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Pilot Specialists--The Potential for Dual-Track Personnel Management of U.S. Air Force Pilots

Thomas O. Fleming, Jr., MAJ, USAF
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas 66027

6 June 1980

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PILOT SPECIALISTS - THE POTENTIAL FOR DUAL-TRACK PERSONNEL MANAGEMENT OF U.S. AIR FORCE PILOTS

A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE

by

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

Pilot retention is decreasing to historically low levels, due in part to the inability of the current USAF personnel system to satisfy demands for job security, assignment selection, and self-esteem. The "dual-track" system by which several air forces segregate pilots into specialists and generalists offers the prospect of satisfying these demands and better aligning individual expectations with aspirations. This study reviews sources of satisfaction and dissatisfaction among USAF pilots and integrates behavioral theory with applicable USAF survey data. Several dual-track systems currently in use are examined, and a hypothetical system is analyzed for potential USAF implementation.

PREFACE

This study examines the feasibility of applying dual-track management of pilots to the U.S. Air Force. The breadth of this proposal necessitated a broad, extensive approach to the research rather than an intensive treatment of any one aspect. It was (and still is) my conviction that any attempt to examine this proposal in piecemeal fashion was unlikely to produce meaningful results. While the conclusions are tentative and to some extent nebulous, it is hoped that this work will stimulate more detailed investigation of this potentially valuable concept of personnel management.

While this report is based on a broad array of official survey data, I have still found it impossible to either support or refute all of my contentions. I have attempted to identify any unsupported assertions and to indicate their sources even if not acceptable in the strictest academic sense. Naturally, I alone am responsible for any errors or omissions.

I wish to express my appreciation to all those who made this study possible. It is a pleasure to thank my thesis committee, all of whom provided invaluable suggestions, comments, and criticism: Major Skip Cooper, chairman; Dr. Brad Lear, consulting faculty member; and Major Dan Mason, committee member. Major Chuck Heltsley of MPC's Rated Officer Retention Group and Captain Mel Gambrell of the MPC Survey Branch also provided countless facts, figures, and memoranda, without which this research could not have been completed. Finally, I must express my deepest thanks to my wife, Karen, who typed the manuscript, and who assisted and encouraged me throughout the "best year of my life."

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EXECUTIVE SUMMARY

QUALIFIER: Part of the mission of the Army Command and General Staff College is distribution of student research products to interested DOD agencies to enhance the potential for new insights into Defense related problems/issues. While the College has accepted this product as meeting academic requirements for graduation, the views and opinions expressed or implied are solely those of the author and should not be construed as carrying official sanction.

TITLE: PILOT SPECIALISTS--THE POTENTIAL FOR DUAL-TRACK PERSONNEL MANAGEMENT OF U.S. AIR FORCE PILOTS

AUTHOR: MAJ THOMAS O. FLEMING, JR.

ADVISOR: MAJ WALLACE E. COOPER

I. Purpose: To determine if the adoption of a "dual-track" personnel system for Air Force pilots would enhance job satisfaction and increase overall retention of pilots.

II. Problem: Air Force pilots with 6 to 11 years of service are resigning in ever-increasing numbers. This has resulted in a shortage of experienced pilots from which it will take years for the Air Force to recover. Expressed reasons for early separation include inadequate compensation, undesirable assignment prospects, low career security, and dislike of the "way of life." Several of these factors stem partially from the current USAF system of officer/pilot personnel management: producing and promoting a "whole man" and separating those deemed unsuitable for further advancement. An alternate system in use by several other major air forces offers the possibility of alleviating some of the current sources of pilot dissatisfaction and better matching a pilot with the compatible overall career objective. This alternate system, popularly known as "dual-track" segregates pilots into two groups: general-

ists who aspire to senior command and staff positions, and specialists who desire simply to remain in active flying duty throughout their full careers. This system appears to offer some potential of increasing overall pilot satisfaction and stemming pilot attrition.

III. Data: This study reviews the fundamental sources of satisfaction and dissatisfaction among pilots in today's Air Force. It integrates the classical and current theories of organizational psychology with survey data of USAF pilots. Numerous formal surveys are reviewed, representing pilots of all age and experience levels from all major commands. Next, the study examines the experience of four major flying organizations with various dual-track systems. The British Royal Air Force, German Luftwaffe, U.S. Army aviation, and U.S. commercial airlines are discussed. Finally, a hypothetical dual-track system is developed and evaluated to ascertain implications for improving overall pilot career satisfaction and retention.

IV. Findings: USAF pilot survey data generally supports current theories of employee behavior, especially Herzberg's two-factor theory. Satisfaction derives from intrinsic needs. Pilot dissatisfaction, on the other hand, stems mostly from extrinsic factors such as inadequate compensation, low job security, and unfavorable working conditions. Allied air forces and other flying organizations employing dual-track personnel systems have been able to better match an individual pilot to a career goal compatible with his capabilities and aspirations. While it is not a panacea, this form of management appears to enhance overall pilot satisfaction.

V. Conclusions: Dual-track management of Air Force pilots, if implemented in conjunction with certain supporting modifications of the USAF personnel system, appears to offer the

potential for increasing overall career satisfaction of the pilot force. Although it is inherently incapable of addressing extrinsic factors such as compensation, family separation, and long duty hours, it does offer the prospect of improving individual motivation by enhancing job security, better aligning career expectations with aspirations, and providing increased opportunity for individuals to obtain preferred assignments.

VI. Recommendations: The complexity of the subject and the absence of any current dual-track system suitable for unmodified adoption by the USAF necessitates that the findings and conclusions of this study be addressed in greater detail in order to verify them and ascertain the feasibility of employing a dual-track system within the USAF. Specific requirements include the following:

-Conduct a comprehensive survey of the USAF rated force to determine the relative importance of flying, promotion, job choice, and security.

-Conduct a detailed quantitative analysis to determine specific trade-offs associated with dual-track implementation and to define the optimium form of such a system.

-Conduct a survey of the pilots of one or more allied nations currently employing dual-track management in order to verify levels and sources of satisfaction among both rated generalists and specialists.

CHAPTER I

INTRODUCTION

Problem Background

Currently, the US Air Force is confronted by one of its most significant peacetime challenges - retaining highly trained pilots beyond their initial periods of obligated service. These pilots are now resigning in ever-increasing numbers just as they should be entering their most productive years in the cockpit. While the USAF pilot retention rate for pilots at 6 to 12 years of service was 56 percent in 1975, the current rate is only 26 percent. This will result in a shortage of 2500 pilots in FY 80.(32 :3) Moreover, the situation could reduce operational rated officer manning to levels as low as 86 percent.(17:10) Quite simply, the problem is one of economics, whether viewed from the perspective of the Air Force or from that of a departing pilot. As costs approach a million dollars to fully train a single pilot, the Air Force is justified in calling him "the military's most expensive product."(51:7-2)

Total pilot training costs can be reduced in one of two ways - by reducing the cost of training an individual pilot or by reducing the number of pilots to be trained. In view of the increasing sophistication of aircraft and the escalating costs of operating them, the latter course would seem to hold greater promise. Given a constant (or possibly increasing) requirement for USAF pilots, this can only be

accomplished through reducing attrition and turnover of the pilot force.

Economic concern is also one of the primary motivations of departing young pilots who seek to double their salaries with the airlines. As noted in congressional testimony, "the major economic alternative to military aviators lies in the airlines."(23:15) In view of current estimates that, throughout the eighties, the airlines will hire more pilots each year than the military produces, this problem is unlikely to disappear of its own volition in the near future.(16:16)

While the root causes of the pilot exodus are complex and varied, if one is to listen to the comments of departing pilots, their choice is not solely motivated by personal financial considerations. Many have indicated that a more fundamental reason is dissatisfaction with their current job or with their future prospects in the Air Force. It is a common complaint that in order to be promoted, thus "succeed" in today's Air Force, it is necessary to get out of the cockpit and behind a desk. In fact, most pilots anticipate non-flying assignments whether they request them or not. In short, many departing pilots, as well as many others who remain, aspire primarily to be a <u>specialist</u> within a system designed to produce (and reward) <u>generalists.</u> Consequently, they seek to fulfill their aspirations by "voting with their feet" and becoming airline pilots.

Since its inception, the Air Force has managed its pilot force (and all other line officers) under a generalist system which applies the same set of procurement, promotion, and separation policies to all line officers.(49 :1-2) Implicit in this system is the assumption that each officer is a potential Chief-of-Staff. This "up-or-out" personnel system

emphasizes promotion to ever-increasing levels of responsibility through recognition of the qualities of leadership and management demonstrated by the "whole-man". While this system undoubtedly produces some excellent managers, it also produces undesirable side effects, not the least of which is the widespread perception that it is inequitable, inefficient, and unnecessarily expensive. The current system creates disruptive personnel turbulence in two ways: directly, by forcing out technically competent pilots deemed unqualified for increased managerial responsibility, and indirectly, by forcing highly qualified pilots to seek "career-broadening" managerial and support experience in order to avoid non-selection at a later date.

Thus, the problem which this study confronts is rooted in the current generalist personnel system under which all USAF pilots are managed. Dissatisfaction with the current system is the proximate cause of a significant percentage of early pilot separations.(21 :3) At the same time, it results in mushrooming costs to the Air Force, not only to train more replacements for departing pilots, but also in terms of the lowered efficiency which accompanies a less experienced pilot force.

A Possible Alternative: Dual-Track Management

An alternative system is presently in use (in varying degrees) in several other major air forces and has, in fact, been considered by the USAF. It is the concept of "dual-track" advancement, wherein officers are segregated into two basic groups at some early or intermediate point in their careers. Those who possess both the ability and desire for managerial responsibility are groomed for promotion to senior command positions. These officers are trained extensively with emphasis on developing the breadth of knowledge and

experience necessary for senior management. Conversely, other officers follow the alternative "track" of increasing specialization and intensive training, which, in the case of rated officers, would result in 20 to 30-year careers in the cockpit. There are a number of ways in which dual-track might be implemented in the Air Force--none of them novel: a warrant officer system like that of the Army, selective continuation of passed-over captains (i.e., modification of the "up-or-out" concept); or a system into which pilot specialists voluntarily enter without regard to promotion passover. While the magnitude of the costs is likely to vary with each of these options, the direction of these costs (savings) should remain constant if retention within the rated force actually is enhanced by dual-track.

On the surface, the idea of a dual-track system for pilot specialists is appealing because of its potential to reduce attrition and thus, overall training costs. However, several studies conducted within the Air Staff during the past decade have concluded that the drawbacks of a dual-track system would offset any of its desirable features.(102:3) They argue that, under dual-track, the morale of the pilot specialist force would suffer due to limited career progression and the monotony of job stagnation. At the same time, such arguments hold, since the total requirement for supervisory and supplement pilots should remain constant, those officers in the generalist (or managerial) track would have less time in the cockpit to gain primary aircrew experience. This would result in less rated experience among Air Force managers and leaders and a smaller pool from which the Air Force could select its rated leadership. The opponents of dual-track have concluded that such effects are likely to occur and will result in decreased

retention rather than achieving the improved retention which dual-track was designed to produce.

Several studies have been conducted to determine the costs or savings to be realized from dual-track. Most have shown that, all else being equal, the cost of dual-track is either approximately equal to or less than that of the present system.(73 :61; 84 :28-32; 91 :52-61)* But, of course, all things are never equal. Naturally, such studies are extremely dependent upon the variables and assumptions around which they are structured (e.g., force size, pilot requirements, promotion opportunity and timing, tenure, cost factors, and retention). However, the most significant variable in terms of potential costs or savings is also the most difficult to quantify - retention. Put simply, if retention improves, dual-track is cheaper; if it does not, then dual-track is more expensive. Significantly, retention not only drives costs; it also provides a direct measure of the relative satisfaction and, to some degree, motivation of the force. Unfortunately, it is this variable which is least subject to direct manipulation.

Consequently, any benefits attributable to dual-track are dependent upon the linkage between dual-track management and pilot retention. Ironically, numerous studies have examined dual-track with hardly any treatment of retention as a variable. By the same token, the growing pilot exodus has focused increased attention on the monetary significance of retention, with proposed remedies including increasing pay, reducing "irritants," increasing or decreasing training commitments, and

*See Appendix A for a more detailed discussion of costs and savings.

appealing for increased professionalism. Unfortunately, few if any of these efforts have addressed proposals to directly increase job satisfaction, probably the most crucial element of the whole retention problem. That is the goal of this research-- to determine if dual-track would improve job satisfaction.

Working Hypothesis

The adoption of a "dual-track" personnel system for USAF pilots would enhance job satisfaction and increase overall retention of the rated force.

Thesis Objective

The principal objective of this research is to determine if the implementation of a dual-track personnel system for Air Force pilots could be expected to increase overall retention of the pilot force. Toward this end, the following sub-objectives have been identified:

1. To determine if reduced promotion opportunity will adversely impact retention of pilot specialists.

2. To determine if rated specialists would experience job enrichment or job stagnation under dual-track.

3. To determine if implementation of dual-track might be expected to foster counterproductive isolation, rivalry, and misunderstanding between rated generalists and rated specialists.

4. To determine if rated generalists under dual-track would be able to attain sufficient rated experience to meet the requirements of law (ACIA) and managerial expertise.

Research Approach

Chapter II will provide a review of pertinent managerial literature regarding job satisfaction and retention and will relate this to the current Air Force situation.

Chapter III will discuss the "other side of the coin"--sources of dissatisfaction among pilots.

Chapter IV will examine existing personnel systems and pilot attitudes in several organizations which embody some features of dual-track. The following will be analyzed: the Royal Air Force, the German Air Force (Luftwaffe), U.S. Army Aviation, and the U.S. commercial airlines.

Chapter V will present and analyze a hypothetical dual-track system for the USAF.

Chapter VI will provide conclusions of the research and recommendations for action and further research.

CHAPTER II

JOB SATISFACTION AS A MOTIVATOR — ITS IMPACT ON PILOT RETENTION AND IMPLICATIONS FOR DUAL TRACK

Background — Motivation Theory

Managerial and psychological literature is rife with theories, studies, and discussions of human motivation — what motivates man to work and what are the implications in work organizations? The study of human behavior is among the most complex subjects for professional research and is thus associated with a high degree of uncertainty. Consequently, any conclusions the reader or researcher might draw regarding the motivation to work or any of its manifestations should be carefully considered. It is recognized that, by careful selection of sources, one can "prove" or at least support, contrasting points of view. For the interested reader, a reasonably comprehensive survey of this topic is provided by Edward E. Lawler, III in Motivation in Work Organizations. Most of the following outline is derived from this work.

As a preface to examining the literature of motivation theory, it is first necessary to recognize two caveats — first, people are different, and second, the workplace is a "system" in which changes in one factor or aspect of a job often create repercussions in other areas.* While both may seem readily apparent, they are too often overlooked in the conclusions of various studies of human motivation which frequently try to reduce this complex subject to a"lowest common denominator."

*For an excellent discussion of the USAF flying squadron as a system, see Case (75:all).

Human behavior is extremely complex. Individuals respond differently to similar needs; people differ in what motivates them to work; and an individual's needs and motivation frequently change over time. Professor Morrison Massey of Colorado University noted that an individual's basic system of values is formed during the first ten years of his life. The primary determinants of one's value system are the diverse forms of social contact of varying importance: parents, other relatives, school, church, media (especially television), peer group, and so forth. By age 20, Massey states, this value system is so firmly established that it is subject to further change only through the occurence of a "critical emotional event" (and then only rarely).(112:--)

The implications of this fact are evident. First, a person's value system is the foundation upon which his personality, needs, and motivations are based, and they too are fully developed by the time a young man or woman enters the job market. What's more, these needs and motivations differ just as the individuals themselves differ in personality and social background. The job or environment which motivates one person may well be anathema to his contemporary from across the street or across the nation. Consequently, the fact of individual differences must be kept in mind as we examine behavioral theories or surveys. While a given theory may be generally applicable to a segment of the population, it seldom applies to all. This fact has provided a focus for criticism of most behavioral theorists, and while it certainly does not obviate their conclusions, it must be remembered in attempting to apply them to "the real world."

