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STABILITY OF FOUR ORGANIZATIONAL BEHAVIOR INSTRUMENTS

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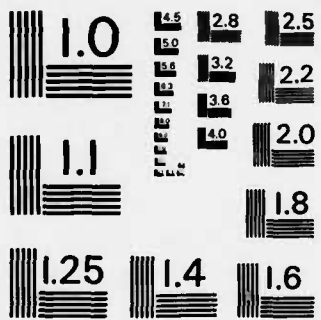
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 THESIS  
 Gary W. Hamby  
 First Lieutenant, USAF  
 AFIT/GSM/LSY/84S-14

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**AIR FORCE INSTITUTE OF TECHNOLOGY**

Wright-Patterson Air Force Base, Ohio

AFIT/GSM/LSY/84S-14

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STABILITY OF FOUR ORGANIZATIONAL  
BEHAVIOR INSTRUMENTS

THESIS

Presented to the Faculty of the School of Systems and Logistics  
of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science in Systems Management

Gary W. Hamby, B.S.  
First Lieutenant, USAF

September 1984

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## Preface

This study is intended to provide some insight into the stability and, to a lesser degree, the internal consistency of four widely used organizational behavior instruments. The need for such research is obvious. Without adequate measurement instruments, research in this area would be worthless. Although not a glamorous area of study, the basic need for this type of research provided unexpected motivation.

Without the help of several others, however, even this unexpected motivation would not have been enough. I owe a great deal to my faculty advisor, Dr. Robert P. Steel, for his guidance and patience. I would like to thank Captain Pete Blatchley, another AFIT student, for his help with one of the data bases. Last, but by no means least, I would like to thank my wife Deb for understanding and tolerating my exile to the library, computer, and desk.

Gary W. Hamby

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Abstract

The quality of an instrument is a critical consideration in all scientific research. This is especially true for the organizational behavior field where the traits to be measured are abstract. Research into the reliability of organizational behavior instruments is essential to the continued advancement of knowledge in this area.

This study computed internal consistency reliabilities and stability coefficients for four commonly used organizational behavior instruments. The instruments in this study were the Organizational Commitment Questionnaire (Porter, Steers, Mowday, and Boulian, 1974), Wagner and Morse's Sense of Competence Questionnaire (Wagner and Morse, 1975), the task identity, task autonomy, skill variety and task significance scales of the Job Diagnostic Survey (Hackman and Oldham, 1975), and need for achievement and need for affiliation scales of the Manifest Needs Questionnaire (Steers and Braunstein, 1976).

Four data bases with a total of 452 subjects were used. The time intervals between applications for the stability coefficients ranged from 7- to 13-months.

The Sense of Competence Questionnaire (Wagner and Morse, 1975) and the Organizational Commitment Questionnaire (Porter et al., 1974) both produced levels of stability and internal consistency reliability within tolerable limits.

The four dimensions of the Job Diagnostic Survey (Hackman and Oldham, 1975) yielded marginally acceptable levels of internal consistency. The stability results for the task significance, task autonomy and skill variety dimensions were higher than those for the task identity dimension.

The internal consistency and stability results for the need for achievement scale of the Manifest Needs Questionnaire (Steers and Braunstein, 1976) were generally acceptable. All estimates for the reliability of the need for affiliation scale tended to be low raising serious reservations concerning the use of this instrument.

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## STABILITY OF FOUR ORGANIZATIONAL BEHAVIOR INSTRUMENTS

### I. Introduction and Literature Review

All sciences use measurement to describe relationships and conditions (Nunnally, 1970). Measurement "consists of rules for assigning numbers to objects in such a way as to represent quantities of attributes" (Nunnally, 1970, p. 7). In fact, a measure's usefulness is determined "by the extent to which it enhances scientific explanation" (Nunnally, 1970, p. 9). An important aspect of useful measures are the rules, or methods of measurement, used to obtain the measures.

At times these methods are obvious, such as the use of a ruler to measure length. Other times, such as in psychological measurement, the rules are not so obvious (Nunnally, 1970). In any case, all methods of measurement must be proven valid by empirical testing (Magnusson, 1967).

Standardized measures are those that can be used by different people on the same object with the same results (Nunnally, 1970). Again, an example is a standard ruler. Several people could measure the same object with the ruler and get the same results. Standardized measures offer many advantages in objectivity, economy, ease of communication, and availability of mathematical analysis over the alternatives of subjective or judgemental measures (Nunnally, 1970). The major advantage of standardized methods is the use of explicit rules for measurement.



Standardized measures are also valuable in psychological measurement. In psychological measurement, the objects being measured are psychological variables. A psychological variable is defined as "any single property or characteristic which it is possible for different individuals to possess in different quantities" (Magnusson, 1967, p. 1). The methods of psychological measurement, as with all methods of measurement, must also be valid to be useful.

Validity, then, is the major consideration in evaluating a measurement method (Guion, 1965). Validity concerns the degree to which the method measures the traits it was intended to measure (Magnusson, 1967; Emory, 1980). There are three types of validity corresponding to the three basic purposes of measurement.

Predictive validity involves establishing some type of functional relationship with a variable. It can be expressed as the degree to which measures predict some criterion measure (Guilford, 1954). A measure has content validity when it is representative of a certain area of content (Nunnally, 1970). Construct validity is the accurate measurement of traits. In other words, construct validity occurs when the trait being measured is the intended target of the measurement method. Construct validity is an important and widely used requirement in psychological research (Nunnally, 1970).

Another vital aspect of a measure is reliability. Reliability is "the extent to which measurements of particular traits are repeatable under the same conditions" (Nunnally, 1970, p. 108). Reliability provides a useful indicator of the extent to which an instrument may be trusted to provide dependable results (Nunnally, 1970). Reliability is vital

because it is a necessary but not sufficient condition for validity (Emory, 1980). A measure can be reliable without being valid, but it cannot be valid unless it is reliable. The dependence of validity on reliability means that "repeatability of measurement is a fundamental necessity in all areas of science" (Nunnally, 1970, p. 108). It makes no sense to empirically test a measure's validity unless its reliability has been proven to be adequate.

Reliability of a measure cannot be measured directly and must be estimated. Estimating reliability involves some form of correlation to determine the measure's sensitivity to random errors (Guilford, 1954; Magnusson, 1967). There are three common methods for estimating reliability. Each approaches the estimation of reliability from a slightly different angle.

The most conservative method of estimating reliability is by the alternate forms method (Nunnally, 1970). In this method, reliability is defined as the extent to which the measure is free from sampling errors (Guion, 1965). To perform this method, two independent and equivalent measures are required. The correlation between the two measures is the estimate of reliability and is called the coefficient of equivalence (Magnusson, 1967). This method provides the most complete estimation of measurement error and covers errors due to content sampling. Content sampling is at issue when the measure tests a subject's knowledge of a certain subject area (i.e., a spelling test). The use of alternate forms is easier for knowledge type testing such as spelling tests, but it is less applicable to other psychological domains such as motivation or personality (Guion, 1965; Nunnally, 1970). Problems arise from the

requirement that the alternate forms of the measure be equivalent. In theory, equivalent measures are parallel measures that must satisfy strict requirements. In practice, alternate forms are considered equivalent if each has the same number of items, their means are not significantly different, and their standard deviations are not significantly different (Guion, 1965). The alternate forms method of reliability estimation is not always used due to the difficulty in developing equivalent alternative measures and to the additional resources required over other methods.

The most common method of estimating reliability is by the internal consistency method. This method uses the correlation of each part of the measure with other parts of the measure as an estimation of reliability. The basis for this estimation is functional unity. Functional unity implies that all parts of the measure are so interrelated that they must be measuring the same trait (Guion, 1965). Reliability measured with this method is related to the degree of homogeneity among the parts of the measure. The internal consistency method of estimation is the most convenient since it requires only one test given at one occasion. It does not, however, consider errors due to changes in the trait over time or errors due to content sampling (Guion, 1965; Nunnally, 1970).

The third method of reliability estimation is the retest method. The retest method involves repeated applications of the same measure over time. The correlation between the two administrations is used to estimate reliability. Reliability estimated by this method produces the coefficient of stability. The retest method does not consider errors due to content sampling. In addition, subjects' memory of the first administration can influence their scores on the second administration unless there is a

considerable length of time between applications and/or there are many items in the measure (Nunnally, 1970; Guion, 1965). For the retest method, reliability is related to the stability of the measured traits over time (Guion, 1965). The time interval between applications must be long enough to minimize the effects of memory but also short enough to minimize the possibility of trait changes in the subjects (Ghiselli, 1964). This method is particularly useful, however, in three situations:

1. Time or funds are not available to construct two forms of the measure.
2. Memory will have little effect (i.e., the measure has many items and there is considerable time between applications).
3. The objective is to measure the reliability of a particular instrument (Nunnally, 1970).

The last condition is particularly useful in cases where the objective of a study is to estimate the reliability of a standardized measurement instrument.

### Research Objectives

Using data obtained from sets of administrations of both the AFIT Survey of Work Attitudes and the AFIT Organizational Development Survey, the objective of this thesis was to estimate the stability coefficients for the following standardized instruments:

1. The Organizational Commitment Questionnaire (Porter, Steers, Mowday, and Boulian, 1974).
2. The Wagner and Morse Sense of Competence Questionnaire (Wagner and Morse, 1975).

3. The Job Diagnostic Survey (Hackman and Oldham, 1975).
  - a. Task Identity
  - b. Task Autonomy
  - c. Skill Variety
  - d. Task Significance
4. The Manifest Needs Questionnaire (Steers and Braunstein, 1976).
  - a. Need for Achievement (nAch)
  - b. Need for Affiliation (nAff)

Both of the surveys used to obtain the data appearing in this study measured a variety of psychological variables and contained over 100 items.

Internal consistency (Cronbach Alpha) estimates were also computed for both pre- and post-measures. The estimation of both stability and internal consistency reliabilities is intended to provide insight into some of the psychometric properties of these instruments.

### Reliability Theory

Reliability concerns the consistency of an instrument when used on different occasions under identical conditions (Magnusson, 1967). In other words, "Reliability concerns the precision of measurement regardless of what is measured" (Nunnally, 1970, p. 107). An instrument is reliable if its results from one application can safely be generalized to the application of the same instrument in a similar situation at another point in time (Nunnally, 1970).

A basic assumption of psychological measurement is "that any measure contains an element of error and an element of truth" (Guion, 1965, p. 28). In reliability theory, this basic assumption may be conceptualized

as every observed score ( $O_j$ ) is composed of true score ( $T_j$ ) plus error score ( $e_j$ ) (Magnusson, 1967).

$$O_j = T_j + e_j$$

The error score is attributed to effects that vary with each occasion (Magnusson, 1967). These are regarded as random errors. Several assumptions apply to this theory. They are: (1) "The individual possesses stable characteristics or traits that persist through time" (Ghiselli, 1964, p. 221); (2) errors are completely random; and (3) the observed score equals the true score plus or minus the error score (Ghiselli, 1964). In theory, the correlation between the obtained and true scores would give an index of reliability for the instrument (Guion, 1965).

The true score may be defined in several ways. It can be regarded as the real, but never observed, value for each observation that is obscured by measurement errors; the average score that would be calculated if the measure were to be taken an infinite number of times; or it can be defined by the relationships between true and observed scores (Cascio, 1982). Error scores are classified as either constant or random. Constant error scores do not affect reliability as they will uniformly affect all measurement applications. Random error scores are due to chance and will vary for each application of the instrument (Guion, 1965; Cascio, 1982). The error scores are assumed to be uncorrelated to what is measured (true scores) and uncorrelated between each application of the measure (Cascio, 1982). The total error scores are assumed to balance out to zero (i.e., mean error = 0) (Magnusson, 1967).

Since the true score cannot be measured directly, parallel tests must be assumed in order to estimate levels of measure reliability (Cascio, 1982). Parallel tests are a ". . . series of operations of measurement or tests which measure the same trait to the same degree . . ." (Ghiselli, 1964, p. 216). The means and variances of parallel tests are assumed to be equal. In addition, it is assumed that there are no traces of the first application to interfere with the second application (Magnusson, 1965). The basic reliability assumption can then be restated to read, the variance of the observed scores ( $S_o^2$ ) is equal to the variance of the true scores ( $S_T^2$ ) plus the variance of the error scores ( $S_e^2$ ) (Magnusson, 1967). Since reliability estimation is based on the correlation between parallel tests (Cascio, 1982), the reliability of an instrument would be the true variance divided by the observed score variance (Magnusson, 1967).

$$r = S_T^2 / S_o^2$$

In other words, reliability equals one minus the error variance divided by the observed variance (Magnusson, 1967).

$$r = 1 - S_e^2 / S_o^2$$

The observed variance can be influenced by measurement errors arising from the administration of the measure, guessing by the subjects, or from scoring errors (Magnusson, 1967). Administration errors may be attributed to such factors as interaction between test administrators and subjects, outside disturbances or distractions, or ambiguous instructions. Guessing errors can occur on multiple choice items where only one answer

is correct. Scoring errors can occur when there is subjective evaluation of the subjects' responses (Magnusson, 1967).

The true scores are assumed to fluctuate between applications. This true score variation does not reflect an instrument's reliability and if included in the error variance will cause an underestimation of reliability (Magnusson, 1967).

With reliability theory introduced, the next step is to introduce and describe each of the instruments investigated in this study.

### Organizational Commitment

The Organizational Commitment Questionnaire (OCQ) is a standardized attitudinal questionnaire designed by Porter, Steers, Mowday, and Boulian (1974) to measure employee commitment to their work organizations (Mowday, Steers, and Porter, 1979). Development of the OCQ spanned nine years of research and involved over 2500 employees from nine different organizations (Mowday et al., 1979). Mowday et al. defined commitment as the degree to which "an individual identifies with a particular organization and its goals and wishes to maintain membership in order to facilitate these goals" and the "relative strength of an individual's identification with and involvement in a particular organization" (Mowday et al., 1979, p. 225-226). It is characterized by a strong acceptance of and belief in organizational goals and values, a willingness to work hard for the organization, and a strong desire to maintain organizational membership (Mowday et al., 1979).

