.14610	0.10377	0.16394
30	0.08540	-0.03188	-0.05811	-0.11751	0.09400
31	-0.01748	-0.05344	0.14392	-0.04984	-0.06729
32	0.01114	-0.07009	-0.10804	-0.23483	0.01941
33	0.14020	-0.12188	0.02186	-0.19488	0.09695
34	0.13551	-0.06578	-0.01886	-0.01148	-0.02612
35	0.02714	-0.00416	0.06863	0.11128	0.03503
36	0.06812	0.05961	0.15864	-0.04793	0.06611
37	0.00083	0.08864	0.07719	-0.05868	0.01738
38	-0.00422	-0.21330	0.01717	-0.00447	-0.04373
39	0.06730	-0.00518	0.02269	0.02007	-0.03263
40	0.02747	-0.09421	0.07937	0.14065	0.13330
41	0.06019	-0.03443	-0.02128	0.08543	0.11034
42	-0.08717	0.07314	-0.02176	-0.08060	-0.06709
43	0.03981	0.01743	0.01174	-0.07826	-0.06180
44	0.06202	0.03672	-0.08339	-0.15207	-0.01805
45	0.14561	0.03214	0.16766	0.22321	0.27894
46	-0.15637	-0.00252	-0.07979	-0.06628	0.01092
47	-0.21069	0.10394	0.09109	0.11773	0.14446
48	-0.09316	0.03595	0.09195	0.15520	0.20067
49	0.12357	-0.03610	0.06241	-0.08814	-0.02494
50	-0.08091	-0.02663	-0.06679	0.30478	0.05951
51	-0.06376	-0.08950	-0.07664	-0.03195	0.13242
52	-0.02105	0.04557	0.13792	0.02074	-0.08208
53	-0.11937	0.03121	0.25358	0.22001	-0.21871
54	0.13326	-0.03555	-0.26051	-0.07713	0.16815
55	0.08698	0.00030	-0.16925	-0.34193	0.27885

APPENDIX
VIII

OBLIQUE FACTOR PATTERN

AD-A037 980 WICHITA STATE UNIV KANS CENTER FOR HUMAN APPRAISAL A--ETC F/G 5/9
MEASUREMENT OF JOB SATISFACTION.(U)
JAN 75 T G SWENSON, J A BELT, A B SWENEY AF-AFOSR-2001-71

UNCLASSIFIED TR-104 AFOSR-TR-77-0368 NL

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AD A037980

END

DATE FILMED
4-77

	1	2	3	4	5	6	7	8	9	10
1	-0.036	0.114	0.033	-0.171	-0.020	-0.092	0.053	0.323	-0.660	0.413
2	0.091	0.046	-0.148	-0.072	-0.026	0.000	-0.247	-0.079	0.448	-0.091
3	0.149	0.043	0.023	0.098	-0.079	0.072	-0.233	-0.052	0.320	-0.093
4	0.014	-0.068	-0.121	0.116	0.055	-0.065	-0.007	0.049	0.151	0.669
5	-0.026	-0.020	0.234	0.039	-0.022	-0.035	0.106	0.108	0.061	-0.609
6	0.087	0.022	-0.519	-0.120	-0.144	0.093	-0.122	-0.041	-0.372	0.535
7	-0.057	-0.039	0.039	0.111	0.025	0.913	0.030	0.044	0.061	0.038
8	-0.051	-0.040	0.062	0.066	0.084	-0.886	0.060	0.065	0.068	0.039
9	0.028	-0.102	-0.123	0.382	0.078	0.054	-0.045	0.251	0.304	-0.184
10	-0.061	0.064	-0.255	0.450	0.063	0.010	0.042	0.287	0.556	0.049
11	0.045	0.048	0.353	-0.512	-0.040	-0.149	-0.062	-0.119	-0.291	0.045
12	-0.049	0.109	-0.842	0.086	-0.059	-0.107	0.031	-0.039	0.088	-0.057
13	-0.073	-0.055	-0.883	0.028	0.083	-0.068	0.079	-0.002	0.022	0.078
14	-0.120	0.038	0.095	-0.656	0.283	-0.044	0.136	-0.013	0.135	0.114
15	0.143	0.057	0.003	0.675	-0.319	0.050	-0.042	-0.006	-0.143	-0.006
16	-0.063	-0.076	0.158	0.977	-0.157	-0.013	-0.065	-0.005	0.018	0.081
17	-0.105	-0.201	-0.024	0.873	-0.006	-0.015	-0.089	0.108	0.130	0.045
18	0.053	0.028	-0.446	0.111	0.039	-0.077	-0.469	0.021	-0.062	-0.086
19	-0.217	-0.058	0.311	-0.210	-0.021	-0.055	0.212	0.108	-0.018	0.095
20	0.146	-0.076	0.144	-0.316	0.044	0.138	0.324	0.028	0.017	-0.180
21	0.319	0.240	0.016	0.191	-0.351	0.061	-0.171	0.156	-0.348	-0.107
22	0.042	-0.005	0.121	-0.776	0.113	0.025	0.097	0.046	0.070	0.087
23	-0.063	0.007	-0.027	0.005	0.038	-0.008	0.767	-0.086	0.120	0.047
24	-0.110	-0.072	-0.065	0.184	0.009	0.009	0.762	0.105	0.004	-0.053
25	0.012	-0.014	0.254	-0.032	0.055	-0.020	-0.716	0.041	0.088	-0.052
26	0.132	-0.165	-0.071	-0.126	-0.057	-0.008	0.503	-0.281	-0.124	-0.105
27	-0.001	-0.107	-0.071	0.260	0.049	0.075	-0.469	0.244	0.051	0.103

