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RECOMMENDED CHANGES TO THE
UNITED STATES AIR FORCE
ENLISTED CAREER PROGRESSION SYSTEM

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LSSR 46-82

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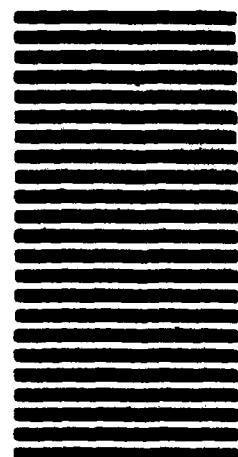
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Thesis Advisor: Jerome G. Peppers, Jr.

The highly qualified enlisted technician is perhaps the most valuable resource in the armed services today. Present U.S. Air Force progression policy requires senior enlisted personnel to leave technically-oriented positions and move into management roles. Those not desiring this change become dissatisfied and frustrated managers or leave the Air Force. A three-year effort consisting of six theses examined and evaluated the current enlisted career progression system to determine whether changes to the system are required. This thesis is the final of the series, and it presents and analyzes information from the progression systems of the U.S. Air Force, U.S. Army, U.S. Navy, Britain's Royal Air Force, and civilian airlines. Surveys, personal interviews, and an organizational behavior literature review provided a perspective of the enlisted force as compared with the civilian organization's perception of an equitable progression system. Middle and senior enlisted technicians viewed the progression system to be inequitable in many ways, and blamed these inequities for dissatisfaction and poor retention rates. A modification to the USAF enlisted tier structure to incorporate a dual-track system is presented. Additionally, changes to the Weighted Airman Promotion System (WAPS) to allow equity and retain experienced technical personnel are also discussed.

LSSR 46-82

RECOMMENDED CHANGES TO THE

UNITED STATES AIR FORCE

ENLISTED CAREER PROGRESSION SYSTEM

A Thesis

Presented to the Faculty of the School of Systems and Logistics

of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the Requirements for the

Degree of Master of Science in Systems Management

By

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September 1982

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of the requirements for the degree of

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CHAPTER I

INTRODUCTION

Overview

Many difficult and serious problems have plagued the
United States military in recent years. Cost overruns, aging
weapon systems, the continuing Soviet threat, and the reten-
tion of a most valuable resource--qualified personnel. This
resource has suffered a constant decline and threatens to
substantially deteriorate the effectiveness and capabilities
of our defense structure. Former Secretary of Defense Melvin
R. Laird stressed his concern for a stronger emphasis in this
area:

> Recruiting people is only half of the personnel diffi-
> culty in today's military. Retaining qualified people
> is an acute problem and will get worse unless remedial
> action is taken. Approximately 30% of males enlisting
> do not even complete their first term of enlistment.
> The services have been losing an average of 75% of
> those completing their first enlistment since 1976.
> In fiscal year 1979 . . . the Air Force dropped below
> 20% in the first term retention rate for the first
> time in five years.
>   While the failure to retain an adequate number of
> those completing their first term is a severe problem,
> it is not nearly as important a national defense issue
> as the failure to retain the requisite number of those
> who have completed their second and third terms of
> service. These individuals, who form the backbone of
> the non-commissioned officers cadre and provide the
> reservoir of technological skills and experience neces-
> sary to operate and maintain our sophisticated weapons
> systems, are irreplaceable. It takes at least a decade
> for a military novice to gain the experience and train-
> ing possessed by these individuals. Yet, the defense

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establishment is losing them in record numbers. None
of the services is currently retaining more than 60%
of its second termers. . . . Over the past few years,
the second term retention rate in the Air Force de-
clined from 75 to 59%. . . . Retention rates for
third-termers--people who have completed approximately
11 years of service--are also in decline. . . . For
every one of the mid-career NCOs who stays past his
or her third term, the services need four fewer re-
cruits to be trained to take their places [19:61].

Highly trained technicians are an extremely costly and
important resource to the United States Air Force. It is in
the best interest of the Air Force to ensure that everything
possible be done to preserve and expand this resource. U.S.
Army Chief of Staff (1980), General Edward C. Meyer accentu-
ated the importance of recruiting and retaining highly quali-
fied personnel:

We must recruit and retain those personnel who
possess the motivation and qualifications necessary
to make a positive contribution to the Total Force.
. . . Concerned leadership and attention to the
needs of the individual will continue to be major
determinants of the success of our recruiting and
retention efforts. . . . Positive leadership, reten-
tion of the tie between the enlisted man and his
leadership over time, concern for the individual,
and improved quality of life offer the framework
within which esprit and cohesion are built [24:5-7].

Problem Statement

It is practically impossible for an enlisted person to
remain a technician throughout a career in the U.S. Air Force.
The personnel job classification scheme and manpower utiliza-
tion policy requires senior enlisted personnel to leave
technically-oriented positions and move into management roles.

The movement into a management role is regarded as a
move "up." If a technician doesn't move "up," he is forced

out of the system.

Based on past manning practices is ". . . an implied condemnation of the career technician: he obviously can be of little potential value if he doesn't want to become a supervisor [31]." General Lew Allen, Jr., Air Force Chief of Staff in 1979, stated the following in a public statement on Air Force people:

> To succeed, we need airmen with technological sophistication and high professional standards. . . . We are also beginning to lose more good, experienced people in critical skill areas, many of whom are impossible to replace in the short term [1:13].

Are there any changes to the current classification structure which might prove effective in strengthening the technically-oriented career areas? Would it be practical and feasible to eliminate or revise the "up-or-out" policy for maintenance technicians and permit skilled technicians to be promoted and to remain in the USAF for a career?

Scope

This thesis examines and evaluates the current enlisted career progression system and provides information and background necessary to determine whether changes to the system are required. The highly technical maintenance career field serves as a basis for exploring the enlisted career progression system in the USAF. The Aircraft Maintenance (42XX0) and Avionics Maintenance (32XX0) career fields represent the majority of the data examined in this thesis effort.

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Background and Literature Review

Background material for this thesis was obtained mainly from five previous theses written for this purpose. To expand knowledge and background, the Defense Technical Information Center (DTIC) was consulted on many aspects of this topic to determine the types and findings of related research. Also, personal interviews were conducted to extend the efforts of the previous survey team. Finally, an organizational/behavioral literature review was accomplished to determine the current behaviorists' and management theorists' perspectives on the subject. The areas reviewed are examined in detail in Chapter III. They are described below in general terms.

Previous Theses

This thesis represents the unification of effort of six research teams. This effort was made to determine whether it would be practical or feasible for the U.S. Air Force to modify its current enlisted promotion policy to allow a technician to be promoted in a technical position rather than be forced into a managerial position in order to be retained for a full career.

The research effort may be visualized as a three-tiered pyramid (see Figure 1-1). The base of the pyramid, tier 1, consists of three research projects and was completed in the first of three consecutive years. This tier provides an information base and contains the following topics:

1. "Attitudes and Opinions of USAF Jet Engine Personnel
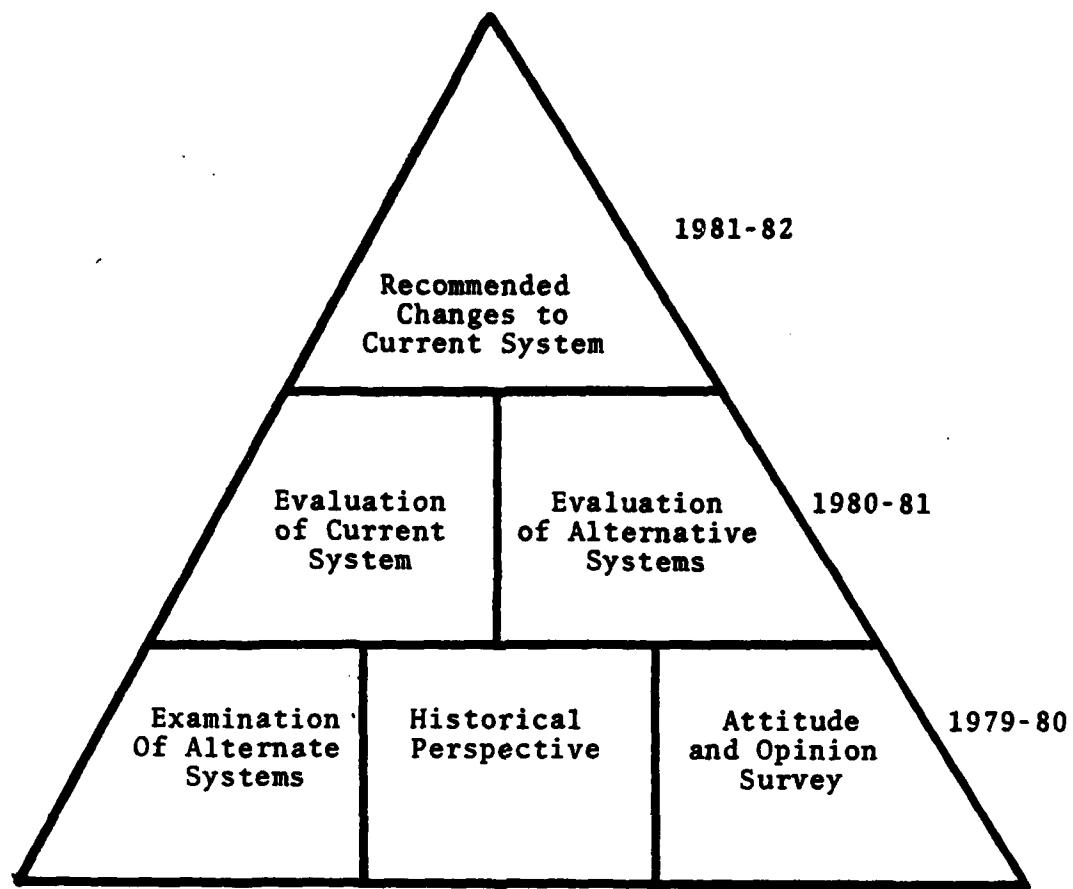
Fig 1-1. Pyramid of Research:
USAF Enlisted Career Progression System

Concerning Enlisted Career Progression:" co-authors Captain
Gary W. Pierce and Captain Erika A. Robeson (32) utilized a
survey instrument to investigate the attitudes, opinions, and
perceptions of aircraft maintenance technicians concerning
job importance, status, skill and experience, current promo-
tion system, transition from technician to supervisor, and
the concept of career technician.

    2. "A [sic] Historical Perspective of the United
States Air Force Enlisted Personnel Promotion Policy (1947-
1980):" co-authors Captain Clark K. Nelson and Mr. Francis
J. Hall (12) examined and described the enlisted promotion
policy from inception to its present state.

    3. "A Comparative Analysis of Enlisted Career Pro-
gression Systems:" co-authors Captain Edward A. Richter and
Captain David C. Tharp (36) examined the enlisted career pro-
gression systems of the Air Force, Navy, Army, and British
Royal Air Force. Two major airlines' maintenance technician
progression systems were also explored.

    The next tier of the pyramid, tier 2, consists of two
research projects and was completed in the second of the three
years. This tier provides crucial information and support to
prepare any necessary recommendations for changes in the cur-
rent career progression system. It consists of the following
research efforts:

    1. "An Evaluation of the Current United States Air
Force Enlisted Career Progression System and Force Structure:"
co-authors Captain Ronald J. Chapin and Captain Luis Suarez

(6) evaluated the current enlisted progression system with particular amplification on personnel management objectives, the Total Objective Plan for Career Airman Personnel (TOPCAP) system, and career retention analysis.

2. "An Exploration of Alternatives to the Current USAF Enlisted Career Progression System:" co-authors First Lieutenant Terry G. Hiatt and Captain Wayne E. Nunnery (15) identified and rigorously analyzed individual elements of the current military and civilian career progression systems. The progression systems were analogous to those examined by Captains Richter and Tharp; however, this thesis analyzed the units in detailed categories including structure, advancement, compensation, and location/commitment.

Tier 3, the apex of the pyramid, consolidates the previous research efforts. This thesis evaluates the practicality and feasibility of modifying the current enlisted progression system and makes recommendations for changes as necessary.

Related Research

The large data base available through DTIC prompted a search through the general areas of career progression, turnover, retention, job stability, promotion, separations, and career development. Approximately 30 technical reports, theses, and papers related to this thesis were discovered by the search. The synopses of the material indicated that eleven of the studies appeared to be applicable. These were

ordered through DTIC. An examination of each paper yielded
several reports pertinent to this thesis. These reports pro-
vided useful background material in the general area of career
progression.

Organizational Behavior Review

An in-depth review of labor, management, and psychology
journals produced numerous articles regarding organizational
behavior. The articles were examined for information pertain-
ing to career progression and job retention, with an applica-
tion to the USAF. The articles found in this manner provided
an understanding of the behavioral aspects of employee turn-
over and career progression.

Research Objectives

The main objective of this research is to recommend,
if necessary, changes to the current USAF enlisted career
progression system in the area of skilled maintenance tech-
nicians. To accomplish this main objective, two specific
subobjectives must be accomplished. These are to:

1. Analyze particular variations of the current
civilian and military career progression systems. Chapter IV
addresses this objective.

2. Recommend the optimum changes to the USAF enlisted
career progression system to provide increased retention of
skilled maintenance technicians. The final recommendations
concerning the enlisted career progression system may be
found in Chapter V.

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Research Questions

To achieve the research objectives, questions relating to the objectives must be answered. These research questions address specific elements of the research objectives. The questions are:

1. What are the particular variations of the current civilian and military career progression systems?

2. Are the variations significant enough to warrant a change in the USAF enlisted career progression system?

3. If the variations are significant, what changes should be recommended?

4. Would these recommended changes produce increased retention of skilled maintenance technicians?

5. What impact would the decision (change vs. no change) have on the current system (i.e., force degradation, turnover, etc.)?

Interpretation of the answers to Questions 1, 2, and 3 will provide achievement of Research Objective 1. Research Objective 2 will be met by answering all the research questions. Question 5 shall be attempted in Chapters IV and V.

CHAPTER II

RESEARCH DESIGN AND METHODOLOGY

Overview

Chapter I introduced the background material of and objectives for this thesis. This chapter presents the methodology used to research and evaluate the material mentioned in Chapter I. The data collection plan is presented first and indicates the sources and method of collection. The data analysis plan explains the methods used to analyze data and to provide answers to the research questions. Finally, the assumptions and limitations section states the limitations on the data and the data gathering methods, and states those assumptions pertaining to the data.

Data Collection Plan

Previous Theses

This is the final thesis in a series of six concerned with the enlisted career progression system (see Figure 1-1). The majority of the data analyzed was obtained from the five previous theses in this series. The theses are available in the Air Force Institute of Technology (AFIT) School of Systems and Logistics Library or through the Defense Technical Technical Information Center (DTIC).

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Related Research

A number of studies related to this thesis were obtained using DTIC resources. These studies provided some additional information and background material. Areas addressed using DTIC were Personnel Retention and Promotion (Advancement) of Managers, Supervisors, and Technicians.

Organizational Behavior

A large body of material has been written about organizational behavior. Behavioral literature pertaining to career progression (promotion) and job retention, and applicable to the Air Force, was located in trade journals, periodicals, and published texts on the subject. This material provided an understanding of the stay/leave job retainment decision.

Interviews

One of the previous theses was based on a survey of jet engine personne` with ranks of E-2 to E-7. To confirm that the attitudes and opinions found in the survey are still generally applicable, a number of personal interviews were conducted at Wright-Patterson AFB with maintenance technicians and supervisory personnel of equivalent ranks. Prior to the interviews, a survey questionnaire, identical to that of Captains Pierce and Robeson, was given to these maintenance personnel, with a 95.8% response rate.

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Data Analysis Plan

The data obtained was analyzed with the goal of answering the research objectives and research questions previously listed in Chapter I. Ultimately, the data provides the information to make recommendations pertaining the the USAF enlisted maintenance career progression system.

The original survey instrument was evaluated for clarity and compatibility with the research objectives. Captains Pierce and Robeson thoroughly tested the questionnaire for applicability and with the use of the Questionnaire Construction Manual (8) and guidance from several AFIT faculty members. Validity tests were not conducted because behaviorists Bohrnstedt (5) and Kerlinger and Keya (18) advise that attitudinal-type surveys demonstrate circular and unclear results when subjected to such tests. The use of data analysis techniques are more beneficial to establish validity. The structure and content of the questionnaire will be described in more detail in Chapter III. The survey instrument itself may be found in Appendix B.

Research Question 1 will be addressed through a review of the five previous theses, DTIC, organizational literature, and personal interviews with operational military and civilian maintenance personnel. Research Questions 2 and 3 require judgmental and regulatory decisions based on the background and existing situation as determined by the information provided by the data. Research Questions 4 and 5 require judgmental and behavioral insight given the information

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provided from the data. Research Objective 1 will be achieved through the interpretation of the results of Research Questions 1, 2, and 3. Research Objective 2 will be addressed in the chapter pertaining to the recommendations and will be achieved as a result of the entire thesis effort.

Assumptions and Limitations

This thesis contains several assumptions. It is assumed that the survey technique and data analysis performed in the previous theses was accomplished in a valid and reliable manner. It further assumes that the findings are generalizable to all the maintenance areas, the types and ranks of personnel interviewed will be in approximately the same proportions as in the previous thesis, and that the degree of bias introduced by the survey instrument, interviewer, interview location and presentation method, and time constraints of the interview are minimized.

There are two major limitations on the survey portion of this thesis. The first is that there is limited time in which to obtain and evaluate the data. The second is that the number of personnel and types of career fields available for the survey is limited.

CHAPTER III

FINDINGS

Introduction

This chapter contains the results, or findings, of data collection which consisted of four areas of research: previous theses, related research, organizational behavior literature review, and personal interviews. Specific concepts and research material will be extrapolated to provide a formulation for future analysis in Chapter IV of this thesis.

Previous Theses

This section provides a summary of the findings of the five previous theses in this set. They were used to provide a foundation for this research. Here, an attempt will be made to present the findings so it will be unnecessary for the reader to obtain each previous thesis, unless more detail is required. The level of detail presented here is limited due to the nature of this document. The original theses should be read to expand and further explain any area of interest referred to in the following summaries. The theses may be obtained through DTIC channels (see Bibliography).

Historical Perspective

Mr. Francis J. Hall and Captain Clark K. Nelson (12) conducted an historical study to provide a documented

reference that details the policy of early promotion programs and identifies changes in the USAF enlisted career progression system from 1947 to 1980.

Three major promotion policies have been used since the United States Air Force became a separate service on 18 September 1947. From 1947 to 1967, a decentralized promotion policy was in effect. In 1967 the policy was altered to reflect a centralization of Airmen promotions. TOPCAP, the Total Objective Plan for Career Airman Personnel, was combined with the centralized promotion policy on 17 May 1971, in an effort to improve the Airman promotion program, enlisted force structure, and long-range management system (42:2-5).

Decentralization. The Air Force continued to follow the decentralized policies and practices of the Army well past the first distinct Air Force regulation (AFR 39-30) concerning enlisted personnel promotions issued in March of 1950 (12:18-20). The management of the promotion system was executed at the base level, where authorizations were made to fill vacancies in the unit's manning allotment. Promotions were often based on the First Sergeant's "black book" and the Commander's "favorite son." This system resulted in "inequities and management problems [12:19]."

During World War II, personnel management problems had developed. Rapid personnel turnover and almost unlimited promotion opportunities (35) resulted in thousands of high-ranking NCOs in the Army Air Force. Many transferred to the Air Force in 1947, creating a rank-heavy structure "hump" and

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period of slow promotions (10).

AFR 39-30, Promotion and Demotion of Airmen (40), initiated minimum time-in-grade (TIG) for promotion, which marked the first management action intended to control promotion progression (35:16). This effort was temporarily thwarted by the suspension of personnel ceilings and waiver of TIG requirements to increase personnel strength during the Korean War. Individual promotions averaged less than six months between grades.

In 1952 the Air Force adopted new titles for the enlisted grades. Previous Army ranks of private, private first class, corporal, and sergeant became basic airman, airman third class, airman second class, and airman first class, respectively. In effect, the new Air Force system demoted the sergeant (E-4) from the NCO to the airman ranks.