Mowday et al. (1979) computed stability coefficients for the OCQ using two samples for which multiple data points were available. A sample



of 60 psychiatric technicians (Porter, Steers, Mowday, and Boulian, 1974) produced retest reliability values of .53, .63, and .75 for 2-, 3-, and 4-month periods, respectively. A group of 212 retail management trainees (Porter, Crampon, and Smith, 1976) had a retest reliability of .62 for a 3-month period (Mowday et al., 1979).

Ferris and Aranya (1983) compared an early version of this instrument to another commitment instrument developed by Hrebiniak and Alutto (1972). Using a sample of 1105 professional accountants in the United States and Canada, Ferris and Aranya estimated the internal consistency reliability coefficient to be .90 (Ferris and Aranya, 1983). They concluded that the OCQ was the more reliable measure of commitment.

Several other studies have reported on the internal consistency reliability of the OCQ. Using samples of 382 hospital workers and 119 research scientists and engineers, Steers (1977) estimated the internal consistency reliability to be .88. Steers and Spencer (1977) estimated the reliability as .90 using a sample of 115 managers in a major manufacturing firm.

A sample of 167 city and university police officers, in a study by Kerr and Jermier (1978), produced an internal consistency estimate of .86. Jermier and Berke (1979) estimated internal consistency at .91 for a sample of 800 police officers and support personnel. Ivancevich (1979) used a sample of 154 project engineers to estimate internal consistency reliability at .84. A sample of 262 university employees produced an internal consistency reliability of .88 in a Morris and Snyder (1979) study.

These studies tend to indicate the OCQ has good levels of internal consistency, but less evidence exists on the instrument's stability.

## Sense of Competence

Wagner and Morse (1975) presented an instrument measuring an individual's sense of competence (Wagner and Morse, 1975). Competence was defined as a person's "existing capacity to interact effectively with his environment," resulting from his or her cumulative life history (Wagner and Morse, 1975, p. 451). Sense of competence refers to the confidence a person has in his or her ability to master his organizational and work environment (Wagner and Morse, 1975).

The instrument contains four factors derived through factor analysis. The first factor is competence and involves a person's overall feelings due to a sense of competence. This factor is measured by questions such as: "Doing this job well is a reward in itself" (Wagner and Morse, 1975, p. 455). Someone who scores high on this factor feels competent over their work.

The second factor is knowledge/problem-solving. This factor measures the person's comprehension and problem-solving abilities at work. Statements such as: "Considering the time spent on the job, I feel thoroughly familiar with my tasks" (Wagner and Morse, 1975, p. 455-456) measure this factor. A person scoring high on this factor feels they understand and can solve most of the problems they encounter at work.

Influence is the third factor and reflects the person's tendency toward internal or external control at work. An example of a question measuring this factor is: "I do not know why it is, but sometimes when I'm supposed to be in control I feel more like the one being manipulated" (Wagner and Morse, 1975, p. 456). A high score on this factor indicates a person who actively engages and attempts to master their environment.

A low score indicated someone who feels little power over their work environment.

The last factor, confidence, indicates belief in oneself. An item from this factor is: "No one knows this job better than I do" (Wagner and Morse, 1975, p. 456). A high score on this factor indicates a high level of self-assurance at work.

For their instrument, Wagner and Morse found an internal consistency reliability coefficient of .96 using a 310 subject sample. Their stability estimate, based on a sample of 35 subjects over a two-month interval, was .84 (Wagner and Morse, 1975).

A 1978 study by Snyder and Morris estimated the reliability of the factors in this instrument. Their samples were 362 employees of federally funded service organizations and 484 employees of four mental health facilities. The competence questionnaire was given as a part of a larger survey.

Using an internal consistency estimate of reliability, three of the four factors had reliability results of: competence, .75; knowledge/problem solving, .72; and influence, .60 (Snyder and Morris, 1978).

Morris and Sherman (1981) estimated the internal consistency for the overall instrument at .68 using a sample of 506 employees at state run care and training centers for the developmentally disabled.

Other studies utilizing this competence instrument have indicated an acceptable level of internal consistency. Tharenou and Harker (1982) estimate the internal consistency reliability to be .76 from a sample of 166 male electrical apprentices in a semipublic electricity authority. Ezell, Odewahn, and Sherman (1981) found the internal consistencies for

a factor breakout of this instrument. Their factor breakout of competence-environment, competence-ability, and competence-motivation had internal consistency estimates of .82, .70 and .60, respectively. Ezell et al. used a sample of 360 managers from state public welfare agencies in their study.

Although the internal consistency reliabilities for this instrument appear to be within acceptable limits, the overall scarcity of psychometric information illustrates the need for research in this area.

### Job Diagnostic Survey

Hackman and Oldham (1975) developed a 21-item instrument intended to: (1) diagnose existing jobs to determine if and how they might be redesigned to improve employee motivation and productivity, and (2) evaluate the effects of job changes on employees (Hackman and Oldham, 1975). The instrument was called the Job Diagnostic Survey (JDS) and encompassed two years of development with over 1500 subjects performing 100 different types of jobs in 15 different organizations (Hackman and Oldham, 1975; Griffin, 1982).

The JDS is based on the theory that positive personal and work outcomes result when three critical psychological states are present.

These critical states are:

1. Experienced meaningfulness of the work.
2. Experienced responsibility for outcomes of the work.
3. Knowledge of the actual results of the work activities

(Hackman and Oldham, 1975; Griffin, 1982).

Five core job dimensions are predicted to influence these critical psychological states. The job dimensions of skill variety, task identity and task significance all affect the critical state of "experienced meaningfulness of the work." The job dimension of autonomy affects the critical state of "experienced responsibility for outcomes of the work." The final job dimension, feedback, affects the critical state of "knowledge of results" (Hackman and Oldham, 1975).

The five core job dimensions are used to calculate a motivating potential score (MPS) for the job.

$$MPS = \frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3} \times \text{Autonomy} \times \text{Feedback}$$

The lower the MPS, the more potential for improvement there is in the job (Hackman and Oldham, 1975; Griffin, 1982).

Using a sample of 658 employees at 62 different types of jobs in seven different organizations, Hackman and Oldham (1975) obtained internal consistency reliabilities for each of the core dimensions. These values were: skill variety, .71; task identity, .59; task significance, .66; autonomy, .66; and feedback, .71 (Hackman and Oldham, 1975).

Dunham (1976) gave the JDS to 658 employees in seven organizations. This sample produced internal consistency estimates of .75, .72, .76, .72, and .73 for feedback, significance, variety, identity, and autonomy, respectively. Kim and Schuler (1979), using a sample of 272 utility employees, estimated internal consistencies of .80 for variety, .69 for identity, .73 for significance, .67 for task autonomy, and .73 for feedback. A study involving 155 insurance employees by Pierce and Dunham (1978)

produced internal consistencies of .69 for feedback, .74 for variety, .70 for identity, and .79 for autonomy.

Schuler, Brief and Aldag (1977) computed internal consistency estimates from four samples. The first sample of 374 hospital nursing personnel produced estimates of .91 (variety), .63 (identity), .69 (autonomy), and .62 (feedback). The second sample consisted of 272 communications employees and produced estimates of .89, .96, .80, and .73 for variety, identity, autonomy, and feedback, respectively. The last two samples in this study, however, produced somewhat lower levels of internal consistency. The third sample of 99 hospital and food service workers produced estimates of .20, .31, .35, and .47 for variety, identity, autonomy, and feedback, respectively. In the final sample, Schuler et al. reported on 70 nursing aides from the same hospital. The estimates from this sample were .47, .47, .55, and .30 for the variables listed above.

There have been other studies that have yielded low estimates of internal consistency reliability for the JDS. Brief and Aldag (1976), using a sample of 77 nursing aides and assistants, estimated internal consistencies of .47 (variety), .47 (identity), .60 (significance), .55 (autonomy), and .30 (feedback). A sample of 343 automobile assembly line supervisors and managers yielded estimated internal consistencies of .53 for variety, .52 for identity, .50 for significance, .53 for autonomy, and .38 for feedback (Evans, Kiggundu, and House, 1979).

Although the JDS is "currently the most widely used perceptual measure of job design" (Pierce and Dunham, 1978, p. 123), its internal consistency is questionable and its stability is largely unevaluated. Some of the questionable internal consistency appears to be due to the

instrument's dimensionality, especially with respect to the subject's level of education (Cook, Hepworth, Wall, and Warr, 1981). In other words, the quality of the results are affected by the education level of the respondents.

### Manifest Needs Questionnaire

Steers and Braunstein (1976) released a questionnaire designed to measure the needs for achievement (nAch), affiliation (nAff), autonomy (nAut), and dominance (nDom) using behaviorally based scales. This questionnaire is known as the Manifest Needs Questionnaire (MNQ) (Steers and Braunstein, 1976).

Theory behind the MNQ holds that "motivated behavior is in large measure a function of the strength of various needs . . . at a given point in time" (Steers and Braunstein, 1976, p. 252). Behaviorally based scales attempt to base the measurement of needs on what the subjects say they do or try to do rather than on what they think (Steers and Braunstein, 1976).

Empirical studies have resulted in a wide range of reliability estimates for the MNQ. Steers and Braunstein (1976) found internal consistency coefficients of: nAch, .66; nAff, .56; nAut, .61; and nDom, .83. They also found stability coefficients of: nAch, .72; nAff, .75; nAut, .77; and nDom, .86. These r's were computed using a 41 subject sample with a two-week interval (Steers and Braunstein, 1976). The high stability values may be due to the short interval between applications (Dreher and Mai-Dalton, 1983).

A more recent study by Dreher and Mai-Dalton (1983) used two samples of 74 and 164 subjects. The resulting internal consistency

reliabilities for samples of 74 and 164 subject samples were: nAch, .33 and .40; nAff, .23 and -.17; nAut, .45 and .31; and nDom, .52 and .59, respectively (Dreher and Mai-Dalton, 1983).

Dreher and Mai-Dalton also summarized past studies of internal consistency for the MNQ and found the following ranges: nAch, .31 to .66; nAff, -.17 to .56; nAut, .31 to .68; and nDom, .46 to .83.

Brief, Aldag, Darrow, and Power (1980) estimated the internal consistency of the MNQ using a sample of 96 registered nurses. The results for each factor were: nAch, .43; nAff, .05; nAut, .45; and nDom, .65 (Brief et al., 1980). In general, Brief et al. felt that the MNQ had questionable internal consistency. Dreher and Mai-Dalton expressed similar reservations, especially for the need for affiliation scale.

Williams and Woodward (1980) used a sample of 346 financial institution employees to estimate the internal consistency reliability coefficients for the MNQ scales. Their results were: nAff, .09; nAut, .50; nDom, .59; and nAch, .31. Williams and Woodward suggest that these poor r's may be due to the instrument having only 20 items (Williams and Woodward, 1980).

Morris and Snyder (1979) estimated the internal consistency reliability for the need for achievement and need for autonomy scales at .63 and .68, respectively. The sample used in this study consisted of 262 permanent nonacademic employees at a western university (Morris and Snyder, 1979).

These studies indicate that the reliability of the MNQ may not be adequate. This is especially true for the nAff and nAch scales.



## II. Method

### Samples

Four samples were used for estimation of stability coefficients. The first sample was from the base hospital at a U.S. Army post. The 64 subjects in this sample (henceforth hospital sample) were given the Air Force Institute of Technology's (AFIT) Survey of Work Attitudes in October 1982 and again in May 1983. The hospital sample was over 67 percent female and over 78 percent civilian. Most of the subjects had some college credits. The average age was between 26 and 30 years, and the average length of time in the organization was 18 to 24 months. Only eight of the subjects held management positions.

The second sample consisted of 158 subjects from a DOD intelligence gathering organization at a U.S. Air Force Base. This sample (henceforth intelligence gathering sample) was over 77 percent male and over 80 percent civilian. The average age was between 31 and 40 years, and the average tenure was 24 to 36 months. The average educational level was an associate degree. Managers accounted for 29 of the subjects. This group was given the AFIT Organizational Development Survey in September 1982 and again in May 1983.

The third sample was obtained from the civil engineering squadron at a U.S. Army post. This sample (henceforth civil engineering sample) was composed of 52 subjects, 49 of which were male. The average age for

the subjects was between 31 and 40 years. The average tenure was 24 to 36 months and most subjects (96 percent) were civilian. Nonmanagers made up over 92 percent of the subjects. The AFIT Survey of Work Attitudes was administered to this sample in October 1982 and November 1983.

The final sample used in this study consisted of 178 missile maintenance personnel at an Air Force base (henceforth missile maintenance sample). This sample was over 75 percent male and over 70 percent military. The average educational level included some college work. The average age was between 26 and 30 years, and the average tenure was 12 to 18 months. Managers accounted for over 42 percent of the subjects. This sample was given the AFIT Survey of Work Attitudes in November 1982 and December 1983. Demographic information for each sample is shown in Table I.

### Measures

There were two different surveys used in the collection of data. The AFIT Survey of Work Attitudes was used for both Army samples and for the missile maintenance sample. The AFIT Organizational Development Survey was administered to the intelligence gathering sample.

The AFIT Survey of Work Attitudes contains all or part of the Organizational Commitment Questionnaire (OCQ), Wagner and Morse's competence questionnaire, the Job Diagnostic Survey (JDS), and the Manifest Needs Questionnaire (MNQ). The survey is contained in Appendix A. The 137 items in the survey include other measurement instruments not investigated in this study.

