

AD-A056 507 AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OHIO SCH--ETC F/6 5/9
A STUDY OF THE LEADER ATTITUDES OF US AIR FORCE COMMANDERS.(U)
DEC 77 S E BOVICH

UNCLASSIFIED

AFIT/6SM/SM/77D-17

NL

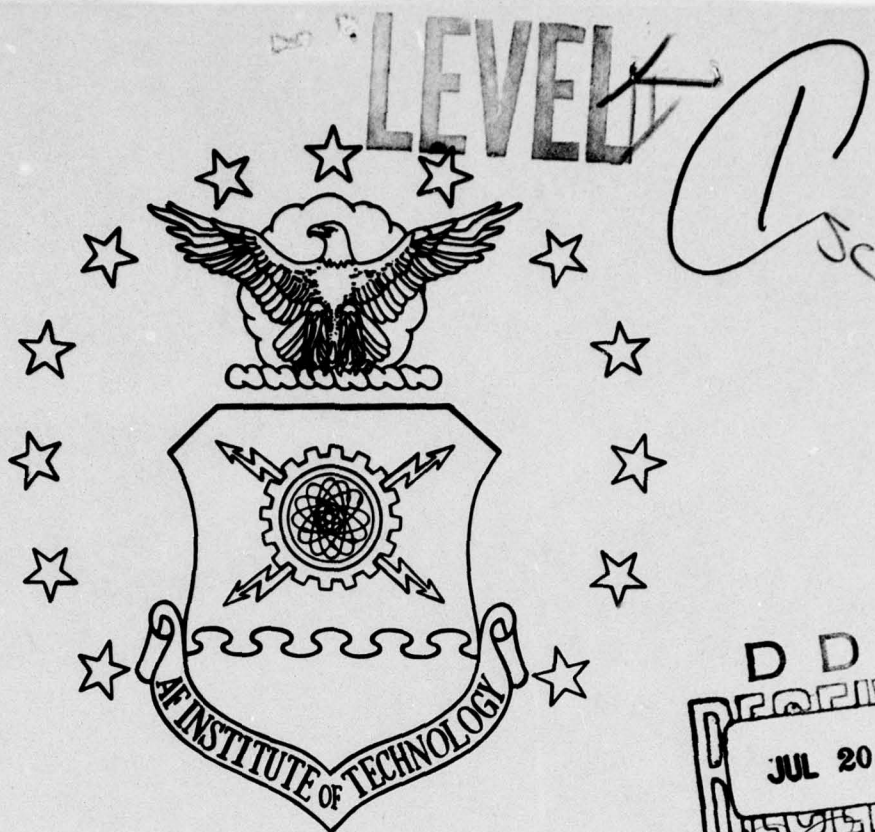
1 of 2

AD
A056 507



AD A056507

AD No. _____
DC FILE COPY



UNITED STATES AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
Wright-Patterson Air Force Base, Ohio

This document has been approved
for public release and sale; its
distribution is unlimited.

78 07 07 012

AFIT/GSM/SM/77D-17

LEVEL II

P

AD A056507

DDC
RECEIVED
JUL 20 1978
F

A STUDY OF THE LEADER ATTITUDES
OF US AIR FORCE COMMANDERS

Thesis

AFIT/GSM/SM/77D-17 Stephen E. Bovich
Captain USAF

AD No. _____
DDC FILE COPY

This document has been approved
for public release and sale; its
distribution is unlimited.

78 07 07 012

14
AFIT/GSM/SM/77D-17

6
A STUDY OF THE LEADER ATTITUDES
OF US AIR FORCE COMMANDERS

9
THESIS

Master's thesis

Presented to the Faculty of the School of Engineering
of the Air Force Institute of Technology
Air University
in Partial Fulfillment of the
Requirements for the Degree of
Master of Science

10
by

Stephen E. Bovich

Captain USAF

Graduate Systems Management

11
December 1977

12
104p.

Approved for public release; distribution unlimited.

Phi 225

act

Preface

This study was performed as part of my efforts to fulfill the requirements for a degree in Systems Management from the Air Force Institute of Technology. Hopefully, the study will provide some insights into the leader attitudes of United States Air Force commanders.

I accept full responsibility for any and all errors in this paper. Observations made and conclusions drawn are derived from the data and presented with as little bias as possible.

I would like to express my appreciation to Dr. Charles McNichols, my thesis advisor, who provided help and encouragement throughout the effort. His assistance, particularly in talking to the computer, was invaluable. Additionally, I would like to thank Dr. Michael Stahl, my thesis reader, who provided assistance and advice far beyond that normally expected from a thesis reader.

Finally, I must credit my wife, Linda, who never failed to give the support and understanding necessary to allow successful completion of the study. Also I must thank my two boys, Timothy and Michael, for encouraging with a smile when a smile was desperately needed.

Stephen E. Bovich

ACCESSION for	
NRIS	Write Section <input checked="" type="checkbox"/>
DDC	Dr. H. Section <input type="checkbox"/>
UNANVOUNDED	<input type="checkbox"/>
DISSEMINATION	
BY	
DISTRIBUTION/AVAILABILITY CODES	
ON	
CIR	
A	

Contents

Preface	11
List of Figures	v
List of Tables	vi
Abstract	vii
I. Introduction	1
Leader Behavior: Its Importance	1
Purposes of the Study	2
Limitations	3
Overview	5
II. Background	6
Leadership Defined	6
Contemporary Leadership Theories	7
Trait Theories	7
Group Theories	8
Situational Theories	8
Dimensions of Leader Behavior	10
Measurement Instruments	17
Ohio State Scales	17
Least Preferred Coworker Scale	17
Summary	18
III. Methodology	19
The Commanders Survey	19
Factor Analysis	23
Analysis of the Measures	24
The Second Survey	28
Computer Programs	29
IV. Analysis Results	30
Standards and Enforcement	30
Factor Analysis	32
Factor Scores	38
Validation of the Measures	40
Working Definitions	45
Analysis of the Behavior of the Measures	46
Demographic Analysis	47
Job Atmosphere	61
Job Satisfaction	65
Subordinate Influence	68
V. Summary and Conclusions	73
Factor Definitions	73
Behavior of the Measures	74
Demographic Analysis	74
Job Atmosphere	75
Job Satisfaction	76

Subordinate Influence of the Measures ...	76
Relation to Other Measures	76
Future Research Implications	78
Bibliography	80
Additional References	82
Appendix A	
United States Air Force Quality of Air	
Force Life Commanders Survey	83
Vita	109

List of Figures

Figure		Page
1	Managerial Grid and Ohio State Dimensions . .	14
2	Eigenvalues vs Factors	33
3	TASK, EOD RELATIONSHIPS by Command	49
4	TASK, RELATIONSHIPS, EOD by Grade, by Sex . .	50
5	TASK, RELATIONSHIPS, EOD by Time In Service .	51
6	TASK, EOD, RELATIONSHIPS by Age	52
7	TASK, EOD, RELATIONSHIPS by Type of Organi- zation	53
8	TASK, RELATIONSHIPS, EOD by Mission of Organization	54
9	TASK, RELATIONSHIPS, EOD by Aero Rating, by Race	55
10	TASK, EOD, RELATIONSHIPS by Time as Commander, by Number of Personnel Assigned	56
11	TASK, RELATIONSHIPS, EOD by Prior Command Experience, by Base Location	57
12	TASK, RELATIONSHIPS, EOD by Hoppock Job Satisfaction Score	66
13	Mean JSAT by Command (QOL-2)	69
14	Career Intent by Command (First Termers - QOL-2)	72

List of Tables

Table		Page
I	Descriptive Statistics for STD and ENF . . .	31
II	Factor Loadings (Greater than .4) After Varimax Rotation	35
III	TASK, RELATIONSHIPS, EOD - Maximum and Minimum Values	39
IV	Command Rank Ordered by TASK	42
V	Command Rank Ordered by EOD and RELATIONSHIPS	44
VI	ANOVA Results	48
VII	Significant Two-way Interactions	60
VIII	Rank Order Correlations	62
IX	TASK, RELATIONSHIPS, and EOD by Q93 and Q86.	64
X	Commands Rank Ordered by Mean JSAT for the Commanders Survey	67
XI	Commands Rank Ordered by JSAT (QOL-2) . . .	70
XII	Commands Rank Ordered by First Termer Career Intent	71

Abstract

This study analyzes the leadership attitudes of United States Air Force commanders. The source for the data is the Quality of Air Force Life Commanders Survey conducted in December 1976. The primary analytic technique used was factor analysis. Underlying dimensions of leader attitudes for the commanders were sought.

Three underlying dimensions emerged from the factor analysis of the survey variables. Called TASK, Enforcement of Discipline (EOD), and RELATIONSHIPS, these three dimensions were measured and their behavior was analyzed relative to the demographic variables and several other variables in the survey. An attempt was made to determine the influence of the dimensions on subordinate job satisfaction and first term career intent, but no relationship was discovered.

The main conclusion of the analysis is that TASK, EOD, and RELATIONSHIPS reflect definite attitudes of Air Force commanders. However, organization climate is essential to the definition of each of the three dimensions. The dimensions do not represent unchanging orientations or approaches to leadership by the commanders. The three dimensions are seemingly unrelated to dimensions discovered by other researchers.

A STUDY OF THE LEADER ATTITUDES
OF US AIR FORCE COMMANDERS

I. Introduction

In March 1975, the Air Force Management Improvement Group (AFMIG) was established by the Chief of Staff of the Air Force. AFMIG was a study group established "to conduct a forward looking examination of Air Force personnel policies and practices, and ensure that they were compatible with today's Air Force and personnel" (Ref 19:Preface). When AFMIG was dissolved, the aims of the group were institutionalized under the direction of the Human Resource Development (HRD) Division of Personnel Plans.

In December 1976, a questionnaire was distributed by HRD to all US Air Force commanders through the grade of colonel. The survey questioned the commanders concerning their attitudes and perceptions about the quality of Air Force life and their jobs. It is the overall purpose of this study to analyze the results of this survey as they pertain to leadership attitudes and behavior.

Leader Behavior: Its Importance

The phenomenon of leadership is probably the most extensively researched social influence process known to the behavioral sciences. Any economic system, political system, business enterprise, or commonwealth organization derives its continued existence from the successful guidance of human beings. It is little wonder that so much time and effort has been expended in delineating the characteristics, functions, and methods associated with effective leadership (Ref 1:231).

This quote applies equally well to the Air Force. As pointed out in a recent Commander's Digest article, the Air Force is presently at its leanest in terms of people, bases, and aircraft since the beginning of the Korean War (Ref 3:23). With less money being spent, in real terms, on all defense expenditures, it is apparent that the key factor for the Air Force in continued performance of its mission is effective leadership. The leadership process involves the leader, a follower or group of followers, and the situation. In this context, then, a study which provides insight into the attitudes and behavior of the leader is important.

The 2695 commanders who completed the survey questionnaire represent "80 percent of the USAF officers possessing both a commander's Air Force Specialty Code (AFSC) or the A-prefix (indicating the individual is currently in a commander's position) to other AFSC's" (Ref 19:1-1). The survey population is, therefore, representative of a large portion of the key leaders in the Air Force today.

Purposes of the Study

A military commander must be concerned with the accomplishment of the mission of his organization. However, the commander cannot avoid consideration for the well being of his subordinates. The first purpose of this study is to analyze the survey with respect to the leadership attitudes of the commanders. Other leadership research has uncovered different underlying dimensions of leader behavior such as concern for people and concern for mission accomplishment.

The survey contains questions which provide insight into the attitudes of the commanders toward their behavior as leaders. The study will attempt to utilize these attitudinal questions to determine whether or not underlying dimensions can be identified for the leader attitude of commanders.

The second purpose of the study is to analyze the relationship between the dimensions of leader attitude discovered and other variables in the survey. Specifically, the relationship between any underlying dimensions of leader behavior and the demographic variables will be examined thoroughly.

A third purpose of the study will be to attempt to discover the influence of any discovered dimensions of leader attitude on subordinates. The two areas which will be explored are subordinate job satisfaction and subordinate career intent. A Quality of Air Force Life Survey distributed to a representative sample of Air Force personnel in March 1977 provides the additional data needed for examining dimension and influence relationships.

A final purpose is to provide empirical information which can support, or not support, any of the current theories of leadership. Different researchers have postulated varying numbers of dimensions of leader behavior. Therefore, additional empirical evidence would be of value.

Limitations

The primary limitation of the study is the fact that

the survey instrument was not specifically designed for the purposes of this study. Nevertheless, even standard instruments used to measure leader behavior and attitudes are not totally reliable. The difficulties involved in measuring leader behavior and attitudes are amply documented in recent literature (Ref 15:211). Thus, the fact that the survey was not specifically designed to measure leader behavior is not a severe limitation.

Another limitation of the study is the use of two different survey instruments. There is absolutely no way of directly relating a particular commander to a particular subordinate. As such, any conclusions drawn relative to relationships between a specific group of commanders, such as all Strategic Air Command (SAC) commanders, and the corresponding group of subordinates, such as all SAC personnel, must be done with this limitation in mind. However, the surveys were distributed within three months of each other. Therefore, the short amount of time between distributions of the different surveys allows for some generalized leader-subordinate conclusions.

A final limitation of the study involves the use of a survey instrument as an information gathering technique. A respondent must answer multiple choice questions with one of a given set of answers, although he may not exactly agree with any of the answers. As such, some information from the survey could be inaccurate. Additionally, the survey may not have been accomplished conscientiously by the respondent.

In the case of the commanders survey and the personnel survey, the emphasis given both surveys by the Chief of Staff of the Air Force, in addition to the large sizes of the survey populations, should lessen the effect of these limitations considerably.

Overview

The overall purpose of this study is to analyze the results, as they pertain to leadership attitudes and behavior, of a December 1976 survey of Air Force commanders. The report of the findings is presented in the next four chapters. Chapter II provides background information by presenting a brief overview of leadership theory. Chapter III describes the methodology of the study. Analytic techniques utilized are briefly discussed. Chapter IV presents the analysis results and Chapter V draws conclusions and implications from the study.

II. Background

Leadership Defined

The word "leadership" is tossed about freely, yet definitions of the term by various authorities yield no universally accepted definition. A review by Stogdill attempted an eleven category classification of various definitions of leadership (Ref 23:7-16). He found leadership defined in the following manners: (a) as a focus of group processes; (b) as personality and its effects; (c) as the act of inducing compliance; (d) as the exercise of influence; (e) as an act or behavior; (f) as a form of persuasion; (g) as a power relation; (h) as an instrument of goal achievement; (i) as an effect of interaction; (j) as a differentiated role; and (k) as the initiation of structure. Hersey and Blanchard defined leadership as a process which "involves accomplishing goals with and through people" (Ref 11:69). Bowers and Seashore defined leadership as "behavior by one member of a group toward another member or members of the group, which advances some joint aim" (Ref 2:240). Barrow defined leadership as the "behavioral process of influencing individuals or groups toward set goals ..." (Ref 1:232). As a final example, Jacobs defined leadership as an "interaction between persons in which one presents information of a sort in such a manner that the other becomes convinced that his outcomes will be improved if he behaves in the manner suggested or desired" (Ref 16:232).

The purpose of relating the above definitions is to

point out the wide variety of thoughts concerning a definition of leadership. In perspective, and for the purposes of this study, leadership involves a leader, followers who with the leader form a group, a reason for existence as a group, interactions between the leader and the followers, and an objective or goal to be achieved. The actions of the leader represent his behavior. The specific pattern of behavior represents his leadership style.

Contemporary Leadership Theories

Leadership theories have been almost as diverse as definitions of the concept itself. The following theories will be briefly examined: trait theories, group theories, and situational theories.

Trait Theories. Scientific analysis of leadership had its beginnings with the trait theories of leadership. According to Luthans, the central question that the trait approach tried to answer was "What characteristics or traits make a person a leader?" (Ref 18:439). An early trait theory was the "great man" theory which said that a person was either born with the qualities of a leader or he did not have them. Primary research was, therefore, directed toward studying proven leaders. Attention, however, turned to a search for universal traits possessed by all persons performing as leaders. The belief then was that these traits could at least, to a certain degree, be acquired through learning and experience. Conclusions of research efforts in this area were not very conclusive. The only conclusion seemed

to be that "leaders are bigger and brighter than those being led, but not too much so" (Ref 18:439).

Group Theories. The group approach shifted attention from the personality of the leader to the behavior of the leader and how this behavior effects the followers. The major thrust of these studies was to identify exactly what leaders do when they are actually leading (Ref 1:232). The primary force in the development of the group theories was the Ohio State Studies. The group theories emphasize that "leadership is an exchange process between the leader and followers and also involves the sociological concept of role expectations" (Ref 18:441). A review of research conducted by Filley, House, and Kerr indicated that leaders who take into account and support their followers generally have a positive impact on attitudes, satisfaction, and performance (Ref 8:219-222). However, other situational variables are present in the leadership process. The fact that the same behavior does not always prove effective in the presence of different situational variables led to the development of situational theories of leadership.

Situational Theories. The hope of both the trait and the group approaches was that specific leader behaviors would be related to effective group performance and group satisfaction. The idea was then that leaders could be trained in these necessary behaviors (Ref 6:41). A review by Korman, however, concluded that "there is very little evidence that leadership behavioral and/or attitudinal variation ... are

predictive of later effectiveness and/or satisfaction criteria" (Ref 17:354). Situational theories attempt to describe leadership behavior in terms of the situational variables present in a particular situation.

Some situational theories endorse adaptive leader behavior. According to Tannenbaum and Schmidt, a successful leader "is one who maintains a high batting average in accurately assessing the forces that determine what his most appropriate behavior at any given time should be and in actually being able to act accordingly" (Ref 25:101).

A situationally based model for leadership effectiveness was developed by Fred E. Fiedler. According to the Contingency model of Fiedler, the performance of the group depends upon the motivational system of the leader and the amount of control and influence that the leader has in a particular situation (Ref 7:73). The main difference between Fiedler and other situational theorists is the fact that Fiedler maintains that if a leadership style does not fit a particular job or situation, then the job or situation must be engineered to fit the individual style of the leader (Ref 4:115). Leadership style of a particular leader is assumed to be relatively inflexible.

The inflexibility of leadership style has been one of the most controversial elements of the Contingency model. A study by Hill concluded that leaders can behave flexibly enough to cope with various situations (Ref 12:46). Another study by Hill and Hughes also concluded that leaders are

capable of varying their behavior when confronted with different types of tasks (Ref 13:83-96). Nevertheless, research utilizing the Contingency model of leadership effectiveness has been extensive and ongoing.

The Path - Goal theory of House is another situationally based model of leadership effectiveness. The theory involves four styles of leader behavior: (1) directive leadership; (2) supportive leadership; (3) participative leadership; and (4) achievement oriented leadership. "Using one of the four styles contingent upon the situational factors, the leader attempts to motivate subordinates, in turn leading to their satisfaction and performance ... the leader attempts to make the path to goals as smooth as possible" (Ref 18:446-447).

Dimensions of Leader Behavior

Most of the contemporary leadership theories discussed are based upon the idea that there are two relatively independent dimensions of leader behavior: task and human relationships. As previously mentioned, leadership involves the accomplishment of a goal or task as well as human relationships. These two dimensional based theories reflect a convergence of the scientific management and human relations schools of thought about management and leadership (Ref 11:61). The function of a leader under the scientific school of thought was to insure that the organizational goals were accomplished. The function of a leader under the human relations school of thought was to facilitate goal achievement while providing for the needs of the followers.

Early theorists viewed the two dimensions as opposite ends of a continuum. One such theory was described by Tannenbaum and Schmidt (Ref 25:95-102). At one end of their continuum was very autocratic behavior (excessive concern for task) and at the other end was very democratic behavior (excessive concern for interpersonal relationships). The first major study effort to recognize that the two concerns were independent dimensions of leader behavior, and, therefore, not opposite ends of a continuum, was research conducted at Ohio State University.

Begun in 1945, the Ohio State studies were a series of investigations of leadership behavior (Ref 22:1). The studies were an interdisciplinary effort with the major efforts being supplied by psychologists, sociologists, and economists (Ref 22:vii). The assembled experts postulated nine dimensions of leader behavior: integration, communication, production emphasis, representation, fraternization, organization, evaluation, initiation, and domination (Ref 22:9). Descriptive statements were composed for each dimension postulated. Each statement was then included in a survey instrument. By means of factor analysis, the nine dimensions were reduced to four orthogonal factors defined as follows by Bowers and Seashore (Ref 2:241-242).

- (1) Consideration - refers to behavior indicative of friendship, mutual trust, respect and warmth.
- (2) Initiating Structure - refers to behavior that organizes and defines relationships or roles, and establishes well defined patterns of organization, channels of communication, and ways of getting jobs done.

- (3) Production emphasis - behavior which makes up a manner of motivating the group to greater activity by emphasizing the mission or job to be done.
- (4) Sensitivity - sensitivity of the leader to, and his awareness of, social interrelationships and pressures inside or outside of the group.

Eventually the number of factored dimensions was reduced to two, since the third and the fourth factors did not account for a very large amount of common variance (Ref 9:44). As a result of the factor analysis performed, an important finding presented by the Ohio State researchers was the identification of two separate and distinct, independent dimensions of leader behavior: consideration and initiating structure. It is apparent that initiating structure corresponded very closely with a task orientation and that consideration corresponded to a relationships orientation, a recognition of individual needs (Ref 18:437, 10:65). The significance of this finding was that the two orientations were then considered as independent factors and not as opposite ends of a continuum. This implies that a leader can evidence both a high concern for people and a high concern for task accomplishment.

Much research has been done utilizing these two dimensions, specifically, in trying to relate them to effectiveness and employee satisfaction. According to a review by Stogdill (Ref 23:393-397), group productivity seems somewhat more related to initiating structure than to consideration. However, employee satisfaction is more highly related

to consideration than to initiating structure. Additionally, several studies point out that an apparent interaction of initiating structure and consideration influences both satisfaction and productivity.