Lawler, too, notes the central importance of individual differences and early value development as they relate to motivation in the workplace. He notes that, while the needs of

employees are essentially the same, their goals which fulfill those needs may differ considerably. The result is that some workers are security-oriented while others are more influenced by achievement needs.(9 :104) He concludes that "rather than trying to change the needs of their subordinates, managers should concentrate on placing people in jobs where their need structure is appropriate." (9 :38, 204)

Essentially, humans are motivated to satisfy various needs and accomplish various goals. Some of our most basic needs are instinctual and are thus governed by unconscious drives (e.g., hunger, sleep, the desire for comfort, and safety). Early theorists focused on such subliminal factors to explain man's behavior. The early efforts of Freud and Darwin led to more recent work in the field of "drive theory" by C.L. Hull, B.F. Skinner, and Cravens and Renner, to note but a few. While such basic, instinctual drives are present in all workers, additional theory and research has indicated that a more complex "hierarchy of needs," such as that postulated by Abraham Maslow, is present in the worker and extends beyond the instincual level. Maslow's hierarchy commences with physiological needs and progresses through needs for security, affiliation, achievement (or esteem), and, ultimately, self-actualization — becoming all that you are capable of becoming.(11:82-92) A person can be motivated by more than one need at a time and will continue to be motivated by a need until either it is satisfied or a lower-order need is threatened.(9 :40) Herzberg, McGregor, and others have also elaborated on the significance of "higher-order needs."

A cursory examination of these needs serves to indicate their presence and importance in the organization: affiliation— the need for social contact; equity — equal abilities and efforts; achievement — the desire to perform and succeed in competitive,

risk-orientated situations; competence — fitness to interact with the environment, characterized by persistence and goal orientation; and self-actualization — growth, self-fulfillment, and the realization of one's full potential. Most theorists feel that man's motivation derives directly from his attempts to satisfy needs. Ironically though, satisfaction does not directly result in motivation. Studies have shown that once a need is satisfied, it ceases to be a motivator.(11:12) An exception, however, appears to be the need for self-actualization, for which, Maslow felt, "increased satisfaction leads to increased need strength." (9 :28) It is noteworthy, that, while most behavior is motivated by goals, if these goals are unattainable, frustration tends to result with various negative manifestations. (11:14)

Many of these needs are interactive to varying degrees. Thus, a worker might be motivated simultaneously by his pay and benefits, the security offered by his organization, affiliation with his peer group, the esteem resulting from achievement in his job, the sense of responsibility, autonomy, and competence which his job provides, and the self-actualization which results from competence and achievement.

Another aspect of worker motivation is provided by "expectancy theory." As postulated by Vroom, this theory ties job satisfaction to a person's expectations, and states that a person's motivation is a multiplicative function of his expectation of need satisfaction and the instrumentality, or importance, which he attaches to the expected outcome. (2:140)

Both satisfaction and motivation are closely related to rewards. Rewards may be either extrinsic (pay and benefits, promotion) or intrinsic (job satisfaction, achievement, self-actualization). The school of "scientific management," fostered by Federick W. Taylor in 1911, was predicated largely on the

application of the extrinsic "carrot-and-stick" approach. That is, a person "will be motivated to work if rewards and penalties are tied directly to his performance.(9 :199) More recently, research has shifted to the concept of "participative management," developed through the efforts of McGregor, Likert, Argyris, and others. Participative management is based on the concept that "individuals can derive satisfaction from doing an effective job per se;"(9 :200) that is, intrinsic motivation.

Needless to say, both intrinsic and extrinsic factors are, to some degree, present in the complex realm of human behavior, with some individuals more predisposed toward intrinsic motivation while others are more inclined toward extrinsic factors. Consequently, Lawler argues for a combined (both scientific and participative) approach, in which employees would be stimulated and challenged by their jobs (participative) and rewarded on the basis of their performance (scientific). The key problem, he notes, is the selection of those people who fit the "right motivational pattern," this being difficult to determine until one has performed in an organization for a time.(9 :207)

A detailed study of the motivation to work was conducted by Professor Frederick Herzberg, who also identified both intrinsic and extrinsic job motivators. He concluded that their general effects are distinctly different. Those factors intrinsic to the job are similar to Maslow's higher-order needs and include responsibility, challenging work, achievement, and growth and development. These "motivators," as he called them, produce positive job attitudes "because they satisfy the individual's need for self-actualization in his work." (6 :70,114) Moreover, motivators also tend to be relatively enduring rather than temporary in nature. On the other hand, he noted that factors which operated as dissatisfiers were not associated with

the job itself, but rather with the conditions which surround the job. These he called"factors of hygiene," based upon the observation that they acted as a preventive rather than a curative. Herzberg's hygienic factors include supervision, interpersonal relations, physical working conditions, salary and benefits, job security, and administrative policies.(6 :113) Interestingly, he noted that these hygiene factors acted only in a negative sense. That is, they tend to create dissatisfaction if not satisfied, but do little to actively motivate an individual when they are satisfied.

Application of Motivation Theory Among Air Force Pilots

Motivation theory gives rise to several questions relevant to the retention problem among Air Force pilots:

- How does job satisfaction relate to retention?
- What determines job satisfaction and what are its effects?
- What determines dissatisfaction among pilots and what are its effects?
- What motivates pilots?

Possible answers to these and other pertinent questions are provided both by consideration of relevant theory and also by a number of surveys conducted by and for the Air Force dealing with this topic.

Job Satisfaction and Retention

Job satisfaction appears to be a major determinant of retention. Virtually all organizational psychologists seem to feel that workers who have a high degree of job satisfaction are less subject to turnover than those who do not enjoy their work.(3 :16,190-194; 5 :60; 9 :101,105;63 :8) An earlier Air Force study declared that "satisfaction in one's job leads to increased productivity, better personal adjustment, and

favorable career intent."(81:59) More recently Gen. B.L. Davis, Commander, Air Training Command and former DCS, Personnel, noted that, "In units where these needs (job satisfaction, recognition, etc.) are being fulfilled - where pilots feel their jobs are important and appreciated - - retention is highest."(56:37)

However, it is essential to realize that satisfaction is not solely dependent on what the worker has done in the past or is presently doing. As a matter of fact, an Air Force study of separating pilots indicated general satisfaction with past and current assignments.(111:5) This apparent paradox is partially explained by the concept of expectancy, which asserts that job satisfaction is linked directly to both the worker's expectations and his perceptions.(2 :140) Essentially, people are satisfied if they think their job will lead to outcomes to which they attach a high value. Thus, the worker (or pilot) must have a reasonable expectation that his future in the job will lead to increased (or at least not decreased) satisfaction. This, in turn, is heavily dependent upon his perceptions (which may differ from reality): perceptions both of what is likely to transpire in the way of changing assignments and also perceptions of the value of the job itself.

It is especially significant that goals be perceived as attainable. As Maslow notes, unattainable goals breed frustration which manifests itself in the form of rationalization, regression, fixation, and ultimately, resignation. (11:5) This observation entails an insidious implication: when goal frustration results, it is often the best workers who, due to their ability and self-confidence, are most likely to leave the organization. The less qualified worker, frustrated, yet unsure of his own ability to compete in the job market, is more likely to continue in service, but reduce his level of effort.

Air Force surveys, as well as numerous informal opinions, seem to support the correlation between job satisfaction and retention.(83:xiv; 94:5; 95:84-85) Nevertheless, this correlation is subject to other influences. It is especially important to note that satisfaction is a relative rather than an absolute concept. It is relative to changing conditions and expectations over time and to perceptions of other opportunities at any time. One recent study of Air Force junior officers concluded that the existence of alternate job opportunity acts as an intervening variable between job satisfaction and retention.(74:100-102) The apparent correlation between USAF pilot attrition and airline hiring lends credence to this observation.

Almost all modern researchers recognize the paramount significance of the worker's job in producing satisfaction and sustaining motivation. Hackman and Oldham concluded that five variables define the "motivating potential" of a job: skill variety, task identity, task significance, autonomy, and feedback from the job.(2:240) These factors were analyzed in a 1978 study of ATC instructor pilots,(83 :32-37) most assigned to cockpit duties. The results indicated a moderately high level of overall job satisfaction, with T-38 IP's indicating above most normative values. Douglas McGregor notes that unless work provides the opportunity to satisfy higher level needs, the workers will feel deprived. He cautions that if management attempts to cope with such deprivation through monetary rewards alone, then "people will make insistent demands for more money."(1 :308-309)

Ironically, while most Air Force pilots indicate a high degree of satisfaction with their current jobs, their perceptions of the future are not so bright. A DOD survey of 498 pilots in 1979 indicated that, while satisfaction with

previous jobs was high, expectations for continued satisfaction in future assignments were dismal. It is also interesting to note that approximately 70 percent of those pilots separating said they "planned to seek a job with commercial airlines."(20:3) In other words, they sought fundamentally the same job they were leaving. While the disparity in pay and benefits between airline pilots and military pilots is significant, this factor was not given as the main reason for separation.* Rather, most separating pilots perceived that their future in the Air Force entailed both a reduced opportunity to remain in the cockpit and an anticipated decline in the personal satisfaction derived from military aviation. This latter factor, it should be noted, derives from perceptions that the pilot's authority is increasingly being circumscribed by over-centralization of authority and insufficient or poor quality proficiency flight training. (76:--; 101:--; 117:2-11)

Job Satisfaction and Its Effects

Surveys of pilots (as well as other officers) lend support to Herzberg's motivator - hygiene concept. Personnel surveyed consistently listed the following factors as providing satisfaction in their jobs: the job itself, achievement and recognition, responsibility, and advancement. These factors are equally important among Navy aviators as well. Based upon a study of Naval pilots' attitudes, one writer concludes that "through the content of his job, his intrinsic needs for challenge, achievement, and excitement will be filled." (67:209)

*However, it should be noted that the issue of pay and benefits, especially in comparison to those of commercial airlines, has been listed as the major dissatisfier in some recent studies. (20:3; 21:3)

According to most motivational theorists, satisfaction results essentially from a perceived correlation between a person's values, needs, and goals on one hand; and reality, his perception of reality, and his expectations on the other. Thus, the question arises, does the current Air Force personnel system of managing pilots serve to enhance or reduce this correlation?

To answer this question, it is first necessary to ask why young men and women become military pilots in the first place. Naturally, the reasons as well as their relative importance, differ from person to person. While reasons vary from patriotism to pay and benefits, surveys have indicated that the preeminent reason is the job itself — a strong desire to fly.(67:199; 77:--;111:5) Moreover, a sizeable majority (73 percent in one survey)(39:3) indicate an initial intent to serve at least 20 years. In fact, fewer than 20 percent of Air Force officers actually remain until the 20-year retirement point.

Most theorists have placed considerable emphasis upon achievement and growth as factors bearing on motivation and job satisfaction. In the case of military pilots, these objectives can be realized through one or both of two avenues, each job-related. First, and in all cases during a pilot's early years of service, he may "grow in the job;" that is, he may continually refine his skills as a pilot. Typically, a pilot's initial six years might include transition into one or more different aircraft, progressively more challenging responsibilities as he gains experience and the trust of his supervisors, (e.g. — upgrade to aircraft commander or flight-lead, and participation in more challenging missions), an opportunity to pass on his newly-acquired expertise as an instructor pilot, and flight-related, non-flying supervisory

responsibilities. In short, his initial period of service provides ample opportunity for motivation through growth, achievement, recognition, and responsibility. While these early years provide little opportunity for managerial or supervisory responsibility, this doesn't seem to act as a dissatisfier, since expectations in this regard are initially low.* Since his first two promotions are virtually assured, there is little correlation between his performance as a pilot and his advancement within the managerial hierarchy of the organization. In other words, he functions to a limited degree, as a specialist in a "dual-track" organization.

As the pilot nears the end of his initial six years, a second motivational avenue opens to him: he can seek increased responsibilities apart from those directly related to flying. Such opportunities might include additional duties within his squadron, staff duties at wing or perhaps major command level, or in unusual cases, supervisory responsibility as a flight commander. Additionally, as the young pilot approaches the six year point, he normally enjoys the opportunity to "change horses" and enter a non-rated career field through the rated supplement. The officer who aspires to rapid advancement and ultimate senior management frequently seeks to leave the cockpit, at least temporarily, at this point in his career. For officers who seek career broadening, relatively rapid advancement, and diverse job responsibilities, the Air Force would appear to offer a high probability of fulfilling these aspirations. (51 :Ch 7)

*Because the Air Force initially promotes officers (to O-2 and O-3) on a "fully-qualified" rather than a "best-qualified" basis at fixed points in their careers, officers' expectations are more clearly defined than for later years and promotions.

Unfortunately, it is the pilot whose motivation arises primarily from flying itself who encounters a potential source of dissatisfaction at the 6 to 11-year point. It is at this point that he is confronted with the dilemma of attempting to stay in the cockpit "at all costs" (which is often impossible anyway due to staff and rated supplement requirements). USAF promotion board results consistently indicate the premium placed upon career broadening, and those whose cockpit tenure is unbroken for too long frequently find themselves passed over for promotion to major or lieutenant colonel. This factor will be examined more closely in the following section.

While much evidence tends to support the contention that job satisfaction is primarily dependent upon intrinsic, job-related factors, few would contend that extrinsic, situational factors are unimportant. Herzberg concludes that such extrinsic factors are incapable of providing the worker with a basic sense of satisfaction since "it is only from the performance of a task that the individual can get the rewards that will reinforce his aspirations."(6 :114) However, several other researchers have disputed Herzberg's findings. Lawler, for instance, argues that overall job satisfaction is determined by "the difference between all the things a person feels he should receive (both intrinsic and extrinsic) from his job and all the things he actually does receive."(20:77) Furthermore, a significant factor in determining what a person feels he should receive is his assessment of the perceived relationship between inputs and outcomes of his contemporaries, both within and outside of the organization. This factor has possibly precipitated increased Air Force attrition as the rather significant disparity between commercial and military aviators has received continual emphasis both in the press and by word-of mouth. Most pilots admit to some degree of dissatisfaction

when they meet a former military pilot of their own year group who, having become a commercial pilot, is now making considerably more money and usually working fewer hours. (35:138)

In a study of Air Force officers (both rated and nonrated), Vrooman concluded that job satisfaction is primarily dependent upon job challenge — whether the work scene stimulates the mind and abilities or is boring and uninteresting."(95:85) An interesting phenonmenon emerges when pilots express their relative degree of job satisfaction and motivation in the combat environment of Southeast Asia as opposed to today's peacetime Air Force. Despite the significant extrinsic differences in favor of the current situation (better living conditions, shorter hours, less danger, less family separation, more pay), it has been the author's observation that virtually all pilots indicate a higher degree of satisfaction in the combat environment. The explanation, as they are quick to point out, was the sense of satisfaction they derived from actually performing the mission for which all their previous efforts had been intended. This is perhaps the best example of the relative importance of intrinsic and extrinsic rewards as they apply to Air Force pilots.

Lawler analyzed the efforts of several researchers and concluded that total job satisfaction is, in fact, dependent upon extrinsic rewards as well as intrinsic rewards.(9:112-147) He cautions, however, that an organization must exercise extreme care in tying extrinsic rewards such as pay and promotion to job performance in order to avoid certain dysfunctional results. Although extrinsic factors appear capable of inducing a certain level of satisfaction in workers,most Air Force-sponsored studies have indicated that such factors as pay, promotions, assignment policy, and working hours/conditions are far more likely to be mentioned in a negative

sense than a positive one. The following chapter will examine those factors which are perceived as a source of dissatisfaction within the organization.