TABLE I

Sample Characteristics

	Hospital	Intelligence	Civil Engineering	Missile Maintenance
N	64	158	52	178
Sex				
Male	19	122	49	134
Female	43	34	2	25
Age (Mean)	26 to 30 yrs	31 to 40 yrs	31 to 40 yrs	26 to 30 yrs
Education (Mean)	Some College	Associates Degree	Below High School	Some College
Tenure (Mean)	18 to 24 mos	24 to 36 mos	24 to 36 mos	12 to 18 mos
Managers	8	29	4	76
Non-Managers	56	129	48	102
Military Officer	0	23	1	18
Enlisted	14	8	1	107
Civilian	50	127	50	53

The Organizational Development Survey contains the Job Diagnostic Survey (JDS), the Wagner and Morse competence Questionnaire, and the need for achievement scale of the Manifest Needs Questionnaire. This survey is given in Appendix B.

Organizational Commitment Questionnaire. Organizational commitment is measured with 15 items using an instrument developed by Porter et al. (1974) and Mowday et al. (1979). Responses were made along a 7-point Likert scale from strongly disagree (1) to strongly agree (7). Some items were negatively phrased and were reverse coded for analysis purposes. Background on the reliability and validity of this instrument may be obtained from a variety of sources (e.g., Mowday et al., 1979).

Sense of Competence. Thirteen items were taken from the Wagner and Morse Sense of Competence Questionnaire. The original instrument contained 23 items. The questions were answered using a 7-point Likert scale of strongly disagree (1) to strongly agree (7). Certain items were reverse scored. Evidence for the reliability, factor structure, and predictive validity of this measure is contained in Snyder and Morris (1978) and Wagner and Morse (1975).

Job Diagnostic Survey. Four core dimensions of the Job Diagnostic Survey (JDS) were measured with 12 items. Measures of task identity, task significance, task autonomy and skill variety were investigated in this study. Task feedback was not included. All items were arrayed on 7-point verbally anchored response scales. Documentation on the factor structure, reliability, and validity of this measure appears in sources such as: Dunham, Aldag and Brief (1977); Griffin (1982); and Hackman and Oldham (1975).

Manifest Needs Questionnaire. Two scales from the Manifest Needs Questionnaire, need for achievement (nAch) and need for affiliation (nAff), were measured in the present study. Responses were provided along a 7-point Likert scale from never (1) to always (7). Some items were negatively worded and reverse scored before analysis. For background information on the MNQ, see Steers and Braunstein (1979) and Dreher and Mai-Dalton (1983).

#### Procedure

The Survey of Work Attitudes and the Organizational Development Survey were administered during evaluative research on organizational development interventions. For all samples, a nonequivalent control group design was used in these studies (Campbell and Stanley, 1963). Since the object of this study was to estimate the stability of the variables over time, only the control group's responses from a sample were used. The experimental groups were dropped because of their exposure to treatments designed to create change on the measures contained in the instruments. The traits measured by the study variables were assumed to remain stable over time for the control groups since they were not directly exposed to any formalized experimental treatment. All surveys were conducted under controlled, standardized conditions. The surveys were given to groups of 20 to 60 individuals during each occasion. All respondents were given standard briefings at each survey administration regarding the voluntary nature of their responses, the confidentiality of responses, and the uses to which the data would be applied.

For each sample pre- and post-measures were conducted in the same locations under comfortable environmental conditions. Since the surveys were attitudinal in nature and did not measure knowledge of a subject, effects due to individual administrators, environmental factors, and guessing were assumed to be negligible and random. Specifically, attitudinal surveys were assumed to be relatively insensitive to these processes (Steel, Personal Communication). Carry-over effects due to memory for previous responses on the first survey were also assumed to be negligible due to the extended length of time between survey administrations and the large number of items in each survey. There were no effects assumed to be due to scoring practices because no subjective scoring by researchers occurred. The only probable sources of error were measurement error and error due to changes in the actual traits measured over time.

To match subject responses to both surveys on a case-by-case basis, subjects were asked to provide their social security numbers (SSAN). The SSANs were matched to answer sheets for the pre-surveys and kept by an organizational liaison during the study. After the post-measure, the subjects' SSANs were used to pair answer sheets for each individual. In this way, the researchers never knew which individual completed which answer form, but they were still able to obtain paired data from each individual.

All subjects were informed of this procedure in detail at the beginning of each survey administration. Since this procedure was performed systematically for every survey, any effects it might have produced on subject responses were assumed to be constant across survey administrations.

## Analyses

Cases from each sample were sorted to obtain only control group member results. Pearson product moment correlations between the two surveys were utilized as estimates for the coefficient of stability. Internal consistency reliabilities (Cronbach Alpha) were also computed for each survey administration for comparison purposes.

### III. Results

This chapter presents the overall results of this study. The general results for means, standard deviations, and coefficients of internal consistency and stability are written in text form. More detailed results by sample and application are presented in Tables II through XVII.

#### Organizational Commitment

Tables II and III summarize the results from the three samples exposed to the Organizational Commitment Questionnaire. The OCQ was not administered to the intelligence gathering sample, therefore, no statistics are available for that group.

Table II provides descriptive statistics for the OCQ. The mean response on this instrument ranged across samples from a low of 4.02 (S.D. = 1.37) for the missile maintenance sample's posttest to a high of 5.06 (S.D. = 1.55) for the civil engineering sample's pretest.

The reliability coefficients for the OCQ appear in Table III. The average internal consistency coefficients were .88 on the pretests, .89 on the posttests, with a grand mean of .89 for all coefficients. The coefficients ranged from a low of .85 for the civil engineering sample's posttest to a high of .91 for the hospital sample's posttest.

The coefficients of stability were .59 for a 7-month interval and .30 and .45 for two 13-month intervals.



TABLE II  
Descriptive Statistics for the Organizational Commitment Questionnaire

Statistics	Sample			
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance
	Pretest			
Mean	4.60	NA	5.06	4.15
S.D.	1.16	NA	1.55	1.14
	Posttest			
Mean	4.53	NA	4.99	4.02
S.D.	1.19	NA	1.07	1.37

TABLE III

Estimate of Reliability for the Organizational  
Commitment Questionnaire

Type of Reliability	Sample				Mean
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance	
Coefficients of Internal Consistency					
Pretest alpha	.89	NA	.90	.86	.88
Posttest alpha	.91	NA	.85	.90	.89
Mean r	.90	NA	.88	.88	.89
Coefficients of Stability					
Retest r	.59	NA	.30	.45	
Time interval (in months)	(7)	(8)	(13)	(13)	

### Sense of Competence Questionnaire

Table IV provides means and standard deviations (S.D.s) for Sense of Competence measures from the four samples. The civil engineering pretest yielded the highest mean response of 5.41 with a standard deviation of 1.53. The lowest mean response was 4.96 from the intelligence gathering sample with a standard deviation of 1.36.

Table V contains reliability coefficients for the competence measure. Average internal consistency reliability coefficients were .74 for the pretest, .76 for the posttest and .75 overall. They ranged from .65 (civil engineering sample's pretest) to .80 (intelligence gathering sample's pretest).

The stability coefficients for the competence instrument were .70, .71, .59, and .54 for 7-, 8-, 13-, and 13-month intervals, respectively.

### The Job Diagnostic Survey

The results from the Job Diagnostic Survey (JDS) are presented in Tables VI through XIII. The JDS was administered to all four samples.

Task Significance. Table VI presents descriptive statistics for the task significance dimension of the JDS. The mean response ranged from a low of 5.12 (S.D. = 1.38) for the intelligence gathering sample's posttest to a high of 6.02 (S.D. = 1.53) for the civil engineering sample's pretest.

Coefficient alphas are given in Table VII. They averaged .65 for the pretest, .66 for the posttest, and .65 overall. The low value was .53 from the civil engineering sample's posttest while the high value was .81 from the intelligence gathering sample's posttest.

TABLE IV  
 Descriptive Statistics for the Sense of Competence Questionnaire  
 (Wagner and Morse, 1975)

Statistics	Sample			
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance
	Pretest			
Mean	4.97	4.96	5.41	4.97
S.D.	.82	1.36	1.53	1.35
	Posttest			
Mean	5.02	5.00	5.25	5.00
S.D.	.77	1.34	1.46	1.08

TABLE V  
 Estimates of Reliability for the Sense of Competence Questionnaire  
 (Wagner and Morse, 1975)

Type of Reliability	Sample				Mean
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance	
Coefficients of Internal Consistency					
Pretest alpha	.71	.80	.65	.79	.74
Posttest alpha	.70	.79	.74	.79	.76
Mean r	.71	.80	.70	.79	.75
Coefficients of Stability					
Retest r	.70	.71	.59	.54	
Time interval (in months)	(7)	(8)	(13)	(13)	

TABLE VI  
 Descriptive Statistics for the Task Significance Dimension  
 of the Job Diagnostic Survey

Statistics	Sample			
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance
	Pretest			
Mean	5.89	5.20	6.02	5.46
S.D.	1.16	1.38	1.53	1.27
	Posttest			
Mean	5.52	5.12	5.84	5.40
S.D.	1.35	1.38	1.29	1.36

TABLE VII

Estimates of Reliability for the Task Significance Dimension  
of the Job Diagnostic Survey

Type of Reliability	Sample				Mean
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance	
Coefficients of Internal Consistency					
Pretest alpha	.66	.79	.59	.54	.65
Posttest alpha	.58	.81	.53	.70	.66
Mean r	.62	.80	.56	.62	.65
Coefficients of Stability					
Retest r	.56	.59	.48	.44	
Time interval (in months)	(7)	(8)	(13)	(13)	

The stability coefficients were .56, .59, .48, and .44 for 7-, 8-, 13-, and 13-month intervals, respectively.

Task Autonomy. Tables VIII and IX present the results for the task autonomy dimension of the JDS. The missile maintenance sample's pretest mean response of 4.36 (S.D. = 1.50) was the lowest while the intelligence gathering sample's posttest mean response of 5.48 (S.D. = 1.19) was the highest on this dimension of the JDS.

The average internal consistency reliability coefficients were .71 (pretest), .62 (posttest), and .67 (overall). These coefficients ranged from .45 for the civil engineering sample's posttest to .76 for the hospital sample's pretest.

The stability coefficients were .53, .66, .17, and .51 for 7-, 8-, 13-, and 13-month intervals, respectively.

Skill Variety. The results for the skill variety portion of the JDS are presented in Tables X and XI.

The mean response ranged from a low of 4.49 (S.D. = 1.35) for the missile maintenance sample's posttest to a high of 5.56 (S.D. = 1.50) for the civil engineering sample's pretest.

The average coefficients of internal consistency were .62 for the pretest, .64 for the posttest, and .63 overall. The lowest coefficient of .47 was from the civil engineering sample's pretest while the highest of .78 was from the intelligence gathering sample's pretest.

The coefficients of stability for 7-, 8-, 13-, and 13-month intervals were .59, .68, .22, and .53, respectively.

Task Identity. Tables XII and XIII present the results for the task identity section of the JDS.



**TABLE VIII**  
**Descriptive Statistics for the Task Autonomy Dimension**  
**of the Job Diagnostic Survey**

Statistics	Sample			
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance
	Pretest			
Mean	5.26	5.37	5.39	4.36
S.D.	1.27	1.29	1.65	1.50
	Posttest			
Mean	5.21	5.48	5.16	4.57
S.D.	1.17	1.19	1.32	1.36

TABLE IX

Estimates of Reliability for the Task Autonomy Dimension  
of the Job Diagnostic Survey

Type of Reliability	Sample				Mean
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance	
Coefficients of Internal Consistency					
Pretest alpha	.76	.73	.69	.67	.71
Posttest alpha	.60	.74	.45	.70	.62
Mean r	.68	.74	.57	.69	.67
Coefficients of Stability					
Retest r	.53	.66	.17	.51	
Time interval (in months)	(7)	(8)	(13)	(13)	

**TABLE X**  
**Descriptive Statistics for the Skill Variety Dimension**  
**of the Job Diagnostic Survey**

Statistics	Sample			
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance
	Pretest			
Mean	4.82	5.25	5.56	4.54
S.D.	1.40	1.37	1.50	1.37
	Posttest			
Mean	4.81	5.31	5.39	4.49
S.D.	1.36	1.27	1.41	1.35

TABLE XI

Estimates of Reliability for the Skill Variety Dimension  
of the Job Diagnostic Survey

Type of Reliability	Sample				Mean
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance	
Coefficients of Internal Consistency					
Pretest alpha	.63	.78	.47	.58	.62
Posttest alpha	.65	.77	.57	.55	.64
Mean r	.64	.78	.52	.57	.63
Coefficients of Stability					
Retest r	.59	.68	.22	.53	
Time interval (in months)	(7)	(8)	(13)	(13)	

The lowest mean response of 4.76 (S.D. = 1.31) was from the missile maintenance sample's pretest. The highest mean response of 5.43 (S.D. = 1.19) was from the intelligence gathering sample's pretest.

The average internal consistency reliability coefficients were .55 for the pretest, .59 for the posttest and .57 overall. The coefficients ranged from .37 for the civil engineering sample's pretest to .66 for the intelligence gathering sample's posttest.

The stability coefficients were .33, .38, .43, and .29 for 7-, 8-, 13-, and 13-month intervals, respectively.

#### Manifest Needs Questionnaire

Results for the Manifest Needs Questionnaire are presented in Tables XIV through XVII. The need for achievement (nAch) scale was given to all four samples. The need for affiliation (nAff) scale was given to all samples except the intelligence gathering sample.

Need for Achievement. Tables XIV and XV contain the results for the nAch scale of the MNQ. The highest mean response was 5.68 (S.D. = 1.71) from the missile maintenance sample's pretest. The lowest was 5.15 (S.D. = .90) from the hospital sample's posttest.