Concurrent with the Ohio State studies, similar research efforts took place at the University of Michigan. The attempt of the Michigan researchers was to "approach the study of leadership by locating clusters of characteristics which seemed to be related to each other and to tests of effectiveness" (Ref 11:65). These investigations identified two distinct dimensions of leader behavior which they titled employee orientation and production orientation. Thus, working independently of the Ohio State researchers, two independent factors closely related to the task and relationships dimensions had been identified.

An outgrowth of the Ohio State studies was the Managerial Grid of Blake and Mouton. The Grid was developed to conceptualize task oriented and relationships oriented leadership styles (Ref 1:235). The two dimensions of the Grid are titled concern for people and concern for production. These are obviously very similar to the previously mentioned factors, consideration and initiating structure, and employee centered and production centered leader behavior (Ref 18:449). Each axis of the Grid is a nine point scale. By means of these scales, a leader can be placed anywhere on the Grid.

Blake and Mouton have hypothesized five behavioral styles representing five different points on the Grid (Ref 1:235):

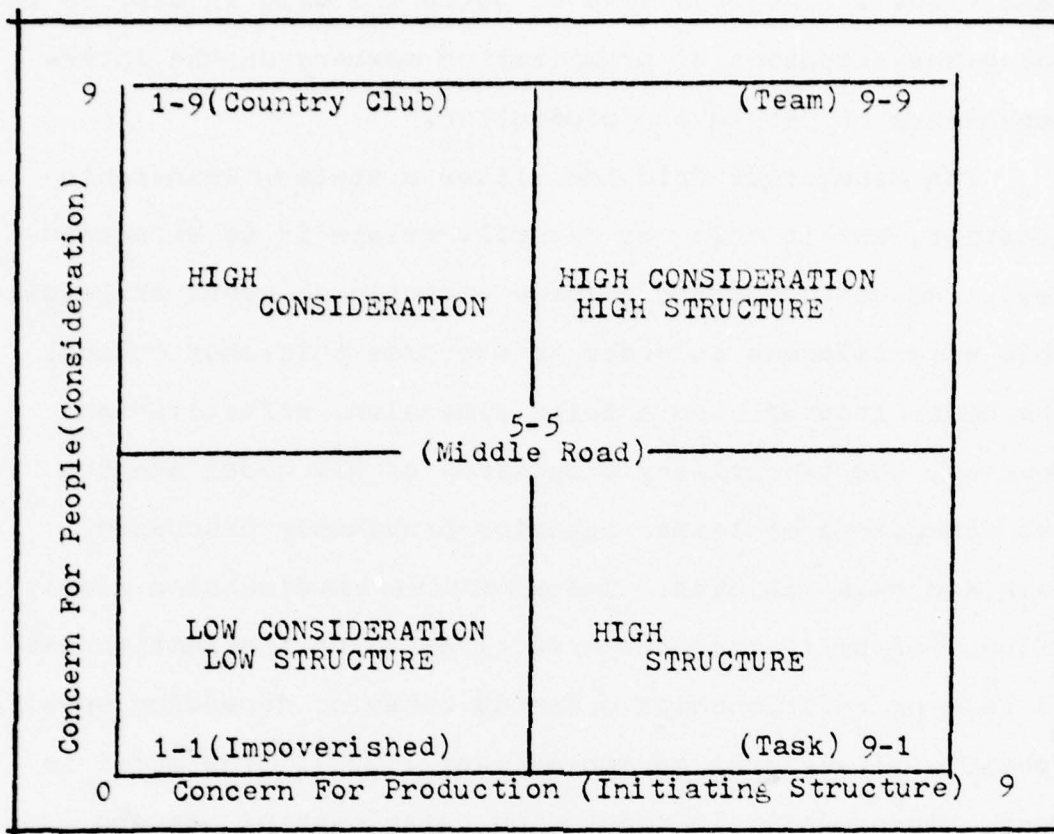


Figure 1. Managerial Grid and Ohio State Dimensions
(Ref 11:68)

- (1) Impoverished - low task, low relationships - (1-1)
- (2) Country Club - low task, high relationships - (1-9)
- (3) Task - high task, low relations - (9-1)
- (4) Middle Road - medium task and relationships - (5-5)
- (5) Team - high task and relationships - (9-9)

Blake and Mouton feel that the best style for a leader to have is the Team (9-9). The Managerial Grid is a logical derivative of the Ohio State research as is shown in Figure 1.

The Grid has been used extensively in Organizational Develop-

ment (O.D.). The objective of using the Grid in O.D. is to focus the attention of organization members on the interdependence of people and production.

The Managerial Grid identifies a style of leadership behavior, but it does not directly relate it to effectiveness. Reddin developed a three dimensional model of leadership effectiveness in order to overcome this shortcoming. The model incorporates a third dimension, effectiveness. However, the two primary dimensions of his model are the two dimensions of leader behavior previously discussed, task and relationships. The effectiveness dimension simply allows for predicting the effectiveness or ineffectiveness of task or relationships oriented behavior depending upon specific situational variables (Ref 1:235). The model is very comprehensive in predicting relationships between leader behavior and different situations, but little research has been done to test its predictive power.

Contrary to the two dimensional positions discussed, others have postulated multidimensional viewpoints of leader behavior. Yukl hypothesized three separate dimensions of leader behavior: consideration, initiating structure, and decision centralization. Consideration and initiating structure are the same factors identified by the Ohio State researchers. Decision centralization refers to the extent to which a leader allows subordinates to participate in the decision making process (Ref 27:416-417).

Bowers and Seashore postulate a four factor theory of

leadership behavior (Ref 2:247). The four factors are the following:

- (1) Support - refers to behavior enhancing the feelings of others.
- (2) Interaction Facilitation - behavior encouraging the development of close, mutually satisfying relationships.
- (3) Goal Emphasis - behavior facilitating the meeting of group goals and standards of excellence.
- (4) Work Facilitation - behavior that helps achieve the goals of the group.

Wofford determined that a five factor categorization of leader behavior was most appropriate (Ref 26:169-173). His five factors are the following:

- (1) Order and Group Achievement - behavior concerning care and accuracy with which a leader handles the functions of planning, controlling, and organizing.
- (2) Personal Enhancement - behavior which relates to use of authority and control.
- (3) Personal Interaction - behavior which concerns the interpersonal relationship the leader establishes with the group.
- (4) Security and Maintenance - behavior concerned with the avoidance of insecurity feelings.
- (5) Dynamic and Achievement Oriented behavior.

The multidimensional theories, such as those discussed, are evidence of the fact that, although it is generally agreed that there are definite dimensions of leader behavior, there is no consensus of opinion as to exactly what, or even how many, dimensions there are.

Measurement Instruments

Various methods have been developed to measure the leadership style of a leader. Two of the more popular methods are the Ohio State scales and the Least Preferred Coworker scale of Fiedler.

Ohio State Scales. The Ohio State scales, consisting of the two dimensions of consideration and initiating structure, have been used very frequently in leadership research (Ref 24:642). Basically, there are two measurement instruments comprising the Ohio State scales, the Leader Behavior Description Questionnaire (LBDQ) and the Leader Opinion Questionnaire (LOQ). The LBDQ typically measures supervisory behavior as perceived by a leader's subordinates. The Supervisory Behavior Description Questionnaire (SPDQ) is a commonly used modification of the LBDQ. The LOQ attempts to measure how the leader feels he should behave in his leadership role (Ref 17:350). LBDQ, SBDQ, and LOQ are coded in such a way that consideration and initiating structure scores can be calculated for an individual leader. The leadership style is then determined from an interpretation of these two scores.

Least Preferred Coworker Scale. According to Fiedler's contingency model of leadership effectiveness, the behavior of a leader is largely determined by the motivational system of the leader (Ref 7:73). The device for measuring this personality variable is to determine the esteem of the leader for, or feeling toward, his least preferred coworker (LPC).

The description of his least preferred coworker is done on an eight point scale. A total LPC score can thus be calculated for each individual. High LPC persons are viewed as primarily relationships oriented and low LPC persons are seen as basically motivated by task accomplishment (Ref 5:456).

Summary

The purpose of this chapter was to provide a brief review of the current state of research in the area of leadership and leader behavior. The review has shown that most of the contemporary leadership theories are based on the idea that there are two relatively independent dimensions of leader behavior: concern for task and concern for human relationships. The purpose of the following chapters of this study will be to attempt to discover existing dimensions of leader behavior for USAF commanders, to develop measures for these existing dimensions, and to analyze the behavior of these measures relative to other survey variables.

III. Methodology

The purpose of this chapter is to describe the manner in which this study was accomplished. Pertinent data gathering information and brief descriptions of analytical techniques utilized are presented.

The Commanders Survey

The primary data for this research study were the results of the USAF Quality of Air Force Life Commanders Survey. During December 1976, approximately 3400 copies of the survey questionnaire were distributed. By the end of January 1977, 2695 completed questionnaires were returned. The responses were entered on file in the Aeronautical Systems Division (ASD) CDC 6600 computer system at Wright-Patterson AFB, Ohio. The responses represent approximately 80% of the USAF officers currently possessing a commander's specialty code or currently serving in a commander's position.

The survey consisted of 149 questions dealing with various aspects of the life of an Air Force commander. The first 13 questions provided pertinent demographic information as follows:

1. Command of Assignment
2. Present Grade
3. Sex
4. Total Service Time
5. Age
6. Aeronautical Rating

7. Type of Organization Commanded
8. Mission of Organization
9. Time as Commander of Present Organization
10. Number of Personnel Assigned
11. Prior Command Experience
12. Base Location
13. Race

Through no intention of the survey designers, question one omitted a response for those assigned to Air Force Communications Service (AFCS). Since AFCS commanders are also of interest to this study, the responses of those who listed command of assignment as OTHER and mission of organization as COMMUNICATIONS were assumed to be the AFCS commanders. The total of 152 cases fitting these two criteria will be referred to as the AFCS commanders throughout this study.

The remainder of the survey questions dealt with diverse subjects, not all of which were pertinent to this study. Of particular interest to the study, however, were questions 58 through 80. These 23 questions listed factors or policies which affect all Air Force personnel. Using a nine point scale, each commander rated each factor or policy with respect to the standard for that factor and the enforcement of that factor. The 23 questions and the rating scale appeared in the survey in the following form:

- A. Standard too strict, enforcement too strict
- B. Standard too strict, enforcement about right
- C. Standard too strict, enforcement too lax

- D. Standard about right, enforcement too strict
 - E. Standard about right, enforcement about right
 - F. Standard about right, enforcement too lax

 - G. Standard too lax, enforcement too strict
 - H. Standard too lax, enforcement about right
 - I. Standard too lax, enforcement too lax
- 58. Overall personal appearance
 - 59. Wear of the uniform
 - 60. Haircuts
 - 61. Mustaches
 - 62. Beard policy
 - 63. Military courtesy and customs
 - 64. Personnel weight control program
 - 65. What my immediate supervisor expects of me
 - 66. My commander's policies and procedures
 - 67. Officer/enlisted on the job relationships
 - 68. Drills and ceremonies
 - 69. Respect for supervisors
 - 70. Safety procedures
 - 71. Working hours
 - 72. Leave procedures
 - 73. Living in on-base family housing
 - 74. Living in on-base dormitories
 - 75. Quality of work expected on the job
 - 76. Quantity of work expected on the job
 - 77. Officer supervisor/subordinate relationships
 - 78. Enlisted supervisor/subordinate relationships
 - 79. Unit mission accomplishment
 - 80. Air Force life in general

Since the scale actually required the rating of two separate things, the standard and the enforcement, these 23 variables were recoded into two new variables for each of the original 23 variables. The new variables were recoded from the original variables in the following manner:

Q58	into	STD58 and ENF58
Q59	into	STD59 and ENF59
Q60	into	STD60 and ENF60
Q61	into	STD61 and ENF61
Q62	into	STD62 and ENF62
-		
-		
Q80	into	STD80 and ENF80

Each of the new variables could take on a value from one to three, as shown below:

1. Standard (Enforcement) too lax
2. Standard (Enforcement) about right
3. Standard (Enforcement) too strict

The survey also included 18 questions dealing with a nine factor Quality of Air Force Life (QOAFLL) model developed by Doctors Manley, McNichols, and Gregory. The survey contained two questions for each of the nine factors. One question addressed the importance of that factor to the individual, and the second question addressed the satisfaction of the individual with that factor in his life. The nine factors, and their associated survey question numbers, are the following: Economic Standard (98, 99), Economic Security (100, 101), Free Time (105, 106), Work (81, 82), Leadership/supervision (28, 29), Equity (125, 126), Personal Growth (107, 108), Personal Standing (56, 57), and Health (142, 143).

Additional questions utilized in the study were those

attitudinal questions relating to the commander's attitudes toward various actions of a leader. The 46 STD and ENF variables, the 18 QOAFI variables, and the other pertinent attitudinal variables were the starting point for the analysis of the data. The entire survey instrument is presented in Appendix A.

Factor Analysis

The primary analytical technique used in the initial analysis of the data was factor analysis. Factor analysis is actually a collection of techniques. It is related to an analysis of interdependency in that it involves a study of the underlying structure of a set of data. Factor analysis involves two types of variables, manifestation variables and latent variables. Manifestation variables are those variables which have been actually measured. In this study, the manifestation variables were the 46 STD and ENF variables, the 18 QOAFI variables, and the other pertinent attitudinal variables. The latent variables are the underlying, unmeasured variables. In this study, the latent variables were the factors underlying the attitudes of the commanders.

Factor analysis was used to search for factors which could be interpreted as dimensions of leader attitude for the commanders. Factor scores calculated for these factors were used as measures of leader attitude for individual commanders. The particular factor analytic technique used was principal component analysis with varimax rotation. Factor scores were computed for the latent variables employing

only those manifestation variables which had substantial loadings on a latent factor. A loading was considered substantial if it was greater than .4.

Three interpretable, useable factors were discovered. Values for these factors were computed and added to the data bank previously compiled. The three measures computed were the central focus of the remainder of the study. Interpretation of the factors and working definitions are provided in the next chapter.

Analysis of the Measures

The next phase of the study involved the analysis of the behavior of the new measures relative to other variables in the survey. The purpose of examining the behavior of the measures was to determine any similarity of the measures to measures developed by other researchers. The other survey variables utilized in this portion of the analysis were all the demographic variables, two job atmosphere variables, and a variable providing a measure of job satisfaction.

The two job atmosphere variables were questions 86 and 93. These two questions provide insight into the environment in which an individual commander works. Q86 and Q93 appeared in the survey instrument as follows:

Q86. Are you given the freedom you need to do your job well?

- A. Never
- B. Seldom
- C. Sometimes
- D. Often

E. Always

Q93. I have sufficient authority to carry out my responsibilities.

A. Strongly disagree

B. Disagree

C. Undecided

D. Agree

E. Strongly agree

The survey contained four questions, Q89 through Q92, which are based upon the Hoppock Job Satisfaction Measure (Ref 14). A combination of these four questions results in a new variable, JSAT, which serves as a measure of job satisfaction. This measure of job satisfaction was computed for all cases. JSAT can take on any integer value between 4 and 28 inclusive. A higher value of JSAT indicates a greater degree of job satisfaction than a lower value of JSAT.

The primary statistical techniques utilized in this portion of the study were one-way and two-way Analysis of Variance (ANOVA) and Rank Order Correlation. ANOVA is a statistical technique involving a dependent, or criterion, variable and an independent variable or list of variables. In the case of one-way ANOVA, there is only one independent variable. The underlying hypothesis of the ANOVA is that there is no difference among the categories of the independent variable with respect to the mean of each category for the dependent variable. An F test is used to test the statistical significance of any variation among the categories.

In two-way ANOVA, there are two independent variables.

The purpose of using two-way ANOVA was to discover any significant two-way interaction effects between the independent variables when the measures are the criterion variables. A significant two-way interaction effect implies that the effect of one independent variable on the criterion variable varies from one category to another of a second independent variable. The interaction effect of the two independent variables on the criterion variable is in addition to the additive effect of the two independent variables on the criterion variable. Thus, the total effect of the two independent variables on the criterion variable is composed of the additive effect and the non-additive, or interaction, effect.

Since the number of cases falling into the different categories of the independent variables was unequal, the classic experimental approach was utilized for the two-way ANOVA (Ref 20:408-409). This approach is to partition the total sum of squares in Y , SS_Y , into three types:

$SS_{A,B}$ = sum of squares due to the additive effects of A and B

SS_{AB} = sum of squares due to the interaction effect of A and B

SS_{error} = sum of squares due to error
 $= SS_Y - SS_{A,B,AB}$

where A and B are the independent variables, Y is the criterion variable, and $SS_{A,B,AB}$ is the total joint effect of A and B and their interaction. Thus, the interaction component is the difference between the sum of squares explained by the total joint effect of the two independent variables on the

criterion variable and the additive effect of the two independent variables. By defining the three components of the total sum of squares in this manner, all three components are made orthogonal to one another.

Mean scores on the discovered measures were computed for the different categories of the demographic variables, Q86, Q93, and JSAT. These different categories were then rank ordered by mean scores of the measures. In order to determine the degree of correlation between any two of the measures, when the categories of a particular variable are rank ordered by mean scores of the measures, the Spearman Rho was used.

The Spearman Rank Order Correlation Coefficient (Rho) is a product-moment correlation coefficient for ranked data. For all practical purposes, it can be interpreted in the same manner as the Pearson Product-Moment Correlation Coefficient. Tables are available to test the statistical significance of Rho. Therefore, if commands of assignment are rank ordered, the rankings being derived from the mean scores of the various commands on each of two of the measures, a significant Rho would imply that, when viewed across commands, those two measures are significantly related. The formula for the calculation of Rho is the following:

$$R = 1 - \frac{6 \sum D^2}{N(N^2 - 1)}$$

where

- R = Rho
- N = the number of items rank ordered
- D = the difference between the rankings for each variable

The Second Survey

The second survey utilized in the study was the USAF Quality of Air Force Life Active Duty Air Force Personnel Survey - Second Edition (QOL-2). Distributed in March 1977, results were available for 10,687 cases. QOL-2 and the Commanders Survey were thus distributed within four months of each other. Therefore, although there is no way to tie an individual commander to his particular subordinates, the short time span between the distribution of each survey permits some generalized commander - subordinate conclusions. In particular, the purpose of this portion of the study was to determine the influence of the new variables on job satisfaction and first term career intent for subordinates. This was accomplished by rank ordering the commands by JSAT and career intent, rank ordering the commands on the three new variables, and then, computing Spearman Rho to determine the degree of correlation.

The job satisfaction measure was again based on the Hoppock Measure. The questions utilized were the same as those used in the Commanders Survey and were number Q57 through Q60 in QOL-2. The career intent measure was question 14 on the survey and appeared in the following form:

- Q14. Which of the following best describes your attitude toward making the Air Force a career?
- A. Definitely intend to make the Air Force a career
 - B. Most likely will make the Air Force a career
 - C. Undecided

- D. Most likely will not make the Air Force a career
- E. Definitely do not intend to make the Air Force a career

Rank ordering of the commands was from high career intent (definitely stay) to low career intent (definitely leave). Career intent was only computed for first termers, those in their first term of enlistment. Specifically, an individual was considered a first termers if he met both of the following criteria:

1. He had less than five years time in service, or he had less than seven years in service and he was a pilot or navigator.
2. He had an aero rating of Flight Surgeon, or a present grade of Captain, First Lieutenant, Second Lieutenant, Staff Sergeant, Sergeant, Senior Airman, Airman First Class, Airman, or Airman Basic.

Computer Programs

With the exception of the Spearman Rho, all analytic techniques discussed were available as standard computer programs on the ASD CDC 6600 computer system. Most programs are portions of the Statistical Package for the Social Sciences (SPSS) (Ref 20). Some of the specific SPSS programs used were FACTOR, BREAKDOWN, CONDESCRIPTIVE, ONEWAY, and ANOVA.

IV. Analysis Results

The purpose of this chapter is to present the results of the data analysis. For the most part, conclusions will be reserved until the final chapter. The first part of the analysis involved factor analysis to discover any existing dimensions of leader attitudes. The second part of the analysis involved measuring the discovered dimensions and an analysis of the behavior of the dimensions relative to other variables in the survey. The final part of the analysis involved an attempt to determine the influence of the dimensions on job satisfaction and first term career intent of subordinates.

Standards and Enforcement

As previously mentioned, a preliminary step in the analysis was to recode question 58 through 80. Dealing with a response calling for a simultaneous judgement regarding a standard and its enforcement, these 23 variables were recoded to facilitate the interpretation of the data. Once the questions were divided into separate variables for standard and enforcement, descriptive statistics were calculated for the entire population. Results are shown in Table 1 for the standard (STD) and for the enforcement (ENF).

The rating scale for the 23 STD and the 23 ENF variables called for a rating according to the following scale:

- 1 - too lax
- 2 - about right
- 3 - too strict

Table I
Descriptive Statistics
for STD and ENF

Factor/Policy	STD Mean	STD Standard Deviation	ENF Mean	ENF Standard Deviation
58. Overall Personal Appearance	2.008	.361	1.310	.517
59. Uniform	1.952	.288	1.360	.507
60. Haircuts	2.255	.560	1.446	.672
61. Mustaches	2.296	.574	1.584	.677
62. Beard Policy	1.993	.520	1.692	.567
63. Military Customs and Courtesies	1.876	.396	1.371	.503
64. Weight Control	2.150	.544	1.759	.718
65. What Immediate Sup Expects	1.976	.322	1.963	.379
66. My Commander's Policies	2.002	.351	1.958	.425
67. Off/Enl on Job Relations	1.947	.363	1.751	.471
68. Drill and Ceremonies	1.886	.524	1.741	.548
69. Respect for Supervisors	1.830	.429	1.488	.513
70. Safety	2.143	.426	1.947	.575
71. Workings Hours	2.060	.359	1.903	.445
72. Leave Procedures	1.976	.310	1.918	.364
73. On-base Family Housing	2.114	.441	2.075	.514
74. On-Base Dormitories	2.263	.576	2.117	.657
75. Quality of Work Expected	1.862	.431	1.662	.533
76. Quantity of Work Expected	1.962	.529	1.750	.565
77. Officer Sup/Sub Relationships	1.971	.313	1.780	.454
78. Enlisted Sup/Sub Relationships	1.888	.395	1.604	.522
79. Unit Mission Accomplishment	2.040	.364	1.978	.447
80. Air Force Life in General	1.987	.333	1.782	.520

Therefore, a mean of 2.263 on STD 74 (living in on-base dormitories) indicates that the commanders feel the standards established for living in on-base dormitories tend toward being too strict. Likewise, a mean of 1.830 on STD 69 (respect for supervisors) indicates the feeling that standards regarding respect for supervisors tend toward being too lax.