SUMMARY

This chapter has reviewed some of the literature concerning job satisfaction and motivation and discussed its application to Air Force pilots.

According to most behavioral theorists, satisfaction and motivation are not synonymous, nor is one a prerequisite for the other. Satisfaction, on one hand, is oriented on the past and the present. It results from the attainment of rewards, both those intrinsic to the job itself, such as responsibility, achievement, and recognition, and those extrinsic to the job, such as pay and benefits, security, and working conditions. The satisfaction of these needs does not necessarily produce motivation, which is oriented more towards the future.

Motivation results from the expectation of satisfaction and the importance of the expected outcome. Since a fulfilled need no longer motivates behavior, extrinsic rewards, such as compensation, are inherently poor motivators. On the other hand, the intrinsic rewards associated with the job itself are capable not only of producing job satisfaction, but long-term motivation as well.

Numerous surveys have supported the application of these theories to Air Force pilots. These pilots, like all individuals, express different needs, and different motivations. Likewise, they derive varying degrees of satisfaction or motivation from the same stimuli. In line

with Herzberg's two-factor theory, pilots' complaints result primarily from extrinsic factors, while their motivation is derived from the jobs themselves. Flying appears especially important to the young aviator. While job satisfaction is positively correlated with retention, many pilots are separating who express a high degree of past job satisfaction. Their concerns are oriented on the future--a continuing erosion of pay and benefits, the declining security associated with "up-or-out" policies, and undesirable assignments which remove them from flying duty.

Implications for Dual-Track

Since different individuals have different sources of satisfaction and motivation, a dual-track system provides an opportunity for each individual to pursue the career path most likely to maximize his own satisfaction. Those pilots whose motivation stems primarily from their love of flying would have a new course of action open to them besides the airlines or Air Force Reserve. By the same token, such a system would enhance basic security by alleviating the current threat to the specialist posed by the up-or-out system.

At the same time, dual-track should "lock" these specialists into a career path in which promotion, the Air Force's traditional measure of achievement, was severely limited. Some of the ramifications regarding generalists, such as decreased flying opportunity and increased assignment turbulence, might also prove less satisfying.

CHAPTER III

DISSATISFACTION AND ITS EFFECTS

Just as satisfaction exerts a direct effect on retention, the "other side of the coin," dissatisfaction, seems directly related to attrition. Lawler noted that dissatisfaction causes turnover for two reasons:

> ...(1) it causes people to search their environment for more attractive alternatives, and (2) it influences the degree to which people feel their jobs will provide in the future the rewards they desire.(9 :101)

The dissatisfaction most often expressed by Air Force pilots seems related to the following factors:

(1) job context vice content (i.e. - Herzberg's hygienic factors,

(2) perceptions of equity, and

(3) the trend of expectations versus aspirations.

Job Context Versus Content

Job context has numerous manifestations, frequently expressed in pilot surveys. Lt. Gen. Andrew P. Iosue, Deputy Chief of Staff, Manpower and Personnel, recently listed "five dominant reasons pilots leave the service" based on surveys of exiting pilots: inadequate compensation, dissatisfaction with the Air Force way of life in general, family separations, long hours, and lack of a say in future assignments.(21 :3) Virtually all of these factors may be considered as hygienic (in Herzberg's terms), in that they are extrinsic, or related to job context, rather than intrinsic to the job itself. Herzberg maintains that, while improving hygenic factors will serve to remove impediments to job satisfaction, such action is incapable of actually promoting a positive attitude of job satisfaction.(6 :113-114) Other researchers predominantly

have concurred with Herzberg's premise. M. Scott Myers conducted a six-year study of employee motivation which reinforced Herzberg's conclusions. Myers, like Herzberg, noted that hygienic and motivational factors, though different, are still closely intertwined. A worker tends to ignore negative peripheral factors such as wages, working conditions, supervisor relations, and status symbols when he finds his job a motivating one. However, Myers points out, he finds these same factors strongly dissatisfying "when his opportunities for meaningful achievement are eliminated."(36 : 31) These conclusions are also supported by the oft-repeated observation that "morale is highest when conditions are at their worst." Implicit in this statement however, is the requirement that the individual in question be motivated by (and usually committed to) his job or task itself.

Such conditions are most often observed in the combat environment. Adolf Galland, Commander of Luftwaffe Fighter Forces in World War II, noted that even in Germany's darkest hours, morale among pilots remained high.(4 :211, 234,297) S.L.A Marshall also observed the willingness of soldiers to accept hardship and privation in battle and stated that "those who respect history will deem it beyond argument that belief in a cause is the foundation of the aggressive will in battle."(10:162) Similarly, Robert N. Ford, in his classic study of motivation among AT&T employees, noted that "a good job situation may offset bad maintenance or surrounding factors." He goes on to say that "when the environment is at its worst, employee performance is usually at its best."(3 :98)

It is not accurate, however, to ascribe unanimity to the acceptance of Herzberg's theories. Ondrack, in

relating hygiene factors to Maslow's lower-order needs, maintains that they are only significant in determining an individual's "base line" for job satisfaction. Given that such a base line is maintained, then "motivators are clearly dominant as sources of both dissatisfaction and satisfaction."(37:79-89) Capt. Thomas N. Thompson, in a 1975 study of USAF job satisfaction reached a similar conclusion, "that the major factors defining the most satisfied groups are exactly the same as those that define the least satisfied groups."(94 :132) Nevertheless, current surveys appear to contradict this conclusion, at least among professional and white-collar groups.

Several researchers, among them Keith Davis, Edgar Schein, Chris Argyris, have noted that Herzberg's two-factor theory is applicable to workers at the upper end of the employment spectrum in white-collar occupations. A variety of surveys of USAF personnel have continually re-affirmed its appicability within the Air Force. For instance, the Air Training Command Survey of Rated Instructors conducted in September 1978, concluded that "there was no one factor readily apparent for early separation." Rather, it was determined, the "separation reason" was a composite of a number of factors: job security, assignment satisfaction, benefits erosion, confidence in management, low concern for the individual,aircrew authority not commensurate with responsibility, work schedule, institutional commitments, family acceptance, and alternate job availability.(83 :1-13) Similarly, both a 1978 study of Military Airlift Command rescue pilots (90:14-15) and the 1978 TAC Aircrew Concerns Conference (117:all) revealed similar sources of discontent.

The importance of perceptions of an organization's extrinsic rewards structure is not easily overstated. Lawler concludes that extrinsic-reward dissatisfaction leads to the

same negative effect as total job satisfaction (absenteeism, turnover, strikes, poor health) and ultimately to total job dissatisfaction itself.(9:141-142) This observation is reinforced in the Air Force by the fact that a majority of exiting pilots maintain that they enjoyed their jobs.(100--)

The existence and significance of dissatisfiers or career irritants has not gone unnoticed by the Air Force, the Department of Defense, or the Congress. In fact, such extrinsic factors are,by their very nature, easier to recognize and to address than their intrinsic counterparts. If it were not for the existence of double-digit inflation, fiscal conservatism, and the fact that personnel-related expenditures already consume a disproportionate share of the DOD budget, extrinsic factors such as pay and benefits would be amenable to rapid solution. Nevertheless, considerable resources and managerial effort have been expended to improve the overall "quality of Air Force life." Without question, this quality has improved over the past five years or so in an absolute sense. The captain with 4 years service in 1975 received a total regular military compensation (RMC) of $18,006. Today, as a captain with 9 years service, his RMC is $24,743 - an increase of $6,737 or 37 percent. At the same time, his tours have become more stable, his remote tours are fewer and farther between, his promotion opportunity to major and lieutenant colonel has improved, his hours are shorter, and his additional duties have been reduced. If this is true (and it generally is), why then has pilot attrition more than doubled in the same time frame? Three factors serve to at least partially explain this seeming paradox: perceptions of equity, the increasing disparity between aspirations and expectations, and not surprisingly, the ready availability of alternate employment.

Perceptions of Equity

The question of equity has two distinct facets — the perception of general equity with relevant groups, and the perception of reciprocal institutional commitment within the Air Force. While these factors represent differing motivations and are not always linked in their effect on USAF pilots, they both exert a direct impact on an individual's perception of equity — fair recognition and reward for his labors.

There is a considerable sentiment, especially in the media, the Congress, and non-defense sectors of the executive branch that military pilots have little to complain about financially. Critics of flight pay increases generally cite two factors to support their positions: the significant pay increases (both basic pay and aviation incentive pay) which have occurred in the past 6-10 years, and comparisons with other workers at large which indicate that military officers and pilots are in the upper segment of total compensation (usually including perquisites and the 20-year retirement system). While both of these contentions are undeniably true, the question then arises — are they relevant?

Two factors serve to mitigate the impact of pay increases received during the past 10 years — inflation and the time frame in question. Since the Arab oil embargo of 1973, "double-digit inflation" has entered our lexicon. Although its impact has affected the paychecks of all workers, military members and other federal employees have found themselves at the forefront of the inflationary battle with "pay caps" an annual occurence. Since 1972, average military basic pay has been eroded by nearly 20 percent(87: 31; 38:4) A 1978 study by the Rand Corporation concluded

that "the fundamental revisions needed to bring military compensation policy in line with the needs of the post-draft environment have been notably absent."(80:58) The military member's perception of inequity has been exacerbated by the media's coverage of pay increases — on one hand the series of federal "pay caps" (normally well below the rate of inflation), and on the other hand, the typically large pay increases of organized labor. The fact that the latter group's pay raises are not typical of workers at large does little to dispel the perception of inequity.

The time frame is also significant regarding financial comparisons. When the concept of "comparability" (with the civilian workforce) was initiated in 1968, military pay increased significantly in a relatively short period of time. Pay raises continued unabated through 1972. For the period 1968 through 1972, military basic pay increased at an average annual rate of 10.9 percent, well in excess of inflation. However, during the period 1973 through 1978, the average annual pay increase was only 6.4 percent, a fact more pronounced because of the double-digit inflation of most of that period.(58:95) Significantly, most of the young pilots leaving the service today in the 6 to 11-year group entered service after 1972, and for all pilots, the memories of the past 7 years are certainly more vivid than those of the preceeding 5 years. Consequently, the financial comparisons which form the strongest perceptions among service members are not based on the pre-1968 time frame, but rather of the past three to five years. Even more significant is the subject of which comparisons are most valid.

Most economists, congressmen, and external observers tend to compare the pay and benefits of military pilots to those of a large heterogeneous external group, such as

society at large, college graduates, or white-collar workers. However, in their study of Stanford business graduates, researchers Thomas and Margaret Harrell concluded that "job dissatisfaction can (probably) be related to declining pay relative to their contemporaries — even though the absolute pay increased."(62 :7) Similarly, the comparative focus of most military members is also much narrower. Not surprisingly, and like most other occupational groups, it tends to concentrate on that group which represents the primary occupational alternative — for military pilots, the airlines. Although this external identification is recognized (and remunerated) in the case of military doctors, it has been ignored as it pertains to pilots.

As a point of comparison, consider the USAF pilot who, as a captain with eight years of service, makes just over $26,000/year. Though well above the nation's overall median income, it is hardly half the salary an airline 727 first officer would be making at the eight-year point ($52,920).(105:--) While a significant disparity has almost always existed between military and commercial pilots, recent changes in the factors of both supply and demand (fewer military pilots being produced, more civilian pilots required) have made this a more viable alternative and thus have accorded it increased "visibility" among USAF pilots. This has been further reinforced by the increased contact between military pilots and their former associates who have left the service but return to tout the virtues of their decision to change employers. Despite the increased notice which USAF pilots have taken of airline compensation, their overall perception of equity is not based solely on external financial comparisons.

Of perhaps equal significance is the perception of many of these pilots of a degree of inequity <u>within</u> the

Air Force - that is, a lack of reciprocal institutional commitment on the part of the Air Force (and its parent, the Federal Government) toward the individual AF member. (76 :--; 77:--; 83:74) At the heart of this problem is the inevitable conflict between the needs of the organization and those of the individual. It is this conflict which creates discord regarding the "up-or-out"system, the controlled OER, the promotion system, assignment policies, additional duty requirements and so forth. Thus, the same USAF promotion system which generally selects highly qualified senior managers, at the same time produces certain negative side effects, such as those described by the Defense and Manpower Commission:

> This complete management system is based upon an arbitrary failure rate that will insure flowing people through the system at a guaranteed rate. It is "failure" oriented, and a stigma is cast upon the person who is adversely affected by this arbitrary rate.(58 :14)

Behavioral theorists have criticized bureaucratic systems in much the same manner. Harry Levinson had the following criticism for "rigid structures based on the military model":

> While the bureaucratic structure, with its heavy emphasis on internal competition for power and position, is often touted as a device for achievement, it is actually a system for defeat. Fewer people move up the pyramidal hierarchy at each step. This leaves a residual group of failures, often euphemistically called "career people," who thereafter are passed over for future promotions because they have not succeeded in the competition for managerial positions.(34:74)

Much recent criticism within the military of government policy has centered around the concept of an individual's "implied contract with the government." Major Thomas R.

Mikolajcik addresses this topic at some length and cites recent changes or proposed changes to time-in-grade requirements, retirement schedules, the availabilities and cost of medical care, post-retirement "double-dipping," and annual pay increases as evidence to support his contention that "the institutional commitment to the individual can always change (while) the individual's commitment to the government is irrevocable."(87:19-21) Several studies have supported the existence of this perception among USAF pilots and its impact on retention. Harrell and Rhame noted it in their analysis of ATC instructor pilots; (83 :74) it was raised at the 1978 TAC Aircrew Concerns Conference;(117:52-56) and it has been repeatedly listed by exiting aircrewmen as a source of discontent.(100:--) In order for USAF pilots to accept their employment as "not just a job, but a way of life," as Air Force leaders have enjoined them to do, it becomes essential for them to perceive the existence of a reciprocal commitment toward them on the part of the instition.

Trends - The Disparity Between Aspirations and Expectations

In reviewing almost any recent survey of Air Force pilots, one is struck by the observation that, while most of those surveyed expressed a relatively high degree of past and present overall satisfaction, their expectations of the future were noticeably less bright.* In a society such as ours which places a premium on future value (à la

*See 1979 Officer Exit Survey, 1980 CGSC USAF Student Survey, 1978 MAC Rescue Survey, and 1979 TAC Aircrew Survey.

Judeo-Christian work ethic), the adverse impact which this belief exerts on retention is hardly surprising. The explanation of this apparent paradox lies in the perceptions of today's pilot force of an adverse trend which serves to increase the gap between their aspirations and their expectations. This perception acts to undermine the professionalism and esprit of the pilot force and to facilitate the development of a climate of pessimism, frustration, and cynicism. In fact, this trend of declining career satisfaction is a composite of many factors. For purposes of analysis, they can be grouped into three areas: pay and benefits, advancement and status, and job satisfaction. In the following paragraphs, each of these areas will be examined in turn.

Pay and Benefits

The significance of this factor is underscored by the priority which it is accorded in current surveys. General Iosue noted in Congressional testimony that 57 percent of exiting pilots in 1979 listed inadequate compensation as "the major reason for getting out."(21:3) Several factors combine to create a negative perception of pay and benefits, even though they continue to increase in an absolute sense.

One of the underlying components of dissatisfation regarding pay and benefits is probably the level of aspirations formed early in the careers of most pilots. Several factors combine to produce what might be unrealistically high expectations during the early years of a pilot's career. Although the initial pay as a newly commissioned lieutenant is relatively low, it increases frequently and dramatically. During the first six years of service, the officer receives eleven pay increases in addition to any

cost of living adjustments or other legislated pay increases. Two of these are the result of promotion (to first lieutenant and captain), four are "longevity" increases at the two, three, four, and six-year points, and the remaining five are the initiation of and incremental increases in flight incentive pay in accordance with the Aviation Career Incentive Act (ACIA). The net increase (under October 1979 pay rates) is $1020/month, an increase of 92 percent. It is also significant that the young pilot's pay at this point tends to compare favorably with his contemporaries in the civilian world. However, after six years of service, the rate of increase slackens appreciably. During the subsequent six years of service, the officer-pilot has only four raises to look forward to: three for longevity and possibly one promotion — near the end of that second six-year period. The total of these raises is currently $353, an increase over the 6-year point of only 16 percent.

