

An Analysis of Retention Issues of Scientists, Engineers, and Program Managers in the US Air Force

EXECUTIVE SUMMARY

by

Derek William Beck

B.S. Physics (1999), Ohio University

Submitted to the System Design and Management Program
in Partial Fulfillment of the Requirements for the Degree of

Master of Science in Engineering and Management
at the

Massachusetts Institute of Technology

February 2005

© 2005 Derek W. Beck.
All Rights Reserved.

The author hereby grants to MIT permission to reproduce and to distribute publicly paper and electronic copies of this thesis document in whole or in part.

ABSTRACT

The United States Air Force is having a difficult time retaining their technical officers, who are critical to the success of their research, development, and acquisitions of major military and defense systems. A statistical analysis is conducted on survey data collected, and the analysis seeks to explain the reasons why officers, mostly junior in rank, leave the Air Force after only a short time on active duty. This retention problem leads to fewer higher-ranking officers, since the military only hires from the bottom up. Results of the research show that about 47% of junior officers have intent to leave the Air Force after their initial commitment, which is 4 to 5 years. With nearly half of the Air Force's incoming officer leaving after their initial commitment, the problem is very serious. Job satisfaction and the closely related Air Force assignment system are shown to be the primary problems for junior officer retention. The thesis concludes with recommendations to Air Force leadership on where to focus their retention efforts. Special emphasis is given on how the Air Force may address tangible components of job satisfaction. Policy change recommendations that affect satisfaction levels with the assignment system are also given.

Thesis Supervisor: George Roth, Principal Research Associate
Sloan School of Management & Lean Aerospace Initiative

Executive Summary

Introduction

In the United States Air Force, military officers incur a commitment to the Air Force of 4 to 5 years, depending on their commissioning source. After this initial commitment, officers may choose to continue in the Air Force, possibly to a retirement after 20 years of service, or they may choose to separate (that is, to leave the AF). The USAF process of recruitment is to “grow” senior officers, and they do so from the bottom ranks. With this limitation, as officers choose to leave the AF, the numbers of available candidates for senior ranks diminish. If recruitment properly accounts for forecasted separation rates, and if those separation rates are reasonably predictable, then the USAF is able to meet the needs of all of its officer requirements whatever their rank. However, in practice, the separation rates are not predictable, nor are necessarily the recruitment rates.

This system of recruitment, which prevents “lateral recruitment” of new officers into the middle ranks, along with the problems of forecasting recruitment and retention, leads to the potential for shortfalls in manning. Such a manning problem, or a “retention issue”, exists in many different categories of officers in the USAF. One group that has been historically undermanned is that of the technical workforce. This is the officer workforce comprised of the scientists, engineers, and program managers, and are known in the Air Force by the first three characters of their Air Force Specialty Codes (AFSC’s): 61S, 62E, and 63A, respectively.¹ Most officers that work in these AFSC’s work specifically in acquisitions, a field dedicated to the development and procurement of new major systems for the military, such as the latest F-22 Raptor fighter.

Retention of this key technical workforce is then critical to both the military and the taxpayer, particularly as the Air Force moves to acquisitions of more complex systems, which in turn further necessitates the need for cutting-edge technical knowledge. Under the military system, retention can be addressed two ways. The first is to overcompensate with recruitment, in preparation for the large losses of personnel due to attrition. This appears to be the primary means the Air Force handles attrition of its officers. The other means of retention is to minimize the rate of attrition, and this can only be accomplished by addressing the frustrations of the junior officers who are in a position to separate.

The purpose of this thesis is to analyze the driving issues that lead technical officers (61’s, 62’s, and 63’s) to separate. These issues primarily affect junior officers at 4 to 5 Years of Service (YOS), following the completion of their initial commitment after commissioning. However, given that it takes 5 or more years to develop an officer², the cost to the Air Force, and the taxpayer, is immense when junior officers are lost at precisely the time they are becoming most valuable. This loss of officers, which starts at 4 to 5 YOS, trails off at about 8 to 10 YOS, since officers are more compelled to remain in until their retirement eligibility at 20 years once they have passed the halfway point. The focus of this research is then “why do officers leave the Air

¹ The shorter form, 61’s, 62’s, and 63’s, will also be used.