The average coefficients of internal consistency were .56 for the pretest, .66 for the posttest and .61 overall. The coefficients ranged from .23 for the civil engineering sample's pretest to .79 for the intelligence gathering sample's posttest.

The stability coefficients were .58 (7-month interval), .74 (8-month interval), .57 (13-month interval), and .67 (13-month interval).

**TABLE XII**  
**Descriptive Statistics for the Task Identity Dimension**  
**of the Job Diagnostic Survey**

Statistics	Sample			Missile Maintenance
	Hospital	Intelligence Gathering	Civil Engineering	
		Pretest		
Mean	5.21	5.43	5.17	4.76
S.D.	1.29	1.19	1.54	1.31
		Posttest		
Mean	5.17	5.28	5.26	4.82
S.D.	1.27	1.20	1.39	1.35

TABLE XIII

Estimates of Reliability for the Task Identity Dimension  
of the Job Diagnostic Survey

Type of Reliability	Sample				Mean
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance	
Coefficients of Internal Consistency					
Pretest alpha	.62	.64	.37	.56	.55
Posttest alpha	.57	.66	.47	.65	.59
Mean r	.60	.65	.42	.61	.57
Coefficients of Stability					
Retest r	.33	.38	.43	.29	
Time interval (in months)	(7)	(8)	(13)	(13)	

TABLE XIV

Descriptive Statistics for the Need for Achievement Scale  
of the Manifest Needs Questionnaire

Statistics	Sample			
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance
	Pretest			
Mean	5.19	5.22	5.28	5.68
S.D.	.92	.87	1.46	1.71
	Posttest			
Mean	5.15	5.34	5.19	5.41
S.D.	.90	.88	1.32	1.28



TABLE XV  
 Estimates of Reliability for the Need for Achievement Scale  
 of the Manifest Needs Questionnaire

Type of Reliability	Sample				Mean
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance	
Coefficients of Internal Consistency					
Pretest alpha	.62	.73	.23	.66	.56
Posttest alpha	.60	.79	.56	.70	.66
Mean r	.61	.76	.40	.68	.61
Coefficients of Stability					
Retest r	.58	.74	.57	.67	
Time interval (in months)	(7)	(8)	(13)	(13)	(13)

Need for Affiliation. Tables XVI and XVII present the results of the nAff scale of the MNQ. The mean response ranged from a high of 4.77 (S.D. = 1.95) for the missile maintenance sample's pretest to a low of 3.86 (S.D. = .71) for the hospital sample's posttest.

The average internal consistency reliabilities were -.23 for the pretest, -.03 for the posttest, and -.12 overall. The range of coefficients was from -.52 for the civil engineering sample's pretest to .13 for the missile maintenance sample's posttest.

The stability coefficients were .14, .52, and .29 for a 7-, and two 13-month intervals, respectively.

TABLE XVI  
 Descriptive Statistics for the Need for Affiliation Scale  
 of the Manifest Needs Questionnaire

Statistics	Sample			
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance
		Pretest		
Mean	3.89	NA	4.32	4.77
S.D.	.65	NA	1.57	1.95
		Posttest		
Mean	3.86	NA	4.19	4.20
S.D.	.71	NA	1.58	1.02

TABLE XVII

Estimates of Reliability for the Need for Affiliation Scale  
of the Manifest Needs Questionnaire

Type of Reliability	Sample				Mean
	Hospital	Intelligence Gathering	Civil Engineering	Missile Maintenance	
Coefficients of Internal Consistency					
Pretest alpha	-.13	NA	-.52	-.03	-.23
Posttest alpha	-.09	NA	-.14	.13	-.03
Mean r	-.11	NA	-.33	.08	-.12
Coefficients of Stability					
Retest r	.14	NA	.52	.29	
Time interval (in months)	(7)	(8)	(13)	(13)	

#### IV. Discussion

##### Organizational Commitment

The range of internal consistency reliabilities (.85 to .91) computed for the OCQ in this study are comparable to the values computed in earlier studies using this instrument. The earlier studies reported internal consistency reliabilities of .84 (Ivancevich, 1979) to .91 (Jermier and Berke, 1978). As evident in these and previous studies, the OCQ appears to have excellent internal consistency characteristics.

The stability coefficients computed by this study were generally lower and used longer intervals than those reported in earlier studies. Earlier studies found stability coefficients of .53 for a 2-month interval, .63 and .62 for 3-month intervals, and .75 for a 4-month interval (Porter et al., 1976; Mowday et al., 1979). The coefficients from this study were .59 for a 7-month interval, and .30 and .45 for 13-month intervals. The OCQ appears to remain quite stable over short intervals of up to 4-months. For intervals longer than 7-months, its stability begins to erode.

The OCQ, because of its high internal consistency, appears to be measuring one trait consistently. The OCQ's stability appears to erode considerably as periods exceed one year or more. This increasing lack of stability suggests that the commitment attitude may become more transient across longer time intervals. That lower stability coefficients are due to changes in the trait itself rather than to measurement error seems likely in light of the high internal consistency reliability estimates.

### Sense of Competence Questionnaire

The alpha coefficients computed in this study for the sense of competence instrument (.65 to .80) only partially agree with past studies using this instrument. The original estimate of internal consistency reliability of .96 provided by Wagner and Morse (1975) was higher than any produced by this study. However, it must be noted that the instrument used in the present studies was a shortened version of the original measure described by Wagner and Morse (1975). The estimates of .68 by Morris and Sherman (1981) and .76 by Tharenou and Harker (1982) are more consistent with the present findings. The highest estimated internal consistency estimate for a factor in this instrument was only .82 (Ezell et al., 1981), still well below the .96 found by Wagner and Morse for the entire instrument. Although most estimates of internal consistency are well below that of Wagner and Morse, the internal consistency is still typically above accepted levels.

The stability of this instrument erodes more slowly than that of the OCQ and may begin to reach an asymptote at about one year. The stability appears to degrade gradually as the interval increases (see Figure 1).

The Sense of Competence Questionnaire, because of its high levels of internal consistency, appears to measure one trait. Personal competence is reputed to be a measure of an individual differences characteristic. The evidence for the stability of this measure, even over periods up to 13 months, supports the contention that a stable trait is being measured.

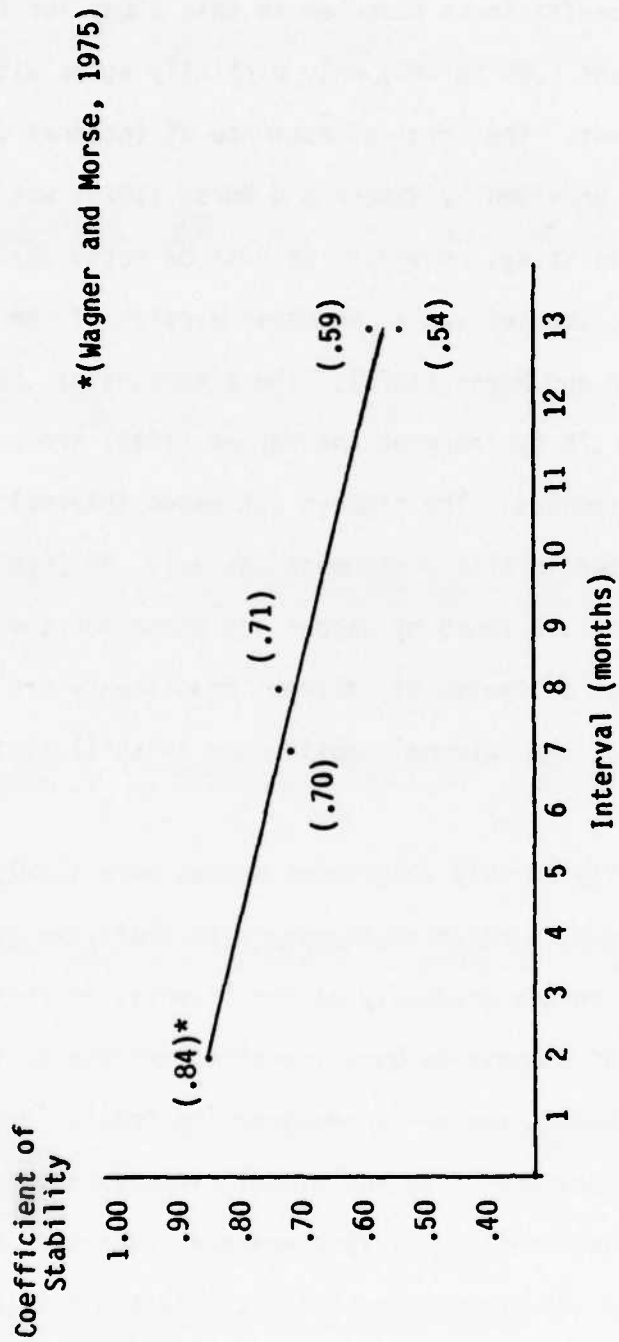


Figure 1. Coefficients of Stability for the Sense of Competence Questionnaire Over Longer Intervals

### The Job Diagnostic Survey

The four dimensions of the JDS measured in this study had similar levels of internal consistency reliability. The average coefficients of internal consistency across all samples were .65 for task significance, .67 for task autonomy, .63 for skill variety, and .57 for task identity.

The stability values for the task significance, task autonomy, and skill variety dimensions were all similar for the 7-month (.56, .53, and .59, respectively) and the 8-month (.59, .66, and .68, respectively) intervals.

An issue raised in past studies concerned possible dimensionality of the JDS with respect to education level. In other words, the quality of results from the JDS were highly correlated with the subjects' education level (Cook et al., 1981). More consistent results were obtained from higher educated samples.

In this study, the intelligence gathering sample had the highest education level (most subjects had at least an associate degree) while the civil engineering sample had the lowest education level (the average level was below high school).

The argument for some effect of education on instrument dimensionality was supported by the internal consistency reliability results of all four dimensions used in this study. The results from the intelligence gathering sample were consistently much higher than those from the civil engineering sample.

The stability results, however, did not entirely support this argument. For the task autonomy and skill variety dimensions, the civil engineering sample's coefficients were much lower than the intelligence



gathering sample's coefficients. Although some of the difference is probably due to the difference in intervals (8-months for the intelligence gathering sample versus 13-months for the civil engineering sample), the civil engineering sample's coefficient was also well below the other 13-month interval application (missile maintenance sample) for both dimensions. For the other two dimensions, this pattern of results did not occur. In fact, the stability of the task identity dimension for the civil engineering sample is higher than that of the intelligence gathering sample.

Task Significance Dimension. The average internal consistency reliability coefficient of .65 with a range of .54 to .81 for the task significance dimension are comparable to results from earlier studies. Earlier studies have produced values ranging from .50 (Evans et al., 1979) to .73 (Kim and Schuler, 1979).

The task significance dimension appears to be reasonably stable for intervals in excess of 8 months. The stability appears to erode steadily beyond intervals of about 13 months.

The wide range of internal consistency estimates indicate that this dimension of the JDS contains considerable measurement error. Further refinement of the measurement of this task characteristic appears necessary.

Task Autonomy Dimension. The internal consistency estimates of reliability from this study are consistent with the results of past studies. The average coefficient of .67 is midway within the range of .53 (Evans et al., 1979) to .80 (Schuler et al., 1977) yielded by earlier studies.

The dimensionality issue was supported by the average internal consistency coefficients. The highest average coefficient, .74, was from

the most highly educated sample. The lowest average coefficient, .57, was from the sample with the lowest education. The two samples with the same education level, hospital and missile maintenance, had very similar average coefficients (.68 and .69, respectively).

With the exception of the civil engineering sample (.17), the stability coefficients were all within tolerable ranges (.53, 7-month interval; .66, 8-month interval; .51, 13-month interval).

Skill Variety Dimension. Most previous research using this dimension has reported internal consistency reliabilities ranging from .47 (Schuler et al., 1977; Brief and Aldag, 1976) to .91 (Schuler et al., 1977). This study also produced a wide range of values ranging from .47 to .78 with an average of .63. This wide range of results suggest that the dimension may contain considerable measurement error.

All stability coefficients with the exception of the civil engineering sample's, were acceptable. The highest coefficient, .68, was from the intelligence gathering sample while the lowest, .22, was from the civil engineering sample. As with the case with other JDS dimensions, the objective attributes of jobs may fluctuate over time, hence these measures may prove to be less stable than measures of other types of traits.

Task Identity Dimension. The average internal consistency coefficient of .57 with a range of .37 to .66 is similar to the results of past studies. Most previous studies produced values ranging from .31 (Schuler et al., 1977) to .72 (Dunham, 1976).

The stability coefficients are all low and do not follow any obvious trends due to dimensionality or interval length. In theory, an instrument's stability should decline over longer intervals due to the introduction

of more sources of random errors. This task characteristic may be particularly susceptible to change with time.

The task identity dimension, because of its low and erratic internal consistency coefficients, appears to need further psychometric development.

### Manifest Needs Questionnaire

The two scales of the MNQ studied here (need for achievement and need for affiliation) produced vastly different results for both internal consistency and stability. The need for achievement scale had mostly acceptable levels of internal consistency and stability while the need for affiliation scale produced mostly low reliabilities. In general, this study supports Dreher and Mai-Dalton's (1983) contention that the MNQ has questionable reliability, especially for the need for affiliation scale.

Need for Achievement Scale. The internal consistency results of this study tended to agree with most past studies. An extensive study by Dreher and Mai-Dalton (1983) reported internal consistency coefficients ranging from .31 to .66 for this scale. Two of the samples in this study produced average coefficients above this range (intelligence gathering, .76; missile maintenance, .68), while the other two samples were well within the range (hospital, .61; civil engineering, .40).