The imbalance of grade structure and the inequities of promotion continued despite attempts to alter the pattern through quotas, tighter restrictions or authorizations and longer minimum TIG requirements. A promotion management system was implemented in 1956 to control promotions by job specialty identified in the Air Force Specialty (AFS) codes. The Air Force began to force the distribution of manning by reducing the surplus in many specialties through the use of a promotion vacancy list. Absence of a vacancy prohibited promotion and attrition served to balance force manning. This was the first effective management control system. However, dissatisfaction still remained as promotion in

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overmanned specialties was almost impossible (12:26).

As a result of World War II and the Korean War inflat-
ing the top grades, a situation existed wherein E-7s super-
vised E-7s who supervised other E-7s. A major change in the
enlisted structure created two new "supergrades": senior
master sergeant (E-8) and chief master sergeant (E-9). This
made it possible to distinguish properly between the differ-
ent levels of responsibility and at the same time provide
the necessary monetary recognition (12:27-28).

Skill levels became a prerequisite for promotion. A
strong quota management was continued by implementing a
Promotion Management List (PML) to control promotions to
grades of E-4 through E-7. Promotions to grades E-8 and E-9
became centralized in 1966.

In 1967 promotion cycles were standardized, a chief
master sergeant of the Air Force position was created, and
titles of the lowest four grades were changed to airman basic,
airman, airman first class, and sergeant (now an NCO), res-
pectively.

Centralization. In the late 1960's and early 1970's,
the decentralized promotion board system for grades E-4
through E-7 was phased out and a new system was adopted. This
new and centralized system was called the Weighted Airman Pro-
motion System (WAPS). WAPS was to fill this need for a
standardized promotion system.

Prior to 1967, the "whole man" concept of scoring was
used but had not been formally defined; AFR 39-29, entitled

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Promotion of Airmen (1967) does so:

> When evaluating airmen for promotion, promotion
> board must apply the "whole man" concept. To do this
> the boardmember must learn everything about the air-
> man that can be obtained from his record . . . duty
> performance, breadth of experience, supervisory and
> leadership ability, seniority, education, favorable
> communications and decorations. These factors,
> however, must not be given a predetermined score. .
> . . Rather, the boardmember should consider all the
> factors together to arrive at a mental picture of
> the whole airman. Only then should he assess his
> record [12:41; 41:1-2].

Airmen were still discontent because of small promotion
quotas, perceived inequities in the allocation of promotion
opportunities within different AFSCs, and the lack of feedback
as to why airmen were not selected for promotion. In addition,
airmen were writing their Congressmen in increasing numbers
regarding this procedure because they found no satisfactory
explanation by their boss, or even their boss' superior (12:
44-45). This spawned an investigation by the Air Force's
Human Resources Laboratory (AFHRL) and a Congressional sub-
committee (12:46-51). The Weighted Airman Promotion System
(WAPS) was the result of their recommendations.

WAPS used seven weighted selection factors: specialty
knowledge test score, promotion fitness exam score, time-in-
service, time-in-grade, decorations and awards, performance
reports, and board evaluations. Appendix E details the WAPS
criteria. This system aligns airmen in promotion priority by
grade, AFSC, and total weighted factor score. It provided a
direct feedback mechanism to those airmen not promoted, show-
ing the score received for each WAPS factor, the total score,

and the total score of the last airman who was promoted in that AFSC. This notification could be used to identify areas for improvement for future promotion cycles (12:56).

TOPCAP. In the early 1970's, it was a desire of the Office of the Secretary of Defense (OSD) and the U.S. Air Force to "provide airmen with valid and visible career objectives while providing the Air Force with a stable and viable enlisted force [12:61]." The objectives of TOPCAP are to establish a stable career configuration, provide a baseline for general mobilization, provide a visible career pattern to enhance accession and retention of high caliber personnel, and establish an integrated management system. The latter objective should provide equitable promotion opportunity for all airmen, a central process for regular and systematic progression, and a basis for purposeful application of monetary incentives (12:61).

TOPCAP depends on a force that is ideally structured based upon a total force objective. It views airmen in two categories: first-term (less than four years of active service) and career (four or more years of active service). The enlisted force was also structured by grade and skill level to meet mission requirements and provide a high level of motivation in the long run (12:62-63). Ideal promotion opportunities are specified based upon a percentage of force.

The implementation of TOPCAP policies and procedures affect an airman throughout his or her life cycle in the Air Force: enlistment, re-enlistment, retraining, promotion, and

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separation. Some of the changes were: promotion incentives
to first-term airmen entering a hard-to-fill or high training
cost AFSC; career and promotion visibility; improved standards
of living; educational opportunities; improved re-enlistment
bonuses for critical AFSCs; manageable retraining programs;
more equitable promotion criteria with equal quotas for each
AFSC; a balance of skill levels within AFSCs; high and low
year of grade tenure requirements for each grade; below-the-
zone (BTZ) promotion to E-4 program; and the adoption of
weighted factors in the senior grade promotion system (12:
64-86).

Special enlisted promotion policies are discussed by
Hall and Nelson (12). Physician Assistant (PA) programs and
the USAF Band are given as examples where unique promotion
policies have been implemented. It is noted that extraordin-
ary circumstances may warrant deviation from the normal pro-
motion policies and continual review and periodic justifica-
tion is necessary.

Summary. Although numerous changes have been made to
the enlisted promotion system since 1947, the basic policy of
promoting those airmen who have demonstrated potential for
increased responsibility has not changed. Promotion has gone
from highly decentralized and subjective to a system which
enhances objectivity, visibility, equity, and centralization.
The Weighted Airman Promotion System (WAPS) and the Total
Objective Plan for Career Airman Personnel (TOPCAP) were,
perhaps, the most effective and all-encompassing modifications

to the enlisted career progression system aimed at improving management and administrative efficiency and restoring the faith of the enlisted personnel.

Comparative Analysis

"A Comparative Analysis of Enlisted Career Progression Systems" (36) by Air Force Captains Edward A. Richter and David C. Tharp provides an examination of the classification and promotion components of the USAF, USN, USA, RAF, and civilian airline enlisted career progression systems, and compares the USAF system with these other systems. The U.S. Army was chosen for comparison as it has had experience with dual-track progression systems. The U.S. Navy was chosen as many of its aircraft systems are identical to Air Force systems. The British Royal Air Force was chosen as "our foreign allies may have the potential for providing improvements to the Air Force . . . progression system [36:10]." Finally, selected commercial airlines were chosen for comparison for two reasons: mission similarity and the following hypothesis from an Air Command and Staff College technical report that was referenced by Richter and Tharp (36:11):

> The working hypothesis is: if "up or out" is
> a viable management concept, then industry, working
> under the profit motive, would probably be employ-
> ing such a practice [17:4].

A search conducted through DTIC produced two studies considering "various aspects of the Air Force enlisted retention problem [36:15]." "Job Enrichment for the Crew Chief," by Robert D. McIntire (23), focused on the use of motivational

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theory for personnel utilization where Richter and Tharp noted that "a peripheral relationship [36:17]" exists between utilization and retention. The second study, "Military Manpower and the All-Volunteer Force" (7), by Richard Cooper of the Rand Corporation dealt not only with ". . . the ramifications of . . . moving to an all-volunteer force [36:18]," but also with manpower management. The report indicates that within skilled job areas, service members having more experience are more productive, and that just as a service member becomes most productive, ". . . current upward progression policies force people into management . . . [36:19]." The objectives to be fulfilled by the information gathered from these reports and about the different progression systems are to:

1. Identify, investigate, and analyze the current enlisted career progression *systems of the* Air Force, Army, Navy, private sector, and British Royal Air Force.

2. Provide a baseline of information for future studies (36:23).

The data about the different progression systems were gathered from several sources: Air Force, Army, British RAF regulations, and Navy manual BUPERSINST 1430.16A (49). Personal, mail, and telephone interviews with Army, Navy, and RAF representatives, and data gathered by telephone and mail from "major airlines" provided additional information.

Air Force. The bulk of the information on the Air Force progression system is from AFR 39-6, AFR 39-29, and TOPCAP (contained in Volume III of the U.S. Air Force

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Personnel Plan). The basis of the progression system is the
grade/rank structure. The grades are E-1 to E-9, with E-5 to
E-9 being NCO, grades E-I to E-3 airmen grades, and E-4 an
airman or NCO grade. Promotion to E-2, E-3 and E-4/Senior
Airman is basically on a time-in-service/time-in-grade format,
with promotions to E-4 made only when vacancies are available.
Below-the-Zone (BTZ) promotion is also possible to E-4, with
the restriction that no more than ten percent of eligible
E-3's can be nominated for BTZ promotion.

     For promotion to E-5 through E-7, the Weighted Airman
Promotion System (WAPS), based on six factors worth up to 460
points, is used. The SKT and PFE are worth a possible 100
points each; TIS - 40 points; TIG - 25 points; medals and
decorations - various amounts; and APR's up to 135 points.
NCOs with the highest scores are selected until the vacancies
are filled. WAPS is detailed in Appendix E.

     Promotion to E-8 and E-9 is based on TIG, APR, decora-
tions, and TIS, with the PFE and SKT replaced by USAFSE and
PME. Up to 450 points are subjectively added by each of the
three members of a review board. Promotions are on a quota
system for each AFSC. For promotion to any NCO grade, mini-
mum TIS and TIG times are required. For every grade there is
also a maximum TIS allowed to keep the promotion channels
open.

     Each enlisted person has a five-digit Air Force Spe-
cialty Code (AFSC). The code designates the particular job
an enlisted person does, with the fourth digit representing

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skill level. A one-letter suffix is occasionally added when different "sub-specialties" within a code exist.

The Air Force enlisted force is divided into three tiers (see Figure 3-1). Tier 1 is the Trainee-Apprentice Tier, consisting of grades E-1 to E-4/Senior Airman, whose members are primarily learning their job. Tier 2 is the Technician-Supervisor Tier, consisting of grades E-4/Sergeant to E-6/Technical Sergeant, with an E-4 serving primarily in a technical capacity and E-6 in primarily a supervisory capacity. Tier 3 is the Supervisor-Manager Tier, consisting of grades E-7 to E-9, with the tier's members serving in supervisory and managerial roles.

Navy. Three parts of the Navy enlisted career progression system are examined: the rank structure, promotional policies, and skill structure. Grade, or rank, structure is similar to that of the Air Force. The grades are E-1 to E-9, with E-4 to E-9 being NCO ranks.

Promotion to E-2 and E-3 is based on the TIG and a competence examination, although long-term enlistees may be assigned E-2 or E-3 ranks upon enlistment. Promotion to E-4, E-5, and E-6 is based on a six-factor score. The six factors are: a specialty test for each career specialty, a performance factor based on a rating form similar to the Air Force APR, length of service and service time in pay grade (LOS and SIPG), awards, and passed but not advanced (PNA) points which are points earned by being above the cutoff point on the specialty test, but having insufficient total points for

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Supervisor-Manager Tier		
E-7 Manager	E-8 Manager	E-9 Manager
Supervisor	Supervisor	Supervisor

Technician-Supervisor Tier		
E-4 Supervisor	E-5 Supervisor	E-6 Supervisor
Technician	Technician	Technician

Trainee-Apprentice Tier			
E-1	E-2 Apprentice	E-3 Apprentice	E-4 Technician
			Apprentice
Trainee	Trainee	Trainee	Trainee
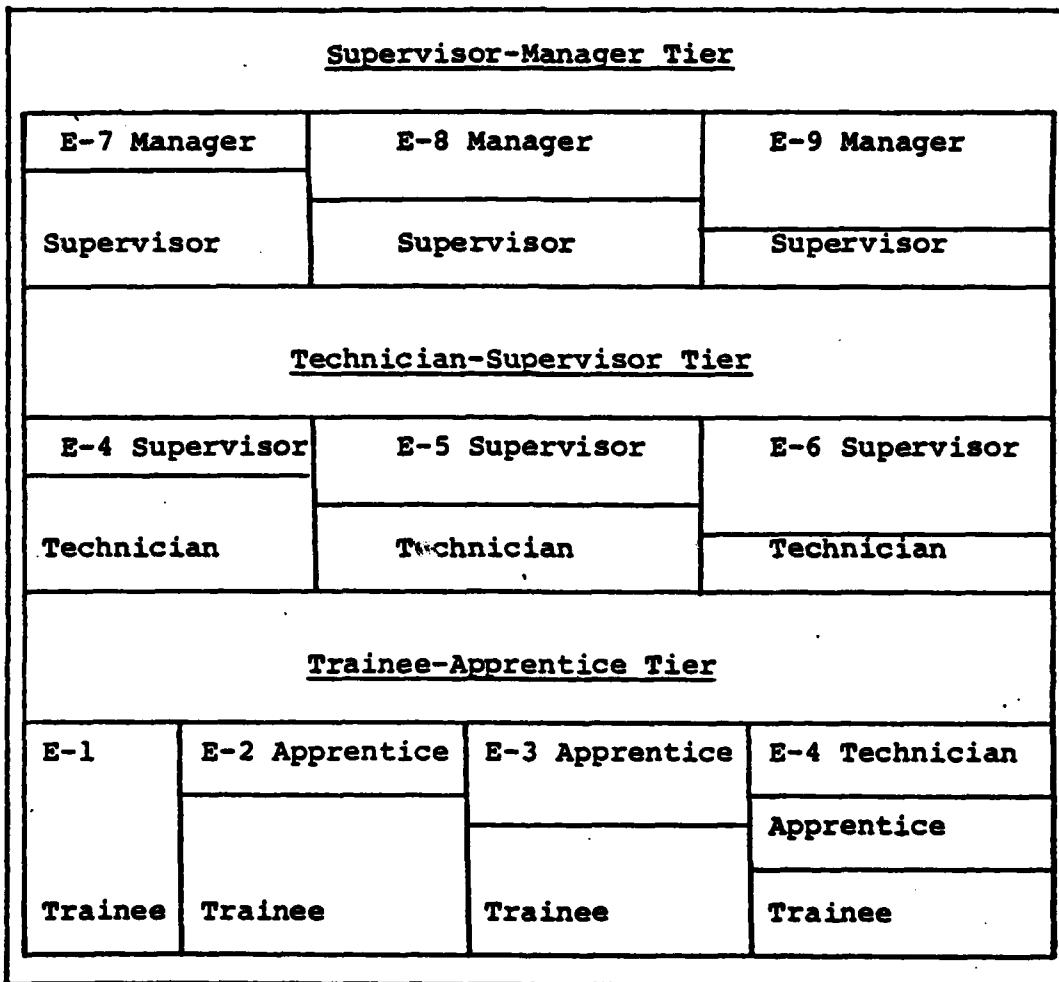
Fig 3-1.   USAF Tier Structure
(15:13)

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promotion. The highest scoring individuals are promoted until all openings are filled. For promotion to E-7, E-8, and E-9, a score based on the specialty test and performance report is used along with a commander's recommendation. The results are reviewed by a selection board, which attempts to promote using the "whole-person" concept. A person can also improve his promotion chances by transferring from an overage (rank-heavy) field with little change for promotion by passing the skill test for a new (undermanned) career field.

Career specialties are divided into six major fields: seaman, fireman, constructionman, hospitalman, and dentalman. Each of these fields is divided into one or more groups. A recruit enlists in the field containing the specialty he is going to enter. "New enlistees are normally guaranteed a specific occupational specialty [36:56]." A person does not, however, choose his career specialty until he/she is an E-3. After promotion to E-4, a symbol on the rank insignia shows the specialty field. Skill level in the specialty is indicated by rank. The specialty tests at lower ranks are technical, but by the time a person is testing for E-8 or E-9, the test includes ". . . items necessary for managers and supervisors [36:59]."

Army. The Army rank structure is composed of ". . . three basic categories: senior non-commissioned officers [NCOs], junior non-commissioned officers [NCOs] and special-ists, and privates [36:61]." Grades E-1 to E-3 are privates and grades E-7 to E-9 are senior noncoms. Grades E-4 to E-6

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belong to either of two tracks--junior NCOs or specialists.
Specialists are not considered NCOs, but are highly skilled
in their technical area. Specialists also do not normally
". . . exercise. . . enlisted command of troops [36:64]."
Interviews with Army enlisted personnel concerning policy
indicated that an E-5 or E-6 specialist was considered a
"nonleader," so it is not desirable to remain in the special-
ist track. This is also implied in Army Regulation AR600-20
(36:64; 47).

The Army skill structure is constructed from the career
management field (CMF) structure. Each CMF is divided into
subfields which are further divided into occupational special-
ties. Each specialty has a nine-character Military Occupa-
tional Specialty (MOS) code. The first three characters
identify the occupational specialty (such as "airplane repair-
man"), the fourth character is the skill level, the fifth
character is special qualifications, the sixth and seventh
characters identify proficiency in foreign languages, and the
last two characters identify an additional skill area. The
skill level in the fourth character is related to the grade.
A soldier cannot have a skill level different than the one
specified for his grade.

Promotion in the Army has some similarities to the
other services. Advancement to E-2, E-3, and E-4 is predi-
cated on TIS, TIG, and commander's recommendation, although
advanced promotion for exceptional soldiers does exist.
Promotion to E-5 and E-6 has minimum TIS, TIG, and education

requirements. After meeting these requirements, promotions are based on promotion points, with points awarded for TIG, TIS, evaluation report, skill test, awards, education, and subjective points awarded by a review board. Promotion to E-7, E-8, and E-9 is based on meeting special requirements determined by Army Headquarters (HQDA), such as date of rank (DOR), minimum TIS, and having at least a high school diploma. Once these requirements are met, a central selection board applied the "whole person" concept to select promotees.

Royal Air Force. The RAF uses a dual grade/rank structure. Occupations are divided into trade groups, and trade groups are divided into List I (technical tasks) or List II (administrative and operating tasks) categories. Both lists have grade structures roughly corresponding to U.S. pay grades E-1 to E-9. E-1 to E-4 are the basic grades; E-5/Corporal is the junior NCO grade; E-6 to E-8 are senior NCO grades; and E-9/Warrant Officer is essentially a managerial position with more responsibility than an E-8/Flight Sergeant position. With the dual rank structure of the RAF, ". . . one often sees the top enlisted grades doing actual work on the aircraft [36:92]." Normally, though, maintenance work is performed by the E-1 to E-7 grades.

For each trade in the RAF, there is a trade title, trade qualification annotations (TQA), and a job specification. The TQA is a three-part code that describes the trade in general. The first part of the code describes an enlisted

person's level of training. The second part of the code describes the type of system an airman works on, and the third part describes the particular specialty. An airman is not given a TQA until he passes a trade test with standards defined by the job specification. Two levels of skill tests are given, and passing the higher skill test is a prerequisite for promotion to E-5/Corporal.

Promotions in the RAF is based on time for E-2 to E-4, and on vacancy for E-5 to E-9. Eligibility for promotion is based on efficiency reports, promotion exams, and TIG in some cases. Reaching a given rank by a certain year is not a requirement for remaining in the service, but airmen must apply for re-engagement, which can be denied, at certain point in time.

Civilian Airlines. In the responding airlines' systems, personnel were divided into management and nonmanagement. Nonmanagement maintenance employees were apprentices, mechanics, lead mechanics, or inspectors. Apprentices have usually been with the company less than eight months. A mechanic is required to hold a valid Federal Aviation Administration (FAA) license. Inspectors and lead mechanics are required to have held FAA licences for specific time periods. Technicians may remain technicians for an entire career, with salary based on position and "TIG." Promotions are based on seniority ("TIS") and qualifications. Technicians may enter management by passing through a selection testing process. Promotions in management are based on education, experience,

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and ability. Reversion to the technician status may be allowed to unsatisfied or unsatisfactory management trainees within a six-month period without loss of pay-rate or seniority.