The second factor is the additional and ever-increasing cost associated with relocation. The frequency of reassignment among the pilot force imposes a significant financial burden both in terms of direct moving expenses and in terms of the costs of buying and selling a house. The latter factor has placed the civilian residence almost out of reach of the young officer, a fact that is significant in emotional as well as financial terms. Officers who sell their homes and remain out of the "housing market" due to overseas assignment or acceptance of on-base quarters quickly find themselves unable to purchase a home of comparable quality to the one sold a year or two previously. Even among those who remain "in the market," there are numerous instances where officers, reassigned to a previous base, are unable to repurchase their previously owned home.

Inflation, like housing, affects all Americans; however, it too deserves mention for its contribution to officers' declining financial expectations. The truly important consideration here is less the level of inflation than its trend. In the absence of effective cost-of-living wage increases, the pilot perceives that he is falling further and further behind, it being difficult to maintain, far less increase, his standard of living.

The final component of financial dissatisfaction is closely tied to inflation. It is the perception of stagnating benefit increases, discussed previously for its contribution to perceptions of equity. Gen. David C. Jones recently stated that "military pay lagged comparable civilian pay by 7 to 19 percent, while military disposable income has declined by 11.5 percent to 22.3 percent since 1972."(33:3)

Advancement and Status

Lawler notes that "...an organization that relies on promotion as its major reward can get into difficulty because of its poor flexibility."(9 :132) He explains that the difficulty of tying promotion directly to performance is that performance at lower-level jobs may be a poor indicator of potential for higher-level responsibilities. This same factor is also the crux of the problem (or "principle") which Dr. Lawrence Peter has lent his name to. Hersey and Blanchard state that the "anti-Peter Principle vaccine" is "...the careful selection of people whose personality and expectations are appropriate for the new job, instead of having upward mobility depend only on good performance at the preceeding level."(5 :131)

The perceptions of self-esteem held by any worker are related both to his status within the organization and

that external to it. In the Air Force, the former is determined primarily by rank and position, the latter by these factors coupled with financial "success" and the perceived level of public esteem in which his profession is held. As with pay and benefits, pilots today perceive an unfavorable trend regarding their status both within and beyond the Air Force.

Also as with pay and benefits, it is likely that dissatisfaction within the service has its roots in unrealistically high expectations created by the pace of early promotions. A 1976 USAF study indicated that 55 percent of the officers surveyed expected to retire in the grade of O-6 or higher, when, at the time, the cumulative opportunity was only 28 percent.(53 :15) The "pace" of promotions also slows over time. Whereas the newly commissioned officer transitions from cadet (either USAFA, ROTC, or OTS) to second lieutenant, to first lieutenant, and then to captain within a span of four years; the subsequent pace is much slower, the average time to major currently being almost 12 years of service. This perception has been exacerbated by the decision to increase promotion opportunity to major to 90 percent, a fact which not only has extended the time required for promotion, but may also serve to "cheapen" the value of the goal once attained.

Although rank is also a component of an officer's status outside the Air Force, it is in most cases secondary to financial considerations and overall public esteem. While pay and benefits have already been discussed at some length, it should be noted that these factors also help to determine a person's status in today's society. The impact of inflation and frequency of relocation on housing has

also been discussed; however, it is relevant to the current topic to note that the house is typically the most visible of status symbols. This factor can also affect the pilot's sense of equity as well as self-esteem, as he finds himself increasingly living in "blue-collar" neighborhoods or apartments rather than alongside airline pilots, lawyers, corporate executives, and other "white-collar" or professional workers.

More insidious, but equally important, is the perceived anti-militarism of the Vietnam era which continues to exist today. This attitude, reflected in campus protests, strident editorials in the media, and both Congressional words and budgetary deeds; has unquestionably affected self-esteem in all branches and at all levels of our armed forces. In this area alone have recent events seemed to reverse the trend of declining expectations. While events in Afghanistan and Iran certainly have tragic international implications, it may at least be hoped that they have served to reawaken the American public to the need for an effective military. At this point however, it is too early to tell.

Job Satisfaction

The topic of job satisfaction is possibly the most significant factor regarding the discrepancies between aspirations and expectations, for as Maslow noted, it is job satisfaction which has the greatest potential for motivation. The fact that this topic does not appear on many survey-produced lists of career dissatisfiers is hardly cause for discounting its importance. As Herzberg and others have noted, and as discussed previously in this paper, expressed dissatisfaction tends to focus on hygienic factors rather than on job-related intrinsic factors. This

is all the more interesting in light of expressed survey comments expressing a generally high level of satisfaction with past jobs. Nevertheless, many comments would appear to indicate that there is a clear disparity between what pilot-officers desire in their jobs and what they perceive as likely to occur. For instance, while 75 percent of exiting pilots in 1979 expressed overall satisfaction with past assignments, 54 percent listed "unsatisfactory future assignments" as a major contributor to their separation decision.(100:--) The fundamental cause of their concerns may be subdivided into two components — those related to flying and those related to job responsibility and challenge.

Since the innate appeal of military flying is almost invariably one of the major reasons a prospective pilot joins the Air Force, it is not surprising that his initial expectations are quite high. The early years of the young pilot's career are conducive to sustaining these expectations, probably including a series of relatively rapid progressions into new aircraft, new flight positions, and ever more challenging missions. For those whose initial flying years included a combat tour, an additional element of motivation was present. However, after five or six years, many pilots perceive their futures as less bright, frequently because the current personnel system will shortly assign them to non-flying duties. While this aspect has been discussed previously, there are also other contributors to the perception of declining satisfaction of flying. For one thing, there has been a more or less continous decline in the quantity of flying as fuel and maintenance costs increase and flight simulators assume a proportionately greater role in flight proficiency training.

Additional problems associated with phasing new generation aircraft into the inventory have compounded this problem, especially in fighter units. Whatever the reasons, the end result has been to decrease the average monthly flying time in fighter units from 30 to 40 hours, typical in the days of the Vietnam War, to less than 20 hours per month in most units. Compounding the impact of this decrease is the fact that younger, less experienced pilots are often affected disproportionately due to unit and MAJCOM supervisory flying requirements, especially in poor weather areas such as Europe.

While decreases in the quantity of flying are largely indisputable, decreases in its quality are perceptual and thus, not so easily substantiated. Nevertheless, the perception appears to be held by many, at least in the tactical forces, that the primary focus has shifted from realistic training and combat effectiveness to "safety first." For a time after US withdrawal from SEA, each aircraft accident seemed to produce an additional constraint. Recent years seem to have witnessed a reversal of this trend as Generals Roberts in ATC and Dixon and Creech in TAC have pushed "realistic training," the most notable outgrowth of which has been "Red Flag," designed to provide an aircrew's "first ten combat missions." Yet, many wing commanders have restricted participation of less experienced pilots in Red Flag in the hope of reducing the high accident rate associated with that program. The often-applied "catch 22" restriction that "you can't do it until you've done it" serves to limit participation in the "better" missions and exercises to the most experienced aircrews. The net result of these factors has led to a widespread perception that the challenge and fun of flying

is declining. Interestingly, many of these same pilots perceive that flying conducted by the Air National Guard or Air Force Reserves is less restricted and more enjoyable. For instance, while 71 percent of respondents to a 1978 survey of ATC instructors said they would accept a commercial airlines job if offered, 77 percent would still like to fly with the Guard or Reserves.(83:154-155) The accuracy of those perceptions is dubious, but they still appear to be held by a significant number of pilots.*

More pronounced and possibly more significant than the perceived decline in the quality and quantity of flying is the perception that overall job satisfaction is also on the decline. It is not limited to pilots; declining job satisfaction affects officers in the middle management whether or not they are rated. Author and columnist Ward Just refers to"the tiger problem ... how do you get an innovative, aggressive man through the middle management of the Army, where life can be very, very dull?" (8 :228) This observation seems to span a large segment of the Air Force officer corps reflecting a variety of backgrounds and ranks. For instance, in a survey of Air Force majors at the Army Command and General Staff College (CGSC), while 92 percent stated that they had been satisfied with their last job, only 67 percent expected their

*These observations and conclusions, as well as those pertaining to the declining quality of flying derive primarily from a series of informal interviews of highly experienced fighter pilots stationed at Eglin AFB,FL and Nellis AFB,NV. The results represent the author's conclusions and are not formally documented. They do however, appear substantiated in part by frequent letters and editorials in Air Force Magazine and The Air Force Times.(For instance, see(67 :190-199))

their next job to be equally satisfying.(77:--) Similarly, while 75 percent of separating pilots (in 1979) expressed satisfaction with past duty assignments, 54 percent listed "unsatisfactory future assignments" as a major reason for separating.(100:--) The underlying cause of these perceptions stems from several sources. Changes in the work environment (extrinsic or hygienic factors) have been discussed previously. While these factors are not inconsequential in determining overall job satisfaction, this section will only address those aspects of the job itself which might contribute to the perceived decline.

An earlier study of job satisfaction in the Air Force concluded that "job satisfaction is primarily dependent on job challenge..."(95:85) This is in line with the theories of human motivation posited by Herzberg, McGregor, Argyris and others. Lawler went even further, describing four "core values" (variety, autonomy, task identity, and feedback) necessary for providing "meaningful personal satisfaction."(9:158-170) At present, there are several trends at work which are perceived to reduce these factors and thus the inherent satisfaction of a job. Two of these trends are preeminent: the increasing centralization of management, and overtraining/underutilizing personnel.

Centralization of management is a trend which has been facilitated by data automation and improved communications, not to mention the physical centralization made possible by budgetary constraints and the past seven years of peace. Now, it is all too easy for a wing commander or deputy commander for operations to personnaly direct operations formerly controlled by the squadron commander or the supervisor of flying. By the same token, flight commanders

in many squadrons find that they are "commanders" in name only, their responsibilities subsumed by the squadron operations officer or squadron commander. Workers and supervisors at each level complain of ever-decreasing authority to execute their responsibilities. In the 1980 CGSC study, more than half the respondents listed "decentralization of authority/responsibility" as the foremost means to improve overall job satisfaction.(77:--) The importance of this factor was also noted in a 1979 CGSC survey of Air Force officers.(76:--)

A by-product of overcentralization in the Air Force is often a short-range focus which impedes long range planning at the unit level and breeds instead a "crisis-response" system of management. This perception was reported in the 1978 TAC Aircrew Concerns Conference II which observed that:

> Tactical aircrews have expressed a lack of confidence in commanders and supervisors at all levels. It is felt that this is a result of our supervisors reacting to crisis after crisis in each area of responsibility due to the pressure of oversupervision at higher levels.(117:36)

Overcentralization is at least partially responsible for the second major source of job discontent--overtraining and underutilization of officers.

Air Force pilots are among the most highly educated and extensively trained individuals in any service, or most professions for that matter. In a pilot's first ten years of service, it is not unusual for him to spend a third of that time in some form of training status, attend Squadron Officer School, complete the Air Command and Staff College Correspondence Course, and to acquire a masters degree (possibly two). Nevertheless, many pilots have only a

limited opportunity to apply their managerial skills during the early portion of their careers. The rank structure of most flying organizations imposes a limit on the opportunity for supervising significant numbers of people. Non-flying responsibility is likely to be limited to serving as a junior wing staff officer, supervisor of flying, or flight commander. Typically, these positions provide little lattitude for real planning or decision making, instead being limited to executing highly standardized plans and policy developed at higher levels. The possibility of dissatisfaction resulting from the use of overqualified people was documented by Thompson in 1975;(94:125) however, little follow-up research appears to have been conducted in this potentially crucial subject area.

SUMMARY

This chapter has attempted to explore some of the primary causes of dissatisfaction among Air Force pilots. In accordance with Herzberg's two-factor theory, the primary expressed sources of dissatisfaction tend to focus on extrinsic factors incidental to the job itself. While these factors have been discussed at some length and are undoubtedly important, it is essential that the intrinsic aspects of job satisfaction not be overlooked. As Herzberg and others have noted, if job satisfaction is not present, it becomes impossible to satisfy the demands for extrinsic rewards, which continue to escalate as each succeeding level is satisfied.

Current pilot dissatisfaction appears to stem from three primary sources: job context, perceptions of equity, and declining expectations. Pilot surveys tend to support Herzberg's two-factor theory of motivation, with most ex-

pressed dissatisfaction oriented around extrinsic factors of job context. In 1979, pilots indicated that their primary reasons for separation were dissatisfaction with compensation, the "way of life," long hours, undesirable assignments, and family separation.

A second fundamental source of pilot dissatisfaction is associated with perceptions of equity. On one hand, many pilots perceive a gross inequity between their tangible compensation and that associated with the primary alternative mode of employment-- the airlines. At the same time, pilots also perceive a lack of reciprocal institutional commitment commensurate with their own dedication to their service and nation. This perception appears rooted in the succession of pay "caps," declining benefits, the "failure-oriented" up-or-out system, and the latent anti-militarism of the U.S. society.

The final source of dissatisfaction discussed in this chapter derives from the declining expectations of USAF pilots in relation to their aspirations. Specifically, these "gaps" appear associated with pay and benefits, advancement and status, and job satisfaction.

Implications for Dual-Track

A dual-track system would directly address two of the top three reasons why pilots are leaving the service: little say in assignments and the "uncertainty of up-or-out."(20:3) Such a system would better align the expectations of pilots with their personal aspirations, especially the often-stated desire to fly throughout one's career. Simultaneously, it would enhance security by eliminating the perceived threat of the "up-or-out" system. Finally, by providing a system in which advancement is not the sole criterion for "success," a dual-track system would serve to enhance pilot status and self-esteem.

At the same time however, a dual-track system would not directly address most extrinsic dissatisfiers such as compensation, long hours, or family separations. Furthermore, it might even exacerbate some of the intrinsic sources of dissatisfaction. There is the possibility that prolonged service in any one job, such as flying duty, might produce job stagnation and boredom. Additionally, pilot specialists could become frustrated by their limited progression in rank. For generalists who also love flying, dual-track would not only reduce the likelihood of flying duty, it might also aggravate other "irritants" such as frequency of reassignment.

CHAPTER IV

ALTERNATE DUAL-TRACK SYSTEMS

The concept of a dual-track personnel management system is not without precedent. It is the norm in civilian business and exists in varying degrees in military forces throughout the world.(86:45-51) As a matter of fact, the USAF is relatively unusual in its dedication to an exclusively generalist system. Even the USAF employs dual-track concepts in its below-the-zone promotion and leadership development programs such as ASTRA or Palace Spotlight. However, current USAF dual-track programs are aimed exclusively at the generalists among the officer corps and do not address pilots or rated officers as a group. Such is not the case in most other military aviation organizations. While it is certainly not valid to draw a direct correlation between any of these services and the USAF, certain parallels do exist, and an examination of some of these systems might prove informative. Therefore, this chapter will review four systems of rated officer management existing in other flying organizations. These include the Royal Air Force of Great Britain, the German Air Force, U.S. Army Aviation, and the commercial airlines.