As with most survey data, there are cases which contain out of range responses. There were 29 cases where respondents chose not to answer any of the 23 questions pertaining to standards and enforcement. No missing cases were used in the computation of any descriptive statistics calculated during the analysis.

Factor Analysis

The first major part of the analysis was the factoring of the STD and ENF variables, and other pertinent attitudinal variables in the survey. The purpose of this factor analysis was to discover any existing dimensions of leader attitude for the commanders. The variables in the factor analysis were the following: Q17 to Q20, Q22 to Q24, Q26, Q28, Q29, Q35, Q40, Q43 to Q47, Q53, Q55, Q81, Q86, Q93, Q96, Q97, Q102, Q110, Q113, Q116 to Q122, Q133, Q138, STD 58 to STD 64, STD 66 to STD 71, STD 75 to STD 79, ENF 58 to ENF 64, ENF 66 to ENF 71, and ENF 75 to ENF 79.

To determine the appropriate number of factors to be retained after the principal component analysis, a graph was prepared presenting eigenvalues for each factor (Figure2).

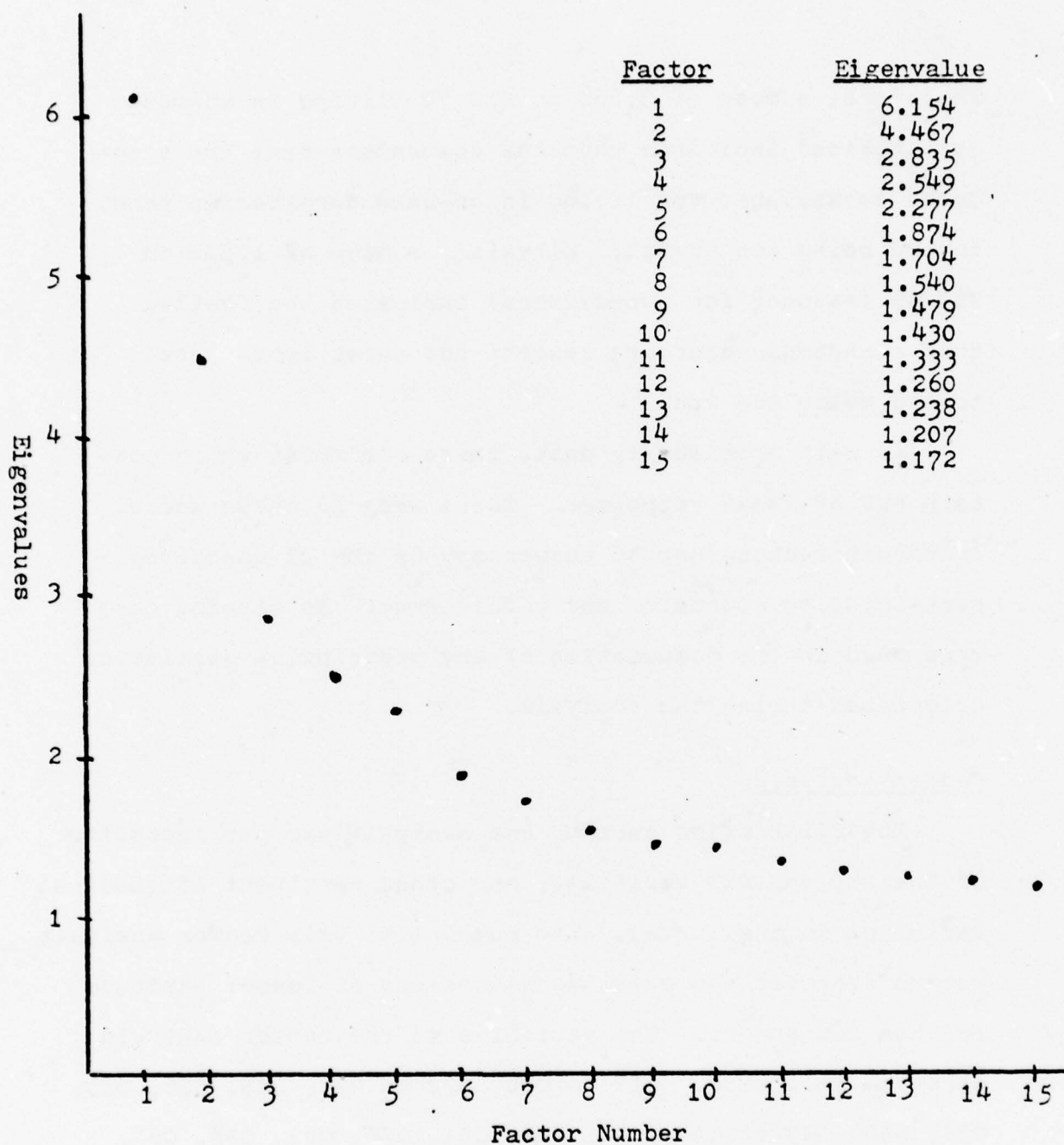


Figure 2. Eigenvalues vs Factors

Ten factors were retained for rotation, since the graph seemed to smooth out significantly at this point (Ref 10:163).

After Varimax rotation, four interpretable factors were found. These factors, and the factor loadings considered significant, are presented in Table II. A factor loading is considered significant if it is greater than .4.

The next step in the analysis was the interpretation of these four factors. The first factor had significant loadings from the following variables:

- STD 58 - overall personal appearance (standard)
- STD 59 - wear of the uniform (standard)
- STD 60 - haircuts (standard)
- STD 61 - mustaches (standard)
- STD 62 - beard policy (standard)

These five variables deal with standards of personal discipline and are not normally within the realm of the individual commander to change since they are set by higher levels of management. Although the attitudes of the commander toward these standards may eventually influence future management policy, the attitudes of a commander towards these standards will generally not affect his behavior as a leader. Therefore, this factor was not considered appropriate to the purposes of this study, and it was eliminated from further consideration in the study.

The second factor had significant factor loadings from the following variables:

- ENF 58 - overall personal appearance (enforcement)

Table II
Factor Loadings (Greater than .4)
After Varimax Rotation

Variable	Factor			
	1	2	3	4
STD 58	.57			
STD 59	.47			
STD 60	.71			
STD 61	.71			
STD 62	.65			
STD 67				.51
STD 69				.42
STD 71			.47	
STD 75			.62	
STD 76			.70	
STD 77				.49
STD 78				.50
STD 79			.46	
ENF 58		.75		
ENF 59		.69		
ENF 60		.74		
ENF 61		.67		
ENF 62		.45		
ENF 63		.48		
ENF 67				.64
ENF 69				.50
ENF 71			.41	
ENF 75			.63	
ENF 76			.72	
ENF 77				.67
ENF 78				.65
ENF 79			.45	
Q43		.42		

- ENF 59 - wear of the uniform (enforcement)
- ENF 60 - haircuts (enforcement)
- ENF 61 - mustaches (enforcement)
- ENF 62 - beard policy (enforcement)
- ENF 63 - military customs and courtesies (enforcement)
- Q43 - opinion of discipline in the Air Force

This factor is apparently the enforcement counterpart of the previously discussed factor. This factor is pertinent to the study. It represents the attitude of a commander towards the enforcement of personal discipline, his concern for the enforcement of discipline. For ease of reference, this factor will be referred to as EOD throughout the study.

The interpretation of positive and negative factor scores is discerned from the signs of the factor loadings. The original ENF variables had a scale ranging from too strict on the high end to too lax on the low end. Conversely, Q43 had a scale ranging from too lax on the high end to too strict on the low end. Since the ENF factor loadings are positive and the Q43 factor loading is negative, then a low EOD value would indicate a feeling of too lax, and a high EOD value would indicate a feeling of too strict. More will be said regarding the interpretation of EOD values after all pertinent factors have been interpreted and defined.

The third factor had significant factor loadings from the following variables:

- STD 71 and ENF 71 - working hours (standard and enforcement)

- STD 75 and ENF 75 - quality of work expected
(standard and enforcement)
- STD 76 and ENF 76 - quantity of work expected
(standard and enforcement)
- STD 79 and ENF 79 - unit mission accomplishment
(standard and enforcement)

These eight variables are all involved with work and the accomplishment of tasks. The fact that both standard and enforcement variables loaded significantly on this factor makes it pertinent to the study. This factor is apparently the attitude of a commander towards the standards necessary to accomplish the work at hand, as well as his attitude towards the enforcement of those standards. This factor seemingly reflects what a commander expects of his subordinates in order to get the job done. For ease of reference, this factor will be referred to as TASK. Since all the signs of the significant loadings are positive, the meaning of positive and negative TASK values is similar to that previously discussed for EOD.

The final factor had significant factor loadings from the following variables:

- STD 67 and ENF 67 - officer/enlisted on the job
relations (standard and enforcement)
- STD 69 and ENF 69 - respect for supervisors
(standard and enforcement)
- STD 77 and ENF 77 - officer supervisor/subord relations
(standard and enforcement)
- STD 78 and ENF 78 - enlisted supervisor/subord relations
(standard and enforcement)

These eight variables are clearly involved with the relationships which exists between a leader and a follower. Since

both standard and enforcement variables loaded significantly, the factor is apparently the attitude of a commander towards the standards defining the relationships on the job between a leader and a follower. Additionally, it is the attitude of a commander towards the enforcement of such standards. This factor will be referred to as RELATIONSHIPS. Again, all significant loadings are positive and, therefore, the meaning of positive and negative RELATIONSHIPS values is similar to that previously discussed for EOD.

Factor Scores

Scores on each of the three measures for each case were calculated using factor score coefficients and standardized variable values. Only the factor score coefficients for those variables which had significant loadings on the factors were used. The computational form of the three measures is as follows:

$$\begin{aligned} \text{EOD} = & -.12088(\text{Q43}-4.047)/.8024+.24913(\text{ENF58}-1.3096)/.5171 \\ & +.23398(\text{ENF59}-1.3604)/.5068+.23077(\text{ENF60}-1.4463)/.672 \\ & +.196(\text{ENF61}-1.5835)/.677+.10686(\text{ENF62}-1.692)/.5673 \\ & +.15346(\text{ENF63}-1.3712)/.5031 \end{aligned}$$

$$\begin{aligned} \text{TASK} = & +.17555(\text{STD71}-2.0601)/.3595+.22273(\text{STD75}-1.8623)/.4308 \\ & +.26866(\text{STD76}-1.9622)/.5291+.15791(\text{STD79}-2.0401)/.3644 \\ & +.16(\text{ENF71}-1.9033)/.4451+.23022(\text{ENF75}-1.6622)/.5329 \\ & +.27798(\text{ENF76}-1.7504)/.565+.16005(\text{ENF79}-1.9782)/.4471 \end{aligned}$$

$$\begin{aligned} \text{RELATIONSHIPS} = & .1807(\text{STD67}-1.9473)/.3628+.11287(\text{STD69}-1.8304)/.4297 \\ & +.16940(\text{STD77}-1.9718)/.313+.17482(\text{STD78}-1.8883)/.3955 \\ & +.2587(\text{ENF67}-1.7512)/.4715+.16270(\text{ENF69}-1.4876)/.5133 \\ & +.26826(\text{ENF77}-1.7798)/.4543+.25575(\text{ENF78}-1.6044)/.5218 \end{aligned}$$

The new variables are standardized because of the nature of the linear combinations just presented. Maximum and minimum values for the TASK, RELATIONSHIPS, and EOD measures are presented in Table III.

Table III
TASK, RELATIONSHIPS, EOD
Maximum and Minimum Values

Variable	N	Maximum	Minimum
TASK	2664	3.94	-5.97
EOD	2666	3.42	-1.45
RELATIONSHIPS	2664	4.45	-5.25

The difference in the number of valid cases for each of the measures is due to a difference in the number of missing cases. A case is considered missing for a measure if any of the variables used in its computation is missing.

Since TASK, EOD, and RELATIONSHIPS are standardized variables, a scale for each of these variables would go from too lax on the negative side to too strict on the positive side with about right at zero (0). At this point in the analysis, it appeared that the TASK and RELATIONSHIPS factors were very similar to leadership dimensions identified by other researchers. These two factors seemed to be very similar to dimensions such as concern for people and concern for production. However, validity testing indicated that although TASK and RELATIONSHIPS were definite attitudinal dimensions, they were more closely tied to the specific organization the individual commander was assigned to than to any leadership dimension, or orientation, of the commander.

Validation of the Measures

Validation involves the determination that a model or measuring instrument does what it is intended to do. According to Nunnally, there are generally three types of validity: predictive, content, and construct (Ref 21:77). Predictive validity is important when the purpose is to use a model to estimate a form of behavior. The model has predictive validity if it adequately estimates the behavior it is purported to measure. An example of an instrument requiring predictive validity is the college entrance examinations designed to provide a guideline for predicting success in college.

Content validity involves the adequacy with which content is sampled. As an example, a final examination in any college course should have content validity. It should adequately cover the subject matter of the course. Predictive validity and content validity are not at issue in this study.

A construct represents a hypothesis about some behavior. A variable is a construct if it is abstract rather than concrete. TASK, RELATIONSHIPS, and EOD can be thought of as constructs. They are not present in the data in concrete terms. The degree of construct validity present in the measures can be determined by examining whether the measures behave as though they measure the constructs they are purported to represent (Ref 21:87). The greater the extent to which they behave as hypothesized, then the greater the

degree of validity for the measures.

At this point in the study, the new variables and the constructs they are hypothesized to represent are the following:

- EOD - represents the attitude of a commander towards the enforcement of personal discipline.
- TASK - represents the attitude of a commander towards the standards necessary to accomplish the work at hand, as well as his attitude towards the enforcement of those standards.
- RELATIONSHIPS - represents the attitude of a commander towards standards defining on the job relationships between a leader and a follower, as well as his attitude towards the enforcement of those standards.

TASK, RELATIONSHIPS, and EOD values were calculated for all cases. Mean scores on these variables were rank ordered by command of assignment. Prior to tabulating these results, it was hypothesized that if the operational commands (those with a flying mission) generally had a TASK mean score lower than the non-operational commands, then the TASK variable would be a valid measure of a concern for task accomplishment. By the nature of their specific missions, it is normally the case that operational commands, such as TAC and SAC, are more oriented toward the accomplishment of their mission than the non-operational commands, such as AFLC or AFSC. This may be in large part due to the fact that operational commands are more directly involved with air combat operations which are viewed by many as the true mission of the Air Force.

Table IV
Command Rank Ordered by TASK

Rank	Command	TASK Value	Op/Non-op
1.	PACAF	.177	Op
2.	TAC	.171	Op
3.	USAFE	.059	Op
4.	SAC	.023	Op
5.	MAC	.003	Op
6.	OSI	-.055	Non-op
7.	AU	-.118	Non-op
8.	ALASKAN	-.158	Op
9.	ATC	-.177	Non-op
10.	AFSC	-.206	Non-op
11.	AFCS	-.284	Non-op
12.	ADCOM	-.308	Op
13.	AFLC	-.347	Non-op
14.	SEC SVC	-.358	Non-op

The rankings by command for TASK are as shown in Table IV.

With only two exceptions (ADCOM and ALASKAN), the operational commands were higher on the TASK variable than the non-operational commands. This was contrary to the hypothesized rank order. This indicated that the TASK variable was not measuring the degree of concern for TASK accomplishment of an individual commander. The ranking by commands

became intuitively logical when viewed in the context of an organizational environment. The TASK variable seems to represent the attitude of a commander towards the standards and the enforcement necessary to accomplish the work at hand, but only as viewed by a commander in the context of his organization. In the strict, very structured atmosphere surrounding an operational commander, he might very logically feel that the standards and enforcement regarding work accomplishment are too strict. Similarly, the commander in a non-operational command could logically have the attitude that the standards and their enforcement are too lax. Thus, for example, a TASK value of .177 for TAC and a TASK value of -.358 for Security Service seems to provide a degree of construct validity.

Rankings by command for EOD and RELATIONSHIPS are as shown in Table V, on the following page.

On the EOD variable, the operational commands again tend to have a higher ranking than the non-operational commands. This is also a logical ranking in the context of consideration of organizational environment. In an operational command, the attention to detail required in performing critical tasks could result in very strict enforcement of personal discipline. As a result, a commander in such a command might readily perceive EOD within his organization as tending to be too strict. Likewise, in a non-operational command, the less critical nature of the work accomplished may result in less stringent enforcement of personal discipline.

Table V
Command Rank Ordered by
EOD and RELATIONSHIPS

Rank/EOD	Command	Rank/RELATIONSHIPS	Command
1.	USAFE	1.	AU
2.	PACAF	2.	ALASKAN
3.	SAC	3.	OSI
4.	OSI	4.	ATC
5.	ATC	5.	MAC
6.	AU	6.	SAC
7.	ADCOM	7.	PACAF
8.	TAC	8.	TAC
9.	MAC	9.	USAFE
10.	SEC SVC	10.	AFSC
11.	AFCS	11.	AFCS
12.	ALASKAN	12.	AFLC
13.	AFSC	13.	ADCOM
14.	AFLC	14.	SEC SVC

Consequently, a commander in such a command might perceive EOD within his organization as tending to be too lax.

Ranking of the RELATIONSHIPS variable did not provide as clear a split between the operational and non-operational commands as the ranking of TASK and EOD provided. The operational commands tended to cluster in the rankings, but the

cluster was in the middle. Nevertheless, it seems logical for AU and ATC to have higher RELATIONSHIPS values since both are commands more involved with an academic type environment. In such an environment, it is logical to assume that a commander might perceive the standards and enforcement of leader-follower relationships to be too strict.

Working Definitions

Therefore, having established some degree of construct validity for the three measures, TASK, RELATIONSHIPS, and EOD are defined as follows:

- TASK - represents the attitude of a commander towards the standards necessary to accomplish the work at hand and towards the enforcement of those standards. This attitude is based upon his own ideas and feelings in the context of the environment of the organization to which the commander is assigned.
- RELATIONSHIPS - represents the attitude of a commander towards the standards which define the relationships on the job between a leader and a follower and towards the enforcement of those standards. This attitude develops as a result of his own ideas and the environment of the organization to which the commander is assigned.
- EOD - represents the attitude of a commander towards the enforcement of personal discipline. This attitude is developed from the ideas of the commander in the context of the environment of the organization to which the commander is assigned.

Organizational environment is essential to the definition of each of the three measures. For example, a TASK value only indicates the attitude of a particular commander towards

standards and enforcement of work accomplishment as perceived by that commander in his own particular organization. Thus, to compare TASK values for two different commanders and to draw the conclusion that a higher value implies less of a task orientation is an incorrect utilization of the TASK variable. A comparison between TASK values for two different commanders only yields the difference in the perception of TASK each has for his own organization. Therefore, an individual commander, at a different time, in a different organization, might very well have a different TASK value. TASK, EOD, and RELATIONSHIPS are intimately tied to the environment of the organization to which a commander is assigned.

Analysis of the Behavior of the Measures

The next major phase of the analysis involved an analysis of the behavior of the measures relative to other variables in the survey. The other variables considered were the demographic variables, two job atmosphere variables, and the job satisfaction variable (JSAT). The purpose of this phase of the analysis was to examine the measures more fully in order to understand them better and to be able to relate them to the measures of other researchers.

During the remaining parts of the analysis, findings were considered statistically significant if they were significant at the $\alpha = .05$ level or lower. F tests conducted in conjunction with the ANOVA were all one tailed tests (right tail). The significance of Rho was determined using a two tailed t test.

Demographic Analysis. The first stage of this phase of the analysis involved looking at TASK, RELATIONSHIPS, and EOD values for the different demographic groups. This analysis was done in conjunction with a one-way ANOVA. Therefore, TASK, RELATIONSHIPS, and EOD values are presented along with the statistical significance of the variance across the different categories of a demographic variable.

Table VI presents the results of the one-way ANOVA for the demographic analysis. From the table, it is seen that command, grade, service time, age, type organization, and mission of organization, each, individually, have a statistically significant effect on the TASK variable. This implies, in each case, that the mean TASK value of at least one category of each of these demographic variables is statistically different from the overall mean on the TASK variable for that particular demographic variable. Charts of mean TASK values for each of the categories of the 13 demographic variables are given in Figures 3 through 11.

From Table VI, it can be seen that, for RELATIONSHIPS, type of organization, mission of organization, and number of personnel assigned, each have a statistically significant effect. These statistical significance levels imply that, for each of these demographic variables, there is at least one category of each variable which is statistically different from the overall mean on the RELATIONSHIPS variable. Mean RELATIONSHIPS values for all categories of the demographic variables are also presented in Figures 3 through 11.