Survey

Captains Gary W. Pierce and Erika A. Robeson (32) constructed, implemented, and analyzed a survey questionnaire to determine the perceptions, attitudes, and opinions of enlisted maintenance personnel concerning the U.S. Air Force enlisted career progression system. After a brief overview of the current Air Force up-or-out progression policy and organizational behavior review, the research questions are developed. These questions address the perceived importance of the technician and the supervisor and their perceived status under the current career progression system. Additional questions concern perceptions and attitudes in regard to skill and experience levels, the promotion system, transition from technician to supervisor, and the concept of a career technician.

Among the enlisted maintenance career areas, that of aircraft maintenance was selected because it contains highly technical specialties. Within aircraft maintenance, the jet engine specialist, 426X2, was determined to be representative of an enlisted technical field.

Questionnaires were sent out to 750 CONUS jet engine specialists in grades E-2/Airman through E-7/Master Sergeant.

E-1/Airman Basic was omitted since the majority were still in technical school and they all had less than six months' experience. Senior and chief master sergeants, E-8 and E-9, respectively, were omitted since the definition of the Air Force specialty 426X2 jet engine mechanic contained neither of the two ranks (32:17-19).

388 questionnaires were returned, for a 52% response rate. A net result of 369 questionnaires (49%) were useable (32:25-26). This is within the normal return rate for Air Force surveys (32:26).

The actual survey questionnaire is in Appendix B, the results in Appendix C, and the statistical procedures may be found in Appendix D. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) (30). Demographic and attitudinal attributes were interpreted with subprograms FREQUENCIES and CROSSTABS.

The survey contained seven areas. First, certain demographic data were obtained from questionnaire items one through eight and eleven. Appendix C contains Tables 1 through 11, indicating the results under the heading "Demographic and Career Intent." These results indicate that "more than three fourths of the respondents were 30 years old or younger [32: 30]," 12.2% are female, 57.6% are married, 50% are on their first enlistment, 47.2% are technicians, 36% are technical supervisors, 39.7% have education beyond high school, and at least 43.8% intend to make the Air Force a career.

The next five areas of the survey are concerned with

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perceptions and attitudes in the following areas: importance
of technicians and supervisors and ease of replacement; status
(respect, value, pride); skill and experience; transition from
technician to supervisor and the promotion system; and career
technicians. These questions were randomly dispersed through
the core of the survey instrument.

Perceived Importance. 98% of the respondents believe
technicians are important to the Air Force, but only 71%
believe the Air Force thinks they are important. 91% believe
supervisors are important to the Air Force, whereas 86% think
the Air Force is of the same opinion. 68% of the first-term
airmen and 83% of the second-term and beyond do not agree
that it is easy to replace technical skills when a technician
leaves the work center. However, respondents believe the
Air Force thinks technicians can be easily replaced.

Perceived Status. "Status was viewed as how they
were regarded or respected by their peers and by the Air
Force (through its policies) [32:45]." 71% of the respondents
agreed that the Air Force regards supervisors more highly than
it regards technicians. 90% and 92% believe that good super-
visors and good technicians are respected, respectively.
"Technicians not promoted are viewed as still valuable,
though perhaps less respected [32:48]." There seems to be
some sort of struggle in the framework of "us against them"
as portrayed in the following quotation by Pierce and
Robeson: "The expression of individual pride in technicians'
abilities was much stronger than the perception of the Air

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Force's pride in its technicians' abilities [32:48-49]."

Perceived Skill and Experience. 89% of the respondents believe in today's Air Force, technicians need to be more highly skilled than ever before. Non-technician level respondents agreed at 93% (32:50-51). Two-thirds to three-quarters of the personnel agreed that technicians in the Air Force are adequately skilled and experienced. More airmen intending careers agreed with this opinion. Quality of work performed is not perceived as very high (58%). The Air Force is perceived as not encouraging technicians to get extended experience as technicians. 75% agreed that it is difficult for supervisors to retain those technical skills they no longer have an opportunity to use. Only half of the respondents reported being satisfied with the quality of supervision they were receiving.

Promotion System. Only 30% of the respondents agreed that good performance as a technician is rewarded by the Air Force. 53% agreed good performance as a supervisor is rewarded. Respondents agree that the Air Force promotion system emphasizes supervisory skills slightly more than technical skills (53% to 41%) (32:57). However, 71% agreed the promotion system does not reward technical skills. Pierce and Robeson rightfully indicate that "[whether] the Air Force loses technical ability by promoting technicians into supervisory jobs . . . was a controversial statement [32:60]." 96% of the technical and master sergeants agreed that some technicians do not want to make the transition from technician to

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supervisor. Overall, the agreement was 88%. Most agreed that some technicians do not have the ability to become good supervisors, and only 11% agreed that good supervisors are born that way.

62% with less than four years service and 80% with over four years service agreed that they cannot advance in the Air Force without becoming a supervisor. 42% agreed and 51% disagreed with questionnaire item 31 that, "I should be allowed to advance without becoming a supervisor." Less than 30% with tenure or career intent agreed, whereas approximately 54% without tenure agreed. Questionnaire item 48 was judged to be the converse of the above to check for internal inconsistency. However, "I think a technician should become a supervisor as a result of being promoted" yielded responses significantly different than expected. 58% disagreed and 33% agreed. These authors feel that the discrepancy is a result of interpretation. No one "should" become, or be allowed to do, anything "without" or "as a result of" some type of self-initiative or demonstrated performance. In other words, nobody gets anything for nothing. Almost three-quarters of the respondents agreed that a technician should have a choice of whether to become a supervisor or to remain a technician or technical supervisor.

Career Technician. "A career technician was defined as a technician [or technical supervisor] with 15 to 30 years of experience . . . rather than a supervisor [32:64]." 68-94% of the respondents agreed that there is a need for

career technicians and promotion of technicians should be
based on technical skill improvement. 66% thought good tech-
nicians should be allowed to work at their skills as long as
they wish. Overall, 30% agreed that they would stay longer
in the Air Force than they now plan to stay if able to work
as a technician or technical supervisor. 45% disagreed.
Almost all respondents enjoy working at a job using their
technical skills, but only 59% agreed that it gave them more
job satisfaction than a supervisory position. Of those 59%,
78% would rather work in a technical position if they could
receive more pay based on their job performance.

The last portion of the survey contained open-ended
questions. 59%, or 219 of the 369 respondents, chose to
express their views. The results were grouped into four
areas: promotion of airmen (vs NCOs); Weighted Airman Promo-
tion System (WAPS); supervision and the career technician;
and pay.

Promotion of Airmen. Many felt the time between pro-
motions was excessive, and the pay was not commensurate with
duties or ability. Below-the-Zone (BTZ) promotion to Senior
Airman received several negative comments. It was perceived
to be unfair in that it did not concentrate mainly on the
AFSC and job performance. Job performance was also suggested
to be the "main criterion [32:72]" for promotions from Airman
(E-2) through Sergeant (E-4), instead of time in grade or
time in service.

Weighted Airman Promotion System (WAPS). WAPS is used

for promotions to the grades of Staff Sergeant (E-5) through
Master Sergeant (E-7). Appendix E describes the details of
this system. The testing portion of WAPS was criticized most
regularly. The Promotion Fitness Examination (PFE) was sug-
gested to have less weighting than the Specialty Knowledge
Test (SKT), reflecting that individuals believe more emphasis
should be placed on job performance. The SKT does not reflect
what people know about their own career fields. Indications
of these conditions are shown in the following examples.

> People who have trouble taking a test do not get
> promoted, although they may be much better mechanics
> than their counterparts who can take a test . . . .
> I believe more emphasis should be placed on hands-
> on equipment job proficiency than on the tests
> [32:74].

> Much of the material on the SKT is seen only once
> a year, at test time, by people testing. They have
> never had any hands-on experience on the equipment
> they're being tested on [32:75].

> I work on TF39 and TF33 engines and the test(s)
> are on J57 and J79 and I've never seen either one
> of those engines [32:75].

> Test personnel on that particular aircraft or
> engine he or she may be working on at time of
> promotion, not [on] what's in Air Force inventory
> [32:75].

> I would like to see the SKT have 150 questions
> on it and the PFE 50. I think your technical skills
> are more important and used a lot more than your
> general knowledge on PFE test [32:75].

The APR system was seen to have inflated ratings and
not reflecting technical knowledge and expertise. Suggestions
were made to force ratings through quotas or percentages and
to somehow ensure an average performing individual would
receive an average rating. Some individuals thought TIG and

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and TIS should be eliminated from WAPS and line numbers should be based on test scores instead of TIG. A few stated that decorations should receive less weighting or be removed from WAPS. Several people suggested that a screening process be used to determine who should compete under WAPS. Additional points for professional military education (PME) or off-duty education were suggested.

Supervision and Career Technician. Following are comments on promotion into supervisory roles and quality of supervision, excerpted from the survey by Captains Pierce and Robeson (32:77-82):

> I don't know about other shops or career fields, but in my shop you are not rewarded for anything. There is no morale at all. We come to work, do our jobs and leave with no recognition for a good job. I think that if there was more recognition for jobs well done it would increase the morale and the quality of work would be better.

> Supervisors need to learn to talk to their people more, rather than just barking out orders. Everyone likes to be congratulated for a job well done and will respond positively to this kind of treatment. We are human beings and not machines.

> I feel I do an excellent job as a jet engine mechanic. I know the engine well, I'm enthusiastic about my job, I work hard and try to learn more each day. And yet nobody cares. As a new SrA, I'm treated like a know-nothing. I'm told what to do, but not as an adult. Our supervisors think they have to tell us every little thing. . . . When I was new in the service, I was proud to be in the USAF, proud of my specific job, and proud of each accomplishment (including "Airman of the Month"). Now I'm fed up and can't wait to get out. I want to be treated like an adult and respected in accordance with the quality of work I put out.

> I know the need for supervision on the job is mandatory to get the best results; however, if a man/woman really doesn't want the responsibility he/she

will hurt the people under them more than help. A supervisor is really the one that influences a person to stay in the Air Force or get out. I blame poor supervisors for the reason most people leave the Air Force.

The lack of communication between supervisor and worker is causing a very serious problem within my work section.

I feel that if the Air Force was to monitor its supervisors and personnel in the management levels more closely, that the service would then improve its environment and attract more of its first term technicians to reenlist. Why should I remain in the service and work for an organization that shows no recognition for doing a good job, and be held at the mercy of a supervisor and his whims?

Persons who have the desire to be supervisors would be a more successful supervisor, than a person who is forced into it.

It seems to me that as soon as you sew on Buck or Staff that you are placed in a supervisory position. I don't feel that sewing on another stripe should qualify you for a supervisory role.

I feel that if you are better qualified at technical skills that you should hold a position where you teach the new airman the technical skills required for the "wrench in hand" work, while someone else who prefers the "pencil in hand" work, performs the supervisory role.

I would very much like to see a "technician" shred-out in each skill. I have 12 years TIS and enjoy working on jet engines because I have an in-depth understanding of each system due to 6 years FTD [Field Training Detachment] experience. To put me behind a desk is worthless; the Air Force will lose my technical skill and gain a belligerent supervisor.

Some people have excellent working supervisors when they have only 3 or 4 people to worry about and not a whole shift, and when they are burdened with being a supervisor when they'd rather be bending a wrench they lose the want to stay in when they know they're going to be supervisors and not technicians. I believe the Air Force working structure should be split with technicians, technician supervisors, being able to stay in 20 or 30 years, still advance in grade, and not have to become supervisor(s) or managers unless they want to.

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I think the Air Force would definitely be more
(a)head if they let people be technicians who want
to be and certain qualified people be supervisiors.
Some people make great technicians but lousy super-
visors. I personal(ly) would like to see some
specialist grades with comparable pay for job done.

Many people in supervisory positions are incompetent.
I know of many cases within my own career field where
people have memorized SKT and PFE answers and were
promoted, but still these same people could not get
along with their workers or actually manage a large
branch. Some of these people were marginal as tech-
nicians also. In cases where the supervisor failed,
they resorted to using threat or bullying tactics to
prove they were the superior person. . . . Most of
the time a person who is considered a good supervisor
is a person who has no feelings for his workers.
Our commanders and maintenance chiefs are largely
responsible for that. Quote the reg and throw them
in jail seems to be the attitude of many supervisors
today. We can't keep good people anymore and a lot
of it is because we have too many unqualified super-
visors trying to over supervise too few mechanics.

If the managers took the time to teach technicians
what their duties would be when they get promoted,
they wouldn't have this fear, at least not all of
it. But when the technicians have to go and do it
by trial and error it gets frustrating. I know;
it's the way I learned. Still, I suppose some people
would like to stay technicians so I guess there
should be some provision for them, because it would
be nice to know that you have all that experience
working for you.

I feel that, although supervisory positions are
vital to the overall organization function, not
enough emphasis is being placed on the technical
skills. There are good technicians who are not
necessarily cut out to be supervisors. It seems
that unless they progress to the supervisory level
they are either separated or classified as "problems
or non-progressive." Some people are content to be
very good at what they are doing without taking over
a section or shop.

Under the current promotion system if a member
performs well at his job and on his WAPS test he is
promoted into a supervisory position. He may not
want to be   supervisor or enjoy this type of work,
which caus   him to perform poorly. This affects
all of the people working under him. . . . I would

like to see a parallel promotion system in which you could achieve rank as a technician up to the technical supervisory level, (or) as a manager.

TOPCAP has forced an awful lot of talent out of the Air Force, E-5, E-6 mainly. I know of many who were satisfied doing their job and supported the mission. They were respected by their supervisors and subordinates alike, but because of Air Force policy they were forced to leave. How do you think the civilian companies could operate like that--having an unskilled worker replaced a skilled employee because he did not make foreman?

I believe that the Air Force is currently stuck on the idea that all experience must eventually convert into supervisory/management positions. I feel that this experience is lost to (the) Air Force. I believe the Air Force would benefit more by letting experienced personnel choose between supervisor/ manager positions, or technical supervisor positions, as befits their capabilities, and then promotion test them by that position. I realize that certain positions have to be filled but I feel that there are enough people who want both areas to keep these positions filled.

I feel that one should be allowed to advance without becoming a supervisor. People have a tendency to do a better job at that which they want to do, and some people don't want to be a supervisor. Thus we have bad supervisors. Now 100% of the people who make the USAF a career will, at one time or another, be a supervisor. Only about 30% even with good training will be good supervisors, and that's what we need-- good supervisors. Bad supervisors train bad supervisors. The impact that supervisors have on the working technicians is too important to be given to anyone with three stripes and a pen. Supervisors can control everything from reenlistment to morale. Better supervisors can cut down the need for more personnel by using all of our resources to (the) maximum. There is not nearly enough emphasis placed on the need for good supervisors, the training of good supervisors, or the value of good supervision. There's not an engine shop in the USAF that couldn't use a 15 or 20 year technician. Experience is probably the one most important factor in our concern for our reenlistments vs. our big turnover rate. Look how much experience you lose from an 8-year SSgt or 12-year TSgt. If they could be just technicians and not worry about everybody else maybe we could retain some. The Army had hard stripes and specialists, not a bad idea.

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<u>Pay</u>. Several respondents commented on their dissatis-
faction with the pay for the requirements of the position.

> Most of the problems that the Air Force has have to
> do with money. I reenlisted for SSgt. I think if
> things don't get better I will get out. I can't
> live on less than $7,000 a year and hold the respon-
> sibilities I hold. We can't attract the people with
> the intelligence it takes to work on the highly
> complex systems we have today. The only way you
> will be able to is to pay a living wage.

> It's almost to the point where even if an individual
> wants to make a career out of the Air Force he/she
> has to get out to support his/her family. For
> example, I'm a staff sergeant with 6 1/2 years of
> service and I have been receiving roughly $100 a
> month in food stamps since my return to the states
> almost two years ago.

> Most NCOs today don't leave the military because of
> nonrecognition or promotions but because the pay
> isn't worth the effort. Any idiot can work for
> minimum wage and still get a cost of living increase
> at the end of the year. I think of separation from
> the Air Force not because I don't like it, in fact
> I do, but it just isn't feasible or monetarily sound
> to do so [to stay].

Current System

"An Evaluation of the Current United States Air Force
Enlisted Career Progression System and Force Structure," by
Captains (USAF) Ronald J. Chapin and Luis Suarez (6), is an
examination of the present Air Force enlisted progression
system with four specific objectives in mind:

1. To add to the existing information base for the
    final thesis effort.
2. To discuss TOPCAP objectives, concepts, and goals.
3. To describe and evaluate the enlisted force struc-
    ture and personnel management system and gain an
    understanding of career progression objectives.
4. To analyze the TOPCAP model structure and . . .
    to determine whether TOPCAP objectives are
    being met [6:10-11].

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The information to meet these objectives and answer the research questions was primarily gathered from HQ USAF, AFMPC, and the Total Objective Plan for Career Airmen Personnel (TOPCAP) Office of Primary Responsibility.

The first subject discussed by Chapin and Suarez is Air Force personnel management. Air Force personnel policy is based on ideas that lead to fulfilling manning requirements by maintaining a flexible and effective force with a core consisting of highly skilled, highly motivated, selectively recruited career personnel (6:18; 43:1-1). To maintain this force, the personnel management system, according to Chapin and Suarez, "must be responsive to . . . [expected] environmental conditions [6:18-19]."

> For example, we can be assured that future technology will increase in complexity. Consequently, we must attain, train, and maintain a personnel force that is abreast of technological advances and proficient in their use. . . . We know that standards of living increase as requirements for skilled personnel increase, and as we strive to sustain the force in an all-volunteer environment, we must provide incentives and entitlements comparable to those in the private sector in order to remain competitive for the available personnel resource [6:19; 43:1-1].

Air Force personnel management philosophy is based on the Total Force Policy, Management By Objectives (MBO), and the Personnel Life Cycle. The Total Force Policy determines the "optimum" force structure by examining the different personnel components of the force. MBO is a method of determining objectives the force should meet by first defining eleven concepts, such as flexible force, involved with the

force structure. Forty-four goals are evolved from the concepts and ". . . describe the configuration of the desired force [6:20]." Specific objectives are then determined to support the goals throughout the personnel life cycle.

The Personnel Life Cycle is composed of five phases. The first phase is procurement with objectives

> . . . concerned with factors such as: the satisfaction of total airman end strengths both currently and in the future, and the establishment of selective recruitment and training requirements to meet standards [6:25; 43:4-11].

The second phase is education and training; and the objectives of this phase are

> . . . generally related to instruction in military subjects or in a specific . . . specialty. The emphasis . . . is on replacing the loss of skills . . . and . . . reducing the costs involved . . . [6:26; 43:4-3 to 4-4].

The third phase of the cycle is utilization, wherein job requirements for missions are identified and the necessary abilities determined. The members of the "airman resource" are distributed as required, and individuals are given opportunities for ". . . professional and managerial growth . . . to satisfy the needs of the Air Force and . . . personal desires . . . [6:27]." Objectives in this phase deal with: determining education, experience, and training required for jobs; distributing the necessary personnel as equitably as possible while providing maturity and leadership experience; and providing career development patterns to better utilize the airman resource (6:26-28; 43:4-5 to 4-7). The fourth phase is sustainment, with activities and objectives designed

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to maintain the airman resource by evaluating such areas as: promotions, assignments, and retentions; establishing promotion controls; providing financial compensation; and recognizing achievement and providing opportunities. The fifth and final phase is separation and retirement, which deals with maintaining the desired personnel and performance levels.

Chapin and Suarez consider Air Force personnel policy and the concepts upon which policy is judged to be "rational and sound." They also, however, consider the "lack of flexibility in the enlisted career progression system for highly trained technicians . . . a glaring weakness in the system . . . [6:31]." This weakness is to force skilled technicians to leave the Air Force or become managers or leaders, without retaining and using their skills, and perhaps producing frustration in those who want to be technicians but can't be, or frustration in those who become managers without management capabilities.

The second area covered by Chapin and Suarez is an examination and analysis of the force structure models on which TOPCAP is based. TOPCAP's main purpose is to develop and maintain an enlisted force of the required experience and skill (6:43). To achieve TOPCAP's objectives, seven models are used.