² Forseth, 12.

Force”, and in particular, “why do acquisitions junior officers (< 5yrs) leave the Air Force”. My hypotheses are:

Job satisfaction is the key problem. People leave because they do not like their job. The AF creates this environment, for example, by failing to fully utilize the degrees and skills of scientist and engineers (S&E’s).

Over recruiting leads to lower job satisfaction. The idea that there are so many Lieutenants but not enough senior officers suggest two things. The first is that there is less professional development and mentoring available from higher-ranking officers due to the less favorable proportion of the two. The second is that Lieutenants are more likely to be doing less meaningful work because Lieutenants, in general, are given less work than a Captain would be, regardless of the authorization. This hypothesis is further supported by the fact that there are fewer jobs at acquisitions organizations that are intended for Lieutenants, yet the organization is overpopulated by Lieutenants. The minimal work then available or “trusted” to Lieutenants is spread across too many, leaving job challenge, value, and satisfaction low.

Assignment flexibility is a key problem. The assignment process, which requires officers to move to a new base every 3-4 years, is somewhat considerate of the officer’s wishes, but ultimately the next assignment is often imposed on the officer. The common phrase “the needs of the Air Force” is often employed to justify why an officer might, say, be assigned to a job that either is nothing like their experience, or otherwise is unsatisfactory for some other reason. Those that remain in the Air Force likely have grown to accept this, but junior officers who have joined the AF on a trial basis do not. Furthermore, “the needs of the Air Force” should really be the needs of their people. The “needs of the Air Force” become irrelevant once you lose all of your best people, thereby inhibiting the mission of the Air Force. The assignment system’s rigidity is therefore likely closely tied to job satisfaction.

Pay is perceived as a problem, but not the biggest problem. The Air Force answers all of its retention issues by “throwing money” at the problem—offering bonuses in exchange for voluntary ADSC extensions. This type of response only treats those intending to stay in the AF with free money, but those that are dissatisfied are not going to be swayed by such a bonus. The fence sitters are likely to take such a bonus in exchange for a reasonable ADSC, though in the end it may not mean they are any more likely to remain in the AF until retirement. A common phrase among the military is “no one joins the military to get rich”. If the reasons a given officer did join the military are not met, giving them extra pay will not satisfy their yearning to find what it is they are looking, and they will look elsewhere. Pay only becomes a problem when none of the other primary professional desires are met. That is, to do a job they love but not receive adequate pay is acceptable. To do a job they hate and not receive adequate pay is completely unacceptable. It is for this latter reason that I believe pay only becomes an issue for those that are unsatisfied with bigger issues in the AF. Moreover, since pay is of lower importance, the AF should not target pay when dealing with retention.

Civilian jobs are perceived as more attractive. “The grass is greener on the other side.” This is also likely tied to job satisfaction. If an officer loves their AF job, then the attractiveness of civilian life, which includes staying in one location for a career if you so choose, perceived-

better pay, and stability, is not enough to sway that officer from prematurely leaving. However, once job satisfaction declines, civilian jobs become more attractive.

Methodology

The process for researching and gathering data for this thesis includes a literature review, a web-based survey, and some limited interviews. Most of the literature review was from RAND reports and publications from the Air Force's Air University.³ The publications from Air University were often other theses of graduates from the Air Force's Air Command Staff College (ACSC), a professional and degree-granting school for intermediate level of military education.