Steers and Braunstein (1976) estimated the stability of the scale at .72 using a 2-week interval. The stability coefficients estimated in this study tended to support the stability estimate of Steers and Braunstein even though the intervals were substantially longer. The stability coefficients of .58, .74, .57, and .67 (for 7-, 8-, 13-, and 13-month intervals, respectively, were all indicative of a stable individual differences characteristic.

The need for achievement scale, due to its internal consistency reliability, may not be measuring a single trait. The wide range of coefficients indicates that the set of traits is highly sample dependent. The stability results, however, indicate that the set of traits this scale measures are stable over periods of time of up to 13 months.

Need for Affiliation Scale. The wide range of low internal consistency coefficients (-.52 to .13) for this scale from this study were consistent with past research results. Dreher and Mai-Dalton (1983), in their extensive review, reported a range of coefficients from -.17 to .56. With exception of the civil engineering sample's pretest coefficient (-.52), all of the estimates from this study were within Dreher and Mai-Dalton's range. The overall average coefficient produced by this study (-.12) was also within their range.

The stability of this scale also varied widely. Only one sample, civil engineering, produced a stability coefficient (.52) close to Steers and Braunstein's (1976) estimate of .56. The other two coefficients were .14 (hospital sample) and .29 (missile maintenance sample). As a further note, although the civil engineering sample produced the highest stability coefficient (.52), it also produced the lowest average internal consistency coefficient (-.33).

The poor results of this scale for internal consistency support Dreher and Mai-Dalton's (1983) reservations about the reliability of this instrument. They recommend a moratorium on the use of this measure, and our evidence further reinforces their conclusion.

## V. Conclusion

As with most large organizations, the Department of Defense and the Air Force in particular are always looking for ways to measure and improve the performance of their personnel. This search has taken the Air Force into new areas of science. Some of these new areas, like organizational behavior, are still in their infancy relative to other sciences and, consequently, do not have a large and proven set of tools and measures. In many cases, researchers in these areas must create the tools they need as they go. Four recently created tools were addressed in this study.

With most new creations, the first version is not usually the best or final form. With this in mind, it is critical that Air Force researchers in the organizational behavior area test their instruments as critically as they test their theories.

Conceptually, individual difference type measures such as the MNQ and the Sense of Competence instrument should be more stable than instruments designed to index other cognitive or affective phenomena. The traits these instruments measure are assumed to be a continuing part of a person's basic character and not subject to frequent substantial change.

The next most stable measure should be an attitude measure such as the OCQ. Attitudes, while relatively firm, can be changed with argument and experiences.

The conceptually least stable of the measures addressed here are task descriptions such as the JDS. Daily changes in the work environment could change a person's perceptions of the job and change their responses to the JDS.

The findings from this study generally support these generalizations. The most stable measure in this study was the Sense of Competence instrument. The next most stable measure was the need for achievement scale of the MNQ followed by the task significance, task autonomy and skill variety dimensions of the JDS. After these, the OCQ was the next most stable followed by the task identity dimension of the JDS. The least stable was the need for affiliation scale of the MNQ.

These findings have several possible implications. One implication is that either task descriptions (especially task significance, task autonomy and skill variety) are perceived as being more stable than previously believed or that organizational commitment is a less stable attitude than previously thought. The possibility that organizational commitment is not as stable and lasting a trait as expected has important implications for the Department of Defense, where retention of personnel is a critical issue.

Another obvious implication is that the need for affiliation scale of the MNQ requires a total reworking before it can be useful. The results on the need for achievement scale of the MNQ indicate that the MNQ is partially useful and addressing a valid concept. The MNQ, however, is severely hampered in its present form by the need for affiliation scale.

The instruments in this study used to measure commitment and competence, both potentially vital elements in maintaining a peacetime military

and winning an armed conflict, appear to be quality instruments whose results can be trusted to be reliable. The results of this study indicate that the OCQ has good internal consistency reliability and acceptable stability for periods of time up to 7 months. The Sense of Competence Questionnaire has good levels of internal consistency and acceptable levels of stability for periods of time up to 13 months.

The instruments in this study used to measure manifest needs and perceived job characteristics were not proven to be as trustworthy. The Air Force needs to be able to measure traits such as personal needs and perceived job characteristics in order to most efficiently assign our personnel and to develop their full potential once assigned. All four dimensions of the JDS addressed here could benefit from some changing of items. Proper rewriting and possible addition of items may correct the marginal internal consistency reliability and apparent dependency on education. The task identity dimension should be given additional emphasis to correct its poor stability. Of the two Manifest Needs scales in this study, the need for achievement scale was clearly superior to the affiliation scale. The need for affiliation scale is seriously flawed. The poor internal consistency and stability estimates indicate that this scale needs major changes. It is possible that the need for affiliation is too complex and diverse a trait to be measured with just four items (Dreher and Mai-Dalton, 1983).

Appendix A: Organizational Development Survey



ORGANIZATIONAL DEVELOPMENT SURVEY

DEPARTMENT OF THE AIR FORCE  
AIR UNIVERSITY (ATC)

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio



## PRIVACY ACT

In accordance with paragraph 30, AFR 12-35, the following information is provided as required by the Privacy Act of 1974:

a. Authority:

- (1) 5 U.S.C. 301, Departmental Regulations; and
- (2) 10 U.S.C. 8012, Secretary of the Air Force, Powers, Duties, Delegation by Compensation; and
- (3) EO 9397, 22 Nov 43, Numbering System for Federal Accounts Relating to Individual Persons; and
- (4) DOD Instruction 1100.13, 17 Apr 82, Surveys of Department of Defense Personnel; and
- (5) AFR 30-23, 22 Sep 76, Air Force Personnel Survey Program.

b. Principal purposes. The survey is being conducted to collect information to be used in consulting aimed at illuminating and providing inputs to the solution of problems of interest to your organization.

c. Routine uses. The survey data will be analyzed and used by the consultants primarily for the purpose of identifying issues of concern and requiring attention across the entire organization. In addition, the data in anonymous and aggregated form may be used to build a larger data base for future consulting and research efforts. As such, results of future research may be included in published articles, reports, or texts. The distribution of these research results will be unlimited.

d. Participation in this survey is entirely voluntary.

e. No adverse action of any kind may be taken against any individual who elects not to participate in any or all of this survey.

## GENERAL INFORMATION

The purpose of this questionnaire is to obtain information from you about your job, your work group and your organization. Specifically, this information is being collected anonymously from you and most other members of your organization in support of a consultation effort requested by your commander.

Please be assured that all information you provide will be held in the strictest confidence. Your individual responses will NOT be provided to management or to any other agency. Feedback on the study's results will be presented to management only in terms of group averages describing what the "typical" employee would say.

A primary objective of this study is to track changes in worker attitudes over time. You will be asked to complete another survey at some later date. In order to detect any changes in worker attitudes, some means was needed to connect responses provided by an employee at different times. At the same time, the consulting team wishes to protect the anonymity of all participants. A procedure was developed to achieve both of these objectives. We ask your indulgence in complying with this procedure.

### Questionnaire Tracking Procedures

You have been provided a computer-scored response form called the Organizational Assessment Form (AFIT Form 11). In the top right hand corner (both on the front and back) you will find a unique, four-digit survey control number. Each member of your organization who completes this survey has a different survey control number. An employee of the organization has agreed to serve as an "intermediary" in this procedure. When you complete your questionnaire, this person will ask you for your survey control number and your social security number. That employee will retain this information on a master list. You will then turn your questionnaire in directly to a representative of the consulting team. This procedure will be followed for future administrations of the survey. The "intermediary" will have a key by which survey control numbers may be linked via social security numbers. He or she will not have access to any questionnaire responses. The consulting team will see completed questionnaires, but will only be told that one arbitrary survey control number should be paired with another. In this way, we feel we have provided for attainment of both aims of the study--employee anonymity and a means of tracking attitude changes.

## KEYWORDS

The following are definitions of key words that recur throughout the questionnaire:

1. Supervisor: The person to whom you report directly.
2. Work Group: All persons who report to the same supervisor that you do. (If you are a supervisor, your work group is the group of employees that report directly to you).
3. Organization: Foreign Technology Division

## INSTRUCTIONS

This questionnaire contains 139 items (individual "questions"). All items must be answered by filling in the appropriate spaces on the computer-scored response sheet provided. If for any item you do not find a response that fits your situation exactly, use the one that is the closest to the way you feel.

Please use a "soft-lead" (No. 2) pencil, and observe the following:

1. Make heavy black marks that fill in the space (of the response you select).
2. Erase cleanly any responses you wish to change.
3. Make no stray markings of any kind on the response sheet.
4. Do not staple, fold or tear the response sheet.
5. Do not make any markings on the questionnaire booklet.

The front side of the computer-scored response sheet has 200 different response blocks (numbered from 001 through 200). Each response block, beginning with the first block numbered 001, is to be used sequentially to answer the 139 questions in the survey. In other words, you will answer the first question in the survey on response block 001, the second question on response block 002, and so on through the last question in the survey which will be answered on response block 139.

Each response block has 7 numbered spaces to the right of the response block number. The survey questions normally require a response from 1 to 7. Please respond to each survey question by marking over the appropriate numbered space (using ONLY a soft-lead pencil) on the computer-scored answer sheet as in the following example:

EXAMPLE

Use the following sample scale to respond to the sample question numbered 999 below: .

Sample Scale: 1 = Strongly disagree  
2 = Moderately disagree  
3 = Slightly disagree  
4 = Neither agree nor disagree  
5 = Slightly agree  
6 = Moderately agree  
7 = Strongly agree

Sample Question:

999. My supervisor is a good planner.

If, in the above sample question, you "Strongly agree", you would mark over the space numbered "7" beside the appropriate response block number for the question as shown below.

Sample Answer Response to Sample Question # 999:

[ D ] [ NA ] 999. [ 1 ] [ 2 ] [ 3 ] [ 4 ] [ 5 ] [ 6 ] [ 7 ]

Disregard  
these spaces  
throughout the  
answer sheet.

## SUPERVISORY INVENTORY

The statements below describe characteristics of managers or supervisors. Indicate your agreement by choosing the statement below which best represents your attitude concerning your supervisor.

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Slightly disagree
- 4 = Neither agree nor disagree
- 5 = Slightly agree
- 6 = Moderately agree
- 7 = Strongly agree

- 001. My supervisor is a good planner.
- 002. My supervisor sets high performance standards.
- 003. My supervisor encourages teamwork.
- 004. My supervisor represents the group at all times.
- 005. My supervisor establishes good work procedures.
- 006. My supervisor has made his responsibilities clear to the group.
- 007. My supervisor fully explains procedures to each group member.
- 008. My supervisor performs well under pressure.
- 009. My supervisor asks members for their ideas on task improvements.
- 010. My supervisor explains how my job contributes to the overall mission.

JOB CHARACTERISTICS

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do NOT use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.

A sample question is given below:

- A. To what extent does your job require you to work with mechanical equipment?

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Very little; the job requires almost no contact with mechanical equipment of any kind.		Moderately				Very much; the job requires almost constant work with mechanical equipment.

Indicate on the answer sheet the number which is the most accurate description of your job. If, for example, your job requires you to work with mechanical equipment a good deal of the time, but also requires some paperwork, you might choose the number six, so you would blacken "6" in on the answer sheet.

If you do not understand these instructions, please ask for assistance. If you do understand them, turn the page and begin.

SECTION ONE OF JOB CHARACTERISTICS

PLEASE PLACE ALL ANSWERS ON COMPUTER-SCORED ANSWER SHEET!

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

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

Very little, the job gives me almost no personal "say" about how and when the work is done.

Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.

Very much; the job gives almost complete responsibility for deciding how and when the work is done.

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

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

My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.

My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.

My job involves doing the whole piece of work; from start to finish; the results of my activities are easily seen in the final product or service.

013. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

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

Very little; the job requires me to do the same routine things over and over again.

Moderate variety.

Very much; the job requires me to do many different things, using a number of different skills and talents.

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

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

Not very significant; the outcomes of my work are not likely to have important effects on other people.

Moderately significant.

Highly significant; the outcomes of my work can affect other people in very important ways.

SECTION TWO OF JOB CHARACTERISTICS

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

How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

- 015. The job requires me to use a number of complex or high-level skills.
- 016. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.
- 017. The job is quite simple and repetitive.
- 018. This job is one where a lot of other people can be affected by how well the work gets done.
- 019. The job denies me any chance to use my personal initiative or judgment in carrying out the work.
- 020. The job provides me the chance to completely finish the pieces of work I begin.
- 021. The job gives me considerable opportunity for independence and freedom in how I do the work.
- 022. The job itself is not very significant or important in the broader scheme of things.



### JOB FEEDBACK

Use the rating scale below to indicate how you feel about the following two questions.

- 1 = Very little
- 2 = Little
- 3 = A moderate amount
- 4 = Much
- 5 = Very much

- 023. To what extent do you find out how well you are doing on the job as you are working?
- 024. To what extent do you receive information from your superior on your job performance.

Use the same rating scale to indicate how much job feedback is present in your job.

- 025. The feedback from my supervisor on how well I am doing.
- 026. The opportunity to find out how well I am doing in my job.
- 027. The feeling that I know whether I am performing my job well or poorly.

### JOB SATISFACTION

Below are 5 items which relate to the degree to which you are satisfied with various aspects of your job. Read each item carefully and choose the statement below which best represents your opinion.

- 1 = Delighted
- 2 = Pleased
- 3 = Mostly satisfied
- 4 = Mixed (about equally satisfied and dissatisfied)
- 5 = Mostly dissatisfied
- 6 = Unhappy
- 7 = Terrible

- 028. How do you feel about your job?
- 029. How do you feel about the people you work with--your co-workers?
- 030. How do you feel about the work you do on your job--the work itself?
- 031. What is it like where you work--the physical surroundings, the hours, the amount of work you are asked to do?
- 032. How do you feel about what you have available for doing your job--I mean equipment, information, good supervision, and so on?