The first model is the Skill Projection model, which develops manpower/skill requirements. The second model is the Objective Force model, which determines how many career 5-skill-level personnel are needed by career progression

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group and years of service. The third model, the Airman Force Steady State model, provides a "best" long-range distribution of personnel by grade and years of service, with an optional output of cost estimates for each of the five phases of the Personnel Life Cycle. The authors consider this model to be limited, as the influence of promotion policies on the model is limited. The fourth model, the Promotion Flow model, is used to compare the present force structure with the desired force structure and determine if present promotion policies are leading to TOPCAP objectives. The fifth model, the Airman Skill Force model, is designed to provide objectives and guidelines for each career progression group. Model 6 is the Airman Force Program and Longevity model, which projects changes in future airman strength total to produce the Airman Force program. Last is the TOPCAP Grade Structure model, designed to provide "best" skill level/grade structures in line with TOPCAP objectives.

To determine whether TOPCAP objectives for the force structure are being met, Chapin and Suarez statistically analyzed retention and force level information obtained from AFMPC. The reenlistment rates obtained were for six indidivual AFSCs, the Logistics field, Maintenance field, and the Air Force overall. The rates were divided into groups of first-term retention, second-term retention, and career retention. First-term retention data in the computer technician area was deleted because the rates were well outside the average range. It was concluded that the data for 1973-1980

was representative of the Air Force. The authors concluded that first and second term retention rates were close to TOPCAP objectives, but that career retention rates need to increase dramatically.

The final area covered by Chapin and Suarez is a discussion of subjects that could affect the future enlisted force structure, and overall force structure planning considerations. The first subject, airman manning ceilings, indicated that percent-of-force manning ceilings aided an alarming decline from 1973 to 1980, in both the overall force level and critical skill retention. Force structure modernization programs have, since 1976, helped reverse this trend. The next subject studied was first-term attrition. The high attrition rates (shown in Table 3-1) will cause a need to recruit a larger number of airmen with a corresponding loss or waste of training dollars and productivity. The third subject considered is the experience profiles of the enlisted force. The profile indicates TOPCAP is stabilizing the enlisted force levels. Logistics and maintenance fields are very close to average in Air Force experience. The final subject covered and related to the future force structure is length of enlistment. A study (45) indicates that more emphasis should be placed on recruiting six-year enlistees to fill high training cost, hard to fill AFSCs, while maintaining options for two, three, and five-year enlistees if force considerations alter.

In the planning area, long-range planning and aircraft

TABLE 3-1

First Term Attrition Trends
(Through Three Years of Service)
[6:101; 39]

	Entering Years								
	71	72	73	74	75	76	77	78	79
Male %	21	26	30	31	30	26	26	27	27
Female %	46	39	34	36	33	30	30	29	28

maintenance manning retention are examined. Long-range planning considerations, e.g., expected increasingly complex technology and lower education levels, guided Air Force planners to list five objectives (14), two of which Chapin and Suarez considered basic to the six-thesis effort:

1. Motivate and retain high quality individuals possessing critically needed skills to insure effective AF mission accomplishment
2. Employ people (after training) to the maximum of their capabilities and desires consistent with AF mission requirements [6:106-107; 14].

In aircraft maintenance manning retention, the authors view present trends as indications of a shrinking manpower pool and an increasing competition with civilian demands for personnel; therefore, increased retention of technicians is vital (6:106-109).

Alternative Systems

"An Exploration of Alternatives to the Current USAF Enlisted Career Progression System," (15) by Terry Hiatt, First Lieutenant (USAF), and Wayne Nunnery, Captain (USAF), is an analysis of Army, Navy, Air Force, Royal Air Force, and

civilian airline career progression systems. There are
analogies between this thesis and the one by Captains Richter
and Tharp (36); however, this thesis provides an overview of
the Air Force enlisted career progression system by producing
an element breakdown in terms of structure, advancement
(progression), compensation, and location/commitment. The
Army, Navy, RAF, and civilian airline systems are then com-
pared and analyzed in the same manner. Three alternatives to
the present USAF system are then briefly developed and criti-
qued. Table 3-2 shows the elements of the career progression
systems.

TABLE 3-2

Breakout Format of Alternative Systems
[15:9]

Structure	Advancement
Tier	Identifiable Progression
Track	Time in Grade
Skill Level	Time in Service
Grade	Up or Out
NCO	Grade Stagnation
Non-NCO	Evaluation
Training	
Compensation	Location/Commitment
Pay Related to Grade	Relocation Options
Pay Related to Skill Level	Service Contract
Pay Related to Seniority	

The Air Force career progression system is analyzed
first by structure. The structure is composed of three tiers:
Trainee-Apprentice (E-1 to E-4); Technician-Supervisor (E-4
to E-6); and Supervisor-Manager (E-7 to E-9), as shown in
Figure 3-1. The authors feel that "the success of TOPCAP and

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the tier structure . . . is one cause of the technician/ experience level shortage . . . [15:14]." The progression system is single-track, as explained in Comparative Analysis (36). Skill level and rank are closely related, as seen in Table 3-3.

TABLE 3-3

Air Force Grades Per Skill Level
[15:16]

Skill Level	Grade	Duty
1	E-1	Trainee
3	E-2/E-3	Apprentice
5	E-4/E-5	Journeyman
7	E-6/E-7	Supervisor/Technician
9	E-8	Superintendent
CEM	E-9	Manager

Training begins with a six-week basic training course, followed by technical or administrative training. Follow-on courses in the airman's specialty, on-the-job training, and career development and broadening round out his education in the course of his career.

Advancement through the ranks is based on TOPCAP (44), WAPS (Appendix E), and other factors as explained in the History (12) and Comparative Analysis (36) theses.

Compensation is base pay plus other pay. Base pay is determined by grade and TIS. Housing allowance, hazardous duty, and other such payments can be lumped in an "other"

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category. These other payments are a small portion of an airman's income. The amount of base pay and the base pay determination is what requires ". . . some junior airman with families to qualify for food stamps [15:22]," and is why

> . . . an E-4 aircraft engine mechanic with up to
> one year of training receives the same pay as an
> E-4 clerk typist with six weeks administrative
> training [15:22].

In the location/commitment area there are two programs --Base of Preference (BOP) and Joint Spouse--to enhance retention. BOP gives an airman the chance to choose a base or an area they would prefer to be assigned to upon reenlistment. Joint Spouse provides for assignment to the same base for couples in which both members are active duty. Neither is completely guaranteed.

Structure. The Army, Navy, RAF, and civilian airlines are analyzed in terms of structure. The Army has a three-tier system, with a dual track arrangement for E-4 to E-6 as explained in the Comparative Analysis (36). Navy also has a three-tier promotion system, composed of an apprentice (E-1 to E-3) tier, technician (E-4 to E-6) tier, and supervisor (E-7 to E-9) tier. The RAF has a four-tiered system, as explained in Comparative Analysis (36).

Civilian airlines are dual-tiered, consisting of a nonmanagement tier, divided into four subtiers; and a management tier, divided into seven subtiers, with the bottom two subtiers maintenance foremen and supervisors who may or may not have been technicians.

Tracks. The Army has a dual-track system for E-4 to
E-6, as explained earlier, and single-track otherwise. The
Navy has a single-track system, with six possible fields of
specialties and a six-factor promotion system, as explained
under Comparative Analysis (36). The RAF has dual-track
system: a technical track and an administrative/operations
track. Civilian airlines have a single track; technicians
advance from apprentice to mechanic.

Grade. The Army and the Navy have E-1 to E-9 grades,
with E-4 and up the NCO grades. The RAF has equivalent E-1
to E-9 pay grades for the technical track, but no E-4 or E-7
equivalent for the administrative track, with E-5 and up the
NCO grades. Civilian airlines have four grades for techni-
cians (apprentice, mechanic, lead mechanic, and inspector)
used as pay grades and to ". . . identify the type or level
of work expected . . . [15:39]."

Skill Levels. The Army has five levels corresponding
to E-1 to E-4, E-5, E-6, E-7, and E-8/E-9. The Navy has nine
skill levels, one for each grade. The RAF uses trade qualifi-
cation annotations (TQA) as explained in the Comparative
Analysis (36), with three skill levels: "qualified" (Q);
"meets minimum post-graduate training requirements" (T); and
"has special skills" (X). Civilian airline technicial skill
levels correspond to the four pay grades, corresponding to
the four non-management subtiers, and are based on the number,
type, and length of time Federal Aviation Administration
licenses are held.

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Advancement through the ranks is explained in Comparative Analysis (36). Army, Navy, RAF, and civilian airline progressions are variously based on TIS, TIG, training, special skills, available slots, and other factors. The U.S. military systems have maximum TIG allowable, and the RAF has a requirement of applying for reenlistment, to allow "new blood" into the system and to prevent personnel from "stagnating" in a low grade.

Compensation. Base pay and allowances plus tax advantages of nontaxable allowances is covered next. Hiatt and Nunnery (15) claim that, in real terms, military pay was less in 1980 than in 1973, and much lower than DoD or commercial civilian pay. Base pay is designed so that lower grades do not receive more pay than those in higher grades with the same length of service. Basic allowance for subsistence (BAS) and basic allowance for quarters (BAQ) provide nontaxable "extra" pay to help with living expenses. Proficiency pay and reenlistment bonuses aid in retention of skilled personnel. The RAF military pay is linked to pay ". . . in similar skills in the civilian economy [15:78]." Pay is based on both rank and complexity of the trade. Civilian airline pay is determined by agreement between the airline and the union. Hourly rates are based on position and, for the mechanic and apprentice positions, based also on time in that position.

Location. Only the Army and civilian airlines are examined. For the Army, certain critical areas can provide a guaranteed assignment, otherwise, you go where the Army

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wants you. For civilian airlines, a technician about to be
laid off can relocate to another location or put his name on
a waiting list of facilities with no openings.

Commitment. Commitment is a length of service contract.
Army contract lengths are from two to six years, with the
Army's option to renew at regular intervals. Soldiers must
normally fulfill their commitment before being discharged.
The Navy has a similar arrangement, with a first enlistment
of four to six years, and three to six years for every enlist-
ment thereafter. The RAF has an initial enlistment of four
years, then "reengagement" must be applied for at the sixth
and ninth through fifteenth years. Civilian airline contracts
are not directly with nonmanagement employees, but through the
union.

Hiatt and Nunnery conclude with three suggested USAF
career progression system modifications. The Modified Tier
Structure would allow a new enlistee to begin technician work
as an E-3 instead of E-4, and allow an E-7 to do some tech-
nical work. This could cause a perceived increased supervi-
sory/management load on the E-8 and E-9 grades. The Modified
Pay Structure would base an airman's pay partly on rank, but
mainly on job skill level. This would aid in retention of
skilled, experienced technicians. The third suggested modifi-
cation is a Dual Track System. This would divide all Air
Force skills into technical or administrative categories. In
this case, technicians would compete with technicians for pro-
motions, and separate promotion criteria would be developed

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for each track. Certain technical areas which presently must fill administrative positions from within would no longer do so, thus freeing technicians to use their skills and allowing administration personnel to specialize into an area such as aircraft maintenance administration. This system is not intended ". . . to separate technicians from their NCO or supervisory duties [15:90]," or to change his/her Air Force obligation.

Related Research

Two separate searches of DTIC material yielded over 30 reports related to this thesis. Of these reports, approximately one-third merited further study. After elimination of material not closely related to this thesis, six reports of interest were left. The general information in five of these reports is covered elswhere in this thesis. The one report left is summarized below.

"The Relationships of Attitude Factors to the Career Decisions of First Term Military Members" (16) is a study of factors affecting the decision whether or not to make the military a career. Authors Hughes and Sweney review characteristics, such as age, education, and race, of the military. These characteristics, along with organizational theory and a brief study of foreign and domestic experiments in satisfying military members, show that maintaining manpower levels (especially with an all-volunteer force) in an increasingly technically sophisticated arena requires incentivizing by

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methods previously not used by the military. The authors
then examine the results of a survey of 154 officers and en-
listed men (Second Lieutenant to Captain and Airman to Staff
Sergeant). The survey was used to identify some factors that
strongly affect career intention. Two working hypotheses
were used:

> The first hypothesis is . . . the reasons for
> returning or separating from the military are signi-
> ficantly different between officers and enlisted
> men. . . .
> The second hypothesis is . . . the objections to
> an Air Force career voiced by most airmen are related
> to Air Force policies rather than dissatisfaction
> with (one's) job [16:26].

The first hypothesis was found to be true. For example,
officers were perceived as receiving pay and benefits close to
that of their civilian counterparts, whereas enlisted per-
sonnel were perceived as receiving much less than comparative
pay and benefits.

The second hypothesis, according to the data, was also
true. "Mickey Mouse [16:51]" regulations and policies, dis-
tribution of work, inaccuracy of performance reports, and
many other factors under the label of "career irritants" in-
fluenced the decision not to make the military a career more
strongly than job dissatisfaction.

The authors conclude with the observation that the
military must improve retention of capable individuals, other-
wise the military ". . . may find itself full of individuals
of marginal abilities . . . [16:62]." Four areas of improve-
ment are suggested. The first area suggested is enlisted pay,

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which was perceived as not being comparable to the pay of equivalent civilian positions. The second area of improvement is the APR/OER system with its highly inflated ratings. The authors suggest using a three-choice rating system: promote, do not promote, and promote well ahead of contemporaries, with "documentation" required for the last two ratings and most individuals falling in the promote rating. (However, the authors do not state what their "documentation" would be, or how to verify it.) The third suggestion is to remove the job irritants--requiring short hair, living in barracks, and unnecessary inspections--which airmen cite as more deterministic of leaving the Air Force than other factors such as not perceiving the Air Force to be a rewarding and challenging job (16:61). The final area suggested is improvement of the military image. The authors suggest keeping abreast of the wants and needs of today's youth, and providing flexibility in policies to meet these wants and needs (16:62). It is noted that these suggestions do not offer any concrete implementations.

Organizational Behavior Review

A literature review reveals that employee turnover is expensive, costing American industry--and taxpayers--billions of dollars every year. Financial costs can be classified as direct (additional fees for recruitment and administration), and indirect (the marked decrease in productivity as replacements require training time to reach adequate levels of job

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performance). Human costs are psychological and caused by
people who do not fit into an organization. Before leaving
the organization, many unsatisfied workers upset the morale
of more contented employees, and antagonize customer, client,
and community relations (20:17).

Labor, management, and psychology journals were re-
viewed to provide an understanding of the behavioral aspects
of employee turnover and career progression. Employee turn-
over is the ultimate form of withdrawal behavior in organiza-
tions. Turnover may be viewed as voluntary or involuntary.
"Voluntary turnover is initiated by the member, whereas in-
voluntary turnover is initiated by forces other than the
member [48:1]." J.L. Price advocates the necessity to con-
sider employees who transfer within the organization as
turnovers (34:63). This is particularly important to this
paper because the required transition from technician through
manager may be considered internal turnover.

Allen Bluedorn (1978) conceptualized a taxonomy of
turnover which consists of a cross-classification of two turn-
over dimensions (4). The two turnover dimensions are:
direction of movement across the organization's membership
boundary (in or out), and whether this movement is initiated
by the member. Models of this type have been theorized and
empirically tested for validity. William H. Mobly has done
considerable study with employee turnover (25; 26; 27).
Mobley et al. (1978) developed a fairly comprehensive model
portraying the perceived thought patterns leading to turnover.

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The steps developing from job dissatisfaction include thoughts about quitting, the intention to search for other jobs, the perceived availability of other jobs, the intention to quit, and the act of quitting. A strong positive relationship (.49 correlation) was found between the intention to quit and turnover (26:10-18; 27:408-414). Marsh and Mannari (22) point out that a desire to leave may not coincide with the opportunity to leave. This may be especially applicable pertaining to the Air Force enlistment obligation requirements.

George Farris (1971) conceptualized a model of turnover which suggests that job change is based on multiple factors (9:311-328). These factors are concerned with the perceived ease and desirability of turnover, present degree of job involvement, present job performance level, opportunity costs of perceived rewards, and other individual and group characteristics. His model suggests that intent to remain is based on perceived behavioral and environmental factors. It also suggests that some degree of job satisfaction must be present to make a job attractive enough to remain.

Although many early studies concentrated on the effects of job satisfaction on performance, job satisfaction is consistently and inversely related to employee turnover (2; 25; 33; 50). Satisfaction is a result of the individual's rewards matching the individual's perceptions of what is fair and equitable (2). Porter and Steers examined job satisfaction and turnover in 60 studies and concluded that a negative relationship was consistent and that job satisfaction was an

indicator of all forms of employee withdrawal (33:608-609).

Employee turnover results from a multitude of factors. People leave the organization because they are dissatisfied with the work itself, the reward structure, inadequate managerial practices, advancement opportunities, or a combination of numerous behavioral, psychological, and environmental factors.

Ray Hackman (11:153-154) classifies individuals in three categories: closure seekers, responsibility seekers, and instrumentalists. These categories describe ways people receive satisfaction and motivation from their work. Closure seekers develop a specialized competence in a skill with which they identify. If they have been trained in a certain area, they attach a prime importance to that job and all else becomes secondary. Closure seekers are task-oriented individuals, expecting to retain their technical identification throughout their careers. "Responsibility seekers perceive their training, even in a technical area, as preparation for supervision and management [32:13]." Their interpersonal skills are placed above their technical skills. Instrumentalists view work as a means to an end. Compensation received for work allows the individual to enjoy other facets of life. Instrumentalists are likely to be involved with a highly specialized skill.

Two types of these individuals, closure seekers and instrumentalists, would be most satisfied if allowed to remain in a technical skill area with daily applications.

Responsibility seekers would be most satisfied if promoted
to management positions (the current policy of the Air Force).
Hackman indicates that less than one-quarter of the indivi-
duals who initially enter technical areas are truly responsi-
bility seekers. This would indicate to these authors that
more than three-quarters of the Air Force enlisted mainten-
ance technicians would desire to remain technicians or
technical supervisors throughout their careers, and the survey
results shown in this thesis support this statement.

Louis B. Lundborg (21) wrote an extremely applicable
article in March of 1980. Written to corporate executives,
the article addressed the feasibility and applicability of
promoting an individual from a technician to a manager posi-
tion. A manager's job "is to manage--not just to do things
himself, but to get things done [21:142]." Lundborg discusses
some differences between technicians and managers. One of the
key differences is perspective.

> The very nature of the technician's job usually
> demands that he focus on one problem at a time . .
> . one piece of the jigsaw puzzle. The manager's
> job requires him to be constantly aware of all the
> pieces of the puzzle. . . . Both of these are valu-
> able and essential functions in a company's
> operation [21:142].

He further states:

> Your top people may appreciate technical compe-
> tence more than you realize, but they don't
> confuse it with managerial competence, which is
> a different animal. The same person may happen
> to have both, and certainly the technician can
> learn to improve his managerial skills if he has
> a genuine interest in doing so. If he hasn't, it
> could be a disservice to him as well as the company

to promote him to a managerial position <u>only</u> as a reward for his technical contributions.

Joseph R. Nevotti discusses factors to determine whether an individual should be moved into a management position (28). The factors include: what's important in terms of success and job identification; information usage in terms of perspective and degree of planning; social style in terms of personality and character; and personal characteristics in terms of outlook on the career. He believes in transferring those individuals into a management position only if they really want the job. The individual should be considered for a managerial position based on management skills, motivation in the current and potential position, and desire for the managerial position.

Interview/Survey Overview

This section describes the findings resulting from interviews of a small population of enlisted maintenance personnel assigned to the 4950th Test Wing Avionics Maintenance Squadron, Wright-Patterson AFB, Ohio. Twenty-four individuals voluntarily participated in a survey/interview sequence to provide the authors of this final thesis a personal perspective of the attitudes and opinions of the enlisted maintenance force. The findings are presented here. The applicability to the total enlisted maintenance force and a comparison to the previous survey by Pierce and Robeson (32) will be presented in Chapter IV.

To provide an initial parallelism to the previous survey, the original survey instrument was administered to the

24 volunteers from the 4950th TESTW AMS. This also acted as a "mind jogger" to allow them time to think of comments and suggestions for the interview period. Actual time between the survey and the interview was less than one week in all cases.