This review will cover entry into the force, initial service commitments, typical career progression, and observations regarding motivation and retention for each of the respective organizations. Since levels of compensation have become increasingly important considerations in all of these organizations, a table which provides comparative salary levels throughout a 20-year career is provided (Table I) Even though no information is provided concerning repre-

TABLE I. COMPARATIVE MONTHLY PAY SCALES (DOLLARS)[1,2,3]

Rank	Yrs Svc	USAF	RAF[4]		GAF[5]	US Army	Commercial[6,7,]
			Gen.	Spec.		(W.O.)	Airlines
2 Lt	1	1213	1250	1250	1463	1152(W-1)	1600(FE/727)
1 Lt	4	1546	1552	1552	1617	1432(W-2)	3321(FO/727)
CPT	8	2187	2027	2213	1799	1773(W-3)	4410(FO/727)
MAJ	12	2485	2481	2213(CPT)	2261	1885(W-3)	4739(FO/707)
LTC	16	2875	2995	2369(CPT)	2533	2206(W-4)	6762(CPT/727)
COL	20	3318	3358	2824(MAJ)	3177	2307(W-4)	8886(CPT/747)

NOTES:
1 - All pilots on flying status
2 - All include quarters allowance at married rate
3 - Foreign exchange rates as of 7 May 1980
4 - RAF Data Source (59:38)
5 - GAF Data Source (61:66-68)
6 - Commercial Airlines Source (105:--)
7 - Commercial pilots are assumed to draw per diem at $1.45/ hour for 250 expense hours per month and to be flying position and equipment as indicated.(105:--) FE=Flight Engineer, FO=First Officer (co-pilot)

sentative civilian pay scales in Germany or Britian, this information should provide a reasonable basis for comparison. A cursory review of the data indicates that pay levels among the USAF, RAF, and Luftwaffe are quite comparable, while Army warrant officer salaries are somewhat lower and airline salaries dramatically higher.

Royal Air Force

Entry/Initial Commitment

The RAF procures its pilots (all of whom are officers) from several sources. No college degree is required to become a pilot; so currently, the RAF recruits approximately half its pilots with university diplomas, one-third from "A-level" high schools (somewhat analogous to U.S. junior colleges), and the remainder with ordinary, or "O-level", high school diplomas.(45:48) University and A-level graduates typically are offered "permanent commissions" which provide for retirement as early as 16 years of service or age 38 (whichever is greater) with about 30 percent of active duty salary. Approximately one-sixth of RAF recruits enter service under a "short-service commission," which is essentially a contract for 12 years of service with an option to separate after 8 years. These officers may opt for a permanent commission at any time.(103:--)

Career Progression

Contrary to USAF's "up-or-out" system, the RAF does not use its promotion system as a selection-out vehicle. As stated by Wing Commander Graham Smart of the British embassy, "Reporting on an officer is for his career, not for his livelihood."(45:48) All officers accepting a permanent commission may stay until age 55, regardless of career progression. Promotion "phase points" are essentially minimums and are as follows: (106:--;45:--)

O-2:	2 years
O-3:	5½ years
O-4:	10 years (Avg time=13/14 yrs)
O-5:	15 years
O-6:	20 years

The"fast burner" would likely be promoted at or near these points, while the average officer would progress much slower and probably rise no higher than O-3 or O-4. Currently, less than 50 percent of RAF officers are promoted to O-4.(114:--) Nevertheless, there is no such thing as being "passed over," since officers remain eligible for promotion indefinetly. Consequently, there is no stigma associated with remaining in one grade for a prolonged period.

After a two-year initial flight training period, all pilots enter operational squadrons. While there is no formalized dual-track system, the "fast-burners" are identified early and will serve staff tours early in their careers. Short-service pilots and most permanent commission officers can expect to spend their first 10 to 12 years in primary flying duties. After promotion to squadron leader (O-4), pilots attend a four-week intermediate PME sourse in residence and can then expect a staff tour followed by a succession of assignments alternationg between squadron and staff duties. In general, pilots don't serve in support or "rated supplement" positions.(103:--)

Those officers not promoted to O-4 within a "reasonable time period" (approximately age 35), are typically offered the opportunity to become "specialist aircrews." As long as they remain physically qualified, specialists continue in flying duties until age 55, though few remain in fighters beyond age 40. While promotion to O-4 is open to specialists, few are selected, and key squadron super-

visory positions are reserved for officers whose further promotion potential is greater.(103:--) Specialists receive additional compensation in the form of "enhanced pay," but their total salary remains below that of year group contemporaries promoted to higher grades. Approximately 20 percent of the pilot force is comprised of specialists.(103:--)

Motivation and Retention

While no direct survey results of RAF pilots were available, officials report a high level of job satisfaction among both specialists and generalists.(103:--;106:--;114:--) The only consistent complaints have concerned low pay scales; however, pay has recently been raised considerably under Prime Minister Thatcher's government, alleviating many of the complaints and helping to improve retention.(59:36-38) There is little or no dissatisfaction regarding the promotion system, which uses closed OER's, nor is there animosity toward those who are promoted rapidly under it. Additional duties are similar to those of USAF squadrons and are accomplished primarily by squadron pilots. Performance of these duties is perceived as an indicator of promotion potential; thus, they are sought by many officers. "Job stagnation" is not considered as a problem, either among specialists or generalists.(103:--;106:--)

There is currently a relative shortage of younger pilots in the RAF. However, officials state that this is more the result of recruiting than retention. While specific retention figures were not available to the author, officals stated that there was "no retention problem, "(103:--) and data indicates that the outflow of officers separating prior to retirement has declined dramatically over the past two years.(59:36)

Conclusions

The RAF personnel management system appears to offer three major advantages in comparison with that of the USAF. First, it facilitates the individual pilot's choice of whether to be a specialist or a generalist, thus matching the "right people with the right jobs." Secondly, it enhances overall security, by separating potential and promotion from performance and quality control. And finally, it enhances retention of highly experienced personnel who would otherwise be separated for failure to advance in grade.

At the same time, the average age of the pilot force is probably somewhat higher. Additionally, the possibility of job stagnation and frustration should not be completely ruled out in the absence of meaningful survey data.

Caveats

The RAF serves as an excellent overall source of information regarding dual-track pilot management; however, several factors preclude a direct comparison with the current USAF system. First, it should be noted that initial duty commitments are much longer than current USAF commitments (8-16 years versus 6). This does much to explain both RAF recruiting difficulties and lack of retention problems. Potential pilots are understandably reluctant to commit themselves to such prolonged service, but once committed are equally reluctant to sacrifice security and "way of life" by separating.

The options for civilian employment open to the RAF pilot appear more limited than those open to the USAF pilot. First, the commercial airlines are less of a lure, due both to the much smaller British airline industry and to the higher age at separation of RAF pilots (due to

longer commitments). By the same token, since approximately half of RAF pilots do not have a college degree, their employability is reduced somewhat with respect to USAF pilots who frequently have a masters as an entree into the civilian job market. It should also be noted that the RAF does not currently have a flying reserve comparable to the ANG or AFRES. Consequently, the RAF pilot has no alternative path on which to pursue military aviation such as those open to the USAF pilot.

Finally, the entire RAF personnel system differs from that of the USAF, to include no "up-or-out" (thus greater sense of security), closed OER's, and a far smaller force with fewer overseas assignments and greater assignment stability. Some officers remain associated with the same squadron for over 20 years. Additionally, there are no specific flying requirements for pay (or "gates") such as those levied by the U.S. Aviation Career Incentive Act.

German Air Force

Entry/Initial Commitment

Like the RAF, the Luftwaffe does not require a college degree for pilot selection. Pilot-officer candidates are recruited from among enlisted radio operators and navigators, high school graduates, and college graduates. It should be noted however, that the German high schools are somewhat more comprehensive than most in the U.S.

There are three different categories of pilots in the Luftwaffe:(44:32) two may be termed "specialists," while the third consists of generalists. The first group consists of former enlisted men. They are limited to transport aviation and have limited advancement opportunity. The second group, known as "BO-41" officers, are recruited

almost exclusively for pilot duties. They accept an initial 20-year commitment which provides for retirement (at 20 years or age 41) with 55 percent of their active pay. The third group, the generalists, or "regular" officers, have initial commitments of 10 years after they complete training (which normally requires about 3 years). Regular officer pilots can retire as early as age 41, but normally stay until mandatory retirement, which is a function of rank (O-4:54, O-5:57, O-6:59, O-7+:60). Full-term retirement carries a pension of 75 percent of the officer's active salary.(44:32)

Career Progression

Much the same as the RAF, the Luftwaffe does not use the promotion system to assure quality control or youth of the force. Thus, there is no "up-or-out" system, and officers are separated only for unsatisfactory performance.

There are no promotion boards or specific percentage promotion opportunity. Rather, selection is subjectively decided by the Personnel Staff (which is separate from the operational air force) based upon semiannual OER's, promotion examinations, and (for O-4 and above) performance in PME courses. The minimum promotion points are as follows:(44:32, 106:--)

O-2: 2 years
O-3: 5 years
O-4: 9 years
O-5: 16 years (approximate timing, not minimum)
O-6 20 years (approximate timing, not minimum)

All regular officers are afforded the opportunity to attend the Armed Forces Staff College (all-service,

intermediate PME) after promotion to major. Their competitive performance in its three-month curriculum determines their eligibility for future attendance at General Staff College (all-service, 21-month advanced PME course) 6 to 18 months later. Graduates are known as General Staff (GS) officers (regardless of their subsequent level of assignment. Top performers are identified through this school system and are groomed for senior command and staff positions.(44:32) Their subsequent assignments will typically rotate between squadron flying and supervisory positions and staff duty at wing, Air Staff, or NATO.

Other officers, both BO-41's and regulars not selected for General Staff College, will normally remain in the same squadron for their full careers. For that matter, even GS officers will normally retain association with the same squadron until promoted out of it. All regular officers continue to be eligible for promotion and command, although most slots go to GS officers. Consequently, the term "passed over" is meaningless, and there is no stigma associated with not being promoted. (44:32)

Motivation and Retention

Unfortunately, no survey results or specific retention figures were available for inclusion in this research. However, senior German officers maintain that job satisfaction, morale, and esprit de corps are all high, among both pilot specialists and General Staff officers. Flying duty is prized by both groups, but most G S officers willingly accept staff duty as a means to enhancing their career advancement.(44:32)

Again like the RAF, and for the same basic reasons, the Luftwaffe has had some difficulty attracting pilots, but little trouble retaining adequate numbers. The German

Air Attache stated that the Luftwaffe "doesn't have the attrition problem which plagues the U.S...(and) is currently meeting its need for pilots.(44:62)

Conclusions

The Luftwaffe offers the same basic advantages and disadvantages as does the RAF. Essentially, it enhances individual security and pilot retention while providing a sound leader/manager development program concentrated on the most promising officers. Pilot experience at the unit level is exceptionally high.

Caveats

As with the RAF, situational differences confound a direct comparison with the current USAF personnel system. It should be noted that long periods of obligated service, low demand for commercial airline pilots, and the absence of an air force reserve organization all serve to enhance retention among pilot specialists.

U.S. Army Warrant Officer Pilots

NOTE: US Army commissioned aviators are recruited and managed essentially the same way as are USAF pilots. Aviation duty is a form of specialty but does not represent a branch of the service. Each commissioned pilot has both a primary and secondary branch identification, such as infantry, armor, military intelligence, ordinance, etc., irrespective of his flight rating.

Entry/Initial Commitment

Army warrant officer (WO) aviators are selected from among volunteer enlisted personnel based upon medical fitness and meeting minimum score requirements on standardized general aptitude and flight aptitude tests. A college degree is not required. Service commitment is

a function of the type and extent of flight training received (concurrent with enlistment contract); however, the initial commitment is 3 3/4 years, including the 9-month initial flight training course. Approximately 45 percent of entrants are recruited directly (i.e., civilians), with the remainder already on active duty at the time of volunteering.(60:41-43)

Career Progression

Warrant officer aviators function as technical specialists. According to DA Pam 600-11:

> The warrant officer is a highly skilled technician who is provided to fill those positions above the enlisted level which are too specialized in scope to permit the effective development and continued utilization of broadly-trained, branch-qualified commissioned officers.(60:23)

The WO aviator will normally remain in flying or flying-related duties (e.g. - aircraft maintenance, flight safety) throughout his career. As with commissioned officers,he may retire at 20 years of service with 50 percent of his base pay.

There are four grades or ranks of warrant officer with minimum phase points as indicated:(60:7)

CWO2: 2 years in grade WO1
CWO3: 4 years in grade CWO2 (avg=6.8 yrs)
CWO4: 4 years in grade CWO3 (avg=6.0 yrs)

"Below-the-zone" selection for CWO3 and CWO4 is authorized for up to 7.5 percent of those eligible.(60:8)

WO aviators are managed under an "up-or-out" system much the same as USAF pilots, and WO's passed over twice are separated. In 1977, 152 WO aviators were separated under up-or-out provisions (of a total force of 5000, with total 1977 accessions of 259).(60:35)

There is little or no "career development" training or PME for WO's beyond their initial training. "Fast-

burners" are identified based on evaluation reports, but receive no special treatment beyond early promotion. They are not authorized to command aviation units in the air or on the ground.(84:26)

Motivation and Retention

The army has experienced considerable difficulty in retaining WO aviators. The average loss at the end of the initial 3 3/4 year obligation is about 35 percent, or 160 of each year group: approximately the same number as released for second pass-overs. At present, total WO retention to year 12 is approximately half that of commissioned Army officers.(115:--)

Although most WO pilots express a high degree of intrinsic satisfaction with flying, many are disgruntled with the system which pays them substantially less than commissioned pilots for much the same work. There is also a high degree of concern about job security resulting from the up-or-out system. Job opportunity in civilian aviation is somewhat more limited than for USAF pilots due to the fact that most are rotary-wing qualified only, a field with greater supply and lower demand than the commercial airlines.(60:--;97:--;115:--)

Conclusions

The Army Warrant Officer program represents dual-track management in the sense that it manages commissioned officers and WO's separately and that the former are generalists while the latter are specialists. Nevertheless, the management of WO specialists is still designed around the "whole-man" concept of generalist management, to include the "up-or-out" system.

It provides for specialized pilots, but by virtue of fairly low retention rates, does not realize the full benefit of a high pilot experience level. Furthermore,

the system does not provide the degree of security or overall job satisfaction extant among RAF or Luftwaffe pilot specialists. By filling cockpits from a source other than commissioned officers, it provides greater latitude for broad development of Army officers; however, this same feature also serves to reduce the number of cockpits available for officers to gain flying experience. This has not posed a problem for the Army to date. Finally, it should be noted that attrition of warrant officers in flight training is approximately one and one-half times higher than that of commissioned officers, with the result that initial per capita training costs are somewhat higher for warrant officers.(115:--)

Caveats

While the Army aviation program is to some degree a dual-track system, extrapolation of any analysis to the USAF is difficult. In the first place, the divergence between generalists and specialists is extreme and exists from procurement on. Comparisons between Army officers with college degrees and younger WO's without equal education might be misleading, especially in terms of motivation for career service. Specialist retention problems appear to go beyond the differences in personnel management and are characteristic of a broad segment of the Army and the US militaty . Finally, it should be noted that the initial period of obligated service for WO's (3 3/4 years) is much shorter than that of other services under study.

Commercial Airlines

Entry/Initial Commitment

Commercial pilots are procured through normal US industry recruiting methods. Traditionally, there has been a far greater number of applicants than slots.

Consequently, little active recruiting has been necessary to attract highly qualified applicants, who currently average over 2600 hours flying time at entry.(16:12) Three-fourths of commercial pilots have military aviation experience. There is no commitment associated with airline training or employment, but pilots almost never voluntarily resign or change employers.