Literature Review

Several sources supported my hypothesis that job satisfaction was a primary issue relating to retention. Butler and Waldroop's "Job Sculpting" article from the Harvard Business Review asserts that achievement in one's job is not indicative of job satisfaction, and that in the end, only if the job meets their deeply embedded life interests will they want to stay. "Deeply embedded life interests do not determine what people are good at—they drive what kinds of activities make them happy." The problem is that "...a good number of people, at least up until midlife, don't actually know what kind of work will make them happy."⁴ The problem then is that people join the military because it meets the other two criteria deemed lesser by Butler and Waldroop—values and ability. However, the article states that life interests are what will ultimately make one happy, and that is the key to long-term retention. Interestingly, the military retirement system's importance as a factor on one's career intent, which grows stronger with time in service, competes with job satisfaction. Thus, if an officer discovers their deeply embedded life interests cannot be easily fulfilled in the AF late in their career, they are more likely to remain in the AF despite low job satisfaction. This might be good for retention, but it is not good for growing strong leadership. This typically late-in-life discovery of embedded life interests is problematic with regards to the Air Force assignment system since undermanned career fields, like those of acquisitions, often make it difficult or impossible to change career tracks once an officer has been assigned their Air Force Specialty Code.

Butler and Waldroop claim that managers are at fault for "...botch(ing) career development—and retention—because they mistakenly assume people are satisfied with the jobs they excel at."⁵ The real reasons career development goes wrong is due to "...the way jobs usually get filled, and...the fact that career development so often gets handed off to the human resources department."⁶ These assertions strike at the heart of what are the problems with job satisfaction in the Air Force and the assignment system.

³ Air University is responsible, among other things, responsible for professional military training and includes schools such as the Air War College. Air University is located at Maxwell AFB, Montgomery, Alabama.

⁴ Butler and Waldroop, 146.

⁵ Butler and Waldroop, 147.

⁶ Ibid.

Lin's 2003 thesis suggested the top five drivers on separation, in order of importance, were the assignment system, family, promotion, job satisfaction, and policy/bureaucracy.⁷ (Compensation was only the sixth most important reason this group had separated.)

A RAND report by Asch and Warner reemphasized many of the key themes suggested above. One interesting thing about this report is that it gave reasons why junior officers that are considering separating should leave the AF earlier than later: "...since the reward for an intermediate-length career is low, personnel must decide early on whether they want to be long-term careerists or leave. Some personnel who might have stayed longer under an alternative (personnel or retirement) system leave very early."⁸

An Air Force report by Arreola and Soper that conducted career research on a focus group of scientist and engineers (S&E's) documented problems of mismatching S&E's to positions that really utilized their skills. It also reemphasized that many S&E's were disenchanted with the current assignment system process. The report raised the question: is there a need for S&E's in the military if so many of them are performing jobs that do not require technical degrees or skills?

Survey Results

Analysis Methodology and Statistical Considerations

The web-based survey, which was opened in early August, received its first responses on August 5, 2004, and was closed on Sept 30, 2004. The working data set was 592 records. The sample of active duty is about 8.6% of the actual 61, 62, 63 population, and is therefore representative of the population.

Overview of the Entire Population

The attrition of junior officers, and the very purpose of this research, is best exemplified in Figure 1, which explicitly depicts the retention problem by showing the large numbers of officers with less than 5 years of service that are either undecided or intending to leave the Air Force. After 4-5 years, depending on the commissioning source for a given officer, junior officer then have an opportunity to separate. It is for this reason that those leaning to separate nearly goes to zero beyond YOS = 5.

Why Officers Separate

A question asked of respondents debating leaving the AF, or who were undecided of their career intent, to rank the following factors from the most to least important influence on their potential separating: (a) Pay & Allowances, (b) Promotion System, (c) Job Satisfaction, (d) Availability of Comparable Civilian Jobs, and (e) Assignment System. The result was that job satis-

⁷ Lin, 47.

⁸ Asch and Warner, xvii.

faction was the primary influence on separating, and the assignment system was the second. Pay was the third.