Interview Findings

The interview itself was conducted in a private setting at or near the normal working environment. An interview guide (see Appendix F) was used to maintain a degree of structure and consistency. All of the interviewees were males because no females were working in any of the shops. The results of the interviews are categorized according to the two rank structures: E-3 and E-4; and E-5 to E-7. There were no E-1, E-2, E-8, or E-9 personnel interviewed.

Question 1: "Do you plan to make the Air Force a career?" In the first rank structure category, E-1 through E-4, 33% stated they would probably make the Air Force a career; 40% stated they would not, and 27% were undecided. The second rank structure category, E-5 through E-9, yielded results of 67% affirmative, 11% negative, and 22% undecided.

The particular reasons given for making the Air Force a career included "the current economic situation," "similar pay (to civilians), stability, job satisfaction," "likes life-style, moving around, and advancement potential," "benefits available for me and my dependents," "training and experience," "(the electronics) are comparable to civilian equipment." Reasons given for not choosing an Air Force career were "pay,

rules, regulations, hair, uniform . . ," "moving around," and "just not satisfied."

Question 2: "Are you a Technician, Technical Supervisor, Supervisor, or Manager?" These terms were differentiated as shown in Appendix A, the Glossary of Key Terms. E-1 through E-4 classified themselves as technicians. E-5 through E-9 classified themselves as "technical supervisors 85% of the time and supervisors 15% of the time."

Questions 3 and 4: "Which would you like to be?" "Why?" Practically all of the people interviewed said they would like to be a technical supervisor. Only one Airman First Class stated he would rather be "just a supervisor, with no hands-on technical work." Another Airman First Class commented that he "would be held back if placed behind a desk," implying he wouldn't be able to reach his full potential (or desire) in the technical field. One Sergeant "hates paperwork. . . I just wish I could be a technician and work on the electronics and let somebody else (like the supervisor) fill out the forms."

Question 5: "Do you think the technicians you work with have the technical proficiency corresponding to their rank?" (For instance, is a technician with higher rank able to perform a job better than a technician with a lower rank?) Why? In general, the feeling was that rank, along with experience in the job, indicated an individual was more proficient on the job. However, there is reason given for some skepticism. Cross-trainees often have a higher rank and less

experience and proficiency than a lower-ranking individual. A large proportion of those interviewed stated that promotions were too often a "result of the ability to take [WAPS and SKT] tests" and not dependent on whether you could "turn a wrench." One Technical Sergeant insisted that "book learners are promoted faster than appliers or doers."

Questions 6 and 7: "Do you think the Supervisors/ Managers are capable of performing the Technicians' jobs?" "Should they be able to?" "Do you think they want to?" The replies from these questions indicated that the supervisors and managers have the basic knowledge of the system, but have forgotten details through lack of recent experience or were not trained on the present equipment. A Master Sergeant stated that:

> I try to sneak some maintenance in once in a while without taking jobs away from the technicians. The equipment has changed some and I get a little rusty. There's not much time to do it with my other work, though. . . . Sometimes I'll stand there and watch. Maybe I could help if it got tough.

Question 8: "Would you like to perform technical functions throughout your career, whether in the Air Force or not?" "Why?" This question resulted in an emphatic "yes" from all interviewees, however one Sergeant indicated he would like to switch into an engineering position because of the pay. The reason for staying was "that's what I've always enjoyed doing."

Question 9: "Would you like to move out of the "hands on" work and supervise or manage the work?" "Why?" Though

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they all desired to stay with a technical function, or at least in a technical field, only one individual desired to become strictly "hands off" and supervise or manage. This Airman First Class thought "it would be a great job, just to sit back at a desk and watch everybody work."

A Technical Sergeant replied that :

I now have the perfect job. I'm a Technical Supervisor. I can work with my hands and keep technically current and still gain management experience. There's a lot of freedom in this position. . . . But, I know that when I make Master [Sergeant], I'll have to supervise and not be allowed to work "hands on."

Question 10: "Do you think, as you progress in rank, you should do more supervising and less maintenance? Explain." Most interviewees thought this was a question describing the normal and natural sequence in any organization. The feeling was that the current Air Force policy dictates it must occur. One Sergeant said, "Why stay at the bottom, . . . that creates instability of job location. Lower ranks move [PCS] more often."

Question 11: "What problems do you see in the current promotion system?" The major problems mentioned were the SKT and PFE examinations. This was indicated by every individual in the second rank structure category (E-5 through E-9). It appeared the lower ranking airmen were not familiar enough with these examinations to make that judgment. Other problems mentioned were related to the idea that promotion to Master Sergeant meant you had to leave the "hands on" technical applications, whether you achieved master technician

status or not, and assume a supervisory role.

Question 12: "What changes would you like to see in the promotion system?" "Promotion should be based on skill, not time," stated a Technical Sergeant. He also feels promotion depends on the individual's supervisor's capabilities to write convincing performance reports; they "should be changed somehow" to be standardized to better reflect performance and be less subjective and dependent on someone who "knows the right words to use."

The SKT and PFE examinations should be "administered more often," but also revised so that the individual is tested only on that for which he or she is (or reasonably will be) directly responsible and accountable. Currently, individuals responsible for maintenance on navigation or communication equipment on a cargo-type aircraft are tested on that of fighter or tanker-type aircraft and vice-versa, without ever having seen the system.

Another change suggested by a senior Staff Sergeant and Master Technician is to allow progression to Master Technician before entry into a supervisory role. Also, an individual "should be required to stay a technician until proficient before becoming a manager." This person also felt "you should move into a management position after being promoted to Master Sergeant." Other interviewees thought promotion to Master Sergeant and beyond should be possible and still remain a technical supervisor to stay active in maintenance and to provide the benefit of seasoned experience to the mission.

Survey Findings

The responses to the survey were categorized into two main areas: E-1 to E-4, and E-5 to E-9. This was done after the interviews because we felt there were some contrasting differences between these two rank structures. The initial implication was degree of experience on the job and in the Air Force and knowledge about the promotion system. This will be analyzed in Chapter IV of this thesis. The responses to the questionnaires were grouped in a similar fashion to that of Captains Pierce and Robeson (32) (see Appendices B and C).

The demographic and career intent information, questions one through eight and eleven, revealed that 85% of the respondents were less than 30 years old, all were male, and 70.8% were married. Table 3-4 shows the grade distribution. Note that not all grades were available for this survey.

As mentioned earlier, the rank structure was divided into two categories for our purposes. Using Table 3-4, the first three grades signify the first rank structure category, while the latter three grades signify the second. Approximately 50% of the respondents were on their first enlistment; 8.3% were three-skill level rated; 62.5% were five-skill level rated; 20.7% were seven-skill level rated; and 8.3% were nine-skill level rated.

Question 8 refers to education. Rank structure category one shows 67% of the respondents having some education beyond high school, while 50% of rank structure two have only high school education.

TABLE 3-4

Grade Distribution

| | Frequency | | |
	Absolute	Percentage	Cumulative %
E-3 Airman First Class	7	29.2	29.2
E-4 Senior Airman	5	20.8	50.0
E-4 Sergeant	5	20.8	70.8
E-5 Staff Sergeant	4	16.7	87.5
E-6 Technical Sergeant	1	4.2	91.7
E-7 Master Sergeant	2	8.3	100.0
No Response	1	--	--
Total Responses	24	--	--

In rank structure category one, 33% responded they intended to make the Air Force a career; 40% indicated they would not; and 27% were undecided. In rank structure category two, the results were 67%, 11%, and 22%, respectively. These results are the same as received during the interview phase, indicating some reliability of responses.

The body of the survey contained questions addressing attitudes and opinions in the following areas: perceived importance of technicians and supervisors and ease of replacement; perceived status (respect, value, pride) of technicians and supervisors; perceptions about skill and experience; transition from technician to supervisor and the promotion system; and opinions regarding career technicians.

Both rank structure categories perceived technicians and supervisors to be important to the U.S. Air Force. They

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also disagreed that it is easy to replace technicians. These findings are analogous to those of Captains Pierce and Robeson (Appendix C). However, almost two-thirds of the first rank structure category agreed that "the Air Force believes it is easy to replace an experienced technician" while 72% of the second rank structure disagreed.

The perceived status was in agreement with the original thesis. Technicians are valued only slightly less if not promoted, yet are respected for their abilities. The Air Force is viewed as regarding technicians with less respect and value than supervisors. Individual pride in technical abilities was perceived stronger than the Air Force's pride in its technicians' abilities.

Again, the two surveys generally coincide. Respondents overwhelmingly agreed there is a need for highly skilled technicians in the Air Force. There is a feeling that the current technicians are basically qualified to perform their jobs, but more experience is necessary along with a better quality of supervision. It is perceived that supervisors with current technical knowledge would provide a better quality of supervision.

Questions concerning the promotion system received mixed responses, with some interesting differences in results from the previous survey. The first rank category disagreed that "good performance as a technician is rewarded by the Air Force;" the second rank category was undecided. Pierce and Robeson found no significant variations in response (32:59)

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to whether the Air Force promotion system emphasizes technical or supervisory skills. The 4950th ABW personnel, particularly those in the second rank structure category, felt there was more emphasis on supervisory skills by the promotion system. The second category also agreed (68%) that "the Air Force promotion system does not reward technical skills."

A sharp contrast in results was noted when asked to respond to the following statement: "The Air Force loses technical ability by promoting technicians into supervisory jobs." Pierce and Robeson noted that this was "a controversial statement [32:60]." They also declared that, "Not surprisingly, only 35% of supervisors and managers agreed compared with 53% of technicians . . . [32:60]." Our survey showed approximately the same percent agreement among technicians, however, an astounding 88.9% of the supervisors and managers agreed with this statement. Analysis of these findings will be discussed in Chapter IV.

Respondents agreed (82%) that they (presently) could not advance in the Air Force without becoming a supervisor, and 68.4% replied that they should be allowed to advance without becoming a supervisor. The ability to have a choice was agreed upon by 83.6% of the respondents.

The last area in the body of the survey concerned attitudes toward the concept of a career technician. 93.1% of the personnel agreed that individuals should be promoted on their technical abilities, whereas 82% agreed that technicians should be promoted on their potential for supervisory

responsibilities. There is obviously some overlap in the responses. Questions 59 and 60 refer to job satisfaction and intent to remain. The results were more in favor of technical skills yielding job satisfaction and remaining in the Air Force longer if allowed to work as a technician or technical supervisor than were found by Pierce and Robeson (32: 65-68). Their results for question 59, as shown in Appendix C, were: 59% agree, 24% disagree, and 18% undecided; our results were: 71%, 12%, and 17%, respectively. Their results for question 60 were: 30% agree, 45% disagree, and 25% undecided; our results were: 54%, 12%, and 34%, respectively.

The final portion of the survey was a short series of open-ended questions. The comments duplicated those as described in the interview findings earlier in this chapter, therefore we will not be repetitious. The interview questions were derived from the original survey for the specific purpose of conforming to Pierce and Robeson's methodology.

Summary

This chapter presented the findings of all data collected through four major areas. These areas include the five previous theses, related research reports found through DTIC, an organizational behavior review, and personal interviews with enlisted maintenance technicians.

The previous theses provided an excellent background for this thesis. An historical perspective (12) of the USAF enlisted career progression system from 1947 to 1980 portrayed

the struggle of the enlisted force and the personnel in charge of the promotion system to find a better system of policies and procedures that would be fair and equitable to the enlisted structure and increase retention of highly qualified airmen. A comparative analysis (36) examines the classification and promotion components of the USAF, USN, USA, RAF, and civilian airlines enlisted (or enlisted equivalent) career progression systems. Similarities and differences were noted. A survey (32) of 369 enlisted maintenance technicians was conducted to determine their perceptions, attitudes, and opinions regarding the U.S. Air Force enlisted career progression system. The current Air Force enlisted career progression system and force structure was evaluated (6). The evaluation included an overview of the TOPCAP model structure. The alternative systems were presented by grouping them into several categories (15). This provided a more linear comparison of the different systems.

DTIC revealed several papers on retention and promotion policies. Much of this information overlapped that received by other methods and was, therefore, not used. The organizational behavior review identified major effects of poor promotions policies, including turnover and unqualified managers.

A survey/interview sequence was undertaken to provide the authors of this thesis a personal perspective of the attitudes and opinions of the enlisted maintenance force. Findings presented here will be analyzed in Chapter IV.

CHAPTER IV

ANALYSIS

Introduction

This chapter interprets the data presented in Chapter III. Findings will be related and unified to provide a solution to the career progression problem. An attempt will be made to analyze the data with the objective of answering the research questions as presented in Chapter I.

Since the inception of the U.S. Air Force in 1947, the enlisted promotion policy has undergone numerous changes. The promotion system started with a decentralized structure and has been intermittently altered toward a more centralized structure to provide equity, objectivity, and manageability to the system. The Weighted Airman Promotion System (WAPS) and the Total Objective Plan for Career Airman Personnel (TOPCAP) were noted to have been the most effective and all-encompassing modifications to the enlisted career progression system.

Current System

Ultimately the current Air Force personnel policy desires to achieve optimum manning levels to maintain a flexible and effective enlisted force consisting of highly skilled, motivated, and productive career personnel. TOPCAP strives

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to realize these goals.

Chapin and Suarez (6) pointed out that individuals have varying degrees of leadership, managerial, and technical abilities, which are not utilized properly by the current progression system.

Figure 4-1 is a rough graphic depiction of the combination of the potentials of people entering technical areas. The current personnel management system is directed solely at those individuals with leadership qualities and management potential. This inflexibility forces those highly skilled individuals with a desire to pursue a career as a technician to leave the Air Force. The reviews, surveys, and interviews detailed in Chapter III indicated that more than three-quarters of the individuals entering technical areas are not responsibility seekers and prefer to remain technicians or technical supervisors. The only choice presently offered these people is to accept lower or middle ranks or get out of the Air Force. Those few technicians desiring to remain in the Air Force for a career must give up their preference to stay "hands on" and transition into management. However, one must note that even then the Air Force is losing the actual technical productivity of these individuals who are not used to capacity in a management position.

The lack of proper measurement and use of these abilities force the system into a static, inflexible structure, resulting in low motivation and increased turnover of experienced personnel. This system, which seems to reward only

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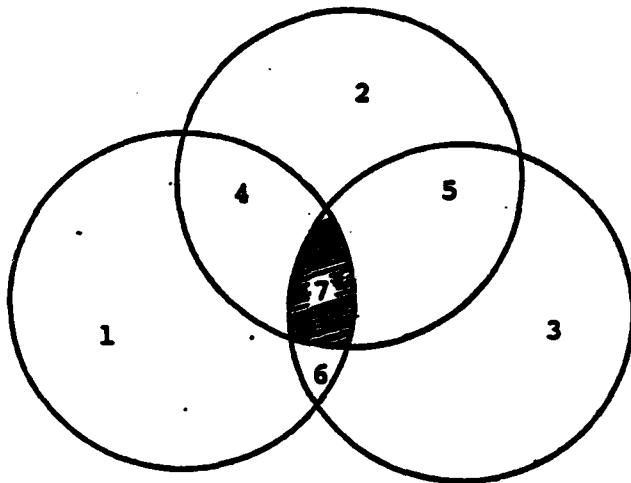
1. Leaders
2. Managers
3. Technicians
4. Managers with leadership qualities
5. Technicians with management potential
6. Technicians with leadership qualities
7. Technicians with leadership qualities, and
   management potential

Fig 4-1.   The Military Professional
[6:33]

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managers, does not and will not work effectively in technical career fields. Those individuals desiring to remain technicians are presently allowed that choice through civilian employees with a more flexible personnel system which rewards technicians.

Critical skill retention levels have declined at a rate of 18% since 1973 (13). The TOPCAP objective force would be seriously affected if this continues. A temporary two-tiered promotion modification in chronic critical shortage (CCS) areas went into effect for promotion to Staff Sergeant in January 1982. Grades E-5 through E-7 in CCS fields will receive a slightly higher rate of selection to ease the rate of turnover in these areas (29; 37).

In some Air Force Commands additional recognition is given for outstanding achievement in the technical field. Air Force Systems Command, for instance, awards an Aircraft Master Crew Chief and Master Technician Award to outstanding airmen. This achievement is regarded as an elite and desirable form of recognition. The airman who wears this patch on his or her uniform can be depended on by supervisors to perform in an exemplary manner. Military (E-4 or above) or civilians are eligible for the award. Considerations for nominations include, but are not limited to:

> . . . work on the aircraft or in the work center during the last 12 months must have been consistently superior based upon available records and as determined by the supervisor and chief of maintenance. . . [and]. . . must demonstrate exemplary bearing and behavior, project the characteristics of a professional NCO, and support the Air Force's "whole person" concept [46:p. 1, para 3b-c].

This award may be worn as long as the individual remains in the Air Force Systems Command, regardless of position held, unless revoked by the chief of maintenance (46:p. 1, para 7).

Figure 4-2 portrays the current promotion system flow, or cycle, in the Air Force. For the scope of this paper, an individual is promoted through the rank of Technical Sergeant by achieving sufficient ratings on all categories of the Weighted Airman Promotion System (WAPS) and he or she is still allowed to perform technical duties. Once promoted to Master Sergeant, an individual must effectively become a supervisor/ manager and give up the "hands on" work performed for many years. As the figure displays, an individual will become a "good" supervisor only if he or she has that ability and desire to do so. If the Airman decides to stay in the Air Force regardless of these criteria, the Air Force may receive a "poor" supervisor as indicated by a Technical Sergeant during the survey: "To put me behind a desk is worthless; the Air Force will lose my technical skill and gain a belligerent supervisor."

Modifying the system to appease Master Sergeants would only serve to compound the problem. If a modification were made to include Master Sergeant as a technical supervisor, then E-8 and E-9 would effectively receive an increased load of supervisory/management functions. This would be unfair and would, in addition, require E-8 and E-9 grades at every facility and produce a top-heavy or inflated rank structure. A division of functions at the Staff or Technical Sergeant
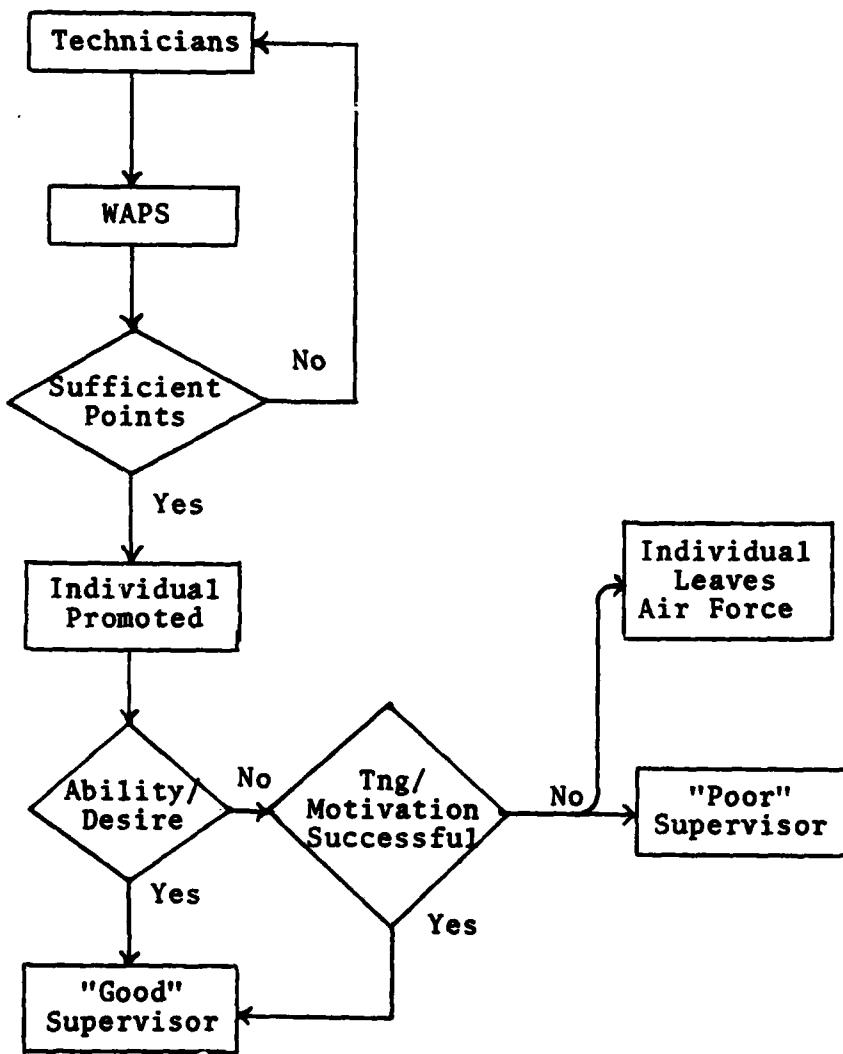
Fig 4-2. The Current Promotion System

level to provide for technical-oriented and managerial-oriented
career phases would result in a decreased workload on managers
and supervisors since the technicians performing the work
would be in that position by choice. They would enjoy their
work and perform it with only periodic supervision, freeing
the supervisor/manager to perform his duties with more con-
centration. This will be discussed further in Chapter V.