Table VI
ANOVA Results

	TASK	RELATIONSHIPS	EOD
Command	F=3.172 α = .000	F=1.16 α = NS	F=1.12 α = NS
Grade	F=4.787 α = .000	F= .510 α = NS	F=3.294 α = .006
Sex	F=1.206 α = NS	F= .031 α = NS	F= .275 α = NS
Service Time	F=2.171 α = .002	F= .993 α = NS	F=1.797 α = .015
Age	F=2.341 α = .002	F=1.367 α = NS	F=2.269 α = .002
Type Org	F=2.312 α = .002	F=3.332 α = .000	F=2.518 α = .001
Org Mission	F=7.073 α = .000	F=2.667 α = .001	F=3.253 α = .000
Aero Rating	F=1.581 α = NS	F=1.294 α = NS	F=1.853 α = NS
Race	F= .956 α = NS	F=1.832 α = NS	F= .672 α = NS
Time as Commander	F=1.733 α = NS	F=1.583 α = NS	F=2.468 α = .012
No. of Personnel (Size)	F=1.407 α = NS	F=3.725 α = .001	F=5.107 α = .000
Prior Experience	F=1.428 α = NS	F= .520 α = NS	F=5.463 α = .000
Base Locus	F= .391 α = NS	F=2.051 α = NS	F= .468 α = NS

NS - Not Significant

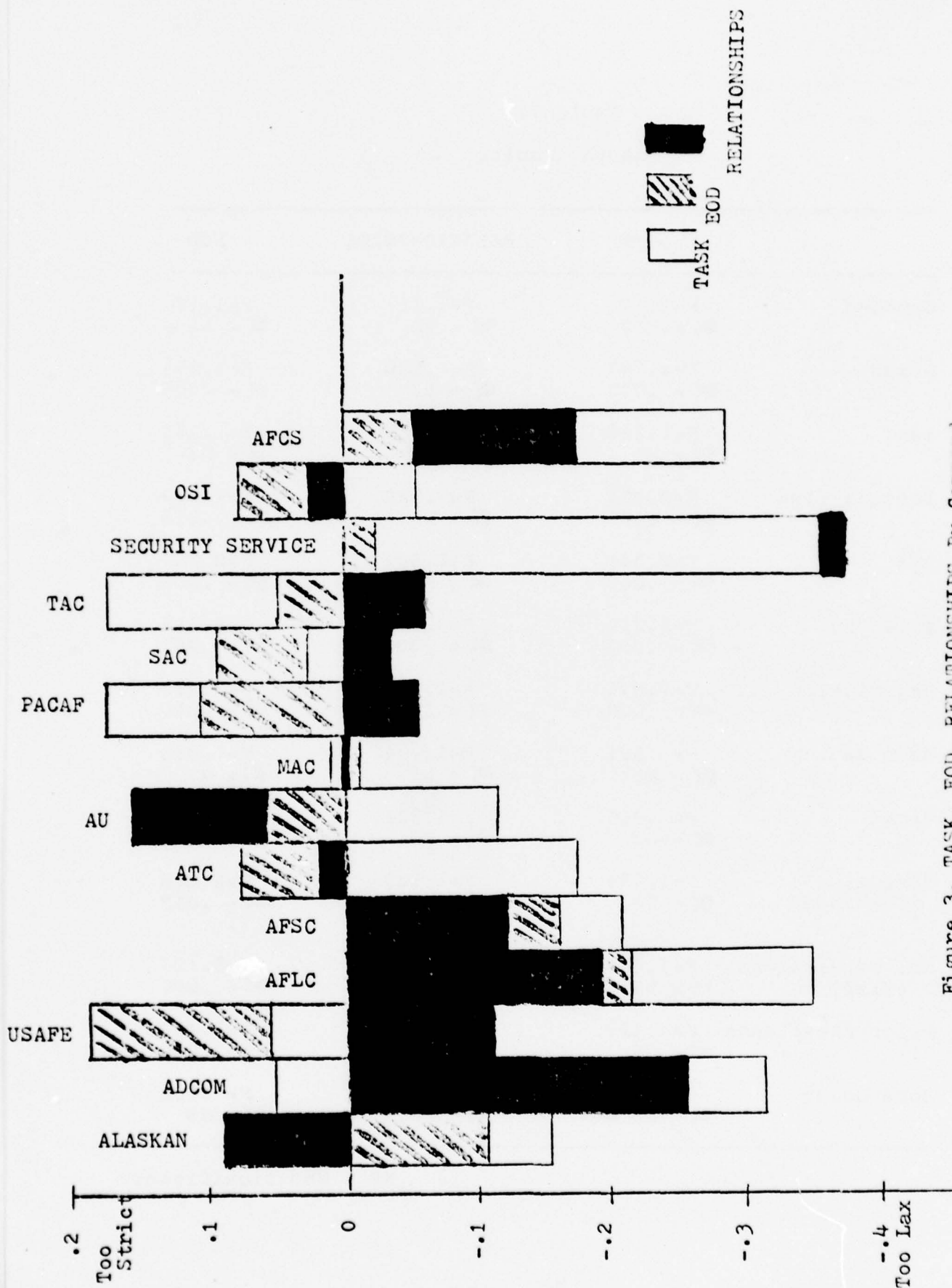


Figure 3. TASK, EOD, RELATIONSHIPS By Command

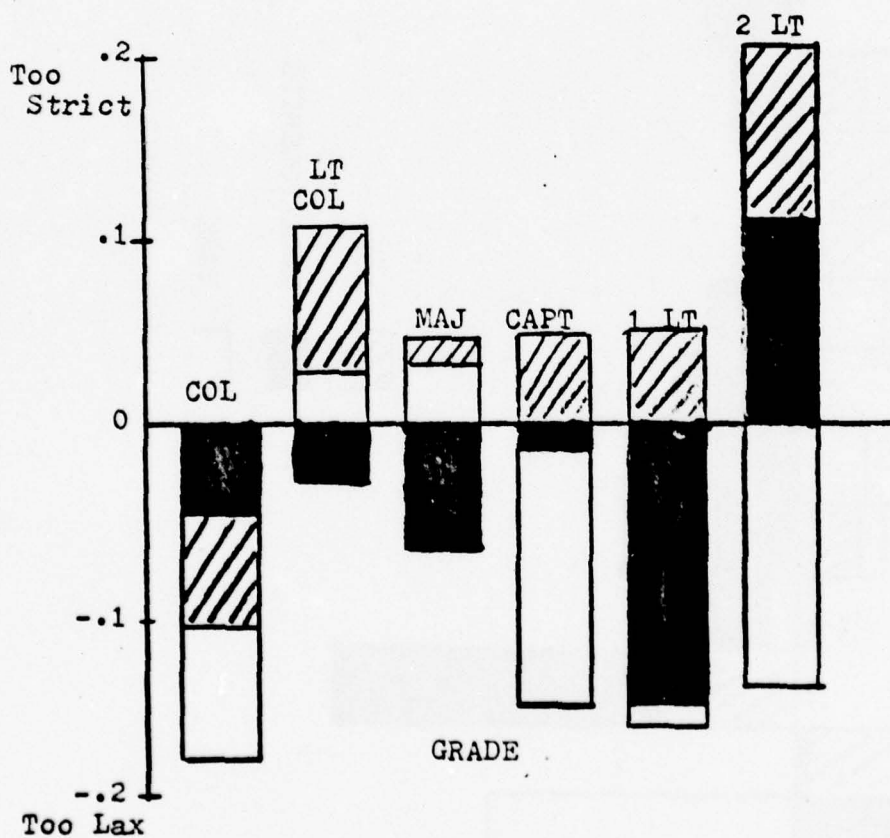
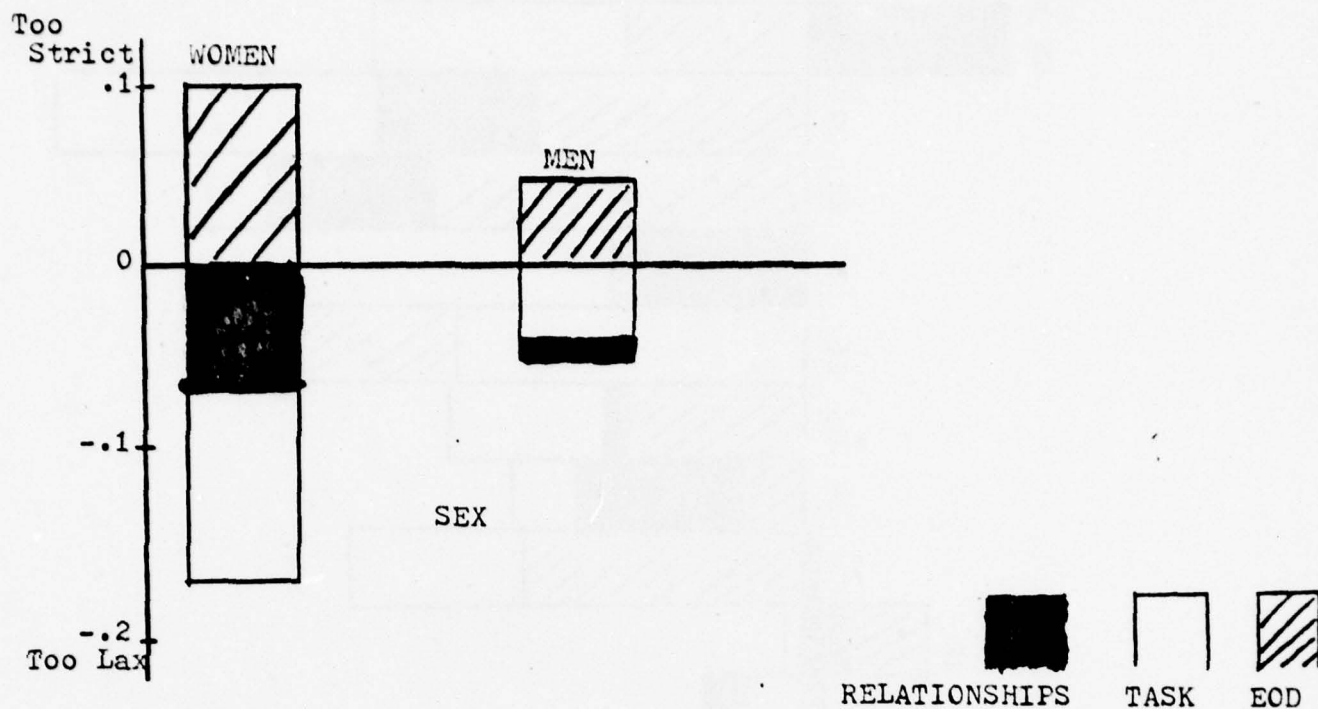


Figure 4. TASK, RELATIONSHIPS, EOD By Grade, By Sex

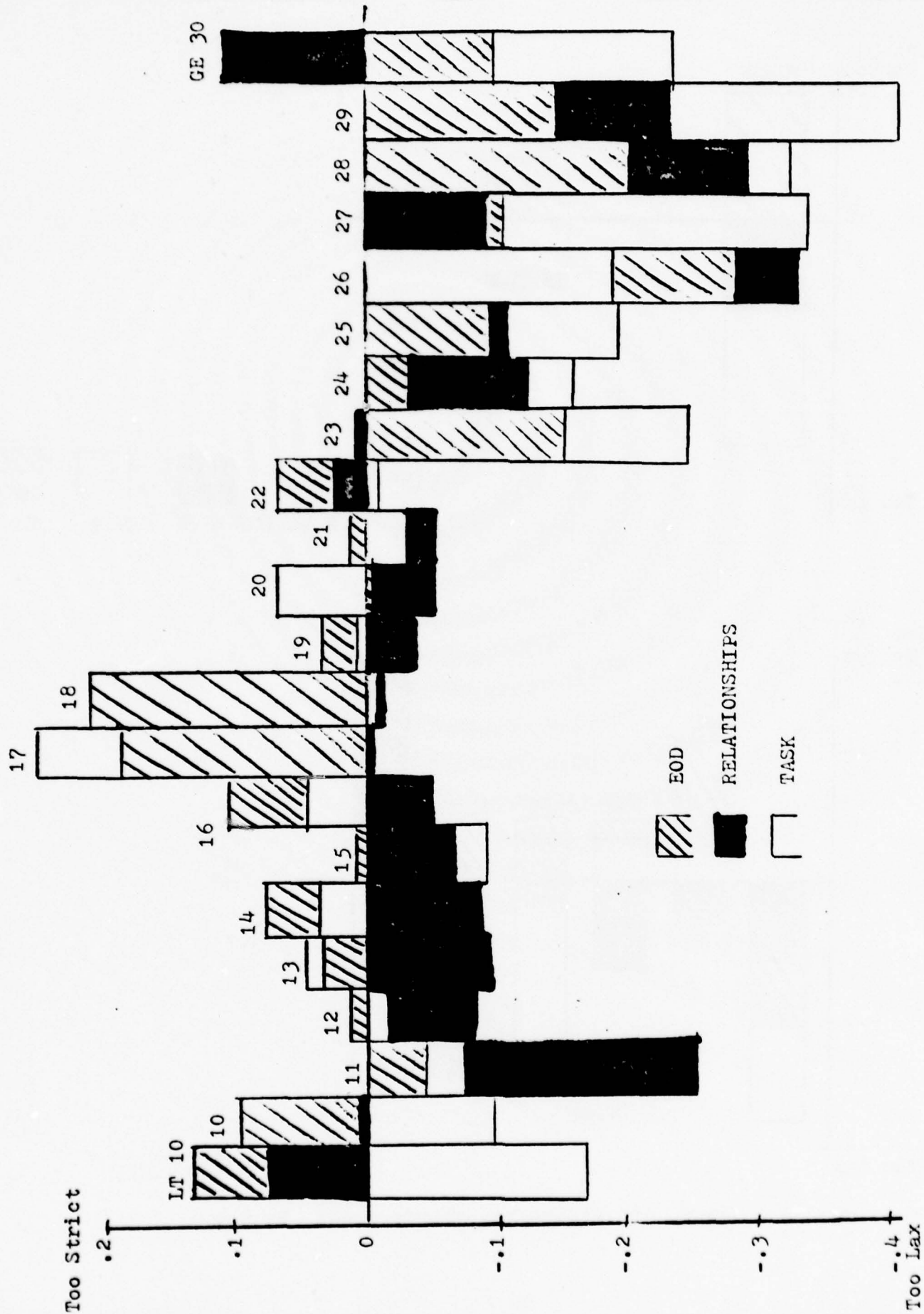


Figure 5. TASK, RELATIONSHIPS, EOD By Time In Service (In Years)