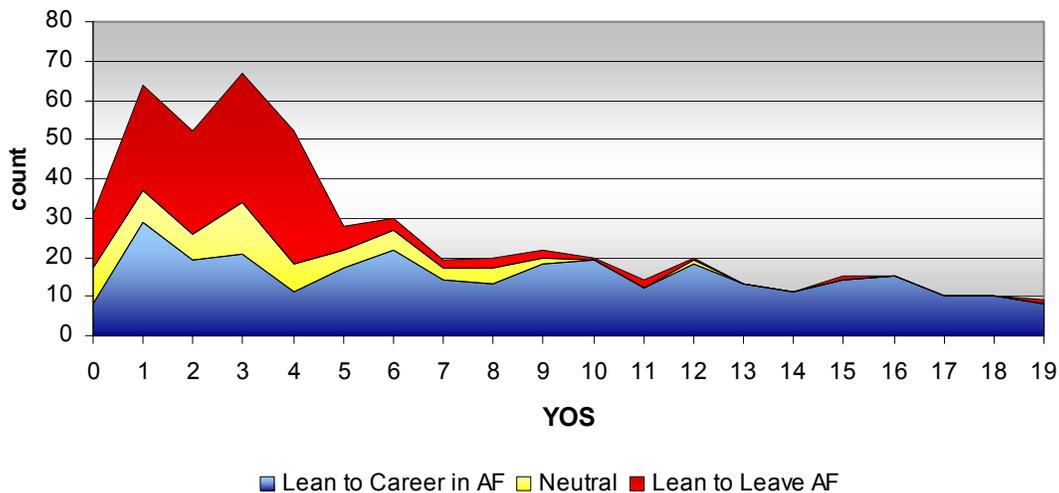


Figure 1 Career intentions vs. YOS (All AFSC's).

Overall Air Force Satisfaction

For junior officer category (<5 years), regardless of their career intent, pay and the promotion system were mostly sources of satisfaction. However, deployments are a key source of dissatisfaction (even more so among those planning to stay in the AF for a career). Job satisfaction, leadership opportunities, and the Officer Performance Report (OPR) system all are major sources of dissatisfaction for junior officers, regardless of career intent.

Job Satisfaction Factors

The largest contributor to job dissatisfaction was the lack of opportunity to use one's degree or skills. This was especially true for the younger officers, who have only recently received their degree. It was also particularly true more for engineers, but a source of dissatisfaction for all. Feeling valued was the second largest source of dissatisfaction for those separating among the five job satisfaction factors offered.

The Assignment System

The assignment system is a major source of dissatisfaction overall, and it is strongly correlated to job satisfaction. Job satisfaction pertains to one's current job, while the assignment system is more or a global problem, and as such deserves the most attention from AF leadership. The idea of homesteading at one base for long tours or even a career is also something that would be welcomed by many, and is a factor that contributes to dissatisfaction with the assignment system overall. Allowing a homesteading policy would certainly contribute positively to minimizing separation rates. Operational experience is something that is desired by about half of the surveyed population, but forcing operational tours on everyone instead of making them voluntary would cause major turmoil in satisfaction and likely hurt overall retention.

Pay

While some prioritize pay, the majority of respondents felt they were adequately paid, and pay was only a primary influence to leave the AF for a small minority.

Bonuses (the CSRB, etc)

The CSRB had very limited success in long-term retention with Captains, and wasted valuable resources by giving away bonuses to Majors who were already effectively vested. The cancellation of the CSRB also likely had at least some negative impact. With 11% having a definite positive effect from the CSRB, and possibly 10% having a definite negative effect due to its cancellation, the CSRB may have ultimately had no net retention effect. What is perhaps the most important thing to take away from looking at the CSRB is that the idea of fixing a retention problem by giving a bonus opportunity does not really address the root cause(s) for the problem in the first place (and hence this thesis).

Promotion System

For the junior officer (< 5yrs), the promotion system appears to be a driver to stay in the AF, which is an unexpected result. It was also surprising to see that Lieutenants were not strongly in favor of a performance-based promotion system. Apparently, the assured promotion at the early ranks is widely considered a positive feature of the AF.