Alternative Systems

The enlisted promotion system of the U.S. Air Force
was compared to that of the U.S. Navy, U.S. Army, British
Royal Air Force, and civilian airlines. The Navy enlisted
personnel place a symbol on the rank insignia to signify their
specialty field. This not only allows immediate recognition
of their job specialty, it also gives the technicians a feel-
ing of camaraderie. Workers who feel they are part of the
organization rather than just an employee of the organization
are more satisfied and more productive (33).

The Army progression system contains an intermediate
two-track structure. This two-track structure distinguishes
E-4 through E-6 personnel as either "hard-rank" junior non-
commissioned officers, or "soft-rank" specialists. The basic
difference is that "hard-rank" soldiers are placed in admini-
strative, management, and supervisory positions and are given
the authority to command troops, while "soft-rank" soldiers
are placed in specialized areas such as maintenance, engineer-
ing, and other similar fields requiring technical expertise.

Each soldier is given the same opportunity for promotion to
the next higher grade, regardless of the tier followed.
Soldiers competing for grade E-7 are considered equally based
on overall achievements, experience, and previous effective-
ness ratings (51).

The two-track structure of the Army acknowledges the
concept that management and maintenance areas have different
requirements, and attempts to configure the enlisted progres-
sion system to allow for these differences. However, Richter
and Tharp (36:64) found evidence that an E-6/Specialist
"soft-striper" had a significantly lower chance for promotion
to E-7 than an E-6/NCO "hard-striper."

The Royal Air Force (RAF) structure is similar to that
of the USAF even though technical and non-technical fields
are split into separate tracks. The major difference relevant
to this paper is that E-7 through E-9 equivalent grades in
the RAF are still engaged in some "hands on" maintenance,
while the USAF requires these grades to be managers. Indivi-
duals in selected technical specialties are considered for
promotion sooner than other fields due to critical shortages.
This is similar to a recent modification to the USAF enlisted
promotion policy for advancement to Staff Sergeant, Technical
Sergeant, and Master Sergeant, where chronic critical short-
age (CCS) skills have been identified (29; 37).

Perhaps the most applicable concept from the civilian
airlines' structure is the ability for maintenance technicians
to enter management through a selection process. Based on

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education, experience, and potential, technicians may enter management for a six-month trial period, during which time they may revert to their previous technical position if unsatisfied or if they perform unsatisfactorily. Pay in this system is based on time and skill.

Hiatt and Nunnery suggested a modified pay structure (15:88-89) which would replace the current rank-based pay system with a skill-based pay system. This would remove the inequity of skilled, highly trained technicians receiving the same pay as airmen working in unskilled occupations.

A dual track system (15:89-90) similar to the RAF progression system was another suggestion. The system would provide one set of promotion criteria for technical fields and a second set of criteria for supervisory/management fields. This would allow technicians to compete only against technicians for promotion, let technicians who wanted to stay technicians remain technicians, and restrict the loss of skilled personnel caused by the current "up or out" policy requiring people to get promoted "up" into management or "out" of the Air Force.

Survey/Interviews

The majority of the enlisted force surveyed consisted of young, married, educated, first-term airmen. 43.8% intend to make the Air Force a career. These airmen have a true concern for the decisions regarding the promotion policies of the Air Force.
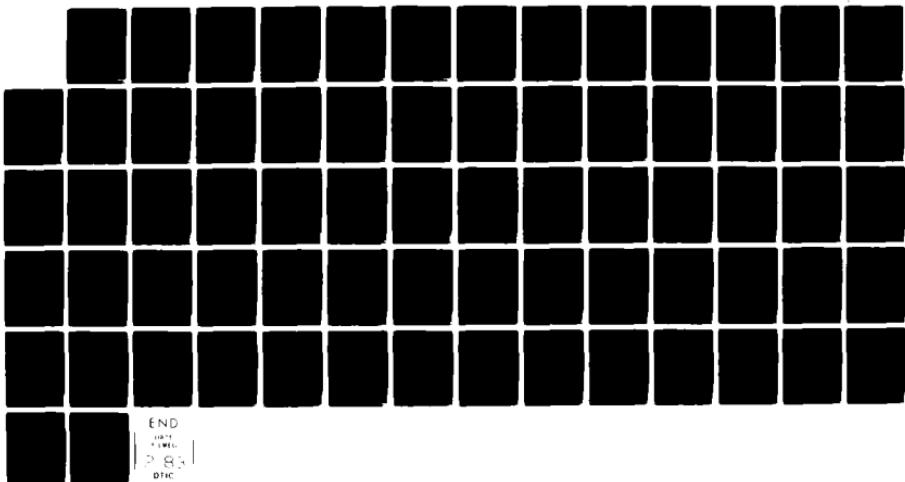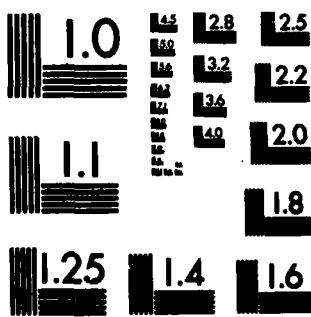
MICROCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS-1963-A

A large majority believe that technicians are more important than the Air Force indicates to them. In other words, airmen do not believe rewards are given to technicians equal to the quality of work received. Technicians think the Air Force regards them with less importance than they deserve. These authors believe that these perceptions are justified because of the inequities that seem to be inherent in the present promotion system. If the enlisted force believes they are being evaluated unjustly, then they will (and have) become less encouraged to perform their duties to the fullest of their capabilities. The result will be low morale, inefficient (and possibly incorrect) maintenance practices, cost overruns, and a high turnover rate.

Good technicians and supervisors are respected. This obvious statement was supported fully, yet the interpretations of "good" were lacking consistency. Is "good enough" sufficiently "good" or is it required that the individual be "better" than the rest to be "good"? Again, the Air Force was perceived as the pessimistic titan that disregards the sensitivities of its working class. These perceptions contribute to the dissatisfaction and other conditions mentioned above.

More skill and training is required of today's Air Force technicians than ever before. Technicians realize this fact, and through their responses to the survey have indicated the Air Force needs to encourage more training in the specialty areas and needs to reward that extra training with points

toward promotion. Extended experience as technicians in
other than Air Force training programs should be advocated
and compensated.

Supervisory personnel were perceived as adequate, yet
unselected. Many present supervisors were regarded as un-
trained and unskilled in management functions. Airmen who
perceive their supervisors are incompetent will be quickly
disenchanted with the system and have a lower rate of produc-
tion and a higher rate of turnover. This also means the Air
Force needs to invest more resources into training supervi-
sory personnel. Ability and willingness to transition from
technician to supervisor need be considered. Further, a
choice in this transition was regarded to be of importance
to the majority of personnel.

There is a definite need for career technicians in the
Air Force. As mentioned before, promotions in technical
fields should be based in a larger proportion on technical
skills and abilities of the individual. The majority of
technicians would prefer to remain technicians or technical
supervisors and many would stay in the Air Force if given
this opportunity. Another complaint was that the pay scale
had no relation to skill level. A number of people wondered
why "E-4 technicians with eight months training are paid the
same as E-4 chefs with six weeks of training."

Regarding below-the-zone promotion to Senior Airman,
some Airmen thought it should relate more closely to job
performance instead of general information in unrelated areas.

After all, a technician should be paid according to his or her technical abilities, not whether he or she is aware of the reasons for the war in the Middle East.

The Weighted Airman Promotion System (WAPS) was the most criticized component of the Total Objective Plan for Career Airmen Personnel (TOPCAP). These criticisms accentuate the theme of the survey: the current promotion system should reward the Air Force enlisted maintenance technicians primarily on their technical expertise and abilities and be less stressful of other areas not dependent on their capabilities for proficiency and performance of duties. In particular, the Specialty Knowledge Test (SKT) was perceived as not reflecting the competence of personnel to perform, but the capabilities of individuals to take a test, especially since some questions are in areas never performed.

Air Force Military Personnel Testing System, AFR 35-8, states that

> . . . normally, individual SKT questions are written to test at the skill level for which the SKT is being prepared. The SKT may include some questions that exceed the minimum skill-level requirements specified by the STS (Specialty Training Standard). This is done to achieve adequate score differentiation [38: p. 15-1, para 15-2b]

and that the tests are written by individuals with grade of Master Sergeant or above. called "subject matter specialists [38:p. 15-1 para 14-3d]" (SMS), who have progressed through the career field. Tests are reviewed by "senior" psychologists for clarity, unambiguity, validity, and references (38).

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Summary

The U.S. Air Force enlisted promotion policy has progressed from a highly decentralized structure to a more objective, centralized system over the past 35 years. Changes made to the system have attempted to eradicate the inequities and provide a more manageable and effective progression system. TOPCAP and WAPS, detailed in Chapter III, were the most effective endeavors implemented. However, some inequities still prevail as indicated by the surveys and interviews.

The present progression system does not effectively reward those individuals in technical career fields who desire to remain "hands-on" technicians and to stay in the Air Force for a career. Enlisted technician turnover, viewed either as voluntarily leaving the service to remain a technician instead of being forced to become a manager, or as involuntarily leaving a technician position to become a manager just to stay in the Air Force, is costing the taxpayers and the Air Force in terms of retraining, inefficiency, morale, and loss of highly experienced technicians.

The Air Force should be seeking to optimize the utility of these highly experienced technicians by keeping as many as possible in their specialties, not by forcing them to stop working in their skills and become managers or get out of the Air Force. Chapter V contains some recommendations that could provide more equity to the career enlisted men and women who desire to remain in the Air Force as "hands-on"

technicians while improving the quality of managers in the system.

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

Introduction

This thesis is the final product of a three-year, six-team endeavor to determine whether the current U.S. Air Force enlisted career progression system should be modified. Figure 1-1 depicts the research design of this project. This thesis is the apex of that pyramid structure which consolidates the previous research efforts. The main objective of this research was to evaluate and recommend, if necessary, changes to the current USAF enlisted career progression system in the area of skilled maintenance technicians.

Chapter III detailed the information obtained through the previous theses, DTIC, an organizational behavior literature review, and personal interviews. Chapter IV supplied the analysis of this information, which leads to the recommendations discussed in this chapter. To obtain a complete understanding of the reasons for these suggestions, we encourage the reader to examine this thesis in its entirety and obtain the previous five theses for more detail.

As discussed in earlier chapters, many enlisted technicians are dissatisfied with the fact they must become managers when promoted to Master Sergeant and beyond. Highly skilled, experienced technicians may prefer to remain in their

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field of expertise.

One of the reasons some supervisors are dissatisfied with their job is that they feel frustrated with their performance and feel no matter how they try, they are ineffective (or less effective than they had hoped to be) as managers. The blame should be placed on the organization for improperly training and selecting the candidate (3). Making the transition from technician to manager should be regarded as critical as making the transition from one career field to another. Surely, personnel would not be expected to change career fields without adequate training, so the supervisor should not be any less adequately trained. Training is necessary to orient an individual to the supervisory role. New skills, behaviors, and attitudes are required. Before an individual is catapulted into this new role, a pre-supervisory training program should allow them to adjust to these changes. A pre-supervisory training program would also allow prospective supervisors to see the full scope of their jobs, not normally addressed at the technician level. Perhaps more importantly, pre-supervisory training would give the individual a chance to decide if a supervisory position is desirable. If not, the individual and the organization would have less invested and probably be more satisfied if another course of action was taken (i.e., be placed in the old or another position). Currently, NCO academies attempt to fill that void, yet a short-term academic environment is not a solution to this problem. A selective and well-constructed, ongoing preparation

program must be implemented to achieve the best quality of managers available and retain valuable, skilled technicians.

Recommendations

To meet the needs of increased retention of technically skilled airman and improved managers, we recommend the modified progression system illustrated in Figure 5-1. In this structure, enlistees entering technical fields are trained through formal instruction and/or on-the-job training. An airman's qualification for promotion is determined by the Weighted Airman Promotion System, modified slightly as indicated later in this chapter. Individuals selected for E-5/ Staff Sergeant and E-6/Technical Sergeant will be able to advance in grade along a Technician/Supervisor Track or a Supervisor/Manager track, based on his or her preference and the needs of the Air Force. Though we have mentioned that this division, or dual-track process, affects airmen at grades E-5 and E-6, the E-4/Sergeant must start to decide which track he or she would prefer. The surveys and personal interviews indicated there should be sufficient airmen to progress in either track of this modified system to ensure adequate levels of management-oriented personnel and technically oriented personnel.

Referring again to Figure 5-1, the boxes labeled as "Good" Technician and "Good" Manager assume that individuals are allowed to pursue the track they desire, are qualified for that track and position, and are receptive of the training
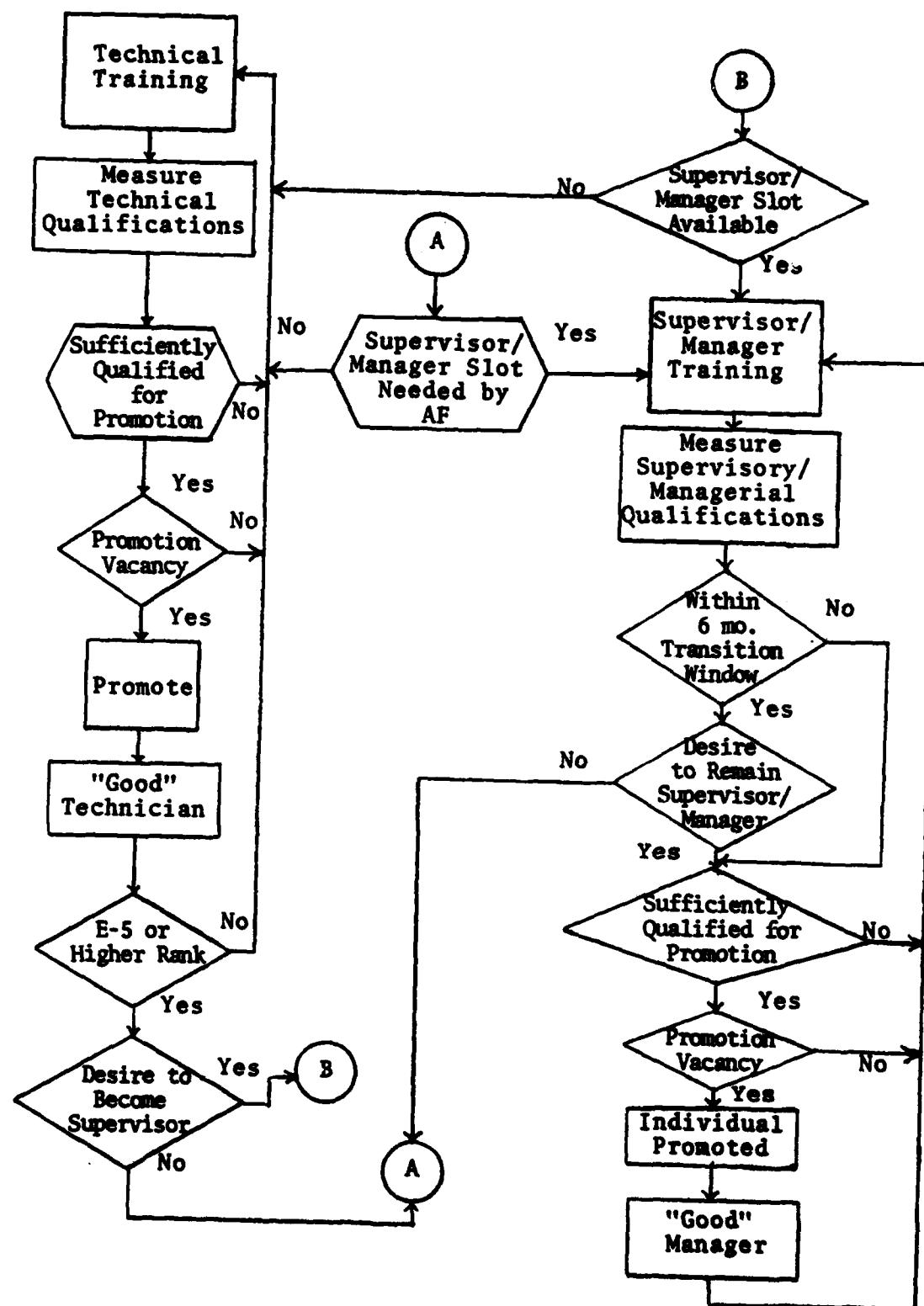
Fig 5-1. The Modified Progression System

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they received for that position.

The airman receives supervisory/managerial training when he enters the supervisory/managerial track. Once the person is on this track, he or she is given a six-month "window" to decide to remain a supervisor/manager or return to being a technician. If the airman decides not to remain a supervisor/manager and the Air Force does not need him in a supervisor/manager slot, he or she may return to their technician status without bias. The airmen remaining in the supervisory/managerial track will advance in the supervisor/manager track as illustrated in Figure 5-2, the Proposed USAF Tier Structure. This structure is a modified version of the current structure of the USAF Personnel Plan shown in Figure 3-1 discussed earlier.

It should be noted that NCOs in the Technician/Supervisor track are expected to continue their duties as technical supervisors. As Hiatt and Nunnery stated, the intention of a dual-track structure is not to ". . . separate technicians from their NCO or supervisory duties [15:90]."

The six-month window is to keep control of individuals who choose to jump back and forth between tracks. This time limit was chosen arbitrarily for illustration, but would not be an unrealistic limit. Additionally, an airman should be allowed no more than two changes to the original decision of which track to pursue.

The mid-lines of each box per grade represent the approximate proportion of time and duty responsibility. The

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Technician/Supervisor Track			Supervisor/Manager Track		
Technical Supervisor - Manager Tier					
E-7 Supervisor	E-8 Supervisor	E-9 Supervisor	E-7 Manager	E-8 Manager	E-9 Manager
Technical Supervisor	Technical Supervisor	Technical Supervisor			
Technician	Technician	Technician	Supervisor	Supervisor	Supervisor
Technician - Supervisor Tier					
E-4 Technical Supervisor	E-5 Technical Supervisor	E-6 Technical Supervisor	E-4 Supervisor	E-5 Supervisor	E-6 Supervisor
Technician	Technician	Technician	Technician	Technician	Technician

Trainee - Apprentice Tier

E-1	E-2 Apprentice	E-3 Apprentice	E-4 Technician
			Apprentice
Trainee	Trainee	Trainee	Trainee

Fig 5-2.   Proposed USAF Tier Structure

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Supervisor/Manager Track is not different from the current
system. The Technician/Supervisor Track contains some not-
so-subtle differences.

The Trainee-Apprentice Tier remains essentially the
same. The dual-track progression system starts with the
Technician-Supervisor Tier. Differences between the two
tracks at this point are noted in the placement of mid-lines
for each box and the stress of technical supervisor versus
supervisor. During this time, important career decisions are
to be made. An individual incorrectly selecting or being
placed in a track could become a poor technician or manager
or be dissatisfied and terminate his or her career in the
Air Force. Any of these outcomes would be costly.