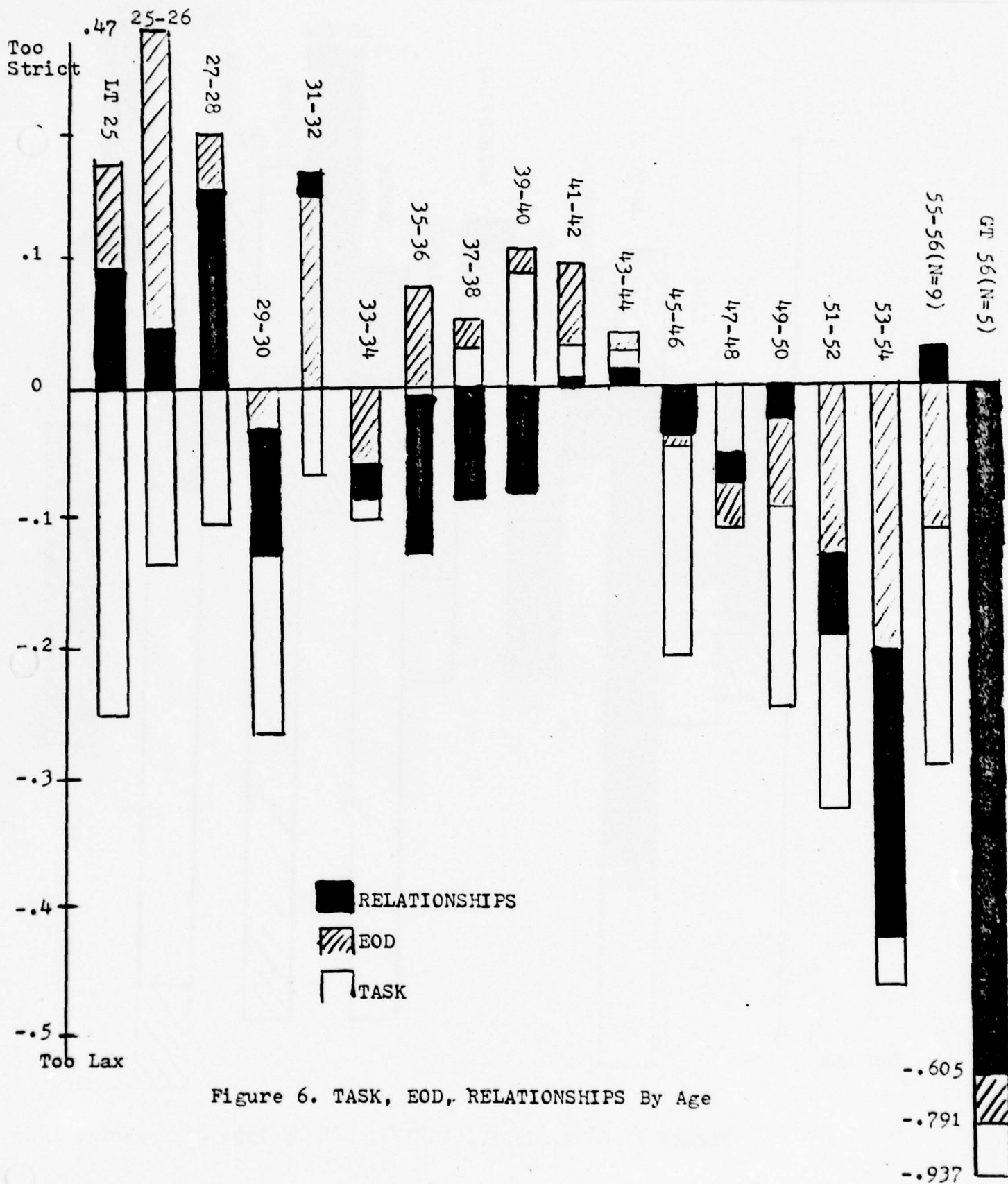


Figure 6. TASK, EOD, RELATIONSHIPS By Age

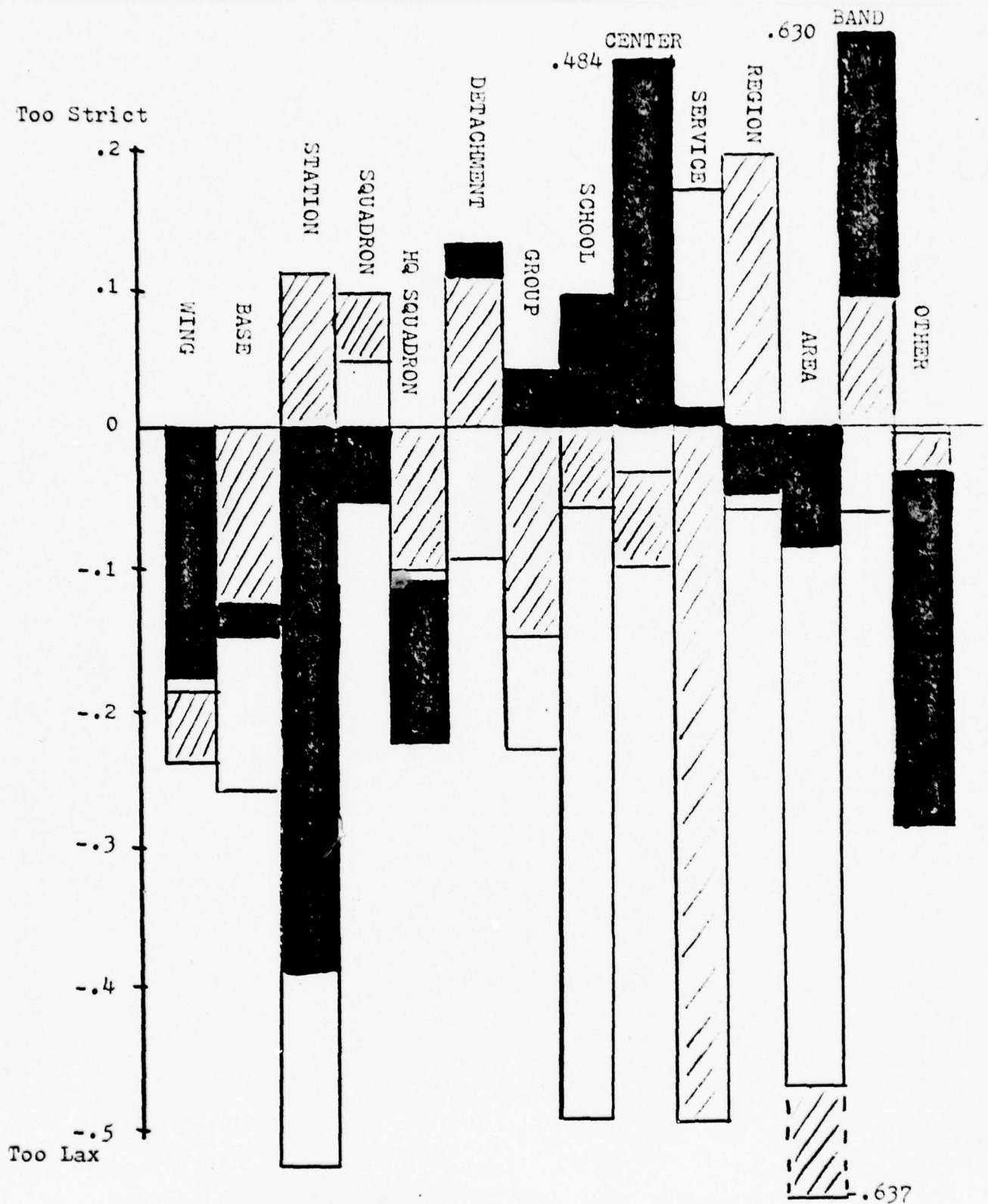


Figure 7. TASK, RELATIONSHIPS, EOD By Type Of Organization

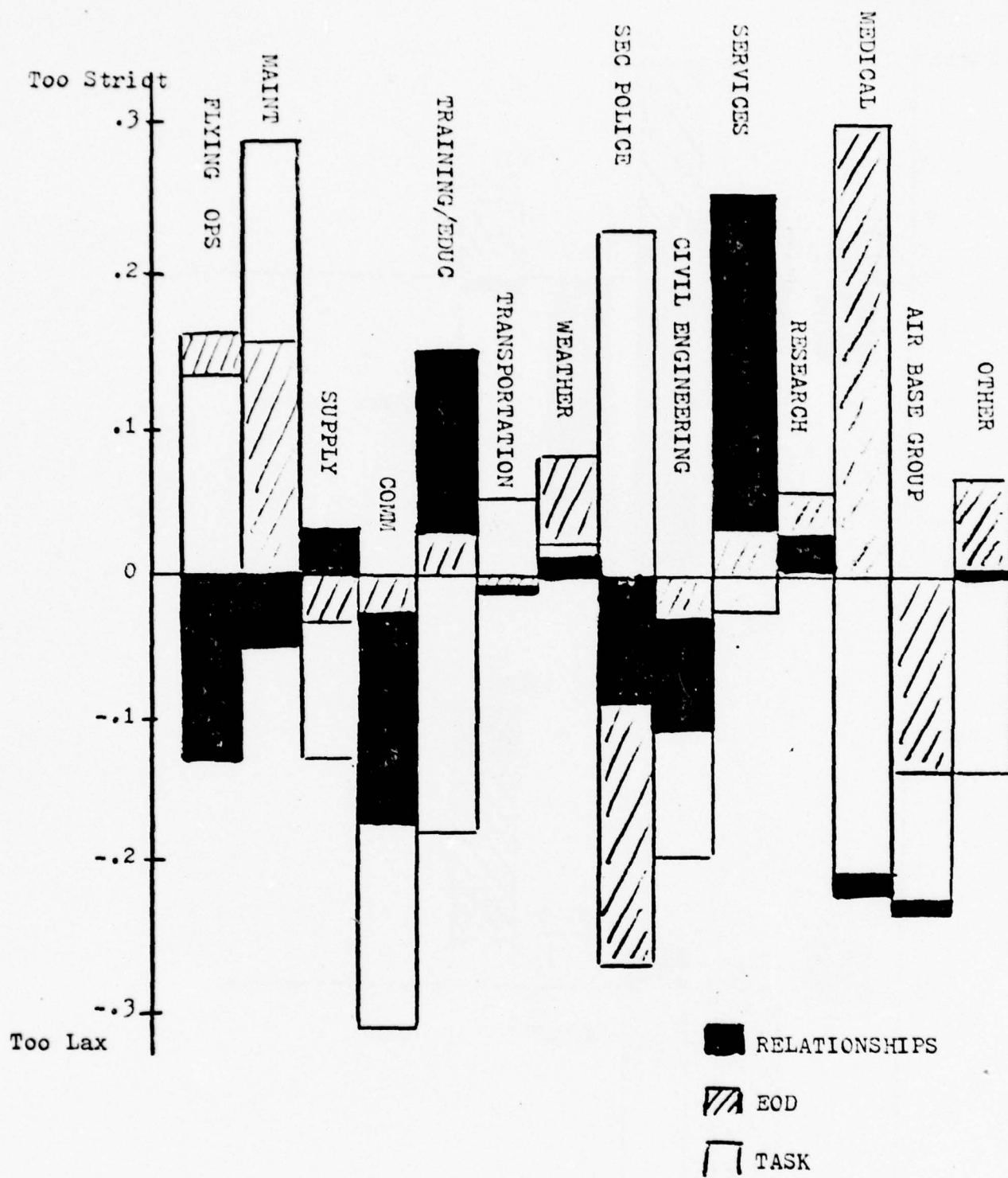


Figure 8. TASK, RELATIONSHIPS, EOD By Mission Of Organization

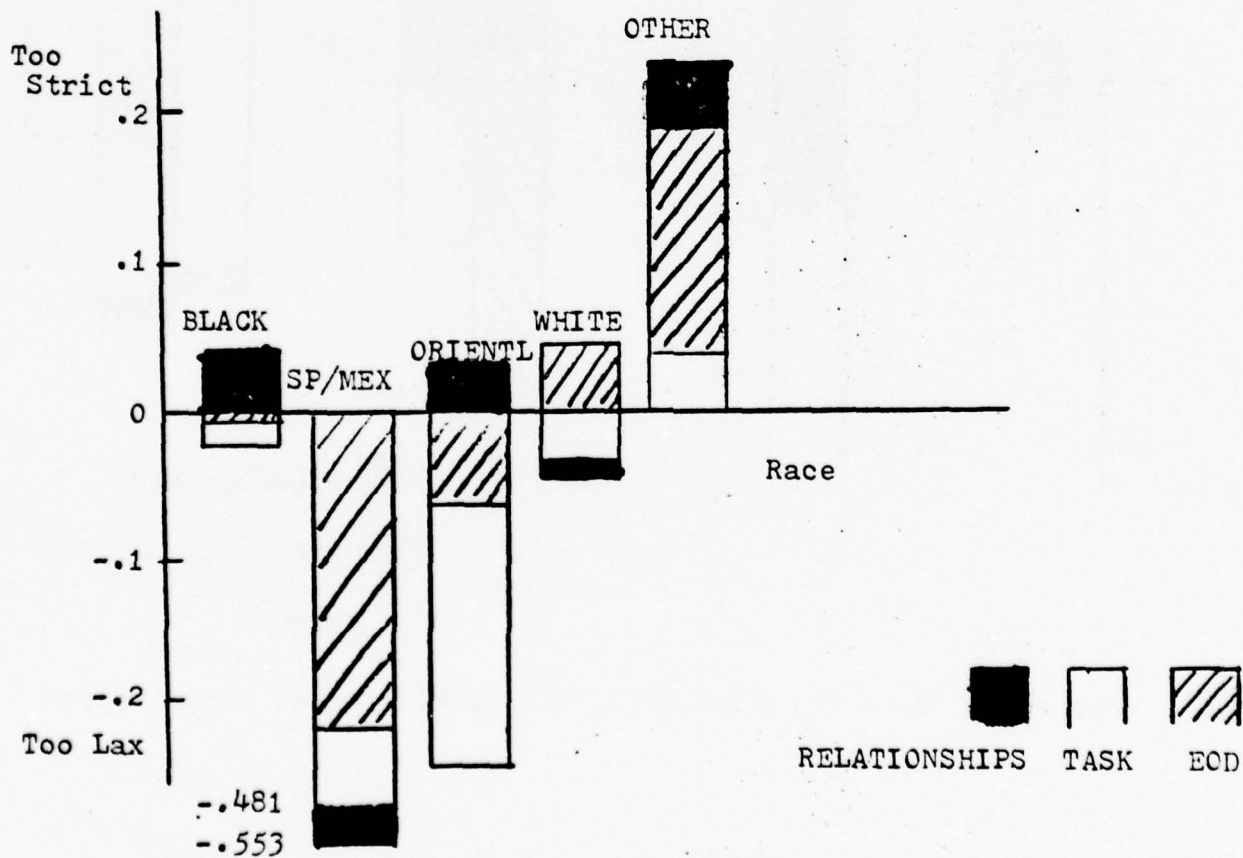
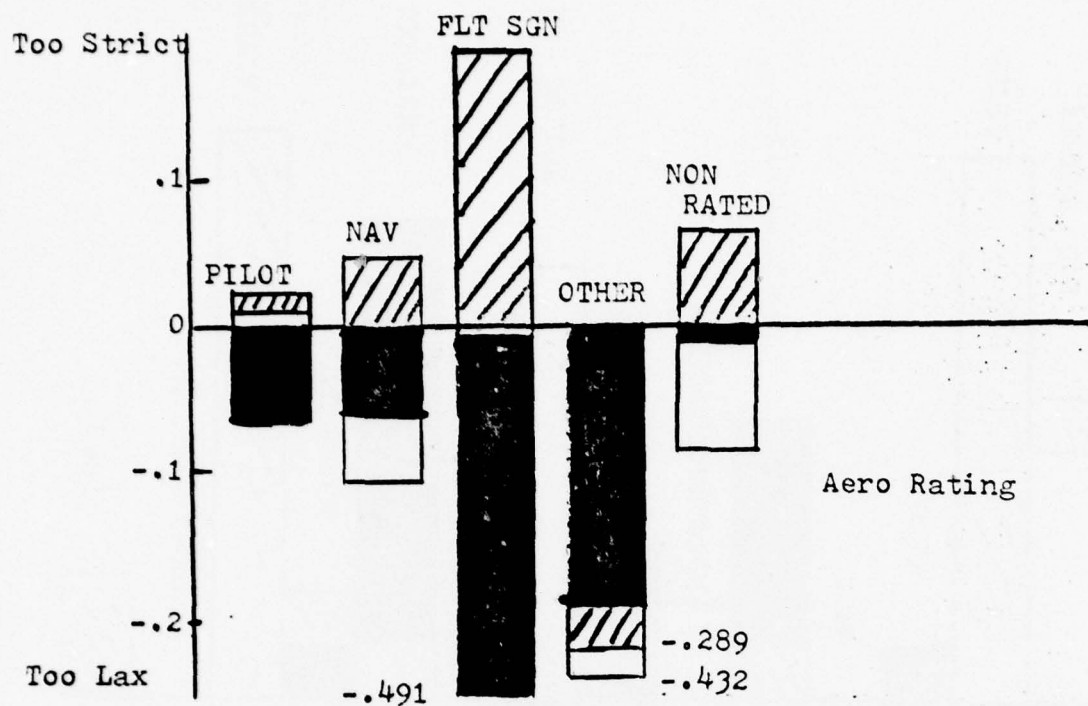


Figure 9. TASK, RELATIONSHIPS, EOD By Aero Rating, By Race

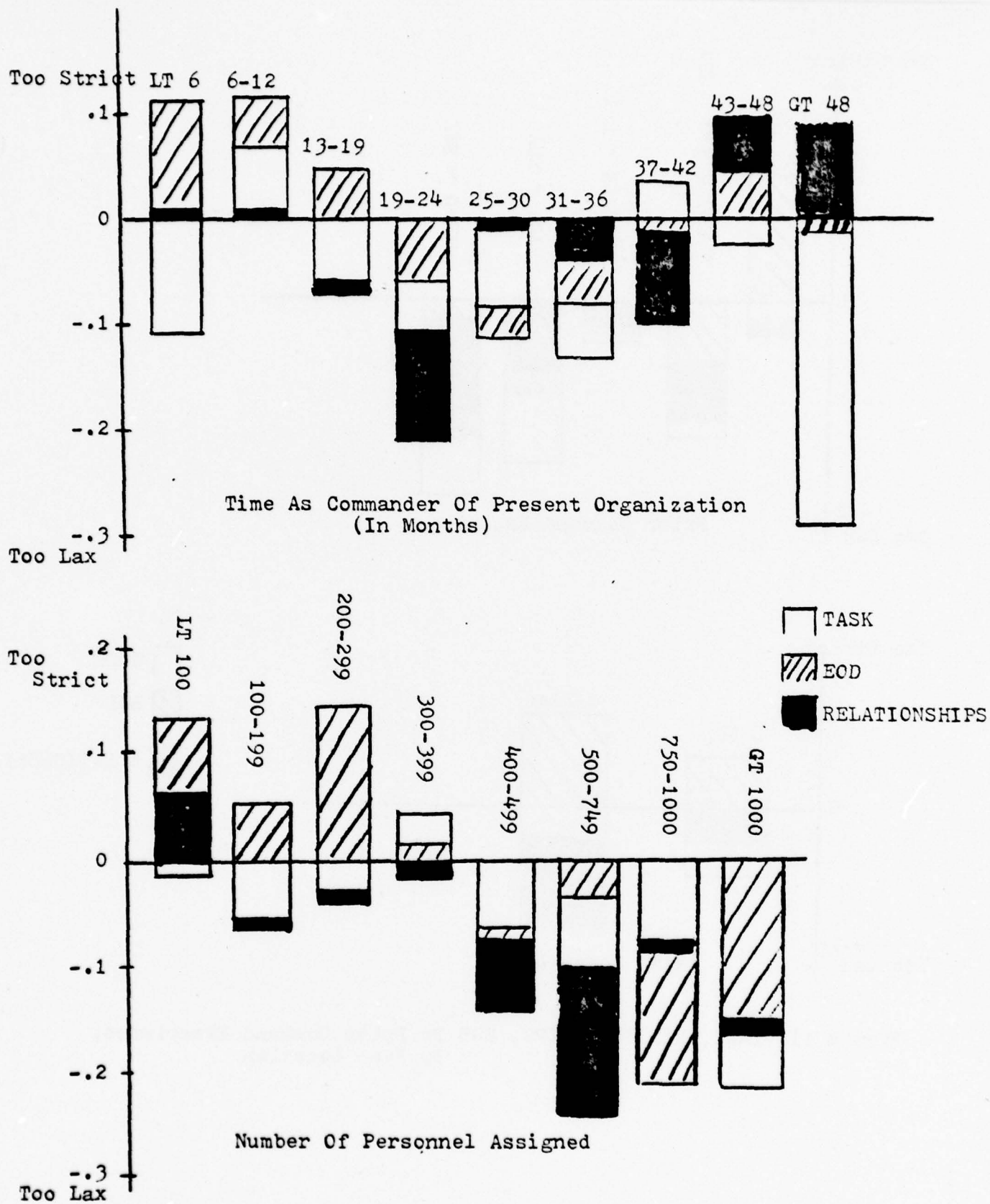


Figure 10. TASK, EOD, RELATIONSHIPS By Time As Commander,
By Number Of Personnel Assigned

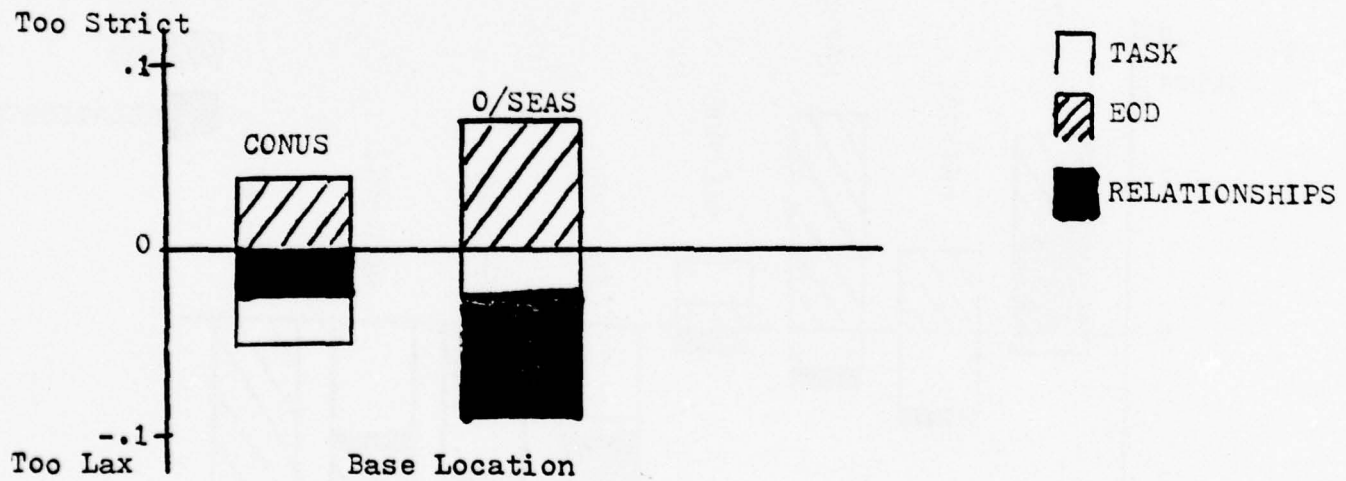
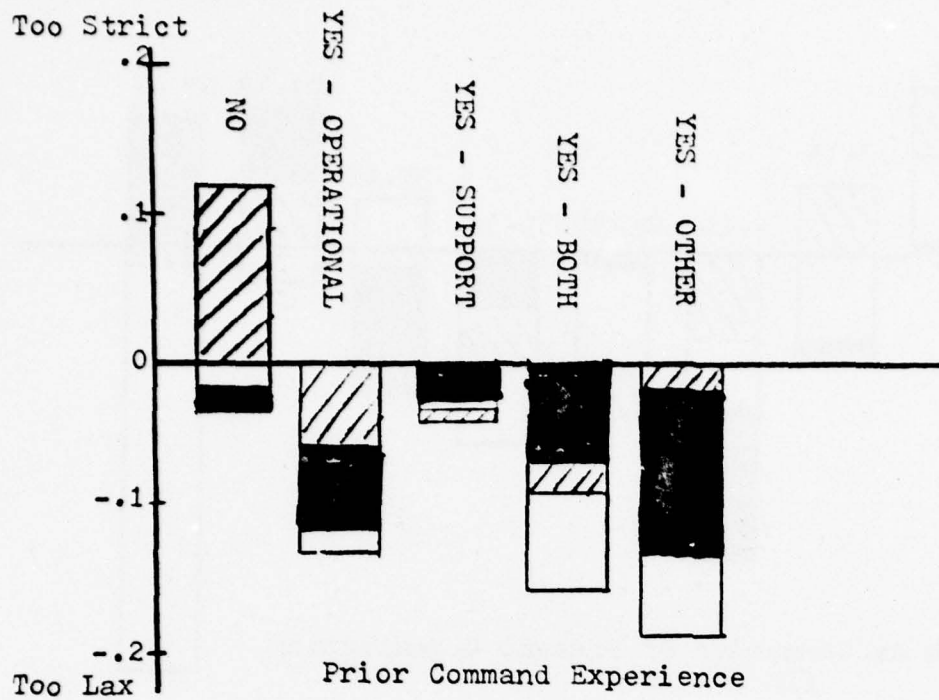


Figure 11. TASK, RELATIONSHIPS, EOD By Prior Command Experience, By Base Location

The demographic variables which have a statistically significant effect on the EOD variable are grade, service time, age, type organization, mission of organization, time as commander of present organization, number of personnel assigned, and prior command experience. Mean EOD values for all categories of the demographic variables are again presented in Figures 3 through 11.

From Table VI, it can be seen that the only two variables significant for all three measures are type of organization and organization mission. This fact tends to add further emphasis to the importance of organizational environment to the interpretation of TASK, RELATIONSHIPS, and EOD. Different types of organizations and different organization missions could definitely result in different organizational environments. Of the thirteen demographic variables, type organization and organization mission seem logically to be the most influential in the determination of the environment of an organization.

At this point, two-way ANOVA were performed utilizing various combinations of demographic variables as the independent variables. Two-way ANOVA were accomplished for TASK, EOD, and RELATIONSHIPS using the following combinations of demographic variables:

- command/age
- command/service time
- command/grade
- command/race

command/mission of organization
command/type of organization
grade/size
grade/prior experience
grade/mission of organization
grade/type of organization
organization size/mission of organization
organization size/age
organization size/aero rating
race/sex
race/prior experience
race/aero rating
prior experience/aero rating
age/aero rating

In performing the two-way ANOVA, tests for two-way interactions between the independent variables were performed. The statistically significant two-way interactions discovered are presented in Table VII. A significant two-way interaction effect implies that the effect of demographic variable A on TASK, RELATIONSHIPS, or EOD varies from one category to another of demographic variable B. For example, from Table VII, the significant two-way interaction between organization size and race (significant at the $\alpha = .001$ level) implies that the effect of organization size on RELATIONSHIPS varies significantly from one race to another. This implies that the effect of organization size and race on RELATIONSHIPS is greater than the mere

TASK	RELATIONSHIPS	EOD
Grade/Prior Experience $\alpha = .034$	Org Size/Race $\alpha = .001$	None
	Sex/Race $\alpha = .045$	
	Aero Rtg/Race $\alpha = .032$	

Table VII
Significant Two-way Interactions

additive effect of race and organization size on RELATIONSHIPS.

The next part of the demographic analysis was to determine the degree of correlation among the rankings of the measures when rank ordered by the different categories of the demographic variables. This was accomplished by rank ordering the categories of the demographic variables on the mean scores of TASK, RELATIONSHIPS, and EOD. The Spearman Rho was used to determine the degree of correlation.

The results of this correlation analysis are presented in Table VIII. There is significant positive correlation between the rankings of TASK and RELATIONSHIPS when rank ordered by command, organization size, and race. Also, there is a significant positive correlation between the rankings of TASK and EOD when rank ordered by command, service time, age, organization size, and race. There is a significant positive correlation between the rankings of RELATIONSHIPS and EOD when rank ordered by service time, age, and organization size. These correlations imply that when viewed across that particular demographic variable, TASK and EOD, or TASK and RELATIONSHIPS, or EOD and RELATIONSHIPS, have a strong relationship. They are significantly correlated in a positive direction.

Job Atmosphere. The next portion of the analysis focused on the atmosphere or environment within which the commander is working. Q86 (Job Freedom) and Q93 (Sufficient

Table VIII
Rank Order Correlations

	TASK - EOD	TASK - RELATIONSHIPS	RELATIONSHIPS - EOD
Command	$p = .7385$ $\alpha = .01$	$p = .5165$ $\alpha = .05$	$p = .3275$ NS
Grade	$p = .3143$ NS	$p = .1430$ NS	$p = .4857$ NS
Service Time	$p = .7301$ $\alpha = .001$	$p = .2603$ NS	$p = .5539$ $\alpha = .01$
Age	$p = .5851$ $\alpha = .01$	$p = .2921$ NS	$p = .6821$ $\alpha = .001$
Aero Rating	$p = .4000$ NS	$p = -.1000$ NS	$p = 0.000$ NS
Type Org	$p = .1165$ NS	$p = .2396$ NS	$p = .0638$ NS
Org Mission	$p = .2352$ NS	$p = .3055$ NS	$p = 0.000$ NS
Cmdr Time	$p = .4833$ NS	$p = -.1333$ NS	$p = .3000$ NS
Org Size	$p = .7143$ $\alpha = .05$	$p = .9286$ $\alpha = .001$	$p = .6667$ $\alpha = .05$
Race	$p = .90$ $\alpha = .01$	$p = .90$ $\alpha = .01$	$p = .7$ NS
Prior Exp	$p = .4$ NS	$p = .55$ NS	$p = .30$ NS

NS - not significant

Job Authority) were used in this stage of the analysis. Mean scores on TASK, RELATIONSHIPS, and EOD for the different categories of job freedom and job authority are presented in Table IX. A one-way ANOVA for TASK, RELATIONSHIPS, and EOD was also done at this time. With the job freedom question as the independent variable, there is a statistically significant effect on TASK ($\alpha = .000$) and RELATIONSHIPS ($\alpha = .000$). With the job authority question as the independent variable, there is a statistically significant effect only on RELATIONSHIPS ($\alpha = .000$).

It is interesting to note that those commanders who feel that they do not have sufficient freedom to do their jobs well feel TASK tends to be too strict, while those who have sufficient freedom feel TASK tends to be too lax. The opposite pattern seems to hold for RELATIONSHIPS. Those commanders who feel they do have sufficient freedom lean more towards feeling RELATIONSHIPS is too strict. Those who feel they do not have sufficient freedom lean more toward feeling RELATIONSHIPS is too lax. For job authority, those commanders who feel they have sufficient authority lean toward feeling RELATIONSHIPS is too strict, while those who feel they do not have sufficient job authority feel RELATIONSHIPS tends to be too lax.