Career Progression

The vast majority of airline pilots spend their entire careers in the cockpits and are independent from management. In fact, the profession is almost 100 percent unionized, a fact which tends to largely segregate pilots and management (which is predominantly non-rated). Nevertheless, there is a limited "flow" from cockpit duty to management for those who seek it. Positions vary from the "chief pilot" at each base of operations (essentially management's "link" with pilots, primarily responsible for coordinating the monthly flying schedule) to one or more corporate executive positions such as vice president for operations.(104:--;105:--)

The vast majority of airline pilots function in a highly specialized and essentially noncompetitive environment, wherein advancement (to first officer and captain), scheduling, and basing are determined by individual choice, solely on the basis of time with the company ("line number"). The new pilot is in a probationary status for one year, during which he may be separated based on performance or attitude with little union protection. After that, his continuance with the company is a function almost solely of health - both his own and his company's. Pilot "furloughs," resulting from the cyclical nature of the industry, have traditionally posed the greatest threat to the pilot's job security, though this threat is minimal after five to ten years.(104:--;105:--)

Motivation and Retention

Few formal surveys have been conducted of commercial pilot attitudes; however, limited sampling indicates a high degree of individual job and career satisfaction.(16:12) Airline pilot retention has never been a problem, aided no doubt by the industry's extremely high level of pay and benefits.

In order to test the common perception of high airline pilot job satisfaction, the author conducted a limited survey (20 respondents) of Braniff Airways pilots based in Kansas City, Missouri, in April 1980. The results indicated an exceptionally high degree of job satisfaction among the surveyed group. Moreover, those respondents with prior military service overwhelmingly considered the airlines to be "much better" than the military in almost every component of job satisfaction. See Appendix B for a more detailed discussion of the survey results.

Conclusions

Due to the fundamental differences between government and business employment, a broad comparison of the commercial airlines with the USAF is of questionable validity. Nevertheless, an examination of pilot attitudes might help to shed some light on the concerns that job satisfaction would be limited and that stagnation and boredom would be problems for pilot specialists in a USAF dual-track system. It would appear that such concerns are not borne out by airline pilot experience.

Caveats

Despite airline pilots' expression of high job satisfaction, one still must consider the possibility of a "halo effect" stemming from lucrative extrinsic factors

such as compensation levels and free time. Since it is unlikely that the military will seek to match airline benefits, it is important to ascertain with high confidence that these limited survey results are in fact broadly applicable.

Summary

The four systems examined in this chapter together provide some insight into the effectiveness of dual-track management of pilots in other services and organizations. No one system appears fully compatible with that of the USAF, nor are exact comparisons possible. Nevertheless, several tentative conclusions may be drawn:

(1) Pilot specialists limited to cockpit duty for their full careers do not appear to suffer job stagnation or boredom, at least not to the extent that it is a source of discontent.

(2) Economic concern is a significant factor among pilot specialists. Consequently, even though specialists and generalists are managed and promoted differently, a relative equity should be preserved regarding the respective compensation levels of the two groups.

(3) Pilot specialists in the RAF or Luftwaffe have a reduced promotion opportunity with respect to their generalist contemporaries. This does not appear to be a significant source of dissatisfaction among specialist aviators.

(4) All systems except for that of US Army warrant officers provide career tenure for pilot specialists irrespective of promotion potential. The job security afforded by this provision is probably a contributor to overall specialist job satisfaction.

(5) The total "pool" of officers from which senior managers are selected is relatively smaller in the RAF,

Luftwaffe, and US Army aviation than would be the case in a single-track system. While no meaningful conclusions can be drawn regarding the relative quality of these services' top leaders, no significant problems are apparent. It should be noted that most specialists are specialists by their own choice, perhaps influenced by knowledge of limited promotion potential. Consequently, it would seem logical to conclude that these officers would not offer appreciably more to overall management of their respective officer corps than is realized from generalists alone.

(6) Rated generalists in the RAF and Luftwaffe serve in cockpit duties exclusively for their first five to ten years. Thereafter, they rotate back and forth from staff to flying duty for the next five to ten years. As in the USAF, almost all senior rated officers serve a tour as squadron commanders. The net result of this progression is that pilot generalists develop a sufficiently detailed first-hand knowledge of air operations to provide a background for future increased command and managerial responsibilities.

CHAPTER V

HYPOTHETICAL DUAL-TRACK STRUCTURE

The foregoing chapters have provided background information regarding pilots and dual-track management. However, it is impossible to reach any meaningful conclusions regarding the viability of this proposal in today's U.S. Air Force without examining it in greater detail as a specific concept.

If the Air Force determines that the potential benefits of dual-track merit its testing or implementation, the structure of such a system would certainly be subject to extensive analysis and debate. The following proposal is not offered as the best or only approach and does not undertake to address all necessary managerial considerations. Nevertheless, it is presented as a further test of this paper's hypothesis and to better focus criticism and consideration.

General

Proposal: The pilot force would be segregated into two separate career paths or "tracks" between an officer's sixth and twelfth years of commissioned service. Most pilots would follow the traditional or generalist track which exists under the present system. For these officers, career progression would change very little. However, a smaller group of pilots would enter into a new, "specialized" track in which they would be limited to cockpit duty and managed under a separate promotion system with sharply reduced opportunity for advancement in rank. These pilots would be assured retention until retirement as long

as they maintained acceptable performance in their aircrew specialty. While the size of this specialized force might vary from year to year, depending upon its ability to enhance pilot retention and overall rated experience, it would comprise approximately 25 percent of the almost 13,000 primary aircrew (RPI-1) positions.(98:--)

Discussion: This proposal is limited to pilots for three primary reasons. Navigator attrition is not currently as severe as pilot attrition (due largely to current and forecast airline hiring of pilots). Secondly, it is more cost-effective for pilots (due to higher training costs). Finally, the trend toward increased acquisition of single-seat fighter aircraft and improved electronic navigational equipment will continue to reduce the number of navigators required for force manning. Nevertheless, if initial results were to significantly increase retention and force capability, consideration might then be given to extending the system to include navigators or even non-rated specialists such as scientists and engineers.

Determining the size of the specialized component of the pilot force would be a far more extensive undertaking than this study and would require continuing refinement. The figure 25 percent of primary flying positions is considered adequate to provide a core of experienced pilots within each unit and significant instructor representation in training organizations. This would amount to approximately 3100 pilots, slightly more than 10 percent of the total pilot force.(49:B-6, 98:--)

This figure is comparable with percentages of specialists in the RAF and less than that of the Luftwaffe. It would appear to be a reasonable compromise, which would provide an adequate cadre of experienced specialists, while retaining a sufficient number of pilots in the generalist

"pool" to ensure selection and development of top performers as senior executives.

Entry Into Specialized Trac:

Proposal: A pilot would be allowed to voluntarily enter the specialized track reasonably early in his career, but only after gaining sufficient experience both as an officer and a pilot to make a well-reasoned decision. Three criteria are suggested to qualify for entry into the specialized pilot force:

1. At least 6 but not more than 12 years commissioned service.

2. "Experienced" status in aircraft of assignment (specific flying hour requirements would vary by type aircraft and would be determined by MAJCOM).

3. Recommendation of individual's wing commander.

Final selection would be through central board action under the auspices of the Manpower and Personnel Center (MPC). Here the final decisions could be made with service requirements foremost, but with the perspective to balance these requirements against individual desires.

Discussion: Entry into the specialized pilot track should occur voluntarily, at a relatively early career point for several reasons. First, it is essential to avoid creating a force of exclusively passed-over officers so as to preclude the development of a negative image (the "leper colony" mentality). Second, early entry would provide a continuing cross-section of experience, attitudes, and youth within the specialized pilot track. Third, early selection would allow maximum time to further refine flying skills and to effectively use this expertise where it is most needed. Lastly, selection should occur sufficiently early that an individual is still qualified and proficient in his aircraft.

The longer selection is delayed, the greater the probablity that intervening staff tours, PME, or other non-flying duty would necessitate expensive requalification training.

It is intuitively obvious that specialized pilots should be well qualified in their primary skills. Therefore, selection should combine objective criteria, such as flying-hour or experience requirements with a subjective evaluation of an individual's abilities and suitability for entry into the specialized track. This critical responsibility is best performed by the respective wing commanders, based on recommendations from lower-echelon supervisors. The chain of command would also discharge a critical responsibility with respect to specialized pilot applicants--each supervisor must insure that these officers are fully apprised of the career consequences of their decisions. This should serve to foster realistic expectations and thus enhance overall job satisfaction. While a majority of pilot specialists would probably enter the track simply as a matter of preference to enhance job satisfaction, some might also seek entry as a result of promotion pass-over to O-4. As long as these individuals are competent aviators, promotion passover should not prejudice their entry into the track. In fact, since such pilots would have above-average flying experience (due to being at the upper end of the 6 to 12 year entry group), it would be especially beneficial to the Air Force to retain them in the cockpit. (See Appendix A for discussion of possible savings in this case.)

One final mode of entry into the track is possible. That is through the warrant officer pilot program currently under consideration in the Congress.(23:3) Obviously, intermingling warrant officers and commissioned specialists in the same track poses a significant problem. Unfortunately, while the scope of this research precludes detailed treat-

ment of this issue, it is felt that such an eventuality would not invalidate the proposal as presented herein.

The question arises as to whether or not there would be sufficient interest in becoming a specialist to attract the required numbers of pilots. A 1969 USAF study indicated that "almost 20 percent of all pilots desire to stay in cockpit duties until they retire or are promoted to colonel."(66:41) Similarly, a 1979 TAC aircrew survey revealed that 31 percent would "stay in the Air Force as a 'career captain' if I could just continue to fly."(101:--)

Specialist Career Tenure

Proposal: Normal tenure for pilot specialists would be 24 years of service, but not to exceed 50 years of age. Specialists would be allowed to retire as early as the completion of their 20th year if they so desired. Any specialists removed from flying status for medical reasons would be subject to early medical retirement unless selectively retained in a non-rated capacity. Career tenure for officers in the generalist track would be unchanged from the present system.

Discussion: The key feature of specialist tenure under dual-track is the concept that it is a function not of an officer's capacity to lead or manage, but rather of his ability to fly and fight. While it is acknowledged that military flying inherently demands a large measure of both leadership and managerial competence, the application of these skills in the cockpit differs from their application in the organization. In any event, the level of cockpit expertise necessary to meet Air Force standards would be insured by continuing performance appraisals.

The 24-year point represents a compromise between the requirement to maintain a youthful rated force and

that of insuring an adequate "return" on the Air Force investment. The age fifty limitation, while below civilian standards (age 60), is felt to be justified by the greater physical and psychological stress of military aviation and by the need to maintain a reasonably youthful force overall. Without any age controls, the average age of the specialist force would likely "creep" upward each year (given a limited size force), eventually precluding entry of qualified younger pilots who are otherwise likely to leave the service.

The question of how age and flying ability are correlated has not been clearly resolved. A cursory review of related literature appears to indicate that age does not appreciably detract from pilot capabilities. Major Rex Cloud, in a 1973 study of this topic concluded that "...it would appear that the aging process is not detrimental to performance."(78:11) While age does exert an adverse impact on physiological qualities such as vision, hearing, fatigue, and reaction time, the net effect is frequently offset by increased experience.(78:18) A 1969 USAF study, "Saber Wings I," also examined age and performance. Though it did not address the pilot who remained continuously on flying duty, the study did conclude that older pilots performed significantly poorer in retraining after a prolonged absence from flying.(66:7-9) Foreign air forces have experienced no significant problems resulting from their "aging " specialists. By the same token, the USAF Reserve forces appear to suffer no ill effects from an older pilot force. Col. E.L. Cummins, Deputy Commander for Operations of the 184th Tactical Fighter Training Group, AFRES, indicated that his pilots, whose average age is 36 (oldest--47), have retained not only a high level of expertise, but a high level of satisfaction and motivation as

well.(99:--) Interestingly, the Saber Wings study revealed that fighter pilots who scored MIG kills in Southeast Asia were almost invariably the older (average age--35), more experienced pilots who also had recent experience in the same or similar aircraft.(65:22)

The situation in which an officer is forced off flying status would require special consideration. Whereas, the generalist forced off status can still serve productively in a non-flying capacity, such might not be the case with a specialist. In such a case, the Manpower and Personnel Center should determine the individual's disposition based on his expressed desires, qualifications and record, and his commander's recommendations. Options would be to retain him in a non-flying capacity at either unit or higher level or to medically retire him under appropriate disability provisions.

There is one final circumstance regarding an individual's tenure: the situation in which an individual loses his flying status through Flying Evaluation Board action. In such cases, MPC should also determine disposition of the individual based on the same considerations as for medical disability. However, an additional option should be available in this circumstance--administrative separation from the Air Force. Such action might well be anticipated in cases where flight discipline or flying regulations were severely breeched.

Promotion System

Proposal: Pilots accepted into the specialized track would be considered under the existing promotion system, but at significantly different phase points. Since entry would occur beyond the 6th year of commissioned service, all pilot specialists would at least be O-3's. Any O-4 entrants

would retain their rank with its associated pay and privileges . Specialists would be considered for promotion to O-4 in their 16th year of service by the same board and based on the same considerations of performance and potential as officers in the "generalist" track (who, under DOPMA, will be in their 10th year). Specialists' promotion opportunity would not be specified; however, selectees would count against congressionally established ceilings and quotas. Non-selected specialists would be considered again in their 17th year of service without prejudice. However, a second passover would result in the officer's not being considered by future boards.

Discussion: One of the "keys" to dual-track is to deemphasize promotion as the only criterion of success among pilots. Performance of rated duties, rather than command or managerial expertise, is the primary consideration for pilot specialists. Consequently, they will not be expected to assume ever-increasing responsibility. Nevertheless, by their 16th year of service, even without PME or broadening assignments, many specialists will be fully capable of assuming the increased degree of responsibility associated with promotion to O-4. There are numerous unit-level field grade positions for which they would be eminently qualified (see following section). It is also in the best interests of the Air Force to consider as large a group of officers as possible to insure selection of the most highly qualified individuals.

The case of the passed-over major who enters the specialist track around the 12-year point represents a potentially thorny problem: should he be considered again in his 16th year as a specialist? Again, since it is in the Air Force's interest to consider the maximum-sized group, this author believes that a second promotion opportunity is in order. The additional "seasoning" as a specialist may

have provided what was lacking earlier in such an officer's career.

Generalists would derive an additional benefit under this system in that they would enjoy accelerated promotion and increased opportunity for selection with respect to the current promotion system. This would result from having a smaller group of officers beyond the grade of O-3 to compete for promotion to the same number of slots.

An additional point of discussion is the fact that consideration of 16-year specialists along with the less experienced 10-year generalist group might prejudice the latter's selection opportunity. While this is possible, those adversely affected would probably not be highly qualified for full career progression within the generalist track. Consequently, the screening provided by this process might serve to focus developmental efforts on the most promising generalists. Non-selection for major might also redirect a generalist into the specialized track at a point in his career when such a transition would prove mutually beneficial both to the Air Force and to the officer himself.

Specialist Duties and Assignments

Proposal: Pilot Specialists would serve exclusively in primary flying (RPI-1) positions, so naturally, their primary duty would be to fly. Specific crew positions would include "line" pilot, instructor, and flight examiner. Because their level of flying experience and expertise would exceed that of pilots in the generalist track, it is expected that specialists would be disproportionately represented in training organizations such as Undergraduate Pilot Training (UPT), Replacement Training Units(RTU), Combat Crew Training Squadrons (CCTS),

and Central Instructor Schools (CIS).

Within operational units, specialists would fulfill two basic requirements: they would provide a cadre of unit-assigned instructors, and they would provide an experienced resource spread relatively equally throughout a unit (e.g.--one per flight within a squadron). They could also serve in such wing-level positions as Standardization and Evaluation Flight Examiners and Weapons and Tactics Officers. In addition to their flying duties, some specialists would also fill supervisory positions within the squadron such as Supervisor of Flying, Flight Commander, and Assistant Operations Officer.

While specialists' assignments would be to the same locations as those of generalists (in flying billets), their tour lengths would be somewhat longer (except for unaccompanied or combat tours). An average tour length of five to six years appears reasonable.