The Technical Supervisor-Manager Tier proposed to
further reward and retain those highly skilled technicians
and provide the Air Force with better qualified managers.
The supergrades E-8 and E-9 will still exist. However, the
ranks of Senior Master Sergeant and Chief Master Sergeant
will continue only in the Supervisor/Manager Track. These
ranks were originally created as management positions and
these authors feel that decision was justified. The Techni-
cian/Supervisor Track contains three steps within the rank of
Master Sergeant. Master Sergeant Step One, Step Two, and Step
Three correspond to the grades E-7, E-8, and E-9, respectively.
Notice that all of the grades in the Technician/Supervisor
Track perform proportionally more "hands-on" technical work
than their counterparts in the Supervisor/Manager Track.

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Promotion in these tracks would be based on slightly different criteria in WAPS.

Within WAPS, we advocate revising the Specialty Knowledge Tests (SKTs) in a manner that would test individuals on equipment they would be responsible for in their career field and, more specifically, in their present job. To this end, we suggest selected shops submit potential questions, coded by career field, to HQ AFMPC for use in designing new tests. Further, a centralized, impartial IG team should be formed to tour bases and give practical "hands-on" testing to individuals eligible for promotion. These results should be a percentage of the total WAPS score. PFE and SKT scores should count in proportion to the track an airman selects to follow. For example, for an airman in the Technician/Supervisor Track, a larger proportion of the score would be SKT instead of PFE.

Further recommended is the implementation of the Master Technician Award (46), Air Force-wide. The award should be made in a discretionary manner to those individuals demonstrating exemplary technical knowledge and expertise. Steps, such as approval at no lower than major command level, should be taken to assure centralized distribution and non-inflation of the award.

For further research, we suggest a future study to determine whether or not it would be feasible to implement a system of pay based on skill, trade complexity, and pay for comparable civilian vocations to provide a more equitable pay system. The study should recommend implementation procedures

for the pay system if the system is determined to be
feasible.

Summary

The highly qualified enlisted technician is perhaps
the most valuable resource in the armed services. Present
U.S. Air Force progression policy requires senior enlisted
personnel to leave technically-oriented positions and move
into management roles. Those not desiring this change be-
come dissatisfied and frustrated managers or leave the Air
Force. This thesis is the final of a three-year, six-team
effort to determine whether changes to the current enlisted
career progression system are required. Progression systems
of the U.S. Air Force, U.S. Navy, U. S. Army, Britain's
Royal Air Force, and civilian airlines were presented and
analyzed. Surveys, personal interviews, and an organizational
behavior literature review provided a well-rounded perspective
of the enlisted force as compared with the civilian organiza-
tion's perception of an equitable progression system. Middle
and senior enlisted technicians viewed the progression system
to be inequitable in many ways, and blamed these inequities
for dissatisfaction and poor retention rates. A modification
to the USAF enlisted tier structure to incorporate a dual-
track system was presented. Additionally, changes to the
Weighted Airman Promotion System (WAPS) to allow equity and
retain experienced technical personnel was also discussed.

These modifications are moderately inexpensive to

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implement as compared with the loss of highly skilled technicians and the resultant rise in training costs and inefficiency of the current system. The benefits of these modifications are increased retention of technical personnel, improved enlisted managers, and a progression system which provides greater equity and commensurate compensation for the enlisted personnel of the United States Air Force.

APPENDIX A

GLOSSARY OF KEY TERMS

Accession - "The act of increasing the airman skill or grade level manning by adding more eligible and qualified airmen to that level [6:115]."

AFHRL - Air Force Human Resources Laboratory

AFMPC - Air Force Manpower and Personnel Center

AFR - Air Force Regulation

Air Force Specialty (AFS) - "A group of related positions on the basis of similarity of knowledge, education, training, experience, and other abilities required to perform them [45:G-1]."

Air Force Specialty Code (AFSC) - "A five-digit code used to identify an AFS [45:G-1]."

Airman - "Any person belonging to the USAF enlisted force (E-1 through E-9) [45:G-1]."

APR - Airman Performance Report (see Appendix E)

Attrition - "The natural expected and unexpected decrease in the number of airmen in a career group over a period of time (usually years) [6:115]."

Below the Zone (BTZ) - Promotion from Airman First Class to Senior Airman ahead of contemporaries due to outstanding qualifications.

Base of Preference (BOP) - Choice of next duty station offered as an incentive for retention.

Career Airman - "An airman having more than four years of completed active service and serving a second or subsequent

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enlistment [45:G-1]."

Career Airman Reenlistment Reservation System (CAREERS) -
"This system controls first-term reenlistment by AFSC
to meet the first-term reenlistment objectives [45:G-1]."

Career Development Course (CDC) - A self-paced study program
to upgrade in skill level.

Career Field - "A group of occupations in the airman classi-
fication structure that are broadly related on the basis
of required skills and knowledge [45:G-1]."

Career Field Subdivision (CFS) - ". . . a division of career
fields in which closely related Air Force Specialties are
arranged in one or more ladders to indicate lateral
functional relationship, emerging at the advanced or
superintendent skill level. Identified by the first three
numerical digits of an AFSC [45:G-1]."

Career Journeyman - "A 5-skill airman required to sustain the
supervisor/technician career requirement [45:G-1]."

Career Progression Group (CPG) - ". . . a cluster of AFSCs
. . . which configured into a ladder account for all input
AFSCs and permit skill-level progression from entry to
9-skill via upgrade procedures characteristic of the
cluster [45:G-1]."

Career Technician - A technician with 15 to 30 years of experi-
ence who is primarily a technician or technical supervisor
rather than a supervisor or manager.

Chronic Critical Shortage (CCS)- Air Force Specialties in tech-
nical fields continuously undermanned and affecting combat

readiness (29).

CONUS - Continental United States

Critical Skill - "That skill which is needed by the Air Force
     to maintain minimum standards in the technical maintenance
     career fields [45:G-1]."

CROSSTABS - An SPSS statistical procedure useful in determining
     whether two or more variables, such as responses to
     questions, are frequency related.

DOR - Date of Rank

DTIC - Defense Technical Information Center

Dual Track - A form of promotion system with personnel divided
     into administrative or technical areas. Competition for
     promotion is within, but not between, each track.

FAA - Federal Aviation Administration

First Term Airmen - "Those airmen who have not completed
     their initial period of enlistment [45:G-1]."

FREQUENCIES - An SPSS statistical procedure used to determine
     factors of a response, such as frequency in percent, mean
     and range.

GAO - General Accounting Office

High Year of Grade Tenure - "The last year of TAFMS an
     airman is permitted to remain on active duty in his or
     her currently held grade [45:G-1]."

HQDA - Headquarters, Department of the Army.

LOS - Length of Service, equivalent to Air Force TIS.

Low Year of Grade Tenure - "The first year of TAFMS an airman
     may posses a particular grade [45:G-1]."

Manager - "One who is accountable for the overall planning,
    organizing, coordinating, directing, and controlling of
    maintenance activities, at branch level or higher [32:24]."

Management by Objectives (MBO) - The determination of specific
    goals, and periods in which those goals are to be met, by
    a subordinate and his superior within the framework of
    organizational goals.

Non-Commissioned Officer (NCO, Non-Com) - An enlisted person
    with a grade, or equivalent thereof, of E-4 to E-9,
    except in the U.S. Air Force, which includes E-4/Sergeant
    and excludes E-4/Senior Airman in this category.

Passed But Not Advanced (PNA) - In the U.S. Navy promotion
    system, the awarding of promotion points to an enlisted
    person for having passed the next higher skill level test,
    but having had insufficient promotion points in the past
    to be eligible for promotion.

PCS - Permanent Change of Station

Professional Military Education (PME) - a structured course
    of study to develop a military member's supervisory and
    managerial abilities.

Promotion Fitness Exam (PFE) - A test of knowledge of general
    military subjects and management practices administered
    annually to eligible personnel.

Promotion Management List (PML) - A quota management system
    to control promotions to grades E-4 through E-7, initiated
    in the mid 1960's.

Promotion Opportunity - "A percentage probability of achieving

the next higher grade by the end of a specified promotion zone [45:G-1]."

Promotion Zone - "The number of years an airman in a particular grade is considered for promotion to the next higher grade [45:G-1]."

Reenlistment Percent - "A rate obtained by dividing the number of reenlistments by the total number eligible to reenlist [45:G-1]."

Retention Rate - "A rate computed by dividing the number of reenlistments for a given year by the total number of airmen separated in that particular year group [45:G-2]."

RAF - British Royal Air Force.

Selective Reenlistment - "A program to control the quality of airmen reenlisted in the career force and to insure the retention of highly qualified personnel [45:G-2]."

Selective Reenlistment Bonus (SRB) - "A reenlistment incentive that may be paid to certain airmen who possess a critical skill at any reenlistment point up to ten years TAFMS [45:G-2]."

Severence Pay/Readjustment Pay - ". . . a one-time lump sum payment, based on TAFMS, payable to career airmen who are involuntarily separated from active duty prior to attaining retirement eligibility. It does not include discipline type severences [45:G-2]."

Shortage Specialty Proficiency Pay (SSPP) - "Referred to as pro-pay - a retention incentive pay for designated specialties paid at a monthly rate [45:G-2]."

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Single Track - A promotion system in which all eligible persons compete among each other for available promotion slots. Increases in rank in this system are usually accompanied by an increase in supervisory/managerial responsibilities.

SIPG - Service Time in Pay Grade - Navy equivalent to Air Force TIG.

Skill-Level - ". . . the level of qualification in an AFS depicted by the fourth digit in the AFSC as follows: 1 - helper level, 3 - semi-skilled level, 5 - skilled level, 7 - advanced level, 9 - superintendent level [45:G-2]."

Special Duty Identifiers - ". . . a code to identify position authorizations and individual airmen assigned to and performing an actual group of tasks on a semi-permanent or permanent duty basis. These duties are unrelated to any specific career field [45:G-2]."

Specialty Knowledge Test (SKT) - A test of technical proficiency in one's career field.

Statistical Package for the Social Sciences (SPSS) - A computer language used for easy statistical analysis of large groups of data.

Supervisor - ". . . one who is accountable for the work of technicians and technical supervisors, and for the administrative details involved with that work [32:24]."

Technician - ". . . one who uses technical skills to perform maintenance. . . . This may be done as an apprentice,

mechanic, technician, or specialist, as these terms are
used in duty titles [32:24]."

Technical Supervisor - ". . . one who uses technical skills
to perform maintenance. . . and who also directly super-
vises those performing maintenance [32:24]."

Time in Grade (TIG) - the amount of time in current grade,
based on date of rank.

Time in Service (TIS) - total number of years spent in the
service (see TAFMS).

Total Active Federal Military Service (TAFMS) - "Total number
of years spent on active duty [45:G-2]."

Total Objective Plan for Career Airman Personnel (TOPCAP) -
". . . establishes the essential characteristics of an
attainable USAF enlisted force and the necessary body of
management concepts required for its development and
maintenance [45:G-2]."

Trade Qualification Annotations (TQA) - RAF equivalent to
Air Force AFSC. Used to identify skills and skill level.

United States Air Force Supervisory Examination (USAFSE) -
A test to measure supervisory and managerial skills used
as part of the basis for promotion to E-8 and E-9.

Variable Reenlistment Bonus (VRB) - ". . . an additional
reenlistment monetary incentive paid to certain first-
term airmen who possess a critical military skill at the
time of their first reenlistment. The VRB was replaced
by the SRB effective 1 June 1974 [45:G-1]."

WAPS - Weighted Airman Promotion System (see Appendix E)

Year Group - ". . . refers to the TAFMS of individuals at
any given point in time (i.e., the fourth year group
refers to all the enlisted individuals who have completed
more than thirty-six months and less than forty-eight
months TAFMS) [45:G-2]."

APPENDIX B

SURVEY INSTRUMENT

PRIVACY STATEMENT

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

    a. Authority:

        (1) 5 U.S.C. 301, Departmental Regulations, and/or

        (2) 10 U.S.C. 8012, Secretary of the Air Force,
Powers, Duties, Delegation by Compensation; and/or

        (3) DOD Instruction 1100.13, 17 Apr 68, Surveys of
Department of Defense Personnel; and/or

        (4) AFR 30-23, 22 Sep 76, Air Force Personnel Survey
Program.

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

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

    d. Participation in this survey is entirely voluntary.

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

GENERAL INSTRUCTIONS

1. <u>Do not</u> in any manner indicate your name or Social Security Number on the answer sheet.

2. We would like to know <u>your</u> opinions relative to the statements in this questionnaire. We are <u>not</u> trying to find out how much you know about current career policy. ANSWER THE ITEMS THE WAY YOU FEEL ABOUT THEM. We value your opinions.

3. Items 1-62 may be answered by filling in appropriate spaces on the answer sheet. If you do not find the exact answer that reflects your opinion, use the one that is closest to it. Items 63-65 may be answered in the space provided.

4. The answer sheet is designed for machine scanning of your responses. Please use a number 2 pencil.
CAUTION: Look at the answer sheet. Notice that the answer blocks are numbered <u>across</u> the page.

5. The answers to 63-65 should be detached from the rest of the questionnaire and placed, along with the answer sheet, in the envelope provided. Place the envelope in outgoing official distribution.

THANK YOU FOR YOUR COOPERATION IN COMPLETING THIS QUESTIONNAIRE.

SECTION I

For the following questions choose the response which best reflects your current status.

1. What is your sex?
   1. Male   2. Female

2. What is your marital status?
   1. Married   2. Single, previously married, or separated

3. How old were you on your last birthday?
   1. 20 or less   4. 31-35
   2. 21-25   5. 36-40
   3. 26-30   6. 41 or more

4. What is your current active duty grade?
   1. Airman Basic   6. Staff Sergeant
   2. Airman   7. Technical Sergeant
   3. Airman First Class   8. Master Sergeant
   4. Senior Airman   9. Senior Master Sergeant
   5. Sergeant   10. Chief Master Sergeant

5. How many years active military service have you completed?
   1. Less than 4 years
   2. 4 or more, but less than 8 years
   3. 8 or more, but less than 12 years
   4. 12 or more, but less than 16 years
   5. 16 or more, but less than 20 years
   6. 20 or more, but less than 24 years
   7. 24 or more, but less than 28 years
   8. 28 or more

6. To which major command are you assigned?
   1. AFCC   5. MAC
   2. AFLC   6. SAC
   3. AFSC   7. TAC
   4. ATC   8. Other

7. What is your skill level?
   1. 3   4. 9
   2. 5   5. Not applicable-CMSgt CEM code
   3. 7

8. What is the highest level of education you have completed?
   1. Less than high school graduate
   2. High school diploma or equivalency certificate
   3. Less than two years or education beyond high school
      (college/vocational-technical school)
   4. Associate degree or two years of college, or more
   5. Bachelor's degree
   6. Some/any work beyond bachelor's degree

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9. At this time, what is your attitude toward making the Air Force a career?
   1. Have already made the Air Force a career.
   2. Definitely intend to make the Air Force a career
   3. Probably will make the Air Force a career
   4. Not sure/undecided
   5. Probably will not make the Air Force a career
   6. Definitely will not make the Air Force a career

10. How many years do you anticipate having served when you retire from the Air Force?
   1. Not applicable, I do not plan to serve until retirement
   2. 20   5. 27-28
   3. 21-23   6. 29-30
   4. 24-26   7. not sure

11. Please read the following definitions which apply to terms used in the rest of this questionnaire.

   TECHNICIAN-one who uses technical skills to perform maintenance on jet engines or their components. This may be done as an apprentice, mechanic, technician, or specialist, as these terms are used in duty titles. The key idea is "wrench in hand."

   TECHNICAL SUPERVISOR-one who uses technical skills to perform maintenance on jet engines or their components and who also directly supervises those performing maintenance. The key idea is "supervising with wrench in hand."

   SUPERVISOR-one who is accountable for the work of technicians and technical supervisors, and for the administrative details involved with that work. This includes, but is not limited to, duty status, training, supply accounts, work assignments, priority setting, and technical and administrative documentation. The key idea is "pencil in hand."

   MANAGER-one who is accountable for the overall planning organizing, coordinating, directing, and controlling of maintenance activities, at branch level or higher.

   Based on the above definitions, which of the following most closely identifies your current duties?
   1. Technician
   2. Technical supervisor
   3. Supervisor
   4. Manager

SECTION 2

Look at the categories on this scale.

Strongly Disagree	Disagree	Slightly Disagree	Undecided/ Don't know	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

Decide which one of these categories best expresses your personal agreement/disagreement with each of the statements that follow. Mark the corresponding number on the answer sheet provided. Please keep in mind the definitions given in #11.

12. In today's Air Force, technicians need to be more highly skilled than ever before.

13. Good supervisors are respected by the people they work with.

14. The Air Force is proud of its technicians' abilities.

15. The quality of work performed by technicians in my career field is above Air Force standards.

16. I think supervisors are important to the Air Force.

17. Good supervisors are born that way.

18. The Air Force promotion system emphasizes supervisory skills.

19. I think technicians are important to the Air Force.

20. Air Force technicians in my career field are, on the whole, adequately skilled.

21. The Air Force thinks that supervisors are important.

22. The Air Force promotion system does not reward technical skills.

23. The Air Force encourages technicians in my career field to get extended experience as technicians.

24. Air Force technicians in my career field are, on the whole, adequately experienced.

25. A technician who has not been promoted is less respected than a technician who has been promoted.

26. The Air Force regards supervisors more highly than it regards technicians.

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Strongly Disagree	Disagree	Slightly Disagree	Undecided/ Don't know	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

27. Good performance as a technician is rewarded by the Air Force.

28. I believe that the person who does not get promoted is less valuable than one who does.

29. Families believe supervisors are more important to the Air Force than technicians are.

30. When technicians leave my work center (PCS, Separation, etc.), it is easy to replace their technical skills.

31. I should be allowed to advance without becoming a supervisor.

32. The Air Force promotion system emphasizes technical skills.

33. The Air Force loses technical ability by promoting technicians into supervisory jobs.

34. I believe that technicians should be proud of their abilities.

35. Good performance as a supervisor is rewarded by the Air Force.

36. Some technicians do not have the ability to become good supervisors.

37. Some technicians do not want to make the transition from technician to supervisor.

38. I feel that technicians are valuable to the Air Force, whether or not they are promoted.

39. The Air Force believes it is easy to replace an experienced technician.

40. Technicians who show potential for increased supervisory responsibilities should be promoted.

41. Technicians who do their jobs and continue to improve their technical skills should be promoted.

42. Technicians who do their jobs should be promoted.

43. I am satisfied with the quality of supervision I receive.

44. A technician should have the choice of whether to become a supervisor or to remain a technician.

Strongly Disagree	Disagree	Slightly Disagree	Undecided/ Don't know	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

45. Good technicians are respected by the people they work with.

46. The Air Force is interested in the job satisfaction of its members.

47. I enjoy doing a job requiring use of my technical skills.

48. I think a technician should become a supervisor as a result of being promoted.

49. Good technicians should be allowed to work at their skills as long as they wish.

50. The Air Force promotion system rewards technical skills.

51. Good technicians who have not been promoted are respected for their technical skills.

52. The Air Force believes that the person who does not get promoted is less valuable than the one who does.

53. If I could receive pay increases based on my job performance, I would prefer to spend my career doing technician's work.

54. The Air Force thinks that technicians are important.

55. I cannot advance in the Air Force without becoming a supervisor.

56. I look forward to my future in the Air Force.

57. There is a need in the Air Force for career technicians. (Technicians with 15-30 years of experience who are primarily technicians or technical supervisors rather than supervisors).

58. It's difficult for supervisors to retain those technical skills they no longer have the opportunity to use.

59. There is more job satisfaction in technical job performance than in supervision.

60. I would stay longer in the Air Force than I now plan to stay if I could work as a technician and technical supervisor.