SUPERVISOR'S ASSESSMENT OF YOUR PERFORMANCE

The following statements deal with feedback you receive from your supervisor concerning your performance. Your frame of reference should be your supervisor's evaluation of your performance in terms of formal feedback (i.e., periodic, written performance appraisals) and informal feedback (i.e., verbal communication on a day-to-day basis). Please think carefully about his/her evaluations of you over the past six months or so.

Based upon the feedback you have received from your supervisor, use the rating scale below to indicate how your job performance would compare with other employees doing similar work.

- 1 = Far worse
- 2 = Much worse
- 3 = Slightly worse
- 4 = About average
- 5 = Slightly better
- 6 = Much better
- 7 = Far better

- 033. Compared with other employees doing similar work, your supervisor considers the quantity of the work you produce to be:
- 034. Compared with other employees doing similar work, your supervisor considers the quality of the work you produce to be:
- 035. Compared with other employees performing similar work, your supervisor believes the efficiency of your use of available resources (money, materials, personnel) in producing a work product is:
- 036. Compared with other employees performing similar work, your supervisor considers your ability in anticipating problems and either preventing or minimizing their effects to be:
- 037. Compared with other employees performing similar work, your supervisor believes your adaptability/flexibility in handling high-priority work (e.g., "crash projects" and sudden schedule changes) is:

ORGANIZATIONAL COMMUNICATIONS

The statements below describe certain aspects of communications in the organization. Indicate your agreement by choosing the statement below which best represents your attitude concerning each aspect.

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Slightly disagree
- 4 = Neither agree nor disagree
- 5 = Slightly agree
- 6 = Moderately agree
- 7 = Strongly agree

- 038. My organization provides all the necessary information for me to do my job effectively.
- 039. My organization provides adequate information to my work group.
- 040. My work group is usually aware of important events and situations.
- 041. My complaints are aired satisfactorily.
- 042. The information in my organization is widely shared so that those needing it have it available.

PERFORMANCE ATTITUDE

Use each of the three rating scales provided below to indicate how you would feel about being viewed as an excellent or outstanding performer at your job. PLEASE PLACE ANSWERS ON COMPUTER-SCORED ANSWER SHEET!

- |      |              |   |   |   |   |   |   |   |           |
|------|--------------|---|---|---|---|---|---|---|-----------|
| 043. | Awful        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Great     |
| 044. | Bad          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Good      |
| 045. | Disappointed | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Delighted |

SUBJECTIVE OPINION

Use the rating scale given below to indicate how likely it is that people who are important to you and whose opinions you value, think that you should strive to be viewed as an excellent or outstanding performer at your job. PLEASE PLACE YOUR ANSWERS ON COMPUTER-SCORED ANSWER SHEET!

- |      |          |   |   |   |   |   |   |   |        |
|------|----------|---|---|---|---|---|---|---|--------|
| 046. | Unlikely | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Likely |
|------|----------|---|---|---|---|---|---|---|--------|

## JOB INVENTORY

Below are items which relate to your job. Read each statement carefully and then decide to what extent the statement is true of your job. Indicate the extent that the statement is true for your job by choosing the statement below which best represents your job.

- 1 = Not at all
- 2 = To a very little extent
- 3 = To a little extent
- 4 = To a moderate extent
- 5 = To a fairly large extent
- 6 = To a great extent
- 7 = To a very great extent

- 047. To what extent do you use your time for weekly or monthly planning?
- 048. To what extent do you use your time for daily planning?
- 049. To what extent is there conflict between your work group and another work group in your organization?
- 050. To what extent is there conflict between your organization and another organization with which you have some work-related dealings?
- 051. To what extent does your work group meet regularly to discuss, analyze, and try to resolve problems of concern to you and others in your work group?
- 052. To what extent do additional duties interfere with the performance of your primary job?
- 053. To what extent do you have adequate tools and equipment to accomplish your job?
- 054. To what extent is the amount of work space provided adequate?
- 055. To what extent do you have the necessary supplies to accomplish your job?
- 056. To what extent do details (tasks NOT covered by primary or additional duty descriptions) interfere with the performance of your primary job?
- 057. To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?

NORMATIVE BELIEFS

The following four items deal with the extent to which people close to you think that you should strive to be viewed as an excellent or outstanding worker.

PLEASE PLACE ANSWERS ON COMPUTER-SCORED ANSWER SHEET!

058. My supervisor would like me to be a high performing worker.

Probably False 1 2 3 4 5 6 7 Probably True

059. My co-workers would like me to be a high performing worker.

Probably False 1 2 3 4 5 6 7 Probably True

060. My family would like me to be a high performing worker.

Probably False 1 2 3 4 5 6 7 Probably True

061. My friends would like me to be a high performing worker.

Probably False 1 2 3 4 5 6 7 Probably True

### WORK GOALS

The following statements deal with your perceptions of the nature of goals and objectives that guide your work. Use the rating scale given below to indicate the extent to which your work goals have the characteristics described.

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Slightly disagree
- 4 = Neither agree nor disagree
- 5 = Slightly agree
- 6 = Moderately agree
- 7 = Strongly agree

- 062. I understand clearly what my supervisor expects me to accomplish on the job.
- 063. What I am expected to do at work is clear and unambiguous.
- 064. I understand the priorities associated with what I am expected to accomplish on the job.
- 065. Results expected in my job are very difficult to achieve.
- 066. I must work hard to accomplish what is expected of me for my work.
- 067. I must exert a significant amount of effort to attain the results expected of me in my job.
- 068. The amount of work I am expected to accomplish on the job is realistic.
- 069. The results I am expected to attain in my work are realistic.
- 070. I find that the results that I am expected to attain in my work are achievable.

### TASK DEMANDS

This section of the questionnaire contains five statements about your job. Use the following rating scale to indicate the extent to which you agree or disagree with the statements shown below.

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Slightly disagree
- 4 = Neither agree nor disagree
- 5 = Slightly agree
- 6 = Moderately agree
- 7 = Strongly agree

- 071. The job offers me a chance to test myself and my abilities.
- 072. Doing this job well is a reward in itself.
- 073. If the work were only more interesting, I would be motivated to perform better.
- 074. My talents, or where I can concentrate my attention best, are found in areas not related to this job.
- 075. At times I can get so involved in my work that I forget what time it is.

### PERCEIVED ABILITY

Use the following scale to indicate your view of your job abilities.

- 1 = Much less ability than others
- 2 = Less ability than others
- 3 = Typical or average ability
- 4 = More ability than others
- 5 = Much more abilities than others

- 076. Compared to others whose job is similar to yours how would you rate your ability to perform the work?

### WORK ROLE ATTITUDES

This section of the questionnaire contains a number of statements that relate to feelings about your work group, the demands of your job, and the supervision you receive. Use the following rating scale to indicate the extent to which you agree or disagree with the statements shown below.

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Slightly disagree
- 4 = Neither agree nor disagree
- 5 = Slightly agree
- 6 = Moderately agree
- 7 = Strongly agree

- 077. Within my work group the people most affected by decisions frequently participate in making the decisions.
- 078. In my work group, there is a great deal of opportunity to be involved in resolving problems which affect the group.
- 079. I am allowed to participate in decisions regarding my job.
- 080. I am allowed a significant degree of influence in decisions regarding my work.
- 081. My supervisor usually asks for my opinions and thoughts in decisions affecting my work.
- 082. My job (e.g., the type of work, amount of responsibility, etc.) causes me a great deal of personal stress and anxiety.
- 083. Relations with the people I work with (e.g., co-workers, supervisor, subordinates) cause me a great deal of stress and anxiety.
- 084. General aspects of the organization I work for (e.g., policies and procedures, general working conditions) tend to cause me a great deal of stress and anxiety.
- 085. There is a high spirit of teamwork among my co-workers.
- 086. Members of my work group take a personal interest in one another.
- 087. If I had a chance to do the same kind of work for the same pay in another work group, I would still stay here in this work group.
- 088. My supervisor knows his/her workers very well; that is, he/she can pinpoint personalities and thereby decides who works well with whom.



WORK ROLE ATTITUDES (Continued)

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Slightly disagree
- 4 = Neither agree nor disagree
- 5 = Slightly agree
- 6 = Moderately agree
- 7 = Strongly agree

- 089. I don't have enough time to do everything that is expected of me on my job.
- 090. The amount of work I have to do interferes with how well it gets done.
- 091. I have work standards that cannot be met given my time constraints.
- 092. I have to do things that should be done differently.
- 093. I have to buck a rule or policy in order to carry out an assignment.
- 094. I receive incompatible requests from two or more people.
- 095. I do things that are apt to be accepted by one person and not accepted by others.

### TASK PREFERENCES

Below are listed five statements that describe various things people do or try to do on their jobs. We would like to know which of the statements you feel most accurately describes your own behavior when you are at work. Please use the following scale to indicate the word ( or phrase) which best describes your own actions. Remember, there are no right or wrong answers. Please answer all questions frankly.

- 1 = Never
- 2 = Almost never
- 3 = Seldom
- 4 = Sometimes
- 5 = Usually
- 6 = Almost always
- 7 = Always

- 096. I do my best work when my job assignments are fairly difficult.
- 097. I try very hard to improve on my past performance at work.
- 098. I take moderate risks and stick my neck out to get ahead at work.
- 099. I try to avoid any added responsibilities on my job.
- 100. I try to perform better than my co-workers.

### JOB EFFORT RATING

- 101. As fairly and objectively as you can, rate the typical amount of effort you normally put into doing your work.

- 1 = Very little effort
- 2 = Enough effort to get by
- 3 = Moderate effort
- 4 = More effort than most
- 5 = Very much effort

### FUTURE WORK PLANS

Use the rating scale given below to indicate your future work plans with respect to the Air Force.

102. Within the coming year, if I have my own way:

- 1 = I definitely intend to remain with the Air Force.
- 2 = I probably will remain with the Air Force.
- 3 = I have not decided whether I will remain with the Air Force.
- 4 = I probably will not remain with the Air Force.
- 5 = I definitely intend to separate from the Air Force.

### GOAL AGREEMENT

Use the following rating scale to indicate the degree of compatibility between your goals and those of your organization.

- 1 = Not at all
- 2 = To a very little extent
- 3 = To a little extent
- 4 = To a moderate extent
- 5 = To a fairly large extent
- 6 = To a great extent
- 7 = To a very great extent

103. To what extent are your organization's goals compatible with your own personal goals?

### ATTEMPTS TO COMPLY

Use each of the four rating scales provided below to indicate the degree to which you attempt to comply with the wishes of each of the individuals (or groups of people) listed below. PLEASE PLACE ALL ANSWERS ON COMPUTER-SCORED ANSWER SHEET!

104. My supervisor:

Rarely      1      2      3      4      5      6      7      Often

105. My co-workers:

Rarely      1      2      3      4      5      6      7      Often

106. My family:

Rarely      1      2      3      4      5      6      7      Often

107. My friends:

Rarely      1      2      3      4      5      6      7      Often

### RECOGNITION AND ADVANCEMENT OPPORTUNITIES

The following questions deal with issues related to opportunities for growth and recognition in your work. Indicate the extent that each question is true for your job by choosing one of the following statements for each question.

- 1 = Not at all
- 2 = To a very little extent
- 3 = To a little extent
- 4 = To a moderate extent
- 5 = To a fairly large extent
- 6 = To a great extent
- 7 = To a very great extent

- 108. To what extent do you have the opportunity to progress up your career ladder?
- 109. To what extent are you being prepared to accept increased responsibility?
- 110. To what extent do people who perform well receive recognition?
- 111. To what extent do you have the opportunity to learn skills which will improve your promotion potential?

### PERFORMANCE INTENTIONS

Based upon the feedback you have received concerning your job performance, what plans do you have for changing your job performance:

PLEASE PLACE YOUR ANSWER ON COMPUTER-SCORED ANSWER SHEET!

- 112. In the future I intend to:
  - 1 = Greatly slack off on my job performance
  - 2 = Somewhat slack off on my job performance
  - 3 = Stay the same on my job performance
  - 4 = Somewhat improve on my job performance
  - 5 = Greatly improve on my job performance

### WORK ENVIRONMENT

Below are four questions which relate to your general work environment. Indicate the extent to which the questions apply to your situation by choosing one of the statements below.

- 1 = Not at all
- 2 = To a very little extent
- 3 = To a little extent
- 4 = To a moderate extent
- 5 = To a fairly large extent
- 6 = To a great extent
- 7 = To a very great extent

- 113. To what extent are you satisfied with the environmental conditions of your work (e.g., office space, windows, noise, lighting, temperature)?
- 114. To what extent do you have the opportunity to make suggestions for improvement in your job situation?
- 115. To what extent are you (in the accomplishment of your work) negatively affected by other organizations on the base?
- 116. To what extent are you (in the accomplishment of your work) negatively affected by other organizations off-base (e.g., higher headquarters)?

### JOB INFORMATION

Use the following rating scale for the 15 statements to express your own feelings about your present job or work.

1. Means you strongly disagree with the statement.
  2. Means you moderately disagree with the statement.
  3. Means you slightly disagree with the statement.
  4. Means you neither disagree nor agree with the statement.
  5. Means you slightly agree with the statement.
  6. Means you moderately agree with the statement.
  7. Means you strongly agree with the statement.
- 
117. I often have to use the skills I have learned for my job.
  118. I often have a chance to try out my own ideas.
  119. I often have a chance to do things my own way.
  120. I often have a chance to do the kinds of things that I am best at.
  121. I often feel at the end of the day that I've accomplished something.
  122. The most important things that happen to me involve my work.
  123. The most important things I do involve my work.
  124. The major satisfaction in my life comes from my job.
  125. The activities which give me the greatest pleasure and personal satisfaction involve my job.
  126. I live, eat, and breathe my job.
  127. I would rather get a job promotion than be a more important member of my club, church, or lodge.
  128. How well I perform on my job is extremely important to me.
  129. I feel badly if I don't perform well on my job.
  130. I am very personally involved in my work.
  131. I avoid taking on extra duties and responsibilities.