Discussion: The whole concept of the specialist within a dual-track system is to maximize the application of his specialized skills. It is this same feature (the opportunity to fly exclusively) upon which many claims of increased retention rest. Consequently, specialists should be pilots first and foremost. Only if their desires, ability, and experience qualify them for increased responsibility, should their duties be expanded to include staff or supervisory functions. Nevertheless, it is equally important that this resource not be uniformly excluded from such duties at the unit level. Ultimately, the unit commander must have the flexibility to put the best man in each job so as to achieve an efficient and motivated organization.

One aspect of this subject requires particular note--specialist assignment to training organizations. With regard to these units, dual-track serves a dual purpose.

First, it applies the most experienced personnel to the critical task of training the succeeding generation of pilots. By concentrating these specialists in such units, overall instructor experience and stability will be increased, hopefully improving the quality of training. However, there is a second benefit to be derived from concentrating specialists in training units. Like any operational squadron, there are only a limited number of supervisory positions. However, the flying experience requirements for assignment to these units tend to create a "rank heavy" organization, with the result that many officers' supervisory talents are under-utilized. Oftentimes, the "line" pilot in an RTU was a flight commander or evaluator in his previous assignment. This under-utilization is a potential source of discontent among career-oriented officers approaching selection for major. Assigning more specialists to these organizations will free their counterparts in the generalist track to pursue assignments which provide a measure of developmental experience more in line with their career aspirations.

There is reason for concern that specialization may have its drawbacks. One researcher noted that "too much specialization can cause people to feel that their careers are getting locked into a groove."(85:50) For many pilots, flying is a "job" which never grows old. Nevertheless, squadron commanders must have the latitude to pursue aggressive and realistic training which continually explores the limits of their pilots' abilities if stagnation is to be averted indefinitely.

While it is desirable to concentrate specialists in training units, within operational units it is desirable to disperse them throughout the flights or sections which comprise the squadron. This acts not only to discourage

the formation of cliques based on career track, but serves also to "spread the wealth" within a unit. Specialists should provide a core of experienced personnel at the lowest echelon, where daily contact with young, inexperienced pilots will be the most productive in developing the latter's flying proficiency through daily face-to-face contact, both on the ground and in the air.

There is little data to substantiate the claim for extended tour lengths; however, this appears reasonable because of the greater stability of the specialist force itself. Not only should retention of these officers be higher (based upon voluntary entry beyond the 6-year point), but turnover will also be considerably lessened by the absence of traditional requirements to accept educational, staff, and other "career broadening" assignments. This policy will reduce costs directly by reducing the frequency of moves, and will also produce intangible savings by increasing organizational stability and extending the corporate memory (fewer lessons re-learned). It should also be noted that this feature may serve to directly enhance retention among pilot specialists, since one of the most frequent causes of dissatisfaction among pilots is family separation and the frequency of moves.(20:3)

While specified flying hour requirements would not differ between generalists and specialists, it is anticipated that the higher experience and greater assignment stability of specialists would necessitate less flying per month to sustain a comparable level of proficiency.

Transitioning into a different type of aircraft (e.g.--fighter to transport) would be contrary to the general intent of the dual-track concept. Nevertheless, a limited degree of cross-flow among systems could be authorized by MPC if it would serve the best interests of the service.

Little has been said about generalists under dual-track because their handling would differ little from that of the present system. The current system, which emphasizes special monitoring and career-enhancing assignments for selected "fast-burners" should continue to operate, albeit with a somewhat smaller field to choose from.

While generalists may well enjoy less assignment stability than their specialist counterparts, this is not all bad. As Fiedler and others have noted, "The least expensive and probably most efficient method (of leader development) is to develop a careful program of managerial rotation that moves some individuals from one job to another at a faster rate than it moves others."(2:138)

Evaluation System

Proposal: Pilots in both the generalist and specialist tracks would continue to be evaluated under the current officer effectiveness report (OER) system. However, for those in the generalist track, primary emphasis would be accorded their potential for increased responsibility, while pilot specialists would receive a performance report which emphasized their technical competence in their rated specialty. Although necessarily subjective, these reports would also reflect certain, more or less objective criteria such as sortie/flying hour requirements, event qualification and currency, flight evaluation performance, and performance during unit evaluations. General measures of officer effectiveness evaluated in the OER would retain their importance, since specialists would still be considered for promotion and would share the general responsibilities of all officers in the same grade.

Discussion: The same OER system is applied to both generalists and specialists for the following reasons:

1. As officers at the same grade level, they share very similar responsibilities. Therefore, qualities evaluated in the report beyond technical competence retain their importance. Dual-track is designed to tailor an officer's career so as to satisfy both Air Force requirements and his own aspirations. It is not intended to obviate his responsibility as an officer.

2. A single system is simpler to administer for raters, ratees, and promotion and selection boards.

3. Since O-3 specialists would be promoted under the same system and pased on the same performance criteria as their contemporaries in the generalist track, equity and objectivity require that evaluation means be comparable.

4. Under wartime mobilization, specialists, as well as generalists, would serve as the nucleus for a rapidly expanding Air Force. As was true during World War II, these officers could anticipate extremely rapid promotion to high-level command and staff positions. In such a contingency, the OER would be indispensable in selecting appropriate specialists for rapid advancement to key positions.

The OER would serve an additional key function for seecialists--it would provide formal annual certification that these officers were meeting required performance standards necessary for retirement tenure. In the event performance failed to meet these standards, appropriate action would be initiated by the officer's wing commander. This would likely consist of counseling and remedial action, coupled with a probationary period, and concluded by a follow-up report within six months. If performance is still sub-standard, administrative discharge proceedings would be in order.

The key difference of evaluation under dual-track

is not in how the system is administered, but rather in how it is perceived by those under it. Under the current system (and also for generalists under dual-track), this system is virtually all-important. It forms the basis for continous competition with one's peers, and it provides the primary input for tangible benefits, such as pay and promotion, the latter itself being necessary for retirement tenure. Moreover, it also provides a very strong measure of status and an individual's sense of self-worth. The failure of the "new OER system," with its controlled quotas was unacceptable to most Air Force officers largely because, by bluntly telling an individual that he was in the bottom half, it undermined his self-concept and sense of value to the organization. Specialists under dual-track should be less subject to such adverse perceptions simply because they function in a largely non-competitive environment (in terms of promotion). The net result should be a personal sense of security, such as that associated with the non-competitive environment of the airlines.

Pay and Allowances

Proposal: Pay and allowances for generalists would not be affected. Specialists, however, would receive an additional "special duty allowance" of $50 per month beginning at the sixth year of commissioned service. At the 12th year of service, this "bonus" would be increased to $100 per month, where it would remain as long as the specialist remained on flying status. The bonus would be related to years of service, not to the point at which a pilot entered the specialist track. Additionally, the basic flight pay of a specialist would not decrease after the 18th year of service as is the case for generalists under the current Aviation Career incentive Act.

Discussion: See Table II. Arguments can be raised that this amount is either too much or too little. The key factor is that it be sufficient to deter our best pilots from joining the airlines, while not being so excessive as to foster a sense of inequity between specialists and their year group contemporaries in the generalist track. The amount recommended is based upon the following considerations:

1. It is roughly comparable to the expected difference in base pay between specialists and generalists; however, this net difference rapidly diverges in favor of generalists (who are promoted) after the 16th year of service. If one instead considers the relative difference between rates of regular military compensation (which also includes quarters and subsistance allowances and their associated tax benefits), then this disparity becomes even more pronounced.

2. Over the full career of a pilot specialist, this differential speciality pay could amount to as much as $18,000, a small fraction of his replacement cost.

3. Officers who are likely to be attracted into the pilot specialist track are, by nature, those most favorably disposed toward a career with the airlines. If they are to be retained in Air Force cockpits, sufficient incentive pay must be provided. Even with bonuses of the recommended magnitude, total lifetime earnings will compare poorly with those of an airline pilot.

4. Specialist "bonuses" begin immediately after the sixth year so as to provide an inducement for early entry into the specialist track. This is necessary to attract pilots while still current in their assigned aircraft (prior to staff or supplement assignment). An increase is provided at the 12-year point both to provide

TABLE II. PAY COMPARISON OF GENERALISTS AND SPECIALISTS UNDER PROPOSED DUAL TRACK SYSTEM

YEAR OF SVC.	GRADE Gen	GRADE Spec	MONTHLY BASE PAY Gen	MONTHLY BASE PAY Spec	MONTHLY FLIGHT PAY* Gen	MONTHLY FLIGHT PAY* Spec	TOTAL ANNUAL DIFFERENTIAL (Gen. minus Spec.) Base
1	O-1	O-1	827	827	100	100	-
2	"	"	"	"	"	"	-
3	O-2	O-2	1041	1041	125	125	-
4	"	"	1251	1251	150	150	-
5	O-3	O-3	1446	1446	165	165	-
6	"	"	"	"	"	"	-
7	"	"	1515	1515	245	295	-600
8	"	"	"	"	"	"	-600
9	"	"	1570	1570	"	"	-600
10	O-4	"	1625	"	"	"	+ 60
11	"	"	1736	1654	"	"	+384
12	"	"	"	"	"	"	+384
13	"	"	1834	1736	"	345	- 24
14	"	"	"	"	"	"	- 24
15	"	"	1918	1779	"	"	+468
16	O-5	O-4	2029	1918	"	"	+132
17	"	"	2182	2001	"	"	+972
18	"	"	"	"	"	"	+972
19	"	"	2307	2057	225	"	+1560
20	"	"	"	"	"	"	+1560
21	"	"	2377	"	205	"	+2160
22	O-6	"	2627	"	"	"	+5160
23	"	"	2780	"	185	"	+6756
24	"	"	"	"	"	"	+6756
TOTAL			AT 20-YEAR POINT				+4644
			AT 24-YEAR POINT				+25476

*Specialist Flight pay includes additional factor of $50 per month for years 6-11, and $100 per month for years 12-24.
NOTE: Specialist flight pay does not decline after year 18.

an additional retention inducement at this traditional career decision point, and also to maintain a degree of parity with officers in the generalist track. Additional increases are not considered necessary after the 12-year point since most individuals remaining at this point are committed at least to 20-year careers.

This analysis compares specialists only to rated generalists. It should be noted that the airline pay scales will also represent a basis of comparison for specialists which cannot be ignored. A sizeable pay raise for both specialists and generalists may be necessary to satisfy the "base-level" needs/expectations of all pilots.

NOTE: See Appendix A for detailed cost analysis.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

Because of the complexity of the overall USAF personnel system and the interactive nature of its components (recruitment, training, assignment, evaluation, promotion, separation, etc.), changes to one component will inevitably affect the others. Consequently, it is almost impossible to accurately predict the net, long-term effects of a modification as far-reaching as implementing dual-track management. While some inferences may be drawn from observations of other, similar systems, they must be carefully limited due to fundamental differences among the military organizations, the complexity of their personnel systems, and the established norms and customs of those services and their underlying social systems.

Like most large, bureaucratic organizations, the U.S. Air Force inherently resists change. The prolonged and often vitriolic controversy surrounding the recent experiment with controlled OER's has probably served to accentuate this resistance to major modifications of established policy. Nevertheless, it is essential that any initiatives to institute a dual-track system not be undertaken piecemeal. Uncoordinated or half-hearted action would almost certainly be worse than no action at all and might easily serve to exacerbate problems.

It should also be noted that the current pilot retention "crisis" stems from a variety of causes. Some are job related, while others, such as compensation, clearly are not. It must not be forgotten that pilot attrition itself is not the cause of the problem; it is the <u>effect</u>. To eliminate

this effect, its underlying causes must be identified and corrected. Most past efforts have been directed at extrinsic sources of dissatisfaction: pay, working conditions, promotion opportunity, OER's, and assorted "irritants." While such actions are necessary to reduce dissatisfaction, most are inherently incapable of actively cultivating satisfaction and motivation.

Conclusions

1. It is the author's primary conclusion that a comprehensive modification of the current USAF personnel system, such as that discussed in Chapter V, would serve to enhance overall job satisfaction and increase the net retention of USAF pilots.

2. Pilot retention is a function of factors both intrinsic and extrinsic to the job itself. Extrinsic factors such as pay, benefits, working environment, and overall security must meet the individual's personal "base level" needs in order for higher order, intrinsic factors to become operative. The lower or more fundamental the need, the more important it becomes to satisfy base level expectations with respect to it. Therefore, it is essential to fulfill an individual's need for basic security. The current "up-or-out" system acts to undermine that security for many USAF pilots--among them those who seek only to fly and fight. Consequently, any program of dual-track management must modify this system if it is to effectively reduce attrition.

3. When these base-level, extrinsic needs are satisfied, the level of inherent job satisfaction then becomes the primary determinant of overall satisfaction, motivation, and retention. The potential for intrinsic job satisfaction is determined largely by the following factors: alignment of aspirations with expectations, job challenge, and sense of

achievement. Dual-track management of USAF pilots offers them increased latitude to pursue their individual goals and preferred career progression paths. It is reasonable to conclude that such a system will more closely align career expectations with personal aspirations, thus promoting a higher overall level of job/career satisfaction and, concomitantly, a higher level of pilot retention.

4. (Sub-objective #1: Determine if reduced promotion opportunity will adversely impact retention of pilot specialists.)

Reduced promotion opportunity will not adversely impact retention of pilot specialists. A sufficient number of pilots will voluntarily accept a limited promotion opportunity in order to become specialists under a dual-track system. There are two "keys" to acceptance of limited promotion by a specialist. First, the overall level of compensation and its rate of increase must fulfill his basic financial requirements and maintain a reasonable perception of equity with respect to the majority of his year group contempories. Secondly, there must be no institutional or personal stigma associated with his limited grade. Elimination of "up-or-out" provisions will dispel the existing aura of failure currently associated with non-promoted officers. The level of professional expertise which specialists will possess should serve as an alternate source of status and self-esteem to these individuals. In the small and close-knit world of the flying squadron, they will almost certainly be accepted for what they <u>are</u> rather than disparaged for what they are <u>not</u>.

5. (Sub-objective #2: Determine if rated specialists would experience job enrichment or job stagnation under a dual-track system.)

There is no basis to assume dual-track specialists would experience job stagnation merely as a result of being assigned to flying duty for their full careers. Quite the contrary, the experience of specialists in other flying

organizations, the expressed sentiments of a large number of USAF pilots, and the fact that the specialist would be limited to that activity of his own volition all support the argument that this would be fertile ground for job enrichment.

6.(Sub-objective #3: Determine if implementation of dual-track might be expected to foster counterproductive isolation, rivalry, and misunderstanding between rated specialists and rated generalists.)

To some degree, at least during the "transition phase" implementing a dual-track system, a degree of counterproductive rivalry must be anticipated. Although there seems to be little or no evidence of this in other dual-track organizations, the perceptions and attitudes which evolved under our current system, as well as the expected sense of insecurity accompanying any significant bureaucratic policy change, will probably produce some short-term friction. Over the longer term the reduced direct competition for promotion and assignments should actually serve to improve the climate within the unit. Isolation of any productive element or individual would seem unlikely in an organization as dependent on teamwork as a flying squadron.

7.(Sub-objective #4: Determine if rated generalists under dual-track management would be able to attain sufficient rated experience to meet the requirements of law (Aviation Career Incentive Act) and managerial expertise.)

Generalist pilots should be able to attain adequate flying experience and, in most cases, continue to meet current ACIA "gate" requirements under the dual-track system hypothesized. Since <u>all</u> pilots would spend at least their first six years in flying duty, this should provide a sound background of flying experience for future generalists and will still allow twelve years to attain the additional five years of gate credit necessary to meet the maximum ACIA requirements. The limited size of the specialized force should not preclude the ability of generalists to meet flying gates.

This system will have the additional benefit of concentrating development efforts on the most promising future leaders at an early point in their careers.

8. A small increase in retention should return large dividends, both in dollars and in terms of the quality and motivation of the rated force. The magnitude of the costs and benefits associated with small variations in retention justify an aggressive effort to improve the currently deplorable rate.