Availability of Civilian Jobs

About 75% of all respondents felt their AF job was at least as good as or better than their civilian counterpart was. Comparing this to overall job satisfaction showed that, for those that are very satisfied with their job, they also feel their AF job is better than the equivalent civilian job. Those that were dissatisfied with their job felt their AF job was either about the same or slightly worse than their civilian counterpart's. Results pertaining to civilian job availability were inconclusive.

Leadership Factors

Supervisors and base leadership are not a major driver for career intent. Most, in fact, are quite satisfied with these levels of leadership. There is only statistical significance with command and AF HQ leadership when compared to career intent, though even with these leadership levels, the majority was satisfied. The correlation with the top levels of leadership to career intent surely indicates a need for senior leadership to do more to address the concerns of junior officers who are apt to separate.

Discussion of Key Open-Ended Comments

Job satisfaction appeared in many forms in the survey, most notably as feeling of undervalued and underutilization, particularly of the junior officers. Several had also mentioned that they felt fooled by their ROTC program, expecting more traditional military jobs (leadership opportunities, deployments, etc) in their jobs, as well as having expectation of hands-on engineering and

science. Others noted they had no incentive to work hard (due to the lack of any merit-based system of pay, promotion, or other incentives). Finally, many frustrated with their AF jobs suggested the Air Force does not need officers to serve in acquisitions at all, and that these jobs can and should be outsourced to government civil servants. The assignment system was also a major source of frustration exhibited in the comments, and included frustrations with the rigidity of the system, the AF treating all officers as interchangeable in any job, and frustration with relocations. The large number of comments on job satisfaction and the assignment system reinforces the hypotheses that these are the two chief drivers for career intent.

Discussion and Conclusions

Job and Air Force Satisfaction

47% of junior officers in this survey expressed intent to separate.⁹ Without a doubt, junior officers are leaving primarily due to low job satisfaction. Job satisfaction entails different things for different people. Reasons include lack of feeling value, lack of challenging work, lack of opportunity to use one's degree or skills, lack of leadership opportunities, lack of deployments or lack of operational experience, lack of recognition, and the OPR system. Of these, the biggest drivers are the six underlined. Of the factors of job satisfaction, more than a third of junior officers expressed being undervalued in their jobs. This may mean being underutilized or simply not respected. Many Lieutenants expressed lack of serious work, represented not only in open-ended comments but also in the factors measuring lack of opportunity to use one's degree or skills, lack of challenging work, and lack of feeling valued. The opportunity to use one's degree or skills, particularly true for those with technical degrees, is very important, especially as they are just leaving college to join the Air Force.

Based on both open-ended comments and the fact that 66% of Lieutenants did not understand how scientists and engineers (S&E's) were utilized by the Air Force, there is a severe problem that begins with the commissioning sources and recruiters. Education is critical and more ROTC cadre slots (and the equivalent at other commissioning programs) should be filled with acquisitions-experienced officers, particularly at technical schools. As of the writing of this thesis, none of the cadre at MIT's own Air Force ROTC program had acquisitions experience or an S&E background. For a leading technical school as MIT, this is a major failure on the part of the Air Force.

Lack of leadership opportunities are another significant influence in overall job dissatisfaction. 45% of junior officers were dissatisfied with the lack of leadership opportunities, and another 17% were undecided or neutral on the issue.

About half of junior officers feel operational experience would be important, but the idea of an operational assignment is widely disagreed upon. If the Air Force were to mandate an operational first assignment, the result would likely do as much harm as good. The best alternative is to give optional opportunities for such experience. The Air Force should consider pairing Sys-

⁹ 47% is the combination of those that have a 4 or 5 on the 5-point Likert Scale. 32.6% gave a 5 (Probably NOT Stay in Air Force), 14.4% gave a 4 (Possibly NOT Stay in Air Force).

tem Program Offices (SPO's) and other acquisitions units to applicable operational units that are would-be users of that which the SPO is developing. The SPO could then participate perhaps just twice a year in field exercises with the user unit.