BACKGROUND INFORMATION

This section of the survey contains several items dealing with personal characteristics. This information will be used to obtain a picture of the background of the "typical employee."

132. Your age is:

1. Less than 20
2. 20 to 25
3. 26 to 30
4. 31 to 40
5. 41 to 50
6. 51 to 60
7. More than 60

133. Your highest educational level obtained was:

1. Non high school graduate
2. High school graduate or GED
3. Some college work
4. Bachelor's degree
5. Some graduate work
6. Master's degree
7. Doctoral degree

134. Your sex is:

1. Male
2. Female

135. Total months in this organization is:

1. Less than 1 month
2. More than 1 month, less than 6 months
3. More than 6 months, less than 12 months
4. More than 12 months, less than 18 months
5. More than 18 months, less than 24 months
6. More than 24 months, less than 36 months
7. More than 36 months

136. How many people do you directly supervise (i.e., those for which you write performance reports)?

1. None
2. 1 to 2
3. 3 to 5
4. 6 to 8
5. 9 to 12
6. 13 to 20
7. 21 or more

137. You are a (an):

1. Officer
2. Airman
3. Civilian (GS or GM)
4. Civilian (WG)
5. Non-appropriated Fund (NAF employee)
6. Other

138. Your grade level is:

1. 1-2
2. 3-4
3. 5-6
4. 7-8
5. 9-10
6. 11-12
7. 13 and above

139. Please fill in (on the computer-scored answer sheet) response choice number 1 for this item.

Thank you for your cooperation in completing this survey!



Appendix B: AFIT Survey of Work Attitudes



AFIT SURVEY OF WORK ATTITUDES

DEPARTMENT OF THE AIR FORCE  
AIR UNIVERSITY (ATC)  
**AIR FORCE INSTITUTE OF TECHNOLOGY**

Wright-Patterson Air Force Base, Ohio

USAF SCN 82-15  
Expires on: 31 December 84

V.II

PRIVACY ACT

In accordance with paragraph 30, AFR 12-35, the following information is provided as required by the Privacy Act of 1974:

a. Authority:

- (1) 5 U.S.C. 301, Departmental Regulations; and
- (2) 10 U.S.C. 8012, Secretary of the Air Force, Powers, Duties, Delegation by Compensation; and
- (3) EO 9397, 22 Nov 43, Numbering System for Federal Accounts Relating to Individual Persons; and
- (4) DOD Instruction 1100.13, 17 Apr 68, Surveys of Department of Defense Personnel; and
- (5) AFR 30-23, 22 Sep 76, Air Force Personnel Survey Program.

b. Principal purposes. The survey is being conducted to collect information to be used in research aimed at illuminating and providing inputs to the solution of problems of interest to the Air Force and DOD.

c. Routine uses. The survey data will be converted to information for use in research of management related problems. Results of the research, based on the data provided, will be included in a written master's thesis and may also be included in published articles, reports, or texts. Distribution of the results of the research, based on the survey data, whether in written form or presented orally, will be unlimited.

d. Participation in this survey is entirely voluntary.

e. No adverse action of any kind may be taken against any individual who elects not to participate in any or all of this survey.

---

AD-A148 441

STABILITY OF FOUR ORGANIZATIONAL BEHAVIOR INSTRUMENTS  
(U) AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OH  
SCHOOL OF SYSTEMS AND LOGISTICS G W HAMBY SEP 84

2/2

UNCLASSIFIED

AFIT/GSM/LSY/84S-14

F/G 5/9

NL





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

## GENERAL INFORMATION

The purpose of this questionnaire is to obtain information about you, your job, your work group and your organization. Specifically, this information is being collected in support of research assessing employee attitudes toward different aspects of their work environment.

Please be assured that all information you provide will be held in the strictest confidence. Your individual responses will NOT be provided to management or to any other agency. Feedback on the study's results will be presented to management only in terms of group averages describing what the "typical" employee would say. In addition, when the results of this study are published, readers will NOT be able to identify specific individuals or work groups.

A primary objective of this study is to track changes in worker attitudes over time. You will be asked to complete another survey at some later date. In order to detect any changes in worker attitudes, some means was needed to connect responses provided by an employee at different times. At the same time, the research team wishes to protect the anonymity of all participants. A procedure was developed to achieve both of these objectives. We ask your indulgence in complying with this procedure.

### Questionnaire Tracking Procedure

On the computer scored response form you were provided you will find a five digit survey control number in the box labeled "identification number." Each employee has a different survey control number. An employee of the organization has agreed to serve as an intermediary in this procedure. When you complete your questionnaire this person will ask you for your survey control number and your social security number. That employee will retain this information on a master list. You will then turn your questionnaire in directly to a representative of the research team. This procedure will be followed for future administrations of the survey. The intermediary will have a key by which survey control numbers may be linked via social security numbers. He or she will not have access to any questionnaire responses. The research team will see completed questionnaires, but will only be told that one arbitrary survey control number should be paired with another. In this way, we feel we have provided for attainment of both aims of the study--employee anonymity and a means of tracking attitude changes.

Thank you for your cooperation in participating in this study. If you have any questions, please contact the researcher at the following address:

Major N. K. Ovalle, 2d, DBA  
or  
Robert P. Steel, PhD  
Wright-Patterson AFB OH 45433  
Telephone: AUTOVON 785-4435

## KEYWORDS

The following are definitions of key words that recur throughout the questionnaire:

1. **Supervisor:** The person to whom you report directly.
2. **Work Group:** All persons who report to the same supervisor that you do. (If you are a supervisor, your work group is the group of employees that report directly to you).
3. **Organization:**

## INSTRUCTIONS

This questionnaire contains 137 items (individual "questions"). The questionnaire booklet is broken into two parts. Part I contains the first 80 items in this booklet, and Part II contains the remaining 57 items. All items must be answered by filling in the appropriate spaces on the machine-scored response sheets provided. If for any item you do not find a response that fits your situation exactly, use the one that is the closest to the way you feel.

Please use a "soft-lead" (No. 2) pencil, and observe the following:

1. Make heavy black marks that fill in the space (of the response you select).
2. Erase cleanly any responses you wish to change.
3. Make no stray markings of any kind on the response sheet.
4. Do not staple, fold or tear the response sheet.
5. Do not make any markings on the questionnaire booklet.

You have been provided with two answer sheets. Do NOT fill in your name on either sheet so that your responses will be anonymous. Please note that both sheets have a survey control number ending with either "1" or "2." Please use the answer sheet with the survey control number ending with the number "1" to respond to the 80 items in Part I of the survey. Answer the items in Part II (numbered from 1 to 57) on the answer sheet with the survey control number ending in "2."

Each response block has 10 spaces (numbered 1 through 10) or a 1-10 scale. The questionnaire items normally require a response from 1-7 only, therefore, you will rarely need to fill in a space numbered 8, 9, or 10. Questionnaire items are responded to by marking the appropriate space on the answer sheet as in the following example:

**SCALE:**

- |                                |                      |
|--------------------------------|----------------------|
| 1 - Strongly disagree          | 5 - Slightly agree   |
| 2 - Moderately disagree        | 6 - Moderately agree |
| 3 - Slightly disagree          | 7 - Strongly agree   |
| 4 - Neither agree nor disagree |                      |

**Sample item 1:**

The guidance you receive in your job from your supervisor is frequently unclear.

(If you "moderately agree" with sample item #1, you would "blacken in" the corresponding number of that statement (moderately agree = 6) on the answer sheet for item numbered "sample item 1.")

**Sample response:** 1 2 3 4 5 6 7 8 9 10

PART I

BACKGROUND INFORMATION

This section of the survey contains several items dealing with personal characteristics. This information will be used to obtain a picture of the background of the "typical employee."

1. Your age is:
  1. Less than 20
  2. 20 to 25
  3. 26 to 30
  4. 31 to 40
  5. 41 to 50
  6. 51 to 60
  7. More than 60
  
2. Your highest educational level obtained was:
  1. Non high school graduate
  2. High school graduate or GED
  3. Some college work
  4. Associate degree or LPN
  5. Bachelor's degree or RN
  6. Some graduate work
  7. Master's degree
  8. Doctoral degree
  
3. Your sex is:
  1. Male
  2. Female
  
4. Total months in this organization is:
  1. Less than 1 month
  2. More than 1 month, less than 6 months
  3. More than 6 months, less than 12 months
  4. More than 12 months, less than 18 months
  5. More than 18 months, less than 24 months
  6. More than 24 months, less than 36 months
  7. More than 36 months.



5. How many people do you directly supervise (i.e., those for which you write performance reports)?

1. None
2. 1 to 2
3. 3 to 5
4. 6 to 8
5. 9 to 12
6. 13 to 20
7. 21 or more

6. You are a (an):

1. Officer
2. Enlisted
3. Civilian (GS)
4. Civilian (WG)
5. Non-appropriated Fund (NAF employee)
6. Other

7. Your grade level is:

1. 1-2
2. 3-4
3. 5-6
4. 7-8
5. 9-10
6. 11-12
7. 13-15
8. Senior Executive Service

## JOB SATISFACTION

Below are 5 items which relate to the degree to which you are satisfied with various aspects of your job. Read each item carefully and choose the statement below which best represents your opinion.

- 1 = Delighted
- 2 = Pleased
- 3 = Mostly satisfied
- 4 = Mixed (about equally satisfied and dissatisfied)
- 5 = Mostly dissatisfied
- 6 = Unhappy
- 7 = Terrible

- 8. How do you feel about your job?
- 9. How do you feel about the people you work with—your co-workers?
- 10. How do you feel about the work you do on your job—the work itself?
- 11. What is it like where you work—the physical surroundings, the hours, the amount of work you are asked to do?
- 12. How do you feel about what you have available for doing your job—I mean equipment, information, good supervision, and so on?

## SUPERVISOR'S ASSESSMENT OF YOUR PERFORMANCE

The following statements deal with feedback you receive from your supervisor concerning your performance. Your frame of reference should be your supervisor's evaluation of your performance in terms of formal feedback (i.e., periodic, written performance appraisals) and informal feedback (i.e., verbal communication on a day-to-day basis). Please think carefully about his/her evaluations of you over the past six months or so.

Based upon the feedback you have received from your supervisor, use the rating scale below to indicate how your job performance would compare with other employees doing similar work.

- 1 = Far worse
- 2 = Much worse
- 3 = Slightly worse
- 4 = About average
- 5 = Slightly better
- 6 = Much better
- 7 = Far better

13. Compared with other employees doing similar work, your supervisor considers the quantity of the work you produce to be:
14. Compared with other employees doing similar work, your supervisor considers the quality of the work you produce to be:
15. Compared with other employees performing similar work, your supervisor believes the efficiency of your use of available resources (money, materials, personnel) in producing a work product is:
16. Compared with other employees performing similar work, your supervisor considers your ability in anticipating problems and either preventing or minimizing their effects to be:
17. Compared with other employees performing similar work, your supervisor believes your adaptability/flexibility in handling high-priority work (e.g., "crash projects" and sudden schedule changes) is:

### JOB EFFORT RATING

18. As fairly and objectively as you can, rate the typical amount of effort you normally put into doing your work.

- 1 - Very little effort
- 2 - Enough effort to get by
- 3 - Moderate effort
- 4 - More effort than most
- 5 - Very much effort

### FUTURE WORK PLANS

Use the rating scale given below to indicate your future work plans with respect to the Air Force or whatever equivalent service/company to which you belong.

19. Within the coming year, if I have my own way:

- 1 - I definitely intend to remain with the Air Force.
- 2 - I probably will remain with the Air Force.
- 3 - I have not decided whether I will remain with the Air Force.
- 4 - I probably will not remain with the Air Force.
- 5 - I definitely intend to separate from the Air Force.

### ORGANIZATIONAL INFORMATION

Listed below are a series of statements that represent possible feelings that individuals might have about the company or organization for which they work. Use the following rating scale to indicate your own feelings about the particular organization for which you are now working.

- 1 - Means you strongly disagree with the statement.
- 2 - Means you moderately disagree with the statement.
- 3 - Means you slightly disagree with the statement.
- 4 - Means you neither agree nor disagree with the statement.
- 5 - Means you slightly agree with the statement.
- 6 - Means you moderately agree with the statement.
- 7 - Means you strongly agree with the statement.

20. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.

- 1 = Means you strongly disagree with the statement.
- 2 = Means you moderately disagree with the statement.
- 3 = Means you slightly disagree with the statement.
- 4 = Means you neither agree nor disagree with the statement.
- 5 = Means you slightly agree with the statement.
- 6 = Means you moderately agree with the statement.
- 7 = Means you strongly agree with the statement.

- 21. I talk up this organization to my friends as a great organization to work for.
- 22. I feel very little loyalty to this organization.
- 23. I would accept almost any type job assignment in order to keep working for this organization.
- 24. I find that my values and the organization's values are very similar.
- 25. I am proud to tell others that I am part of this organization.
- 26. I could just as well be working for a different organization as long as the type of work was similar.
- 27. This organization really inspires the very best in me in the way of job performance.
- 28. It would take very little change in my present circumstances to cause me to leave this organization.
- 29. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.
- 30. There's not too much to be gained by sticking with this organization indefinitely.
- 31. Often, I find it difficult to agree with this organization's policies on important matters relating to its employees.
- 32. I really care about the fate of this organization.
- 33. For me this is the best of all possible organizations for which to work.
- 34. Deciding to work for this organization was a definite mistake on my part.