Recommendations

Past studies have generally confined themselves to a cost analysis of the dual-track concept. The behavioral considerations which are the key to variations in retention have been slighted all too frequently. It is essential that the questions which this study has addressed be explored further in an effort to gain a better understanding of the complex variables of human behavior. The following specific recommendations are submitted for further research:

1. Conduct a more detailed attitudinal survey of the USAF rated force to ascertain the probable impact on retention of implementing a dual-track system. Such a study should especially address the strength and function of flying as an intrinsic motivator, the significance of freedom of job choice in terms of expectations and motivation, the various perceived measures of status and "success," and the attitudes of pilots toward career broadening and job diversification.

2. A study should be undertaken to better quantify some of the problems and tradeoffs associated with designing a specific dual-track system for the Air Force. Specifically, it should consider, for different force structures (mixes of specialists and generalists) and varying retention rates, the impact on assignment stability, training frequency and costs, time in grade for promotion phase points, and

excursions on varying compensation levels.

3. A comprehensive study should be undertaken of one or more dual-track air forces of allied nations, especially Britain, Germany, or Canada. The objective of this effort would be to collect data on the attitudes of crew members toward dual-track features which differ from the current USAF system. Additionally, it should seek to collect quantitative data regarding those topics identified in recommendation two.

4. A more comprehensive study of commercial airline pilots (especially former military pilots) should be undertaken to confirm those observations and tentative conclusions reported herein.

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APPENDIX A

DUAL-TRACK COST ANALYSIS

This section is intended to examine the potential savings associated with a dual-track personnel system applied to the USAF pilot force. The first objective will be to examine cost factors which pertain to an individual pilot in various weapon systems. Results may then be aggregated under various force structure assumptions to provide a rough measure of total force, life-cycle costs. Two caveats are in order with regard to these data. First, any cost comparisons of personnel force structure are extremely scenario dependent. The more assumptions which are aggregated, the lower the reliability of the output. Additionally, the methodology employed is very simplistic and makes no pretense of comprehensively modeling the myriad of variables bearing on the problem. Nevertheless, this rudimentary analysis should still suffice to indicate the potential for cost savings under dual-track.

Demonstrable savings are predicated upon the reduction of repeated pilot replacement cost assumed under dual-track. This in turn is dependent upon increased retention and reduced turnover within the rated force. Increased retention is applicable with relative certainty only in the case where pilots passed over for major are selectively continued on active duty who otherwise would be forced out under "up-or-out" provisions of the current personnel system.

The following discussion of individual pilot life-cycle costs is derived from methodology employed by Maj. B.L. Bennett in a study conducted in 1976.(73:--) Cost data is from AFP 173-13, <u>USAF Cost and Planning Factors Guide</u>, for FY 1980. (48:--)

Assumptions

1. Life-cycle costs are predicated upon a 24-year career.

2. Requirements for replacement due to promotion, reassignment, and resignation are such as to require three pilots to be trained to fill one slot over a 24-year period.

3. Pilots begin flying as O-1's.

4. In-unit qualification will require approximately ten hours of flying time per individual.

5. Costs per man-year are derived from AF-wide tables of standard composite rates by grade (AFP 173-13) and include basic pay, BAQ, incentive pay, and miscellaneous expense. Some distortion is present since this figure is weighted to include non-rated officers.

6. Ancillary costs are omitted (PCS, TDY).

7. The subject is assumed to be a well-qualified pilot passed over for O-4 and involuntarily separated from the Air Force at the 12-year point.

TABLE A-I WEIGHTED ACQUISITION COSTS

Acquisition Costs = weighted average of 2000 pilots procured, with 600 from AFA, 1000 from ROTC and 400 from OTS.

Expected cost of officer procurement is as follows:

SOURCE	COST(FY78 DOLLARS)	FRACTION FROM THIS SOURCE	
Air Force Academy	106,500	x 600/2000(=.3)	= $31,950
ROTC	18,400	x 1000/2000(=.5)	= 9,200
OTS	8,900	x 400/2000(=.2)	= 1,780
		TOTAL EXPECTED COST	= $42,930

DATA SOURCE: AFP 170-13, 31 May 79, Table 20.

TABLE A-II. COST OF UP-OR-OUT
(Net Cost of Replacing F-4 Pilot "Specialist" Forced Out for Pass-Over to O-4)

DUAL-TRACK SYSTEM		CURRENT SYSTEM
$ 42,930	ACQUISITION[1]	$ 42,930
	FLIGHT TRAINING	
628,220		628,220
671,150	UPT[2] = $122,000	671,150
	Survival[2] = 1,000	
	Lead-In Tng[2] = 35,400	
	Advanced Tng[2] = 446,300	
	In-Unit Tng[3] = 23,520	
	PAY & ALLOWANCES[4]	
109,754	Years 1-6	109,754
	PAY & ALLOWANCES	
146,046	Years 7-12	146,046
$ 926,950	COST TO DATE	$ 926,950
	(Officer Forced Out)	15,000
	MISSION-CAPABLE REPLACEMENT	671,150
	PAY & ALLOWANCES	
158,247	Years 13-18(1-6)	109,754
	(Officer Assigned Non-Flying Duties)	
	MISSION-CAPABLE REPLACEMENT	671,150
	PAY & ALLOWANCES	
170,448	Years 19-24(1-6)	109,754
1,255,645	(Officers Leave Service)	$2,503,758
444,883	RETIREMENT COST[5]	0
$1,700,528	TOTAL	$2,503,758
803,230	Least Expensive Program	

NOTES

1. See TABLE A-I.
2. Source: Memo from Maj. George Greenwood AF/MPXXF, SUBJECT: Reintroduction of Warrant Officers, 18 Oct 79.
3. Source: AFP 170-13, Table 12. Reflects 10 flying hours for each system.
4. Regular Military Compensation. Source: "Pay and Allowances of the Uniformed Services." Committee Print, prepared for Committee on Armed Services, House of Representatives, US Gov't Printing Office, Washington, D.C.,1979, p.94.
5. House Armed Services Print, Table 3, p.113.

The crucial cost variable in any study which impacts upon retention is the cost of retention itself, or more specifically, the cost of providing a replacement (of comparable experience) for a pilot who is not retained. Table III provides a breakout of pertinent cost factors associated with replacing a single fighter pilot.

TABLE III. FINANCIAL IMPACT OF RETENTION

Cost To Replace 1 Experienced Fighter Pilot (F-4E)
(From Initial Acquisition Through 6-year point)

Acquisition (AFA)[1]	$ 106,500
Undergraduate Pilot Training[2]	122,000
Survival Training[2]	1,000
Fighter Lead-In Training[2]	35,400
Initial System Training (RTU)[2]	446,300
Regular Military Compensation for 6 years[3]	108,696
In-Unit Flying Experience[4] (15 hrs/month for 4½years-after RTU)	1,905,120
3 PCS Moves (AFA to UPT to RTU to Base of Assignment in CONUS)[5]	5,767
TDY (30 days/year over 6 years at average cost of $25/day)	4,500
TOTAL	$2,735,283

NOTES

Cost Factor Sources
1. AFP 173-13, 31 May 79, p.78.
2. Greenwood Memo, 18 Oct 79.
3. U.S. House Armed Services Committee Print, p.94.
4. AFP 173-13, p.62.
5. AFP 173-13, p.28.

If such savings could be realized for a significant number of pilots, the budgetary impact would be dramatic. The following table illustrates total net savings which could be realized by an improvement in pilot retention of only 10 percent. This analysis makes no provisions for either discounting or inflation, both of which would tend to further magnify the differential savings.

TABLE A-IV. RETENTION COST CONSIDERATIONS FOR TOTAL FORCE

Net affect of increasing retention by 10 percent or 180 pilots.
(of 1800 projected lossed of 6-11 year O-3's in FY80)

Replacement Costs (for F-4 pilots with 6-years)
= $2,735,283 x 180 = $492,350,940

Offset by higher pay for years 7-12 (= $40,365)
plus ultimate retirement annuity (= $444,883)
(for Major at 24 years)
= ($40,365 + 444,883) x 180 = $ 87,344,640

NET DIFFERENCE = $405,006,300

AVERAGE ANNUAL SAVINGS (over 6 years) = $ 67,501,050

Naturally, the net effect of implementing dual-track would be subject to many more variables than have been described thus far. Unfortunately, a computer model is required to consider such factors as total pilot requirements, total force size, grade structure and constraints, tenure and residual loss rates--not to mention retention. At this time, the model used for force structure analysis at Headquarters, USAF is not available for more detailed research.

APPENDIX B

In order to sample attitudes of commercial airline pilots, a brief survey was distributed in April 1980 to approximately 50 Braniff Airways pilots based in Kansas City, MO. Twenty surveys were returned for a response rate of 40 percent. While the sample was too limited to be statistically significant, it did provide an indication of the current attitudes, level of job satisfaction, and perceptions of this group on a variety of subjects. The objectives of the survey were to (1) assess the degree of job satisfaction among young airline pilots (especially former USAF pilots), (2) determine which factors are most important in determining overall career satisfaction, (3) evaluate the group's perception of the relative merits of careers in the military or commercial aviation, and (4) sample attitudes regarding implementation of a dual-track system in the military.

The group averaged 32 years of age, 2.8 years of airline experience, 7.5 years of military service, and just over 2200 hours of prior military flying time, primarily in heavy (cargo or tanker) aircraft. Fourteen were former USAF pilots (plus 1 Navy and 1 Army).

The overall level of job satisfaction was measured with the Hoppock battery of four standardized questions (5-8 on the survey) which permit comparison of relative job satisfaction, even among diverse groups.(7:--) Since several USAF surveys have used this same measure, it facilitates direct comparison of the relative degree of job satisfaction between military and commercial aviators. The mean value of Braniff pilots' responses was an exceptionally high 25.8 (of a range of 4 to 28). For purposes of camparison, the

results of several USAF surveys are provided in Table B-I.

TABLE B-I. COMPARATIVE JOB SATISFACTION RATINGS

Survey	Job Satisfaction Mean Score
1980 Braniff Pilots	25.8
1980 USAF CGSC Students (74:--)	20.3
1979 ATC T-38 IP's (79:30)	19.2
1977 USAF Quality of Life Survey (all officers) (79:30)	18.7

Two factors emerged as preeminent components of overall career satisfaction: the opportunity to fly, and working conditions (e.g., - schedule, facilities, etc.). Also mentioned vehemently, though less frequently, were pay level and stability of family life. Other factors, such as professional identity, educational opportunity, advancement opportunity, job security and (surprisingly) job challenge/responsibility were either listed as relatively unimportant or ignored altogether.

Those commercial pilots with former military service expressed no regrets at their decision to leave the military. They unanimously rated the airlines "much better" than the military overall, and were also heavily predisposed toward the airlines in virtually every individual category except job security, opportunity for advancement, and"quality of flying." Somewhat surprisingly, they also felt that the airlines' retirement system was much better than the military's 20-year option, frequently criticized by Congress and elements of the media as excessively generous. This possibly is due to the fact that few would care

to retire early from a job with which they are so highly satisfied.

The group's feelings were mixed regarding dual-track management in the military, although it should be noted that the survey's description of such a concept was extremely brief. While the pilots overwhelmingly felt that such a system would be "an improvement," only a few (about 20 percent) indicated that such a system alone would have kept them in the military. Yet even a small response is interesting in light of the strength of response regarding the airline - military comparison. The vast majority of respondents discounted the possibility that they might eventually become bored with either military or commercial flying. The pilots expressed two specific reservations regarding a dual-track system: (1) the majority said they would not care to serve under a squadron commander younger or less experienced (flying) than themselves, and (2) a few felt that pilot-specialists should not be "penalized" by slower promotions.

Survey of Commercial Airline Pilots

As you probably realize, the military services have recently been experiencing an historically high turnover of pilots with 6 to 11 years of service. I am an Air Force officer conducting a study of this problem. As representatives of our biggest competitor--commercial aviation, you can provide a valuable insight into this problem which those of us still on the "inside" might not have (more so since many of you are former military aviators, perhaps still flying with the Guard or Reserve forces). Please take a few minutes to complete this questionaire. Any comments you might wish to offer regarding either the questions or any aspects of military or civilian employment would be welcome.

Thomas O. Fleming, Jr.

THOMAS O. FLEMING, JR.,MAJ,USAF

1. Age____
2. Years Service with Airlines_____
3. Active Military Service - Branch_____ Rating_____
   Yrs Svc___ Type A/C flown_____
   Approx. Mil. Flying Hrs_____
4. Please evaluate the following factors as to their significance in determining your overall career satisfaction. First rank the three factors you consider <u>most</u> important, then the three you consider <u>least</u> important in determining overall satisfaction.

Most Important	Least Important	
_____	_____	a. Opportunity for training & education
_____	_____	b. A challenging, responsible job
_____	_____	c. Pay & Allowance
_____	_____	d. Opportunity for advancement
_____	_____	e. Quality of leadership & supervision
_____	_____	f. Fringe benefits
_____	_____	g. Travel & new experiences
_____	_____	h. "Say" in future assignments
_____	_____	i. Basic job security
_____	_____	j. The people
_____	_____	k. The retirement system
_____	_____	l. Working conditions
_____	_____	m. Professional identity & prestige
_____	_____	n. Opportunity to fly
_____	_____	o. Other factors_____
_____	_____	p. Other factors_____

5. Which one of the following shows how much of the time you feel satisfied with your job?

A. All of the time
B. Most of the time
C. A good deal of the time
D. About half of the time
E. Occasionally
F. Seldom
G. Never

6. Choose the one of the following statements which best tells how well you like your job.

A. I hate it
B. I dislike it
C. I don't like it
D. I am indifferent to it
E. I like it
F. I am enthusiastic about it
G. I love it

7. Which one of the following best tells how you feel about changing your job?

A. I would quit this job at once if I could
B. I would take almost any other job in which I could earn as much as I am earning now
C. I would like to change both my job and my occupation
D. I would like to exchange my present job for another one
E. I am not eager to change my job, but I would do so if I could get a better job
F. I cannot think of any jobs for which I would exchange
G. I would not exchange my job for any other

8. Which one of the following shows how you think you compare with other people?

A. No one likes his job better than I like mine
B. I like my job much better than most people like theirs
C. I like my job better than most people like theirs
D. I like my job about as well as most people like theirs
E. I dislike my job more than most people dislike theirs
F. I dislike my job much more than most people dislike theirs
G. No one dislikes his job more than I dislike mine

Please use the following scale to answer questions 9-14.

Strongly Agree	Agree	Neutral/undecided	Disagree	Strongly Disagree	N/A
A	B	C	D	E	F

NOTE: Dual-Track Pilot Management--A personnel management system wherein a limited number of pilots would be offered an opportunity to be "pilot specialists" with limited advancement and adequate pay.

___9. A dual-track system such as described above would be an improvement
___10. I would have remained in the USAF/Navy if such a system existed
___11. Military flying offers a degree of satisfaction not attainable in commercial aviation
___12. I would not care to serve under a squadron commander who was younger or less experienced (flying) than I
___13. Being limited exclusively to military flying duties for 15-20 years would most likely result in boredom and frustrations
___14. I expect that commercial flying will become boring after 15-20 years

15. Please compare the relative merits of military and commercial flying in terms of the following factors:(Please use the following scale to assign a value for each factor)

Military Much Better	Military Somewhat Better	No Difference	Airlines Somewhat Better	Airlnes MuchBetter
A	B	C	D	E

___a. Job satisfaction
___b. Pay & benefits
___c. Assignment locations
___d. Duty schedule/free time
___e. Working conditions
___f. Quality of flying
___g. Benefits
___h. Supervision
___i. Job security
___j. Retirement benefits
___k. Status/prestige
___l. Opportunity for advancement
___m. Overall

APPENDIX C

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