	1	2	3	4	5	6	7	8	9	10
28	-0.755	0.055	0.038	-0.027	-0.011	-0.041	0.056	-0.068	-0.124	0.061
29	0.822	-0.001	-0.021	-0.104	0.118	-0.027	-0.018	0.068	0.180	0.076
30	0.818	-0.052	-0.179	-0.069	0.103	0.040	-0.041	-0.091	-0.063	-0.026
31	0.784	-0.040	-0.157	0.115	0.086	-0.016	-0.082	0.105	-0.231	-0.037
32	-0.542	-0.005	-0.123	-0.171	-0.171	-0.026	-0.082	-0.348	-0.014	-0.126
33	0.728	-0.055	-0.102	-0.113	0.067	0.123	-0.157	-0.118	-0.204	0.007
34	0.750	0.056	0.175	-0.010	-0.023	0.161	-0.097	0.026	-0.038	-0.043
35	0.878	0.114	0.138	-0.064	-0.109	0.081	-0.035	0.185	-0.056	0.116
36	-0.681	0.138	0.103	-0.047	0.011	0.121	0.088	0.011	-0.170	0.175
37	-0.698	0.046	0.057	-0.028	-0.027	0.030	0.121	-0.061	-0.080	0.080
38	0.863	0.064	0.065	-0.064	-0.095	0.013	-0.294	0.064	-0.083	-0.069
39	-0.888	0.011	0.016	-0.009	-0.114	0.082	0.000	-0.029	0.030	0.009
40	0.017	0.931	0.172	-0.101	-0.065	0.077	-0.096	0.196	-0.021	0.162
41	0.040	0.973	0.098	-0.107	-0.042	0.078	-0.016	0.081	0.054	0.049
42	-0.092	0.819	-0.178	-0.022	0.037	-0.114	0.114	-0.081	-0.022	-0.195
43	0.086	0.846	-0.007	-0.070	-0.044	0.053	0.033	-0.052	-0.079	-0.152
44	-0.131	0.755	-0.192	0.108	0.078	0.001	0.093	-0.187	-0.011	-0.210
45	0.381	0.107	0.094	0.094	0.528	0.163	0.081	0.412	-0.062	0.418
46	-0.101	-0.049	0.096	-0.127	-0.663	-0.123	-0.040	-0.232	0.041	0.017
47	-0.163	-0.095	0.020	0.133	-0.630	-0.163	0.111	0.029	-0.021	0.330
48	0.038	-0.043	0.229	-0.083	-0.466	-0.011	0.020	0.116	-0.013	0.393
49	0.078	0.003	-0.061	0.084	0.773	0.079	-0.000	0.090	-0.116	-0.093
50	0.045	-0.122	0.035	-0.022	0.873	-0.136	0.005	0.400	0.296	0.048
51	0.067	-0.085	-0.002	0.087	0.861	-0.155	-0.042	0.059	0.078	0.004
52	-0.129	-0.025	-0.035	-0.741	-0.041	0.075	-0.024	0.114	-0.114	0.003
53	-0.032	0.063	-0.167	-0.576	-0.127	-0.009	-0.060	0.381	-0.114	-0.025
54	-0.051	0.057	0.061	0.761	0.007	0.007	0.059	-0.267	0.211	-0.003

	1	2	3	4	5	6	7	8	9	10
55	0.072	0.050	0.028	0.614	0.133	-0.032	0.110	-0.453	-0.060	0.079

APPENDIX
IX

SECOND-ORDER ORTHOGONAL ROTATED FACTOR MATRIX

VARIABLE	FACTOR I	FACTOR II
1	-0.60879	0.09283
2	-0.24139	0.32679
3	0.43255	-0.38145
4	-0.89214	-0.05485
5	-0.27111	0.32403
6	-0.20475	0.25540
7	0.55329	-0.22138
8	0.09853	-0.56743
9	-0.30025	0.40543
10	0.08271	0.77279