Two-way ANOVA were then performed with TASK, RELATIONSHIPS, and EOD as the criterion variables and the following sets of variables as the independent variables:

job authority/job freedom

Table IX
TASK, RELATIONSHIPS, and EOD
by Q93 and Q86

Q93 - I have sufficient job authority.

	<u>TASK</u>	<u>RELATIONSHIPS</u>	<u>EOD</u>
Strongly disagree	.024	-.191	.121
Disagree	.030	-.186	.018
Undecided	.017	.050	.147
Agree	-.065	-.039	.050
Strongly agree	-.068	.088	.019

Q86 - Are you given freedom to do your job?

	<u>TASK</u>	<u>RELATIONSHIPS</u>	<u>EOD</u>
Never	.033	-.083	.264
Seldom	.179	-.134	.053
Sometimes	.096	-.133	.084
Often	-.126	-.078	.046
Always	-.080	.079	.012

job authority/command

job authority/grade

job freedom/command

job freedom/grade

A significant two-way interaction was discovered between job

freedom and job authority for TASK ($\alpha = .029$).

Job Satisfaction. The final part of the analysis of the behavior of the measures dealt with job satisfaction. The variable JSAT, used to measure the job satisfaction of a commander, could take on any integer value between 4 and 28 inclusive. A high value indicates a high degree of job satisfaction and a low value indicates a low degree of job satisfaction. TASK, RELATIONSHIPS, and EOD mean scores were calculated for every possible value of JSAT. The results are presented in Figure 12. The number of cases with JSAT values of four, five, six, seven, eight, and nine were insufficient to allow meaningful analysis. One-way ANOVA were also done with TASK, EOD, and RELATIONSHIPS as the criterion variable and JSAT as the independent variable. There was a statistically significant effect on EOD ($\alpha = .048$). Looking at Figure 12, for TASK, it appears that the most variation occurs for those who are least satisfied. It seems that those who are least satisfied are the most concerned with TASK being either too strict or too lax. For EOD, it appears that those who are the least satisfied are the most concerned with EOD being too strict.

Mean JSAT scores were then computed for each command. A one-way ANOVA showed no statistically significant differences among commands for JSAT scores ($\alpha = .191$). The JSAT scores were rank ordered by command with the intention of determining the degree of correlation between JSAT and TASK, EOD, and RELATIONSHIPS when rank ordered by command. The

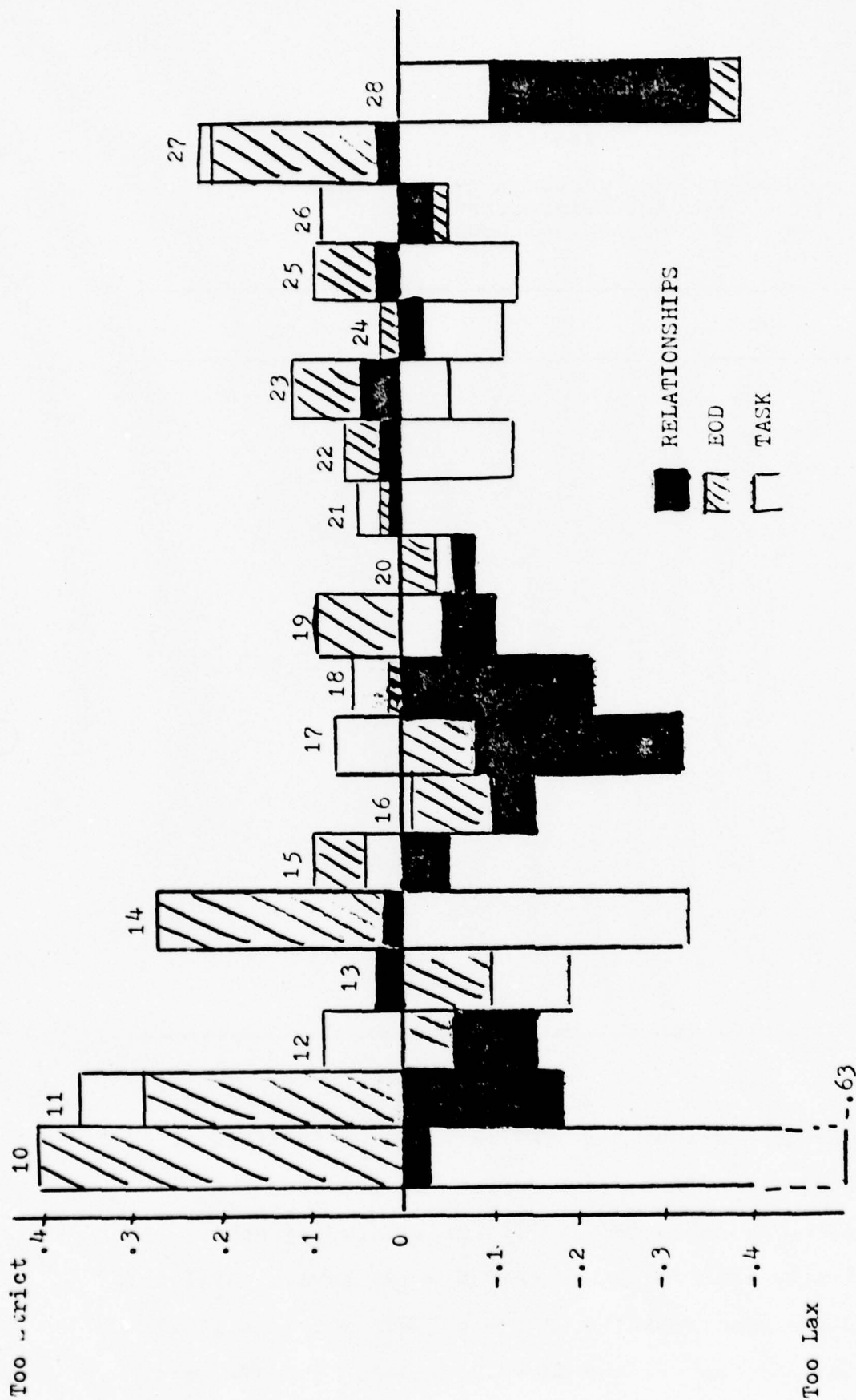


Figure 12. TASK, RELATIONSHIPS, EOD By Hopcock Job Satisfaction Score

Table X
Commands Rank Ordered by Mean JSAT
For the Commanders Survey
-Highest to Lowest-

Rank	Command
1.	AFCS
2.	AFLC
3.	ADCOM
4.	SEC SVC
5.	ATC
6.	USAFE
7.	SAC
8.	AFSC
9.	OSI
10.	MAC
11.	ALASKAN
12.	PACAF
13.	AU
14.	TAC

rank order of commands for JSAT is as shown in Table X.

For JSAT and TASK, rank ordered by command, the Spearman Rho is equal to $-.7231$. This value of Rho is statistically significant at the $\alpha = .01$ level. Similarly, for JSAT and RELATIONSHIPS, $Rho = -.6747$, which is statistically significant at the $\alpha = .01$ level. For JSAT and

EOD, there is no statistically significant rank order correlation. These two statistically significant correlations imply that a commander in a command with a low mean JSAT score will tend to have a higher score on TASK and RELATIONSHIPS than a commander in a command with a high mean JSAT score.

Subordinate Influence

The final stage of the analysis involved an attempt to determine the influence of TASK, RELATIONSHIPS, and EOD on subordinate job satisfaction and on subordinate first term career intent. JSAT scores were calculated for the entire survey population and charted by commands. These results are presented in Figure 13. The rank order for the commands on JSAT is as shown in Table XI.

To examine the influence of TASK on JSAT, Rho was calculated between the rank order of the commands on TASK from the Commanders Survey and the rank order of the commands on JSAT from the QOL-2 Survey. For commander TASK and QOL-2 JSAT, there was no statistically significant correlation. Similarly, there was no statistically significant correlation between commander RELATIONSHIPS and QOL-2 JSAT, or between commander EOD and QOL-2 JSAT.

The career intent of first termers in QOL-2 was then calculated. Results by command are presented in Figure 14. OSI was not included due to the small number of first termers. Career intent scores were then rank ordered by command and Rho was calculated in similar manner to the JSAT analysis.

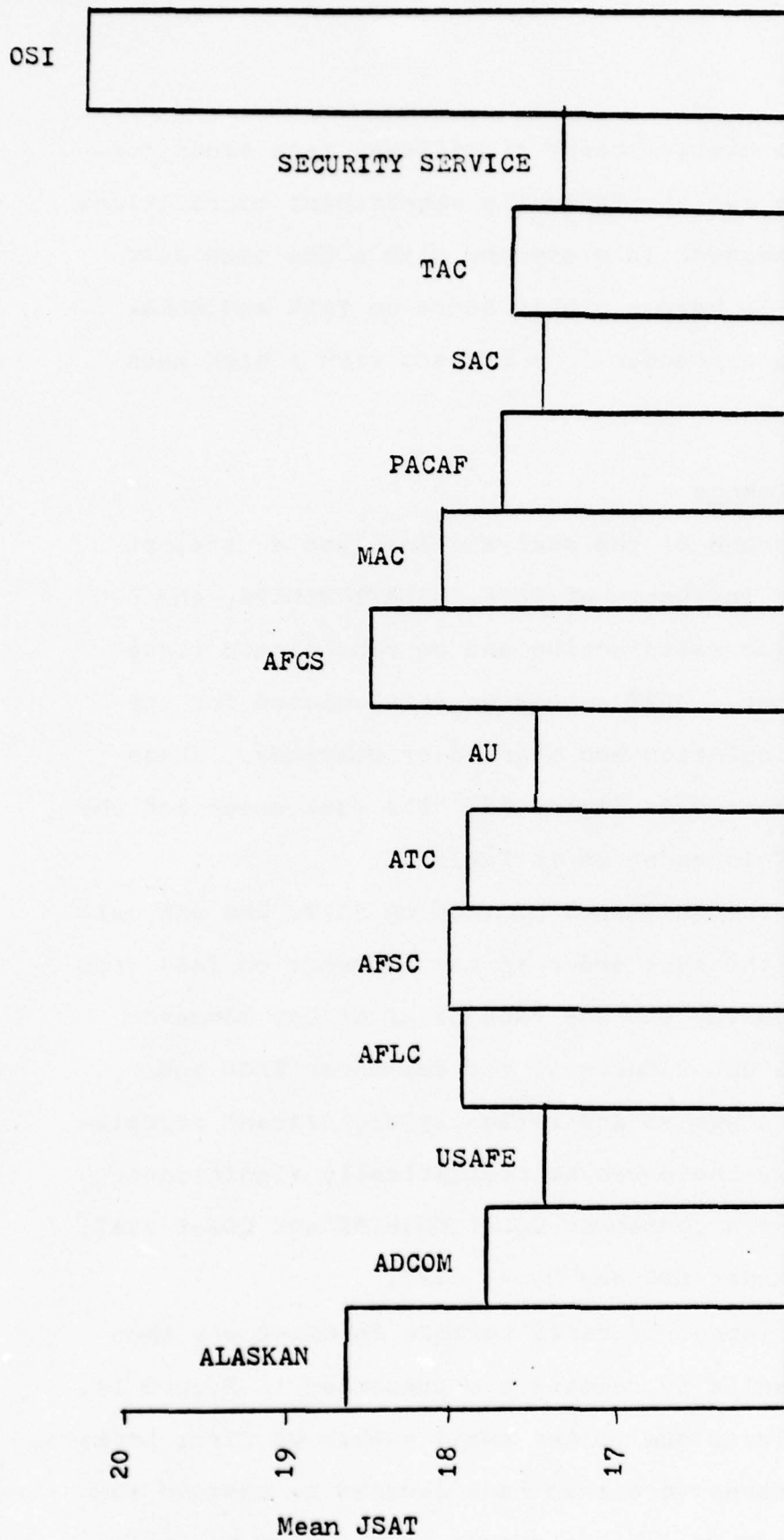


Figure 13. Mean JSAT By Command (QOL 2)

Table XI
Commands Rank Ordered by JSAT (QOL-2)
-High to Low JSAT-

Rank	Command
1.	OSI
2.	ALASKAN
3.	AFCS
4.	MAC
5.	AFSC
6.	AFLC
7.	ATC
8.	ADCOM
9.	PACAF
10.	TAC
11.	AU
12.	SAC
13.	USAFE
14.	SEC SVC

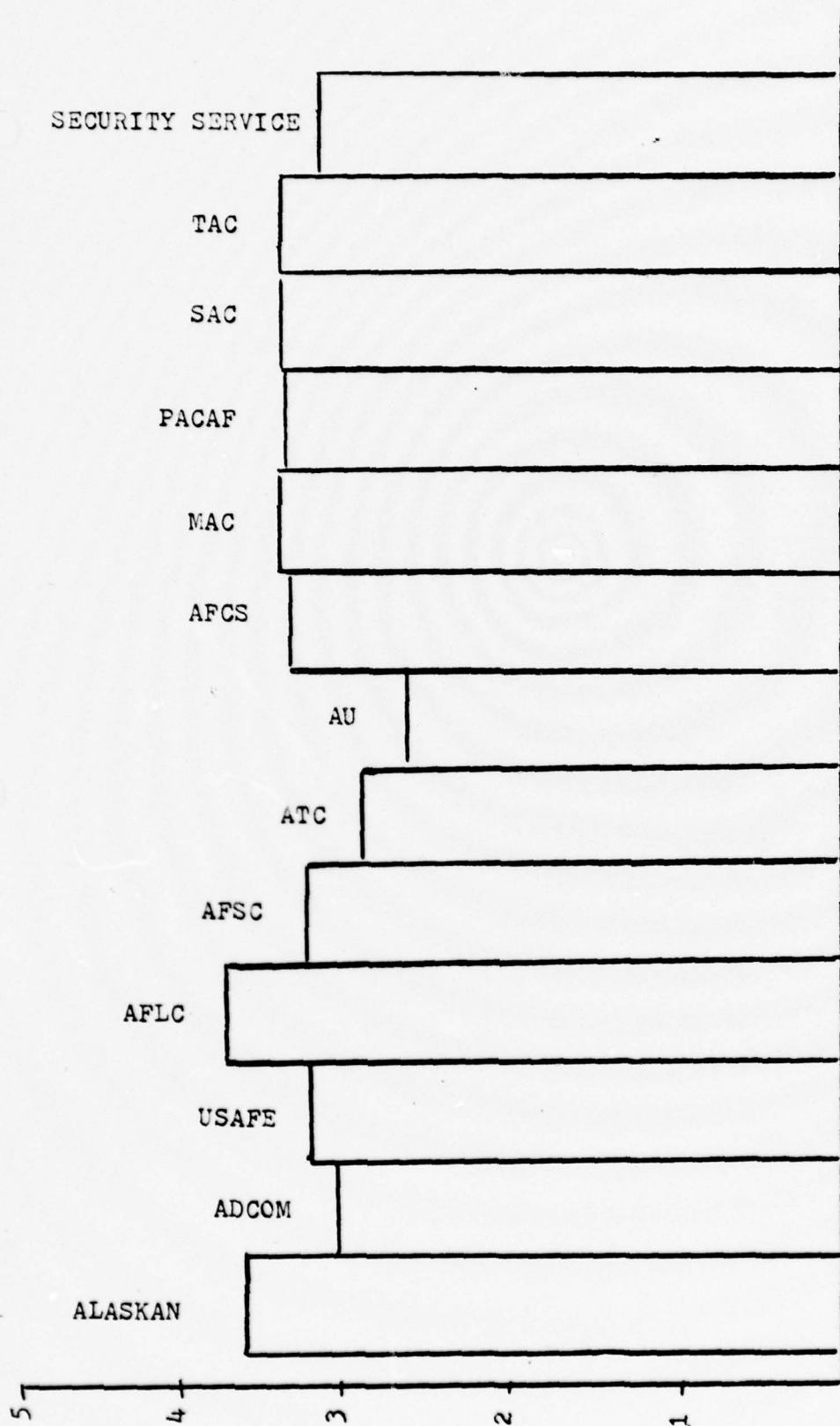
The rank order of the commands was as shown in Table XII. No statistically significant correlation between TASK, EOD, or RELATIONSHIPS and first term career intent was discovered.

The next chapter will address the conclusions which can be drawn from the analysis results presented in this chapter.

Table XII

Commands Rank Ordered by First Termer Career Intent
-High to Low Intent-

Rank	Command
1.	AU
2.	ATC
3.	ADCOM
4.	SEC SVC
5.	USAFE
6.	AFSC
7.	AFCS
8.	PACAF
9.	SAC
10.	TAC
11.	MAC
12.	ALASKAN
13.	AFLC



Scale: 1-----5
 Def Stay Def Not Stay

Figure 14. Career Intent By Command
 (First Termers - QOL 2)

V. Summary and Conclusions

The primary purpose of this study was to examine the results of the 1976 U.S. Air Force Commanders Survey with the intention of discovering underlying dimensions of leader attitude for the commanders. The primary analytical technique used was factor analysis. By factor analyzing 46 STD and ENF variables as well as other pertinent attitudinal variables, three underlying factors emerged. Called TASK, RELATIONSHIPS, and EOD, these three measures were the central focus of the study. The summary of findings and conclusions will be discussed in this chapter in four sections. The four sections are: definitions of the factors, behavior of the measures, subordinate influence of the measures, and the relation of the measures to other research findings.

Factor Definitions

TASK, EOD, and RELATIONSHIPS are defined as follows:

- TASK - represents the attitude of a commander towards the standards necessary to accomplish the work at hand and towards the enforcement of those standards. This attitude is based upon his own ideas and feelings in the context of the environment of the organization to which the commander is assigned.
- RELATIONSHIPS - represents the attitude of a commander towards the standards which define the relationships on the job between a leader and a follower and towards the enforcement of those standards. This attitude develops as a result of his own ideas and the environment of the organization to which the commander is assigned.

EOD

- represents the attitude of a commander towards the enforcement of personal discipline. This attitude is developed from the ideas of the commander in the context of the environment of the organization to which the commander is assigned.

Organizational climate is essential to the definition of each of the three measures. The measures do not represent unchanging orientations or approaches to leadership by the commanders. Each measure reflects a leadership attitude of the commander, but only in the context of the environment of the organization to which the commander is assigned.

Behavior of the Measures

An analysis was performed on the behavior of the measures relative to the demographic variables, two job atmosphere variables (Q86 and Q93), and a job satisfaction variable (JSAT).

Demographic Analysis. The results of one-way ANOVA with the demographic variables as the independent variables were that command, grade, service time, age, type organization, and mission of organization each, individually, have a statistically significant effect on TASK. For RELATIONSHIPS, type of organization, mission of organization, and number of personnel assigned each have a statistically significant effect. Grade, service time, age, type organization, mission of organization, time as commander of present organization, number of personnel assigned, and prior command experience each have a statistically significant effect on EOD.

A significant two-way interaction was discovered between

grade and prior experience when TASK was the criterion variable. When RELATIONSHIPS was the criterion variable, there were significant two-way interactions between organization size and race, sex and race, and aero-rating and race. For EOD, there were no significant two-way interactions.

By the design of the factor analysis the three discovered dimensions are orthogonal. As such the correlation among TASK, RELATIONSHIPS, and EOD are zero. Several correlations were discovered among the rankings of TASK, RELATIONSHIPS, and EOD when the categories of the demographic variables were rank ordered on the mean scores of TASK, RELATIONSHIPS, and EOD. There was a significant positive correlation between the rankings of TASK and RELATIONSHIPS when rank ordered by command, organization size, and race. Likewise, there was a significant positive correlation between the rankings of TASK and EOD when rank ordered by command, service time, age, organization size, and race. Also, there was a significant positive correlation between the rankings of RELATIONSHIPS and EOD when rank ordered by service time, age, and organization size.

Job Atmosphere. Two one-way ANOVA were performed on the measures with Q86 (job freedom) and Q93 (job authority) as independent variables. With job freedom as the independent variable, there was a statistically significant effect on TASK and RELATIONSHIPS. With job authority as the independent variable, there was a statistically significant effect

only on RELATIONSHIPS. Significant two-way interaction was discovered between job freedom and job authority for TASK.

Job Satisfaction. One-way ANOVA results showed that JSAT had a statistically significant effect only on EOD. Additionally, it appears that those who are least satisfied with their job are the most concerned with TASK being either too strict or too lax. Also, those least satisfied are the most concerned with EOD being too strict.

When rank ordered by command, there is a statistically significant negative correlation between JSAT and TASK, and between JSAT and RELATIONSHIPS.

Subordinate Influence of the Measures

The attempt to determine the influence of the measures on subordinate job satisfaction and first term career intent was done utilizing the QOL-2 survey. To determine the influence of the measures on subordinate JSAT and career intent, Spearman Rho was calculated between the rank order of the commands of assignment on the measures from the commanders survey, and the rank order of the commands of assignment on JSAT and career intent from the QOL-2 survey. No statistically significant correlations were discovered.

Relation to Other Measures

This study began as an attempt to identify underlying dimensions for the leader attitudes of Air Force commanders. The three measures which emerged from the study - TASK, EOD, and RELATIONSHIPS - reflect definite attitudes of Air Force

commanders. However, the fact that the measures are drawn from the battery of questions dealing with standards and their enforcement makes the measures seemingly unrelated to dimensions of leader behavior identified by other researchers. TASK, EOD, and RELATIONSHIPS are much more intimately tied to the organizational climate than the dimensions of other researchers.

The Ohio State studies identified two dimensions, consideration and initiating structure. These two dimensions are treated as being more closely tied to the leader himself. Interpretation of scores on consideration and initiating structure are utilized to determine the leadership style of a leader. Once a style has been identified for a leader, he will usually act in accordance with that style. TASK, EOD, and RELATIONSHIPS do not define a leadership style. They reflect the attitude of a commander in light of the environment of the organization to which the commander is assigned. As such, a different organizational environment could result in different values for TASK, EOD, and RELATIONSHIPS.