More than half of junior officers want deployment opportunities, with another 20% neutral on deployment. Without these opportunities, the Air Force should seriously consider if officers are needed to fulfill the acquisition needs of the AF, or if civil servants would be better suited for this role.

The Assignment System

The assignment system is clearly the second most important source of frustration, behind job satisfaction, and the two are directly correlated. Job satisfaction, which is intangible and hard to quantify, can then be improved indirectly by improving the assignment system.

One of the chief problems with the assignment system is that officers are treated as interchangeable parts. While the current system attempts to consider the needs of all stakeholders, including the officer and the Air Force, the system is failing to do so adequately. The fact that chemical engineers are being placed in mechanical engineering jobs or that some scientists and engineers are coded as 63A's (instead of 62E's) are examples of a mismatching problem that believes officers are interchangeable. The system is also limited as it fails to take into account an officer's experience and new realizations of what kinds of jobs will make them happy (and this happiness or discovery of one's embedded life interests leads to job satisfaction and retention).

This leads to the next problem in the assignment system, that of being locked into an AFSC. The assignment system primarily assigns people to jobs that match their AFSC. The problem with this is that the average officer is assigned their AFSC based on their undergraduate degree alone. Their undergraduate degree may have little to do with their embedded life interests, which they may not even discover until well after they have achieved their Bachelors. This is further complicated by the fact that, due to the historical retention and manning problems for the 61S, 62E, and 63A fields, the Air Force Personnel Center (AFPC) is reluctant to allow officers in these fields to change their AFSC. What this means is that officers feel they are, and indeed they are, stuck in their AFSC. This locking in happens very early, since the Air Force offers scholarships to many undergraduates in ROTC if they are pursuing technical degrees.¹⁰ This scholarship is certainly a major influence not to change one's degree major. It is therefore true that the decision of degree major as a senior in high school can lock you into an AFSC and career track through ROTC and throughout the remainder of your tenure with the Air Force. However, it is unlikely that many seniors in high school know yet what their embedded life interest may be.

Hence, as an officer either discovers new professional interests, or finds that their embedded life interests may be something other than their AFSC, they may have little choice but to separate. This inflexibility is a fundamental problem with the Air Force. If people are indeed the greatest asset the Air Force has, then listening to them and working with their needs is what is necessary to not only make them happy, but also to quell separations and thereby maximize the Air Force's ability to succeed at its mission.

¹⁰ USAF Academy students do not choose their major until their junior year, but face similar locking-in problems.

The final assignment issue is that of the number of reassignments. Many people expressed a desire for longer tours of duty, particularly in the open-ended statements (the survey itself did not adequately measure for this). This would certainly cut costs for the military by minimizing number of moves the Air Force would need to pay for. Furthermore, this would help the Air Force continuity for long-development acquisitions programs. If frequent reassignment is a non-negotiable modus operandi, then the Air Force could reassign personnel to elsewhere on a base, and need not keep them in the same job per se. Even if for some reason “homesteading”, or remaining at one base for a career, is simply not tolerable, some comprise such as longer tours, or two consecutive assignments at one base, is certainly both beneficial to the Air Force and the personnel.

OPR’s, Promotions, and Merit

While junior officer support for a merit-based promotion system was split, recognition was shown to be a factor on career intent. This leads to the question of whether some other merit-based measures should be instituted. The problem with a lack of a merit-based system is that it encourages mediocrity—with job performance not really a factor for promotion until Lt Colonel¹¹, time in service essentially drives one’s promotions. Since the pay chart has rank on one axis, and years of service on the other, this means that in fact pay is exclusively time-based for all ranks until about Lt Colonel. Therefore, pay is not an incentive to do one’s job well. Such a system then encourages separation of those who are naturally inclined to be overachievers. This system in fact actually discourages hard work, and encourages those that do not want to work hard to remain in the military. For, if those that do not wish to work hard were to leave the military, the civilian system that is based on merit would demand far greater efforts than the military. It is therefore a lack of a merit-based system in the military that is a retention tool for the under-achievers and at the same time a tool to expel the sharpest and brightest of young military officers.