### JOB INFORMATION

Use the following rating scale for the 15 statements to express your own feelings about your present job or work.

1. Means you strongly disagree with the statement
  2. Means you moderately disagree with the statement
  3. Means you slightly disagree with the statement
  4. Means you neither disagree nor agree with the statement.
  5. Means you slightly agree with the statement.
  6. Means you moderately agree with the statement.
  7. Means you strongly agree with the statement.
- 
35. I often have to use the skills I have learned for my job.
  36. I often have a chance to try out my own ideas.
  37. I often have a chance to do things my own way.
  38. I often have a chance to do the kinds of things that I am best at.
  39. I often feel at the end of the day that I've accomplished something.
  40. The most important things that happen to me involve my work.
  41. The most important things I do involve my work.
  42. The major satisfaction in my life comes from my job.
  43. The activities which give me the greatest pleasure and personal satisfaction involve my job.
  44. I live, eat, and breathe my job.
  45. I would rather get a job promotion than be a more important member of my club, church, or lodge.
  46. How well I perform on my job is extremely important to me.
  47. I feel badly if I don't perform well on my job.
  48. I am very personally involved in my work.
  49. I avoid taking on extra duties and responsibilities.

### WORK ROLE ATTITUDES

This section of the questionnaire contains a number of statements that relate to feelings about your work group, the demands of your job, and the supervision you receive. Use the following rating scale to indicate the extent to which you agree or disagree with the statements shown below.

- 1 = Strongly disagree
  - 2 = Moderately disagree
  - 3 = Slightly disagree
  - 4 = Neither agree nor disagree
  - 5 = Slightly agree
  - 6 = Moderately agree
  - 7 = Strongly agree
- 
50. Within my work-group the people most affected by decisions frequently participate in making the decisions.
  51. In my work-group there is a great deal of opportunity to be involved in resolving problems which affect the group.
  52. I am allowed to participate in decisions regarding my job.
  53. I am allowed a significant degree of influence in decisions regarding my work.
  54. My supervisor usually asks for my opinions and thoughts in decisions affecting my work.
  55. My job (e.g., the type of work, amount of responsibility, etc.) causes me a great deal of personal stress and anxiety.
  56. Relations with the people I work with (e.g., co-workers, supervisor, subordinates) cause me a great deal of stress and anxiety.
  57. General aspects of the organization I work for (e.g., policies and procedures, general working conditions) tend to cause me a great deal of stress and anxiety.
  58. Most people are not always straightforward and honest when their own interests are involved.
  59. In these competitive times one has to be alert or someone is likely to take advantage of you.
  60. It is safe to believe that in spite of what people say, most people are primarily interested in their own welfare.
  61. There is a high spirit of teamwork among my co-workers.
  62. Members of my work group take a personal interest in one another.

63. If I had a chance to do the same kind of work for the same pay in another work group, I would still stay here in this work group.
64. My immediate supervisor makes an effort to help people in the work group with their personal problems.
65. My immediate supervisor insists that members of our work group follow to the letter all policies and procedures handed down to him.
66. My immediate supervisor seeks the advice of our work group on important matters before going ahead.
67. My immediate supervisor pushes the people under him (or her) to insure they are working up to capacity.
68. My organization provides all the necessary information for me to do my job effectively.
69. My work group is usually aware of important events and situations.
70. The people I work with make my job easier by sharing their ideas and opinions with me.
71. People in my work group are never afraid to speak their minds about issues and problems that affect them.



### WORK GOALS

The following statements deal with your perceptions of the nature of goals and objectives that guide your work. Use the rating scale given below to indicate the extent to which your work goals have the characteristics described.

- 1 = Strongly disagree
  - 2 = Moderately disagree
  - 3 = Slightly disagree
  - 4 = Neither agree nor disagree
  - 5 = Slightly agree
  - 6 = Moderately agree
  - 7 = Strongly agree
72. I know exactly what is expected of me in performing my job.
73. I understand clearly what my supervisor expects me to accomplish on the job.
74. What I am expected to do at work is clear and unambiguous.
75. I understand the priorities associated with what I am expected to accomplish on the job.
76. It takes a high degree of skill on my part to attain the results expected for my work.
77. Results expected in my job are very difficult to achieve.
78. It takes a lot of effort on my part to attain the results expected for my work.
79. I must work hard to accomplish what is expected of me for my work.
80. I must exert a significant amount of effort to attain the results expected of me in my job.

---

Your first answer sheet should now be completely filled. If it is not completely filled, go back and check the sequencing of your answers. You may have skipped an item. Use the second answer sheet (the survey control number ends in "2") to respond to the remaining items in the questionnaire (those in Part II).

---

PART II

WORK GOALS (continued)

1. Means you strongly disagree with the statement
  2. Means you moderately disagree with the statement
  3. Means you slightly disagree with the statement
  4. Means you neither disagree nor agree with the statement.
  5. Means you slightly agree with the statement.
  6. Means you moderately agree with the statement.
  7. Means you strongly agree with the statement.
- 
1. The amount of work I am expected to accomplish on the job is realistic.
  2. The results I am expected to attain in my work are realistic.
  3. What my supervisor expects me to accomplish on my job is not impossible.
  4. I find that the results that I am expected to attain in my work are achievable.

### JOB CHARACTERISTICS

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do NOT use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.

A sample question is given below:

- A. To what extent does your job require you to work with mechanical equipment?

1-----	2-----	3-----	4-----	5-----	6-----	7
Very little; the job requires almost no contact with mechanical equipment of any kind.			Moderately			Very much; the job requires almost constant work with mechanical equipment.

Indicate on the answer sheet the number which is the most accurate description of your job. If, for example, your job requires you to work with mechanical equipment a good deal of the time, but also requires some paperwork, you might choose the number six, so you would blacken "6" in on the answered sheet.

If you do not understand these instructions, please ask for assistance. If you do understand them, turn the page and begin.

PLACE ALL ANSWERS ON ANSWER SHEET!

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

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

Very little; the job gives me almost no personal "say" about how and when the work is done.

Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.

Very much; the job gives almost complete responsibility for deciding how and when the work is done.

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

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

My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.

My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.

My job involves doing the whole piece of work; from start to finish; the results of my activities are easily seen in the final product or service.

7. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

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

Very little; the job requires me to do the same routine things over and over again.

Moderate variety.

Very much; the job requires me to do many different things, using a number of different skills and talents.

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

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

Not very significant; the outcomes of my work are not likely to have important effects on other people

Moderately significant.

Highly significant; the outcomes of my work can affect other people in very important ways.

### Section Two

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

#### How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very	Mostly	Slightly	Uncertain	Slightly	Mostly	Very
Inaccurate	Inaccurate	Inaccurate		Accurate	Accurate	Accurate

9. The job requires me to use a number of complex or high-level skills.
10. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.
11. The job is quite simple and repetitive.
12. This job is one where a lot of other people can be affected by how well the work gets done.
13. The job denies me any chance to use my personal initiative or judgment in carrying out the work.
14. The job provides me the chance to completely finish the pieces of work I begin.
15. The job gives me considerable opportunity for independence and freedom in how I do the work.
16. The job itself is not very significant or important in the broader scheme of things.

### JOB FEEDBACK

Use the rating scale below to indicate how you feel about the following two questions.

- 1 = Very little
- 2 = Little
- 3 = A moderate amount
- 4 = Much
- 5 = Very much

- 17. To what extent do you find out how well you are doing on the job as you are working?
- 18. To what extent do you receive information from your superior on your job performance.

Use the same rating scale to indicate how much job feedback is present in your job.

- 19. The feedback from my supervisor on how well I am doing.
- 20. The opportunity to find out how well I am doing in my job.
- 21. The feeling that I know whether I am performing my job well or poorly.

### TASK PREFERENCES

Below are listed ten statements that describe various things people do or try to do on their jobs. We would like to know which of the statements you feel most accurately describe your own behavior when you are at work. Please use the following scale to indicate the word (or phrase) which best describes your own actions. Remember, there are no right or wrong answers. Please answer all questions frankly.

- 1 = Never
- 2 = Almost never
- 3 = Seldom
- 4 = Sometimes
- 5 = Usually
- 6 = Almost always
- 7 = Always

- 22. I do my best work when my job assignments are fairly difficult.
- 23. I try very hard to improve on my past performance at work.
- 24. I take moderate risks and stick my neck out to get ahead at work.
- 25. I try to avoid any added responsibilities on my job.

26. I try to perform better than my co-workers.
27. When I have a choice, I try to work in a group instead of by myself.
28. I pay a good deal of attention to the feelings of others at work.
29. I prefer to do my own work and let others do theirs.
30. I express my disagreements with others openly.
31. I find myself talking to others around me about non-business related matters.

### TASK DEMANDS

This section of the questionnaire contains a number of statements about your job. Use the following rating scale to indicate the extent to which you agree or disagree with the statements shown below.

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Slightly disagree
- 4 = Neither agree nor disagree
- 5 = Slightly agree
- 6 = Moderately agree
- 7 = Strongly agree

- 32. The job offers me a chance to test myself and my abilities.
- 33. Doing this job well is a reward in itself.
- 34. If the work were only more interesting I would be motivated to perform better.
- 35. Mastering the job meant a lot to me.
- 36. My talents, or where I can concentrate my attention best, are found in areas not related to this job.
- 37. This job is valuable to me for no other reason than I like to do it.
- 38. At times I can get so involved in my work that I forget what time it is.
- 39. Even though the work here could be rewarding, I am frustrated and find motivation continuing only because of my paycheck.
- 40. I honestly believe I have all the skills necessary to perform this task well.
- 41. I would make a fine model for an apprentice to follow in order to learn the skills he/she would need to succeed.
- 42. No one knows this job better than I do.
- 43. If anyone here can find the answer, I'm the one.
- 44. I do not know as much as my predecessor did concerning this job.



### SITUATIONAL ATTRIBUTES

These items deal with various attributes and characteristics of your job situation.

- 1 = Strongly disagree
  - 2 = Moderately disagree
  - 3 = Slightly disagree
  - 4 = Neither agree nor disagree
  - 5 = Slightly agree
  - 6 = Moderately agree
  - 7 = Strongly agree
45. My supervisor knows his/her workers very well; that is, he/she can pinpoint personalities and thereby decides who works well with whom.
46. There is a great deal of support and unselfishness in our work group.
47. Members of our work group are treated equally in terms of their worth to the workgroup.

### GOAL AGREEMENT

- 1 = Not at all
  - 2 = To a very little extent
  - 3 = To a little extent
  - 4 = To a moderate extent
  - 5 = To a fairly large extent
  - 6 = To a great extent
  - 7 = To a very great extent
48. To what extent are your organization's goals compatible with your own personal goals?

### SELF PERCEIVED ABILITY

- 1 = Much less ability than others
  - 2 = Less ability than others
  - 3 = Typical or average ability
  - 4 = More ability than others
  - 5 = Much more ability than others
49. Compared to others whose job is similar to yours how would you rate your ability to perform the work?

ORGANIZATIONAL PERCEPTIONS

Some organizations go out of their way to take care of their employees. They have a genuine interest in the welfare of their workers. They have many ways of communicating to their workers that they are valued and respected. Other organizations have developed a reputation among their workforce as uncaring impersonal creations. These organizations often treat their employees in a dehumanized fashion -- as if the workers were little more than cogs in a well-oiled machine.

Most organizations fall somewhere between those two extremes. Use the bipolar rating scales given below to indicate the degree to which you have seen your organization demonstrate concern for the welfare of its employees.

For example: If your organization appeared "flexible" most of the time when dealing with its employees, you might rate it as shown.

Rigid--1--2--3--4--5--6--7--Flexible

50. Unconcerned--1--2--3--4--5--6--7--Concerned

51. Impersonal--1--2--3--4--5--6--7--Humane

52. Uncaring--1--2--3--4--5--6--7--Caring

53. Disinterested--1--2--3--4--5--6--7--Interested

54. Aloof--1--2--3--4--5--6--7--Friendly

The remaining three items are used for administrative purposes. They indicate the type of survey (first, second, etc.) and the sponsoring organization involved.

55. Please fill in response choice Number "2" for this item.

56. Please fill in response choice Number "1" for this item.

57. Please fill in response choice Number " " for this item.

THANK YOU FOR YOUR COOPERATION

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## VITA

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The quality of an instrument is a critical consideration in all scientific research. This is especially true for the organizational behavior field where the traits to be measured are abstract. Research into the reliability of organizational behavior instruments is essential to the continued advancement of knowledge in this area.

*thesis*  
This study computed internal consistency reliabilities and stability coefficients for four commonly used organizational behavior instruments. The instruments in this study were the Organizational Commitment Questionnaire (Porter, Steers, Mowday, and Boulian, 1974), Wagner and Morse's Sense of Competence Questionnaire (Wagner and Morse, 1975), the task identity, task autonomy, skill variety and task significance scales of the Job Diagnostic Survey (Hackman and Oldham, 1975), and need for achievement and need for affiliation scales of the Manifest Needs Questionnaire (Steers and Braunstein, 1976).

Four data bases with a total of 452 subjects were used. The time intervals between applications for the stability coefficients ranged from 7- to 13-months.

The Sense of Competence Questionnaire (Wagner and Morse, 1975) and the Organizational Commitment Questionnaire (Porter et al., 1974) both produced levels of stability and internal consistency reliability with tolerable limits.

The four dimensions of the Job Diagnostic Survey (Hackman and Oldham, 1975) yielded marginally acceptable levels of internal consistency. The stability results for the task significance, task autonomy and task variety dimensions were higher than those for the task identity dimension.

The internal consistency and stability results for the need for achievement scale of the Manifest Needs Questionnaire (Steers and Braunstein, 1976) were generally acceptable. All estimates for the reliability of need for affiliation scale tended to be low raising serious reservations concerning the use of this instrument.



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