There are two apparent reasons for the non-emergence of leader dimensions similar to those of other researchers. First, the instrument was not specifically designed to study the leadership attitudes and behavior of the commanders. As a result, questions contained in the survey did not yield the hoped for dimensions.

A second reason for non-emergence was the fact that the

commanders themselves responded to the survey. In the Ohio State studies, the two primary types of instruments employed are the Leader Behavior Description Questionnaire (LBDQ) and the Leader Opinion Questionnaire (LOQ). The LBDQ instrument calls for a description of the behavior of a leader by subordinates. The LOQ instrument calls for the leader himself to relate how he feels he should behave. Both types of instruments are coded to allow consideration and initiating structure scores to be computed and a leadership style to be determined. The commanders survey would thus be more closely related to the LOQ type instrument, although personal attitudes, and not prescribed behavior, was measured.

Differences in the versions and types of Ohio State scales used have been postulated as explaining some of the inconsistencies in leadership research findings (Ref 24:642). Also, from the review of the literature, it seems that most work being done in the field of leadership research today utilizes the LBDQ type instrument as opposed to the LOQ type instrument. This is probably due to the fact that when you ask an individual how he behaves, or would behave, you often receive an answer the individual feels he should give. Nunnally termed this problem the social desirability factor (Ref 21:479). Observance of actual behavior, especially by subordinates, would appear to be a much more valid source of information.

Future Research Implications

Two possible research studies are indicated by this

study. First, U.S. Air Force leaders could be surveyed using a previously validated instrument for measuring leader opinion, such as the LOQ. Second, selected subordinates could be surveyed with an instrument such as the LBDQ. The second study would appear to have more potential value. Senior enlisted personnel could be surveyed about their immediate supervisors. It would be of interest to see if such research findings were similar to the findings of other researchers.

It is very difficult to measure leader behavior in attitudinal survey instruments. To measure and to analyze the behavior of Air Force leaders, the instrument must be directed to subordinates in order to avoid the social desirability factor. Such an instrument could be incorporated in the Quality of Life survey series. The Supervisory Behavior Description Questionnaire (SBDQ), an updated more efficient version of the LBDQ, could be part of a Quality of Life survey sent to a representative sample of Air Force personnel. Responses to the SBDQ portion of the survey would provide the data for an analysis of the actual behavior of Air Force leaders as perceived by their subordinates.

Bibliography

1. Barrow, Jeffrey C. "The Variables of Leadership: A Review and Conceptual Framework". Academy of Management Review, 2:231-246, April 1977.
2. Bowers, David G. and S.E. Seashore. "Predicting Organizational Effectiveness with a Four Factor Theory of Leadership". Administrative Science Quarterly, 11: 238-263, 1966.
3. Commander's Digest, 20:23-31, 31 March 1977.
4. Fiedler, Fred E. "Engineer the Job to Fit the Manager". Harvard Business Review, 43:115-122, Sep-Oct 1965.
5. -----. "The Effects of Leadership Training and Experience: A Contingency Model Interpretation". Administrative Science Quarterly, 17:453-469, 1972.
6. -----. "Personality and Situational Determinants of Leader Behavior" in E. Fleishman and J.G. Hunt, Current Developments in the Study of Leadership. Carbondale, Ill., Southern Ill. Press, 1973.
7. Fiedler, Fred E. and M. Chemers. Leadership and Effective Management. Glenview: Scott Foresman and Co., 1974.
8. Filley, A., R. House and S. Kerr. Managerial Process and Organizational Behavior. Second edition. Glenview, Ill.: Scott Foresman and Co., 1976.
9. Halpin, A.W. and B.J. Winer. "A Factorial Study of The Leader Behavior Descriptions", in R.M. Stogdill and A. Coons (Eds), Leader Behavior: Its Description and Measurement - Chapter III. Columbus, Ohio: Bureau of Business Research, Ohio State University, 1957.
10. Harmon, Harry H. Modern Factor Analysis. Third Edition, Revised, Chicago, University of Chicago Press.
11. Hersey, P. and K. Blanchard. Management of Organizational Behavior. Englewood Cliffs, New Jersey: Prentice Hall, 1972.
12. Hill, Walter A. "Leadership Style: Rigid or Flexible?" Organizational Behavior and Human Performance, 9:35-47, 1973.
13. Hill, Walter A. and D. Hughes. "Variations in Leader Behavior as a Function of Task Type". Organizational Behavior and Human Performance, 11:83-96, 1974.

14. Hoppock, R. Job Satisfaction. New York: Harper and Brothers, 1935.
15. Hunt, J. and L. Larson. "We March to the Beat of a Different Drummer: An Overview", in J. Hunt and L. Larson (Eds.), Leadership Frontiers. Kent State University Press, 1975.
16. Jacobs, T.O. Leadership and Exchange in Formal Organizations. Alexandria, Virginia; Human Resources Research Organization, 1970.
17. Korman, Abraham K. "'Consideration,' 'Initiating Structure', and Organizational Criteria - A Review". Personnel Psychology, 19:349-361, winter 1966.
18. Luthans, Fred. Organizational Behavior (Second Edition). New York: McGraw-Hill Co., 1977.
19. Manley, T.R., C.W. McNichols, and M.J. Stahl. Quality of Air Force Life: A Report on the Attitudes and Perceptions of Air Force Commanders. AFIT Technical Report 77-2, Wright-Patterson AFB, Ohio, April 1977.
20. Nie, N.H., et al., Statistical Package for the Social Sciences. (2nd Edition). New York: McGraw-Hill, 1975.
21. Nunnally, Tom C. Psychometric Theory. New York: McGraw-Hill Book Co., 1967.
22. Stogdill, R.M. and A.E. Coons. Leader Behavior: Its Description and Measurement. Columbus, Ohio: Bureau of Business Research, Ohio State University, 1957.
23. Stogdill, R.M. Handbook of Leadership. New York: Free Press, 1974.
24. Szilagyi, Andrew and Robert Keller. "A Comparative Investigation of the Supervisory Behavior Description Questionnaire (SBDQ) and the Revised Leader Behavior Description Questionnaire (LBDQ-Form XII)". Academy of Management Journal, 19:642-649.
25. Tannenbaum, Robert and Warren Schmidt. "How to Choose a Leadership Pattern". Harvard Business Review, 36:95-102, 1958.
26. Wofford, J.C. "Factor Analysis of Managerial Behavior Variables". Journal of Applied Psychology, 54:169-173, 1970.
27. Yukl, Gary. "Toward a Behavioral Theory of Leadership". Organizational Behavior and Human Performance, 6:414-440, 1971.

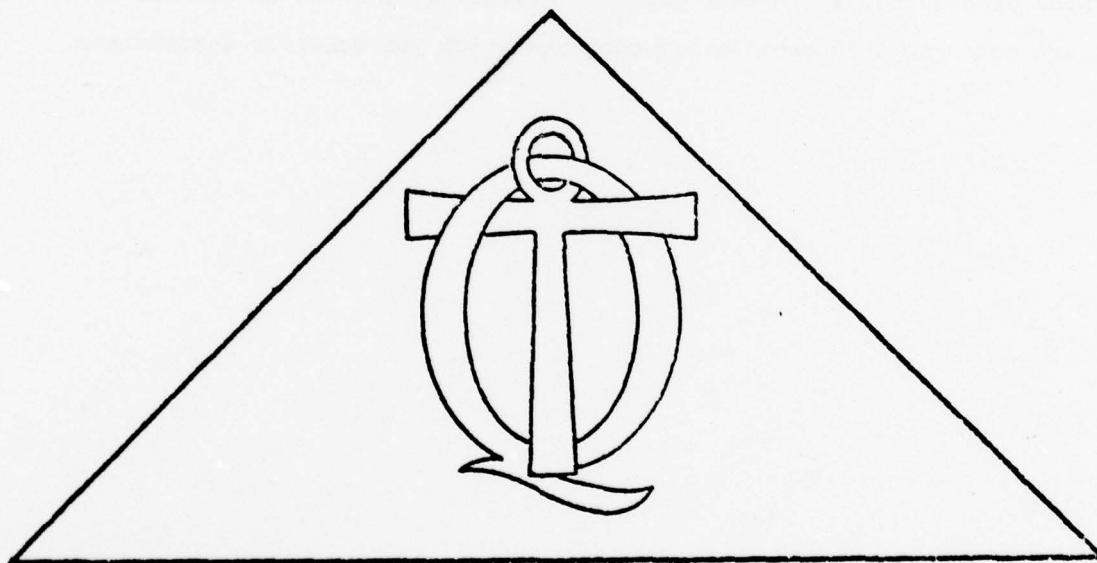
Additional References

1. Bennis, W.G. "Leadership Theory and Administrative Behavior: The Problem of Authority". Administrative Science Quarterly, 4:259-301, 1959.
2. Greenwood, J.M. and W.J. McNamara. "Leadership Styles of Structure and Consideration and Managerial Effectiveness". Personnel Psychology, 22:141-152, 1969.
3. Hollander, E.P. "Style, Structure, and Setting in Organizational Leadership". Administrative Science Quarterly, 16:1-10, 1971.
4. House, R., A. Filley, and S. Kerr. "Relation of Leader Consideration and Initiating Structure to R and D Subordinate Satisfaction". Administrative Science Quarterly, 16:19-30, 1971.
5. Hunt, J. and V. Liebsher. "Leadership Preference, Leadership Behavior and Employee Satisfaction". Organizational Behavior and Human Performance, 9:59-77, 1973
6. Kerr, S., et al. "Toward a Contingency Theory of Leadership Based Upon the Consideration and Initiating Structure Literature". Organizational Behavior and Human Performance, 12:62-82, 1974.
7. Nebeker, D.M. and T.R. Mitchell. "Leader Behavior: An Expectancy Theory Approach". Organizational Behavior and Human Performance, 11:355-367, 1974.
8. Reddin, W.J. "The 3-D Management Style Theory". Training and Development Journal, April 1976:8-17.
9. Rubenowitz, S. "Job Oriented and Person Oriented Leadership". Personnel Psychology, 15:387-396, 1962.
10. Sashkin, M. "Leadership Style and Group Decision Effectiveness: Correlational and Behavioral Tests of Fiedler's Contingency Model". Organizational Behavior and Human Performance, 8:347-362.
11. Taylor, J.C. "An Empirical Examination of a Four-Factor Theory of Leadership Using Smallest Space Analysis". Organizational Behavior and Human Performance, 6:249-266, 1971.

Appendix A

United States Air Force
Quality of Air Force Life
Commanders Survey

UNITED STATES AIR FORCE
QUALITY OF AIR FORCE LIFE
COMMANDERS SURVEY



USAF SCN7 T-11
DECEMBER 1976

LEADERSHIP/MOTIVATION DIVISION
HUMAN RESOURCES DEVELOPMENT
DIRECTORATE OF PERSONNEL PLANS
HQ UNITED STATES AIR FORCE

FOREWORD

As an Air Force commander, you are in a unique position to observe the personal and organizational functioning of the Air Force. It is hoped that you will take the opportunity to complete this survey and, thereby, provide the Air Staff with the benefit of your experience. Your responses are anonymous. They will be combined with those of all other Air Force commanders to formulate an attitude and opinion data base not otherwise available, upon which to base future personnel plans and policies. Although the survey uses a special answer sheet for machine processing, a comments page is included at the end of the survey. You are encouraged to provide any comments which you consider appropriate.

INSTRUCTIONS FOR COMPLETING SURVEY

Please do not fold, staple, or otherwise damage the answer sheet.

Select only one answer to each question.

Mark your answers on the answer sheet. It is not necessary to write on the survey itself. Please use a No. 2 pencil.

Be sure to mark your answers carefully so that you enter them opposite the same answer sheet number as survey question number.

Be sure that your answer marks are heavy and that you blacken the oval-shaped space. Erase all changes completely and carefully so as not to tear the answer sheet.

	A	B	C	D
Right Way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
to Mark	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Answer Sheet	A	B	C	D
	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wrong Way	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
to Mark	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Answer Sheet	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Since this survey is strictly anonymous, please do not write your name or your SSAN on either your answer sheet or survey booklet.

PRIVACY ACT STATEMENT

In accordance with paragraph 30, AFR 12-35, Air Force Privacy Act Program, the following information about this survey is provided as required by the Privacy Act of 1974:

a. Authority. This survey information is authorized for solicitation by Federal Statute Title 10, United States Code, Section 8012, Executive Order 9397, 22 Nov 1943, DoDI 1100.13, 17 Apr 1968, and AFR 30-23, 22 Sep 1976.

b. Principle Purpose. This survey is being conducted to gain the attitudes and opinions of Air Force commanders on a variety of subjects of interest to HQ USAF.

c. Routine Use. The survey data will be converted to statistical information for use by decision makers in development of future personnel plans and policies.

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.

1. What is your major command of assignment?

- | | |
|--|---|
| A. Alaskan Air Command | M. Air Force Data Automation Agency |
| B. U.S. Air Force Academy | N. Headquarters Command |
| C. Aerospace Defense Command | O. Military Airlift Command |
| D. U.S. Air Forces in Europe | P. Pacific Air Forces |
| E. Air Force Accounting and Finance Center | Q. Strategic Air Command |
| F. Air Force Logistics Command | R. Tactical Air Command |
| G. Air Force Systems Command | S. USAF Security Service |
| H. Air Reserve Personnel Center | T. Air Force Military Personnel Center |
| I. Air Training Command | U. Air Force Inspection and Safety Center |
| J. Air University | V. Air Force Audit Agency |
| K. Headquarters Air Force Reserve | W. Air Force Office of Special Investigations |
| L. Headquarters USAF | X. Other |

2. What is your present active duty grade?

- A. Colonel
- B. Lieutenant Colonel
- C. Major
- D. Captain
- E. First Lieutenant
- F. Second Lieutenant

3. What is your sex?

- A. Female
- B. Male

4. How much total active federal military service have you completed?

- | | |
|------------------------------|------------------------------|
| A. Less than 10 years | L. 20 years but less than 21 |
| B. 10 years but less than 11 | M. 21 years but less than 22 |
| C. 11 years but less than 12 | N. 22 years but less than 23 |
| D. 12 years but less than 13 | O. 23 years but less than 24 |
| E. 13 years but less than 14 | P. 24 years but less than 25 |
| F. 14 years but less than 15 | Q. 25 years but less than 26 |
| G. 15 years but less than 16 | R. 26 years but less than 27 |
| H. 16 years but less than 17 | S. 27 years but less than 28 |
| I. 17 years but less than 18 | T. 28 years but less than 29 |
| J. 18 years but less than 19 | U. 29 years but less than 30 |
| K. 19 years but less than 20 | V. 30 years or more |

5. How old were you on your last birthday?

- | | |
|-----------------------|------------------|
| A. Less than 25 years | J. 41 - 42 |
| B. 25 - 26 | K. 43 - 44 |
| C. 27 - 28 | L. 45 - 46 |
| D. 29 - 30 | M. 47 - 48 |
| E. 31 - 32 | N. 49 - 50 |
| F. 33 - 34 | O. 51 - 52 |
| G. 35 - 36 | P. 53 - 54 |
| H. 37 - 38 | Q. 55 - 56 |
| I. 39 - 40 | R. Over 56 years |

6. What is your current primary aeronautical rating?

- A. Pilot
- B. Navigator
- C. Flight Surgeon
- D. Other type of aeronautical rating
- E. Nonrated

AD-A056 507 AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OHIO SCH--ETC F/6 5/9
A STUDY OF THE LEADER ATTITUDES OF US AIR FORCE COMMANDERS.(U)
DEC 77 S E BOVICH

UNCLASSIFIED

AFIT/6SM/SM/77D-17

NL

2 of 2

AD
A056 507



END
DATE
FILMED
8 -78

DDC

7. What type of organization do you command?

- | | |
|------------------|------------|
| A. Wing | J. School |
| B. Base | K. Center |
| C. Station | L. Service |
| D. Squadron | M. Region |
| E. Hq Sq Section | N. Area |
| F. Detachment | O. Academy |
| G. Group | P. Band |
| H. Laboratory | Q. Other |
| I. Depot | |

8. What is the mission of your organization?

- | | |
|-----------------------|--------------------|
| A. Flying Operation | H. Security Police |
| B. Maintenance | I. Civil Engineers |
| C. Supply | J. Services |
| D. Communications | K. Research |
| E. Training/Education | L. Medical |
| F. Transportation | M. Air Base Group |
| G. Weather | N. Other |

9. How long have you been Commander of your present organization?

- A. Less than 6 months
- B. 6 - 12 months
- C. 13 - 18 months
- D. 19 - 24 months
- E. 25 - 30 months
- F. 31 - 36 months
- G. 37 - 42 months
- H. 43 - 48 months
- I. Over 48 months

10. How many military and civilian personnel are assigned to your organization?

- A. Less than 100
- B. 100 - 199
- C. 200 - 299
- D. 300 - 399
- E. 400 - 499
- F. 500 - 749
- G. 750 - 1000
- H. Over 1000

11. Have you previously held a command position prior to your current assignment?

- A. No
- B. Yes, an operational commander
- C. Yes, a support area
- D. Yes, in both operations and support area
- E. Other

12. The location of my base is

- A. CONUS
- B. Overseas

13. Which one of the following do you consider yourself?
- A. Black American
 - B. Spanish or Mexican American
 - C. American Indian
 - D. Oriental American
 - E. White American (other than Spanish or Mexican American)
 - F. Other
14. Has your present organization experienced a manning reduction since you took command?
- A. No
 - B. Yes, and it has caused significant problems in getting my job done
 - C. Yes, but it has caused few problems in getting my job done
 - D. Yes, and it has had a positive impact on getting my job done
15. Have you experienced an increase in administrative procedures and reports required of the commander since you took command of your present organization?
- A. No, they have been decreasing
 - B. No, they are about the same as before
 - C. Yes, and it has caused significant problems in getting my job done
 - D. Yes, but it has caused few problems in getting my job done
 - E. Yes, and it has had a positive impact on getting my job done
16. What percent of your duty time is spent on commander's duties as compared to staff functional duties?
- | | |
|---------|-----------------|
| A. 100% | G. 40% |
| B. 90% | H. 30% |
| C. 80% | I. 20% |
| D. 70% | J. 10% |
| E. 60% | K. 5% |
| F. 50% | L. Less than 5% |
17. Formal commander's training courses of instruction should be prerequisites for assignment as a commander.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree
18. The Headquarters Squadron Section commander has sufficient authority to carry out his/her responsibilities.
- A. Strongly agree
 - B. Agree
 - C. No opinion
 - D. Disagree
 - E. Strongly disagree
19. Under current procedures, the Headquarters Squadron Section is responsive to the needs of the individuals in the organization.
- A. Strongly agree
 - B. Agree
 - C. No opinion
 - D. Disagree
 - E. Strongly disagree

20. What do you believe is the maximum effective/manageable size of a squadron?
- A. Less than 250
 - B. 251 - 350
 - C. 351 - 450
 - D. 451 - 550
 - E. More than 550
21. Do you have a full-time Senior Enlisted Advisor on your staff?
- A. No, I don't need one
 - B. No, but I need one
 - C. Yes, but I don't need one
 - D. Yes, and I need one
22. Recent changes in Air Force Personnel programs have been aimed at enhancing NCO prestige. Do you believe these efforts will be successful?
- A. Definitely yes
 - B. Probably yes
 - C. Undecided
 - D. Probably no
 - E. Definitely no
23. Commissioned officer prestige has declined over the past several years.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree
24. How does the quality of the Airmen entering the Air Force today compare with that of the Airmen who entered in previous years?
- A. Decreased
 - B. Remained about the same
 - C. Increased
 - D. Don't know
25. Are you satisfied with the Weighted Airman Promotion Program (WAPS) which promotes airmen to grades E-5, E-6, and E-7?
- A. Very satisfied
 - B. Somewhat satisfied
 - C. Undecided
 - D. Somewhat dissatisfied
 - E. Very dissatisfied
26. Do current Air Force promotion policies provide the latitude you need in carrying out your responsibility for quality control in the airman promotion programs?
- A. All of them do
 - B. Most of them do
 - C. Some of them do
 - D. Few of them do
 - E. None of them do

27. How do you rate the system which allows airmen to compete for early promotion to E-4?

- A. Very favorably
- B. Favorably
- C. Undecided
- D. Unfavorably
- E. Very unfavorably
- F. Never heard of it.

One of the aspects of our lives is the Leadership/Supervision we receive on the job. Please rate the degree of importance of this factor to you and your degree of satisfaction with it based on the following description:

LEADERSHIP/SUPERVISION: My supervisor has my interests and that of the Air Force at heart; keeps me informed; approachable and helpful rather than critical; good knowledge of the job.

28. What degree of importance do you attach to the above? (Select one of the seven points)

A.....B.....C.....D.....E.....F.....G		
Low		High
Importance	Medium	Importance
	Importance	

29. To what degree are you satisfied with the LEADERSHIP/SUPERVISION aspects of your life? (Select one of the seven points)

A.....B.....C.....D.....E.....F.....G		
Highly		Highly
Dissatisfied	Neutral	Satisfied

30. What is your opinion of the quality of leadership in the Air Force?

- A. Excellent
- B. Above average
- C. Average
- D. Below average
- E. Poor

31. What is your opinion of the leadership ability of your immediate supervisor?

- A. Excellent
- B. Above average
- C. Average
- D. Below average
- E. Poor

32. How often do you and your supervisor get together to set your personal performance objectives?

- A. Never
- B. Seldom
- C. Sometimes
- D. Frequently
- E. Very frequently

33. How often are you given feedback from your supervisor about your job performance?
- A. Never
 - B. Seldom
 - C. Sometimes
 - D. Frequently
 - E. Very frequently
34. The Air Force does a good job of keeping me informed about what is going on.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree
35. Commander's Call is an effective way for a commander to communicate with his people.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree
36. The requirement to hold Commander's Call should be changed from mandatory to optional.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree
37. Attendance at Commander's Call should be optional.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree
38. How often should Commander's Calls be conducted?
- A. Monthly
 - B. Every other month
 - C. Quarterly
 - D. As determined by each commander
39. Which one of the following do you consider to be the most effective means of receiving feedback from military personnel assigned to your organization?
- A. Base newspaper action line columns
 - B. Base councils
 - C. IG complaint system
 - D. Personal contacts with military members other than my staff
 - E. My staff

40. Do you get enough feedback from the military people in your organization?
- A. No, not as much as I would like
Yes, and it is of:
 B. No use
 C. Little use
 D. Some use
 E. General use
 F. Great use
41. You might use a variety of media to communicate an important policy to military personnel at your base. In which of the following do you have the greatest confidence?
- A. Regular administrative channels
 B. Commander's Call
 C. Bulletin board announcements
 D. Base newspaper
 E. Oral communication at staff meetings
42. In which one of the following do you have the least confidence?
- A. Regular administrative channels
 B. Commander's Call
 C. Bulletin board announcements
 D. Base newspaper
 E. Oral communication at staff meetings
43. What is your opinion of discipline in today's Air Force?
- A. Too strict
 B. Somewhat strict
 C. About right
 D. Somewhat lax
 E. Too lax
 F. No opinion
44. New airmen arriving in my organization from Basic Military Training or technical training are motivated to comply with the requirements of Air Force discipline and standards.
- A. Strongly disagree
 B. Disagree
 C. Undecided
 D. Agree
 E. Strongly agree

Please rate the contribution of each of the following councils/committees to your organization.