Pay and Bonuses

Pay turns out to be a small factor for separation, with 72% of junior officers satisfied with pay and allowances. The Continuing Skills Retention Bonus (CSRB) was, for this and other reasons, a failure. Indeed, civilian companies feel paying a retention bonus at all is a failure, as it reflects a lack of attention to real retention factors.¹²

Conclusions

Revisiting my hypotheses:

Job satisfaction is the key problem. Job satisfaction is clearly the key driver for retention for junior officers. Those non-junior officers intending to separate do so for varying reasons, but the bulk of retention efforts should be focused on those leaving at the 4-5 year point, where the ma-

¹¹ Promotions up to Captain are essentially guaranteed, and the promotion to Major for this category of officers is so high (92% in the 1 Nov 2003 promotion board), that it is not until the Lt Colonel promotion review board that performance becomes a significant factor.

¹² Soper, 10.

majority of officers are leaving. Of this group, the primary reason they leave is due to job satisfaction. Conclusion: my hypothesis is correct.

Over recruiting leads to lower job satisfaction. It is unclear in the end whether over recruiting leads to lower job satisfaction. Since excess Lieutenants fill the many vacant Captain positions, in the end, most organizations do not have an excess of overall personnel. However, with underutilization of Lieutenants in general, as is shown above, more Lieutenants likely means less valuable work for all. Additionally, it has been said elsewhere¹³ that attrition of the mid-level officers hurts mentoring of junior officers, which likely has some effect on job satisfaction. In the end, the survey did not adequately prove a connection of over recruiting and job satisfaction, one way or the other. Conclusion: my hypothesis is inconclusive.

Assignment flexibility is another key problem. Not only is this “another” key problem, it is the clear secondary problem, and is directly linked to job satisfaction. Frustration with the assignment system includes inability to change AFSC’s, particularly in the acquisitions community, lack of control on job assignment or base/location, and the frequency of reassignments. The Air Force competes with the civilian world in this regard more than any other, and with pay not being a major problem, it is the assignment-related quality of life issues that the Air Force must focus the bulk of its retention efforts. The entire system should in fact be overhauled, as sweeping changes are required. Conclusion: my hypothesis is correct.

Pay is perceived as a problem, but not the biggest problem. Pay is largely considered adequate, even by those with intent to separate. It is not the driving force behind separation, and the Air Force should not focus their retention efforts on special pay for the acquisitions community. Nevertheless, the continued bonuses offered to pilots have an impact on morale and job satisfaction of acquisitions officers. For this reason, the Air Force should either consider implementing bonuses from a morale standpoint (not a retention standpoint), or should do away with those for pilots. Conclusion: my hypothesis is correct.

Civilian jobs are perceived as more attractive. 40% of junior officers felt their jobs were better than those of their civilian counterparts, and another 26% felt they were about the same. For junior officers with intent to separate, availability of civilian jobs averaged as their fourth influence to separate of the limited reasons given in Question 31. This leads to the conclusion that similar civilian jobs are not, by most, considered more attractive than their AF jobs. Conclusion: my hypothesis is incorrect.

The problems with retention and dissatisfaction are many. Real action by Air Force leadership, in the form of changes in policy, is what is required. Indeed doctrine like the S&E Concept of Operations (CONOPS) document suggests the Air Force is willing to do this: “To motivate the workforce, we must provide a culture with technically challenging and rewarding work, along with competitive compensation and rewards that are based on technical merit and contribution.”¹⁴ The Air Force has not yet come to realize that competitive compensation is no longer in the form of (just) pay, but in the form of quality of life. Most of the problems listed here, and the recommendations on how to address them, are quality of life issues. In addition, many of these

¹³ Arreola and Soper, 12.