61. Which of the following most closely represents your opinion
    of the amount of attention the Air Force gives to developing
    supervisory skills?
    1. Not nearly enough
    2. Not enough
    3. Undecided/No opinion
    4. Enough
    5. Too much

62. Which of the following most closely represents your opinion
    of the amount of attention the Air Force gives to developing
    technical skills?
    1. Not nearly enough
    2. Not enough
    3. Undecided/No opinion
    4. Enough
    5. Too much

SECTION 3

Open-Ended Questions--Response is OPTIONAL

63. What problems, if any, do you think the current promotion
    system has?

64. What changes, if any, would you like to see implemented in
    the promotion system?

65. Please feel free to comment on any of the areas mentioned
    in this questionnaire.

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APPENDIX C

SURVEY RESULTS

Following are the results of the survey performed by
Captains Pierce and Robeson (32:30-66) as discussed in
Chapter III

TABLE 1

AGE ON LAST BIRTHDAY

Category	Frequency		
	Absolute	Percentage	Cumulative %
20 or less	78	21.2	21.2
21-25	137	37.2	58.4
26-30	64	17.4	75.8
31-35	61	16.6	92.4
36-40	24	6.5	98.9
41 or more	4	1.1	100.0
No response	1	--	--
Total responses	369	--	--

TABLE 2

SEX

Category	Frequency		
	Absolute	Percentage	Cumulative %
Male	323	87.8	87.8
Female	45	12.2	100.0
No Response	1	--	--
Total Responses	369	--	--

TABLE 3

MARITAL STATUS

	Frequency		
Category	Absolute	Percentage	Cumulative %
Married	212	57.6	57.6
Single, previously married, or separated	156	42.4	100.0
No Response	1	--	--
Total Responses	369	--	--

TABLE 4

GRADE

	Frequency		
Category	Absolute	Percentage	Cumulative %
Airman	21	5.7	5.7
Airman First Class	110	29.9	35.6
Senior Airman	53	14.4	50.0
Sergeant	24	6.5	56.5
Staff Sergeant	84	22.8	79.3
Technical Sergeant	61	16.6	95.9
Master Sergeant	15	4.1	100.0
No Response	1	--	--
Total Responses	369	--	--

TABLE 5

YEARS OF ACTIVE MILITARY SERVICE

Category	Frequency		
	Absolute	Percentage	Cumulative %
Less than 4	184	50.0	50.0
≥ 4, < 8	57	15.5	65.5
≥ 8, < 12	48	13.0	78.5
≥ 12, < 16	47	12.8	91.3
≥ 16, < 20	27	7.3	98.6
≥ 20, < 24	4	1.1	99.7
≥ 24, < 28	1	.3	100.0
No Response	1	--	--
Total Responses	369	--	--

TABLE 6

SKILL LEVEL

Category	Frequency		
	Absolute	Percentage	Cumulative %
3 level	23	6.3	6.3
5 level	203	55.3	61.6
7 level	134	36.5	98.1
9 level	7	1.9	100.0
No response	2	--	--
Total responses	369	--	--

TABLE 7

CURRENT DUTIES

	Frequency		
Category	Absolute	Percentage	Cumulative %
Technician	168	47.2	47.2
Technical Supervisor	128	36.0	83.2
Supervisor	52	14.6	97.8
Manager	8	2.2	100.0
No response/ Invalid response	13	--	--
Total responses	369	--	--

TABLE 8

MAJOR COMMAND ASSIGNMENT

	Frequency		
Category	Absolute	Percentage	Cumulative %
TAC	131	35.6	35.6
MAC	98	26.6	62.2
SAC	89	24.2	86.4
ATC	35	9.5	95.9
AFLC	8	2.2	98.1
AFSC	7	1.9	100.0
No response	1	--	--
Total responses	369	--	--

TABLE 9

EDUCATION

Category	Frequency		
	Absolute	Percentage	Cumulative %
Less than high school	3	.8	.8
High school or equivalent	219	59.5	60.3
Less than 2 yrs past high school	121	32.9	93.2
Associate degree or 2 yrs college	24	6.5	99.7
Bachelors degree	1	.3	100.0
No response	1	--	--
Total responses	369	--	--

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TABLE 10

CAREER ATTITUDE

Category	Frequency		
	Absolute	Percentage	Cumulative %
Have already made Air Force a career	75	20.4	20.4
Definitely intend to make the Air Force a career	30	8.2	28.6
Probably will make the Air Force a career	56	15.2	43.8
Not sure/undecided	91	24.7	68.5
Probably will not make the Air Force a career	48	13.0	81.5
Definitely will not make the Air Force a career	68	18.5	100.0
No response	1	--	--
Total responses	369	--	--

TABLE 11

ANTICIPATED YEARS OF SERVICE AT RETIREMENT

Category	Frequency		
	Absolute	Percentage	Cumulative %
N/A-do not plan to serve until retirement	134	36.5	36.5
20 years	110	30.0	66.5
21-23 years	30	8.2	74.7
24-26 years	12	3.3	77.9
27-28 years	0	--	77.9
29-30 years	4	1.1	79.0
Not sure	77	21.0	100.0
No response	2	--	--
Total responses	369	--	--

TABLE 12

IMPORTANCE AND EASE OF REPLACEMENT

	PERCENT		
	Disagree	Agree	Undecided/ Don't know
19. I think technicians are important to the Air Force.	2	98	1
54. The Air Force thinks that technicians are important.	20	71	8
16. I think supervisors are important to the Air Force.	6	91	2
21. The Air Force thinks that supervisors are important.	8	86	7
29. Families believe supervisors are more important to the Air Force than technicians are.	28	28	44
30. When technicians leave my work center (PCS, separation, etc.), it is easy to replace their technical skills.	76	20	4
39. The Air Force believes it is easy to replace an experienced technician.	33	55	12

NOTE: Some rows do not sum to 100% due to no response/invalid response or rounding.

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TABLE 13

DISAGREEMENT WITH ITEM 21

Technician	Technical Supervisor	Supervisor	Manager
5.4%	8.6%	13.5%	25.0%

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TABLE 14

PERCEIVED STATUS

	PERCENT		
	Disagree	Agree	Undecided/ Don't know
26. The Air Force regards supervisors more highly than it regards technicians.	20	71	8
13. Good supervisors are respected by the people they work with.	8	90	2
45. Good technicians are respected by the people they work with.	7	92	2
51. Good technicians who have not been promoted are respected for their technical skills.	26	65	9
25. A technician who has not been promoted is less respected than a technician who has been promoted.	44	50	6
28. I believe that the person who does not get promoted is less valuable than one who does.	83	13	4
52. The Air Force believes that the person who does not get promoted is less valuable than the one who does.	23	65	12
38. I feel that technicians are valuable to the Air Force, whether or not they are promoted.	10	87	3
34. I believe that technicians should be proud of their abilities.	3	96	1
14. The Air Force is proud of its technicians' abilities.	34	55	11

NOTE: Some rows do not sum to 100% due to no response/invalid response or rounding.

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TABLE 15

PERCEIVED SKILL AND EXPERIENCE

	PERCENT		
	Disagree	Agree	Undecided/ Don't know
12. In today's Air Force, technicians need to be more highly skilled than ever before.	8	89	2
20. Air Force technicians in my career field are, on the whole, adequately skilled.	20	78	2
24. Air Force technicians in my career field are, on the whole, adequately experienced.	26	67	7
15. The quality of work performed by technicians in my career field is above Air Force standards.	27	58	16
23. The Air Force encourages technicians in my career field to get extended experience as technicians.	39	45	16
58. It's difficult for supervisors to retain those technical skills they no longer have the opportunity to use.	20	75	5
43. I am satisfied with the quality of supervision I receive.	47	49	4

NOTE: Some rows do not sum to 100% due to no response/invalid response or rounding.

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TABLE 16

SKILL DEVELOPMENT

Which of the following most closely represents your opinion of the amount of attention the Air Force gives to developing:

	supervisory skills?	technical skills?
Not nearly enough	15%	17%
Not enough	30%	40%
Undecided/no opinion	17%	9%
Enough	27%	32%
Too much	10%	1%

TABLE 17

PROMOTION SYSTEM

	PERCENT		
	Disagree	Agree	Undecided/Don't know
27. Good performance as a technician is rewarded by the Air Force.	67	30	4
35. Good performance as a supervisor is rewarded by the Air Force.	35	53	13
32. The Air Force promotion system emphasizes technical skills.	52	41	7
18. The Air Force promotion system emphasizes supervisory skills.	38	54	8
22. The Air Force promotion system does not reward technical skills.	17	71	12
33. The Air Force loses technical ability by promoting technicians into supervisory jobs.	45	49	5
37. Some technicians do not want to make the transition from technician to supervisor.	4	88	7
36. Some technicians do not have the ability to become good supervisors.	6	93	1
17. Good supervisors are born that way.	83	11	6
55. I cannot advance in the Air Force without becoming a supervisor.	18	71	11

TABLE 17--Continued

	PERCENT		
	Disagree	Agree	Undecided/ Don't know
31. I should be allowed to advance without becoming a supervisor.	51	42	7
48. I think a technician should become a supervisor as a result of being promoted.	58	33	9
44. A technician should have the choice of whether to become a supervisor or to remain a technician or a technical supervisor.	18	72	10.

NOTE: Some rows do not sum to 100% due to no response/invalid response or rounding.

TABLE 18

CAREER TECHNICIAN

	PERCENT		
	Disagree	Agree	Undecided/ Don't know
40. Technicians who show pote _l for increased supervisory responsibilities should be promoted.	9	84	7
41. Technicians who do their jobs and continue to improve their technical skills should be promoted.	4	94	3
42. Technicians who do their jobs should be promoted.	24	68	9
57. There is a need in the Air Force for career technicians. (Technicians with 15-30 years of experience who are primarily technicians or technical supervisors rather than supervisors).	15	75	10
49. Good technicians should be allowed to work at their skills as long as they wish.	22	66	12
60. I would stay longer in the Air Force than I now plan to stay if I could work as a technician or technical supervisor.	45	30	25
47. I enjoy doing a job requiring use of my technical skills.	3	96	1
59. There is more job satisfaction in technical job performance than in supervision.	24	59	18

TABLE 18--Continued

| | PERCENT | | |
	Disagree	Agree	Undecided/ Don't know
53. If I could receive pay increases based on my job performance, I would prefer to spend my career doing technician's work, or technical supervisor's work.	16	69	15
46. The Air Force is interested in the job satisfaction of its members.	51	39	10
56. I look forward to my future in the Air Force.	34	45	20

NOTE: Some rows do not sum to 100% due to no response/invalid response or rounding.

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APPENDIX D

STATISTICAL PROCEDURES

Difference Test

The statistical test used for the difference between two population proportions is outlined below (30). This method was used for comparisons of differences within a questionnaire item, since the two groups were mutually exclusive demographic or career intent categories.

The alternative hypotheses were:

H_0: $p_2 - p_1 = 0$

H_1: $p_2 - p_1 \neq 0$

The alpha (α) risk at $p_2 - p_1 = 0$ was to be controlled at .05. Rejection of the null hypothesis was interpreted to mean a significant difference existed between the two proportions.

Calculation of the action limits for the two-tailed test required an estimate of $\sigma(\bar{d})$ when $p_2 - p_1 = 0$. Since $p_2 - p_1$ in this case, p represents their common value. To estimate p from the two samples, the pooled estimator of p was calculated:

$$\bar{p}_1 = \frac{N_1\bar{p}_1 + N_2\bar{p}_2}{N_1 + N_2}$$

Then a sample estimator of $\sigma^2(\bar{d})$ based on the pooled estimator $\bar{p}^1$ was:

$$s_c^2(\bar{d}) = \bar{p}^1 (1 - \bar{p}^1)(\frac{1}{N_2} + \frac{1}{N_1})$$

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The decision rule then was:

If $A_1 \le \bar{d} \le A_2$, conclude H_0

If $\bar{d} < A_1$, or $\bar{d} > A_2$, conclude H_1 where

$$A_1 = 0 + z(\alpha/2) \; s_c(\bar{d})$$

$$A_2 = 0 + z(1 - \alpha/2) \; s_c(\bar{d})$$

The $z(\alpha/2)$ and $z(1 - \alpha/2)$ were -1.96 and 1.96, respectively, for $\alpha = .05$. The $s_c(\bar{d})$ was the square root of $s_c^2(\bar{d})$, whose formula was given above.

Confidence Interval Approach

The confidence interval approach for the population proportions is outlined below (30). This method was used for comparison of differences between questionnaire items, since the sample, N, was identical for both p's. The original survey (32) sample size at 369 was large enough to use the normal distribution tables for approximation.

A two-sided confidence interval for the population proportion p with approximate confidence coefficient 1-α is $L \le p \le U$, where:

$$L = \bar{p} - z(1 - \alpha/2) \; s(\bar{p})$$

$$U = \bar{p} + z(1 - \alpha/2) \; s(\bar{p})$$

The $z(1 - \alpha/2)$ was 1.96 based on $\alpha = .05$. The $s(\bar{p})$ was computed:

$$s(\bar{p}) = \sqrt{1 - \frac{n}{N}} \; \sqrt{\frac{\bar{p}(1-\bar{p})}{n-1}}$$

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After computing confidence intervals for two different p's, if the invervals overlapped, the two p's were judged as not significantly different. If the confidence intervals did not overlap, this was interpreted as a significant difference between the p's.

Since these procedures constituted multiple tests on the same data base, the alpha level (α) may be somewhat greater than that specified in a given test.

APPENDIX E

WAPS CRITERIA

WAPS Scoring: E-5 Through E-7

Factors	Weights
Specialty Knowledge Test (SKT) score	100 (95 from 1968-1972)
Promotion Fitness Examination (PFE) score	100 (95 from 1968-1972)
Time-in-Service (TIS)	40
Time-in-Grade (TIG)	60
Decorations	25
Airman Performance Reports (APR)	135
TOTAL	460 (450 from 1968-1972)

APR: Multiply 15 times the mean overall evaluation received on APRs over last five years, not to exceed a total of 10 APRs.

SKT: Questions taken primarily from Career Development Course (CDC) and On-the-Job Training (OJT). Administered annually to all eligible personnel.

PFE: Knowledge of general military subjects and management practices. Administered annually to all eligible personnel.

TIS: Total years of active federal military service (TAFMS) multiplied by two. Maximum of 40 points. One point for less than six months of any year. Two points for six months or more of any year.

TIG: One-half point per one full month in grade up to a
       maximum of 60 points for 120 months in grade.

Decoration	Point Value
Medal of Honor	15
Air Force Cross	9
Distinguished Service Cross	9
Distinguished Service Medal	9
Silver Star	7
Legion of Merit	7
Distinguished Flying Cross	7
Airman's Medal	5
Soldier's Medal	5
Bronze Star	5
Meritorious Service Medal	5
Air Medal	3
Commendation Medal	3
Purple Heart	1

Additionally, a promotion board evaluation considers
education level, self-improvement efforts (both in terms of
formal education and technical knowledge), level of duty,
favorable communications, and other pertinent data. The
weighted factor system limits the board evaluation to 18% of
the total score, thus eliminating total reliance on whole-
man judgments which has proved so unsatisfactory in the
past (12:52-56).

WAPS Scoring: E-8 Through E-9

Phase I Factors	Weights
USAF Supervisory Examination (USAFSE)	100
Airman Performance Report (APR) score	135
Professional Military Education (PFE)	35
Time-in-Grade (TIG)	60
Time-in-Service (TIS)	25
Decorations	25
TOTAL	380

USAFSE: Percentage of correct answers. Management and
supervisory skills.

APR: Multiply 15 times the mean overall evaluation received
on APRs over last five years, not to exceed a total
of 10 APRs.

PME: Senior NCO Academy = 20 points; Command NCO Academy =
15 points. Completed either correspondence or in
residence.

TIG: One-half point for each month in the current grade,
based on date-of-rank (DOR), up to ten years.

TIS: One-twelfth point for each month of total active mili-
tary service (TAFMS), up to 25 years.

Decorations: As described earlier in this Appendix, maximum
of 25 points.

Additionally, a central promotion board at HQ AFMPC
subjectively evaluates each airman and converts this evaluation

to a numerical score ranging from six to ten. An overall board score is then computed by summing the scores of the three panel members who evaluated the record. This number is multiplied by fifteen. This, combined with the weighted factor score is placed in descending order for the airman's AFSC, and promotion is based on the quota system.

APPENDIX F

INTERVIEW GUIDE

HAND SHAKE. . ."HELLO, HAVE A SEAT. . . I'M GLAD TO SEE YOU."

<u>SELF INTRODUCTION</u>

I'M <u>first name last name</u>. I'M A GRADUATE STUDY AT AFIT
IN AREA B AND AS YOU COULD PROBABLY TELL FROM THE SURVEY, WE
ARE COLLECTING INFORMATION REGARDING THE PROMOTION SYSTEM OF
ENLISTED MAINTENANCE PERSONNEL. THIS IS FOR A MASTER'S THESIS
AT AFIT.

YOUR OPINIONS ON THIS SUBJECT ARE REALLY IMPORTANT TO
US. IT MAY AFFECT DECISIONS CONCERNING THE FUTURE PROMOTION
SYSTEM. I'D LIKE TO ASK YOU A FEW QUESTIONS, IF I MAY. . .
THESE QUESTIONS ARE INTENDED TO BE OPEN ENDED, AND NOTHING
YOU SAY TO ME WILL BE USED AGAINST YOU IN ANY WAY.

1. DO YOU PLAN TO MAKE THE AIR FORCE A CAREER?

   (If yes or no).... ARE THERE ANY PARTICULAR REASONS?

   (If no or undecided)....WHAT WOULD MAKE YOU WANT TO
                                              STAY?

2. ARE YOU A TECHNICIAN, TECHNICAL SUPERVISOR, SUPERVISOR
              (wrench in   (supervise w/wrench   (pencil in
               hand)   in hand)   hand)

   OR MANAGER?
    (plan, organize maintenance activities)

3. WHICH WOULD YOU LIKE TO BE?

4. WHY?

5. DO YOU THINK THE TECHNICIANS YOU WORK WITH HAVE THE TECH-
   NICAL PROFICIENCY CORRESPONDING TO THEIR RANK? (FOR
   INSTANCE, IS A TECHNICIAN WITH HIGHER RANK ABLE TO PERFORM
   A JOB <u>BETTER</u> THAN A TECHNICIAN WITH A LOWER RANK?) WHY?

6. DO YOU THINK THE SUPERVISORS ARE CAPABLE OF PERFORMING THE TECHNICIANS' JOBS?

   6a. SHOULD THEY BE ABLE TO?

   6b. DO YOU THINK ANY OF THEM WANT TO?

7. DO YOU THINK THE MANAGERS ARE CAPABLE OF PERFORMING THE TECHNICIANS' JOB?

   7a. SHOULD THEY BE ABLE TO?

   7b. WOULD THEY WANT TO, DO YOU THINK?

8. WOULD YOU LIKE TO PERFORM TECHNICAL FUNCTIONS THROUGHOUT YOUR CAREER, WHETHER IN THE AIR FORCE OR NOT?

   8a. WHY?

9. WOULD YOU LIKE TO MOVE OUT OF THE "HANDS ON" WORK AND SUPERVISE OR MANAGE THE WORK?

   9a. WHY? or WHY NOT?

10. DO YOU THINK, AS YOU PROGRESS IN RANK, YOU SHOULD DO MORE SUPERVISING AND LESS MAINTENANCE? EXPLAIN YOUR ANSWER FOR ME, PLEASE.

11. WHAT PROBLEMS DO YOU SEE IN THE CURRENT PROMOTION SYSTEM?

12. WHAT CHANGES WOULD YOU LIKE TO SEE IN THE PROMOTION SYSTEM?

13. DO THE SYSTEM WORK? IN OTHER WORDS, DOES IT PROMOTE THE BEST PEOPLE?

14. WOULD YOU LIKE TO ADDRESS ANYTHING I MAY HAVE MISSED OR DIDN'T GO INTO ENOUGH?

15. WAS THERE ANYTHING ABOUT THE QUESTIONNAIRE OR INTERVIEW THAT YOU DIDN'T LIKE? ANYTHING YOU DID LIKE?

16. DO YOU HAVE ANY QUESTIONS?

THANK YOU VERY MUCH FOR PARTICIPATING IN THE INTERVIEW.

YOU'VE BEEN REALLY HELPFUL.

SHAKE HANDS

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