	<u>Of Great Value</u>	<u>Of Considerable Value</u>	<u>Of Moderate Value</u>	<u>Of Little Value</u>	<u>Of No Value</u>
45. Enlisted Advisory Council	A	B	C	D	E
46. Human Relations Council	A	B	C	D	E
47. Junior Officer Council	A	B	C	D	E
48. Drug and Alcohol Abuse Control Committee	A	B	C	D	E
49. Nonappropriated Fund Council	A	B	C	D	E
50. Nonappropriated Fund Advisory Committees	A	B	C	D	E
51. Equal Employment Opportunity Advisory Committee	A	B	C	D	E

52. What percent of your personal time is involved in preparation and attendance at these councils, etc.?

- A. None
- B. Less than 5%
- C. 5% - 10%
- D. 11% - 15%
- E. 16% - 20%
- F. More than 20%

53. Some of the above councils are used as a means of dealing with problems without going through command channels.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

54. I feel that if the above councils were used to solve problems without going through command channels, it would weaken the Air Force chain of command.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

55. In your opinion, do councils such as JOC, EAC, HRC, etc., affect your ability to do your job?

- A. Strongly enhance
- B. Enhance
- C. Neutral
- D. Detract
- E. Strongly detract

Please rate the degree of importance of the concept of personal standing to you and your degree of satisfaction with it based on the following description:

PERSONAL STANDING: To be treated with respect; prestige; dignity; reputation; status.

56. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Low						High
Importance		Medium				Importance
		Importance				

57. To what degree are you satisfied with the PERSONAL STANDING aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly						Highly
Dissatisfied		Neutral				Satisfied

Listed below are 23 factors or policies which affect Air Force personnel. Using the scale listed immediately below, please rate each of the areas. Mark only one response for each item.

- A. Standard too strict, enforcement too strict
- B. Standard too strict, enforcement about right
- C. Standard too strict, enforcement too lax
- D. Standard about right, enforcement too strict
- E. Standard about right, enforcement about right
- F. Standard about right, enforcement too lax
- G. Standard too lax, enforcement too strict
- H. Standard too lax, enforcement about right
- I. Standard too lax, enforcement too lax

- 58. Overall personal appearance.
- 59. Wear of the uniform.
- 60. Haircuts.
- 61. Mustaches.
- 62. Beard policy.
- 63. Military courtesy and customs.
- 64. Personnel weight control program.
- 65. What my immediate supervisor expects of me.
- 66. My commander's policies and procedures.
- 67. Officer/enlisted on-the-job relationships.
- 68. Drills and ceremonies.
- 69. Respect for supervisors.
- 70. Safety procedures.
- 71. Working hours.
- 72. Leave procedures.
- 73. Living in on-base family housing.
- 74. Living in on-base dormitories.
- 75. Quality of work expected on the job.
- 76. Quantity of work expected on the job.
- 77. Officer supervisor/subordinate relationships.
- 78. Enlisted supervisor/subordinate relationships.
- 79. Unit mission accomplishment.
- 80. Air Force life in general.

Please rate the degree of importance of your work to you and your degree of satisfaction with it based on the following description:

WORK: Doing work that is personally meaningful and important; pride in my work; job satisfaction; recognition for my efforts and my accomplishments on the job:

81. What degree of importance do you attach to the above? (Select one of the seven points)

A.....	B.....	C.....	D.....	E.....	F.....	G
Low						High
Importance		Medium	Importance			Importance

82. To what degree are you satisfied with the WORK aspects of your life? (Select one of the seven points)

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly						Highly
Dissatisfied		Neutral				Satisfied

83. Past assignments have prepared me for my current duties.

A. Strongly disagree
B. Disagree
C. Undecided
D. Agree
E. Strongly agree

84. The Air Force requires me to participate in too many activities that are not related to my job.

A. Strongly disagree
B. Disagree
C. Undecided
D. Agree
E. Strongly agree

85. Does your immediate supervisor give you recognition for a job well done?

A. Never
B. Seldom
C. Sometimes
D. Frequently
E. Always

86. Are you given the freedom you need to do your job well?

A. Never
B. Seldom
C. Sometimes
D. Often
E. Always

87. What is your estimate of the average number of hours per week you spend on the job?
- A. Less than 30 hours
 - B. 31 - 35
 - C. 36 - 40
 - D. 41 - 45
 - E. 46 - 50
 - F. 51 - 55
 - G. 56 - 60
 - H. More than 60
88. How do you evaluate your present Air Force job?
- A. Not at all challenging
 - B. Not very challenging
 - C. Somewhat challenging
 - D. Challenging
 - E. Very challenging
89. Which one of the following shows how much of the time you feel satisfied with your job?
- A. All the time
 - B. Most of the time
 - C. A good deal of the time
 - D. About half of the time
 - E. Occasionally
 - F. Seldom
 - G. Never
90. Choose the one of the following statements which best tells how well you like your job.
- A. I hate it
 - B. I dislike it
 - C. I don't like it
 - D. I am indifferent to it
 - E. I like it
 - F. I am enthusiastic about it
 - G. I love it
91. Which one of the following shows how you think you compare with other people?
- A. No one likes his job better than I like mine
 - B. I like my job much better than most people like theirs
 - C. I like my job better than most people like theirs
 - D. I like my job about as well as most people like theirs
 - E. I dislike my job more than most people dislike theirs
 - F. I dislike my job much more than most people dislike theirs
 - G. No one dislikes his job more than I dislike mine.
92. Which one of the following best tells how you feel about changing your job?
- A. I would quit this job at once if I could
 - B. I would take another job in which I could earn as much as I do now
 - C. I would like to change both my job and my occupation
 - D. I would like to exchange my present job for another one
 - E. I am not eager to change my job, but would for a better one
 - F. I cannot think of any jobs for which I would exchange
 - G. I would not exchange my job for another

93. I have sufficient authority to carry out my responsibilities.

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

94. For your next assignment, do you want a job which has greater responsibility than your current job?

- A. Definitely no
- B. Probably no
- C. Not sure
- D. Probably yes
- E. Definitely yes

Listed below are a number of factors which have been associated with favorable attitudes toward an Air Force career.

FAVORABLE FACTORS

- A. Opportunity for training and education in the Air Force
- B. My Air Force job (challenging, provides sense of accomplishment, etc.)
- C. Pay and allowances
- D. Housing
- E. Promotion system and opportunity
- F. Fringe benefits (medical and dental care, BX, commissary, etc.)
- G. Leadership and supervision in the Air Force
- H. Travel and new experiences
- I. Have "say" in future assignments
- J. Security of Air Force life
- K. Air Force policies and procedures
- L. The retirement system
- M. Opportunity to serve my country
- N. Some other factor
- O. I do not intend to make the Air Force a career

95. Select the one factor which originally influenced you the most to make the Air Force a career.

96. Select the one factor which TODAY would influence you the most to make the Air Force a career.

Listed below are a number of factors which have been associated with unfavorable attitudes toward an Air Force career.

UNFAVORABLE FACTORS

- A. Family separation
- B. My Air Force job (little challenge, little sense of accomplishment, etc.)
- C. Pay and allowances
- D. Housing
- E. Promotion selection system
- F. Promotion opportunity
- G. Fringe benefits (medical and dental care, BX, commissary, etc.)
- H. Leadership and supervision in the Air Force
- I. Frequent PCS moves
- J. Little "say" in future assignments
- K. Insecurity of Air Force life
- L. The people
- M. Air Force policies and procedures
- N. Some other factor
- O. Nothing unfavorable

97. Select the one factor which TODAY would influence you the most NOT to make the Air Force a career.

The following four questions address the subjects of economic standards and security. Please rate the degree of importance of these concepts to you and your degree of satisfaction with them based on the descriptions shown below:

ECONOMIC STANDARD: Satisfaction of basic human needs such as food, shelter, clothing; the ability to maintain an acceptable standard of living.

98. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Low						High
Importance			Medium			Importance
			Importance			

99. To what degree are you satisfied with the ECONOMIC STANDARD aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly						Highly
Dissatisfied			Neutral			Satisfied

ECONOMIC SECURITY: Guaranteed employment; retirement benefits; insurance; protection for self and family.

100. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Low						High
Importance			Medium			Importance
			Importance			

101. To what degree are you satisfied with the ECONOMIC SECURITY aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly						Highly
Dissatisfied			Neutral			Satisfied

102. The Air Force is providing enough information to its members to permit them to determine the current status of actions which may impact on their fringe benefits (Commissary, retirement, medical care, etc.).
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly Agree
103. Military pay raises over the past five years have adequately offset increases in the cost of living.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree
104. How do you think your military pay (including all allowances and fringe benefits) compares with pay in civilian employment for similar work?
- A. Military pay is far higher than civilian
 - B. Military pay is somewhat higher than civilian
 - C. Both about equal
 - D. Military pay is somewhat less than civilian
 - E. Military pay is far less than civilian
 - F. There is no valid comparison between military and civilian pay

Please rate the degree of importance of free time to you and your degree of satisfaction with it based on the following description:

FREE TIME: Amount, use, and scheduling of free time alone, or in voluntary associations with others; variety of activities engaged in.

105. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Low			Medium			High
Importance			Importance			Importance

106. To what degree are you satisfied with the FREE TIME aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly						Highly
Dissatisfied			Neutral			Satisfied

Please rate the degree of importance of personal growth to you and your degree of satisfaction with it based on the following description:

PERSONAL GROWTH: To be able to develop individual capacities, education/training; making full use of my abilities; the chance to further my potential.

107. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Low			Medium			High
Importance			Importance			Importance

A.....B.....C.....D.....E.....F.....G
Highly Highly
Dissatisfied Neutral Satisfied

- A. Strongly disagree
- B. Disagree
- C. Undecided
- D. Agree
- E. Strongly agree

A. Very little
B. Little
C. Some moderate amount
D. Much
E. Very much

A. My grade is much too high for the work I am doing.
B. My grade is somewhat too high for the work I am doing.
C. My grade is about right for the work I am doing.
D. My grade is somewhat too low for the work I am doing.
E. My grade is much too low for the work I am doing.

A. Definitely no
B. Probably no
C. Undecided
D. Probably yes
E. Definitely yes

- A. Strongly agree
- B. Agree
- C. Undecided
- D. Disagree
- E. Strongly disagree

A. Dormitory Manager
B. Enlisted/Dependent Counselor
C. Commander's Assistant
D. Interorganization Communications/Liaison
E. Administrative Manager
F. Other

115. Do First Sergeants on your installation attend a monthly meeting to exchange ideas and update one another on Air Force and local policies and/or local problems?
- A. All of them do
 - B. Most of them do
 - C. Some of them do
 - D. Few of them do
 - E. None of them do
116. Most of the Senior NCOs (E-7 through E-9) understand and are able to communicate with the people who work with them.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree
117. Do you like the changes introduced by the Tri-deputate Reorganization Program?
- A. Definitely yes
 - B. Probably yes
 - C. Undecided
 - D. Probably no
 - E. Definitely no
 - F. Never heard of it
118. Do you like the changes introduced by the new E-4 Appointment to NCO Status Program (AFR 39-13, Senior Airman/NCO)?
- A. Definitely yes
 - B. Probably yes
 - C. Undecided
 - D. Probably no
 - E. Definitely no
 - F. Never heard of it
119. Do you feel that the new Phase I NCO PME (NCO Orientation Course) is meeting its objective of preparing E-4/Senior Airmen to assume the roles and responsibilities of NCOs?
- A. Definitely yes
 - B. Probably yes
 - C. No opinion/don't know
 - D. Probably no
 - E. Definitely no
120. Do you feel that the new Phase II NCO PME (USAF Supervisor's Course) is meeting its objective of preparing E-4/NCOs, E-5s, and civilian employees to assume their first supervisory positions?
- A. Definitely yes
 - B. Probably yes
 - C. No opinion/don't know
 - D. Probably no
 - E. Definitely no

121. Do you like the changes introduced by the new Enlisted Force Organization ("Three-tier," AFR 39-6)?

- A. Definitely yes
- B. Probably yes
- C. Undecided
- D. Probably no
- E. Definitely no
- F. Never heard of it

122. Do you like the changes introduced by the new Individualized Newcomers Treatment Orientation (INTRO) Program?

- A. Definitely yes
- B. Probably yes
- C. Undecided
- D. Probably no
- E. Definitely no
- F. Never heard of it

123. Have you been provided sufficient information and instructions to properly perform your duties under the Selective Reenlistment Program?

- A. No

Yes, and I got most of my information from:

- B. AFR 35-16
- C. The Career Advisory News
- D. The Base Career Advisor
- E. My Unit Career Advisor
- F. The CBPO

124. Do you believe that you as a commander have sufficient information available to you about each individual airman to make a good reenlistment selection decision?

- A. No

Yes, and I obtain most of my information from:

- B. The airman's supervisor
- C. The records in the CBPO
- D. The records in my unit
- E. The first sergeant
- F. Personal knowledge of the airmen

Please rate the degree of importance of the concept of equity to you and your degree of satisfaction with it based on the following description:

EQUITY: Equal opportunity in the Air Force; a fair chance at promotion; an even break in my job/assignment selections.

125. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Low			Medium			High
Importance			Importance			Importance

126. To what degree are you satisfied with the EQUITY aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly						Highly
Dissatisfied			Neutral			Satisfied

127. Do you believe that racial discrimination is a problem on your base?
- A. No
 - B. Yes, a minor problem
 - C. Yes, a moderate problem
 - D. Yes, a big problem
128. Are race relations on your base improving, the same, or worse than last year?
- A. Greatly improving
 - B. Somewhat improving
 - C. The same
 - D. Somewhat worse
 - E. Much worse
129. Do you think it is likely that there will be a racial flare-up on your base in the near future?
- A. Yes, definitely
 - B. Yes, probably
 - C. I don't know
 - D. No, probably not
 - E. No, definitely not
130. Do you think your race is now a factor in your promotion opportunity?
- A. Very helpful
 - B. Somewhat helpful
 - C. Makes no difference
 - D. Somewhat harmful
 - E. Very harmful
 - F. No opinion/don't know
131. Do you think minority group personnel receive the same punishment for the same offense as other personnel in disciplinary action (Article 15 and court martial) under the Uniform Code of Military Justice?
- A. Minority groups receive much more severe punishment
 - B. Minority groups receive somewhat more severe punishment
 - C. No difference in punishment
 - D. Minority groups receive somewhat less severe punishment
 - E. Minority groups receive much less severe punishment
 - F. No opinion/don't know
132. Human Relations Education courses are effective in getting people to treat each other better.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree
133. Current Air Force training programs should help prepare people to get along with other people.
- A. Strongly disagree
 - B. Disagree
 - C. Undecided
 - D. Agree
 - E. Strongly agree

134. On the same jobs as Air Force men, do Air Force women tend to be absent from the job for all reasons more, less, or about the same?
- A. Much more
 - B. More
 - C. About the same
 - D. Less
 - E. Much less
135. On the same jobs as men, do Air Force women tend to do more, less, or about the same amount of work?
- A. Much more
 - B. More
 - C. About the same
 - D. Less
 - E. Much less
136. Who do you believe should address matters regarding racial/sex discrimination?
- A. Installation IG
 - B. Equal Opportunity Office
 - C. Unit Commander
 - D. Supervisor
 - E. Other
137. How would you rate your understanding of the Equal Opportunity Affirmative Actions Plan?
- A. Excellent
 - B. Good
 - C. Fair
 - D. Poor
 - E. Not aware of the Plan
138. To what extent are you personally involved in the development of the Equal Employment Opportunity (EEO) Plan of Action of your organization?
- A. Very little
 - B. Moderately
 - C. Considerably
 - D. Totally
 - E. We have no EEO Plan
139. How do you rate the effectiveness of the EEO complaints process?
- A. Excellent
 - B. Good
 - C. Fair
 - D. Poor
 - E. Not aware of the process
140. How would you rate your understanding of the EEO Plan of Action?
- A. Excellent
 - B. Good
 - C. Fair
 - D. Poor
 - E. Not aware of the Plan

141. I believe I am capable of handling discrimination complaints involving members of my organization.

- A. All of them
- B. Most of them
- C. Some of them
- D. Few of them
- E. None of them

Please rate the degree of importance of health to you and your degree of satisfaction with it based on the following description:

HEALTH: Physical and mental well-being of self and dependents; having illnesses and ailments detected, diagnosed, treated and cured; quality and quantity of health care services provided.

142. What degree of importance do you attach to the above?

A.....	B.....	C.....	D.....	E.....	F.....	G
Low			Medium			High
Importance			Importance			Importance

143. To what degree are you satisfied with the HEALTH aspects of your life?

A.....	B.....	C.....	D.....	E.....	F.....	G
Highly						Highly
Dissatisfied			Neutral			Satisfied

144. From your viewpoint and experience, do you think drug abuse is a problem in the Air Force?

- A. It is not a problem
- B. It is a minor problem
- C. It is a serious problem
- D. It is a major problem

145. Do you think that drug abuse control education is helpful?

- A. I have never attended
- B. It is not effective
- C. It is effective for new personnel entering the Air Force
- D. It is effective for all personnel
- E. It is effective for supervisors only

146. Is the drug abuse rehabilitation program effective for helping personnel with this problem return to productive service performance?

- A. Do not know about rehabilitation program
- B. Have no opinion about rehabilitation program
- C. Rehabilitation programs are not effective
- D. Rehabilitation programs are effective

147. From your viewpoint and experience, do you think alcohol abuse is a problem in the Air Force?

- A. It is not a problem
- B. It is a minor problem
- C. It is a serious problem
- D. It is a major problem

148. Do you think that alcohol abuse control education is helpful?

- A. I have never attended
- B. It is not effective
- C. It is effective for new personnel entering the Air Force
- D. It is effective for all personnel
- E. It is effective for supervisors only

149. Is the alcohol abuse rehabilitation program effective for helping personnel with this problem return to productive service performance?

- A. Do not know about rehabilitation program
- B. Have no opinion about rehabilitation program
- C. Rehabilitation programs are not effective
- D. Rehabilitation programs are effective

COMMENTS SHEET

COMMANDERS SURVEY

Please provide any comments which you feel would be of value to HQ USAF in our efforts to improve the quality of Air Force life. If you use this sheet, please detach it and return it with your answer sheet.

Grade: _____

Type of organization commanding _____

THANK YOU FOR COMPLETING THIS SURVEY

Vita

Stephen E. Bovich was born on 11 June 1948 in Brooklyn, New York. Raised on Long Island, he attended Chaminade High School, Mineola, New York. He graduated in 1970 from Colgate University, Hamilton, New York, with a Bachelor of Arts degree in Mathematics.

Upon graduation he was commissioned in the Air Force and proceeded to Keesler Air Force Base, Mississippi, for a year of technical training. He was then assigned to the 823rd Radar Squadron, Air Defense Command, Fairchild Air Force Base, Washington, as the assistant electronic maintenance supervisor. After a subsequent assignment to the 645th Radar Squadron as the electronic maintenance supervisor, he spent a year remote at Sparrevohn Air Force Station, Alaska, as the electronic systems officer. Subsequently, he was assigned to Klamath Air Force Station, California, as the electronic systems staff officer until September 1976 when he entered the Air Force Institute of Technology.

Captain Bovich is married to the former Linda Marie Havlik of Glassport, Pennsylvania. They have two children, Timothy and Michael.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER AFIT/GSM/SM/77D-17 ✓	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) A STUDY OF THE LEADER ATTITUDES OF U.S. AIR FORCE COMMANDERS		5. TYPE OF REPORT & PERIOD COVERED MS Thesis
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Stephen E. Bovich Captain		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Air Force Institute of Technology (AFIT/EN) Wright-Patterson AFB, Ohio 45433		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE December 1977
		13. NUMBER OF PAGES 119
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release: distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES Approved for public release; IAW AFR 190-17 JERRAL F. GUESS, Captain, USAF Director of Information		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Leadership Commanders Task Relationships Enforcement of Discipline		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This study analyzes the leadership attitudes of United States Air Force commanders. The source of the data is the Quality of Air Force Life Survey conducted in December 1976. The primary analytic technique used was factor analysis. Underlying dimensions of leader attitudes for the commanders were sought. Three underlying dimensions emerged from the factor analysis of the survey variables. Called TASK, Enforcement of Discipline (EOD), and		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

RELATIONSHIPS, these three dimensions were measured and their behavior was analyzed relative to the demographic variables and several other variables in the survey. An attempt was made to determine the influence of the dimensions on subordinate job satisfaction and first term career intent, but no relationship was discovered.

The main conclusion of the analysis is that TASK, EOD, and RELATIONSHIPS reflect definite attitudes of Air Force commanders. However, organization climate is essential to the definition of each of the three dimensions. The dimensions do not represent unchanging orientations or approaches to leadership by the commanders. The three dimensions are seemingly unrelated to dimensions discovered by other researchers.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)