¹⁴ S&E CONOPS, 8.

issues plague the Air Force as a whole, and not just acquisitions-related officers. Some of the recommendations, explicitly given below, require radical thinking and major shifts in culture and thinking. But the civilian world has either already made these changes, or had always had them as an advantage. The Air Force simply needs to catch up. With 47% of the junior officers expressing intent to leave, and the high cost of losing officers at the precise time they are becoming most productive and valuable, the Air Force cannot afford to ignore these issues. When the Air Force must heavily recruit to maintain personnel as large numbers separate, it should send a signal that something is seriously wrong with the system. And it needs to be fixed.

Key Recommendations to Air Force

In this age of internet file-sharing, music downloads, and Tivo, one principle has become evident, particularly in today's younger generations: people will give up quality for flexibility and control. In fact, the entire consumer industry is moving more and more to giving people more control. While this is applicable to many internet-based business models and consumer products, this is also true for career choices. The Air Force competes with the civilian sector as a whole for manpower, and the flexibility offered by the civilian sector is more valuable to many people, even despite benefits like retirement and medical pay. Such benefits are essentially unrealized gains for very junior officers, while these same benefits become strong incentives to stay in the Air Force for senior officers. Because of benefits being unrealized for juniors, junior officers are more likely to weigh their career decision on non-monetary and non-benefit incentives. The problem with AF manpower is that the military gets just one chance to retain someone, since once separated, a former officer can not (typically) rejoin. Thus, finding the root causes for retention are critical if the military wishes to minimize the numbers that are separating. The overall reasons junior officers are separating are due to problems with the assignment system and overall job satisfaction, and these two factors are strongly correlated to each other. Thus, giving officers better control, particularly in these two areas, is at the heart of all of the following specific recommendations to the Air Force.

Overhaul the assignment system: Better flexibility, more say for assignments (which should lead to better matching of jobs), and allowance for cross flowing to other AFSC's should be allowed to keep the Air Force competitive to the civilian world. The assignment system is one of the chief problems of retention, and it is directly linked to job satisfaction, the biggest source or retention. Addressing the assignment system will also immediately help job satisfaction.

Improve job satisfaction: Job satisfaction will improve due to its direct relationship with the assignment system. Try to create more opportunities for deployments, such as connecting every System Program Office (SPO) to a group of applicable operators, or offer TDY's of weeks or months for operational experience. Do not make operational assignments mandatory, though operational TDY's could be, as the damage from such a mandate will overshadow any good from it. Encourage more leadership opportunities at the SPO or unit level. Finally, create a culture for change that better utilizes junior officers.

Longer tours of duty or reassignment within an AFB: The Air Force should allow more flexibility in length or location of assignment. The need for relocation of acquisitions officers is hard to defend, and frequent relocations are 1) not economical, 2) not conducive to acquisitions or re-

search & development, and 3) a negative effect for many on their quality of life. The idea that people leave the Air Force because they merely do not wish to move, whether for family reasons or something else, is indicative of a rigid system. No military professional in this career field should have to leave the Air Force to keep their family intact in order to avoid a PCS, especially when the base they would be leaving is likely undermanned.

Avoid focusing future retention solutions on pay: Consider reinstating some sort of engineering bonus only for morale to show this is an important group, otherwise, if this is impractical, strongly consider canceling that pay for pilots. Pay or bonuses for retention purposes serve little use for the acquisitions community, and likely the Air Force as a whole, and so cancellation of extra pay for pilots is justifiable (particularly with a pilot-unfriendly economy). Equalize acquisitions to the pay status of pilots, one way or another.

Better education about AF scientists and engineers at the commissioning sources: The fact that 66% of Lieutenants did not understand how S&E's were utilized by the Air Force proves there is a severe problem that begins with the commissioning sources and recruiters. Education is critical and more ROTC cadre slots (and the equivalent at other commissioning programs) should be filled with acquisitions-experienced officers, particularly at technical schools. It is at this early indoctrination to the AF that the image of military life is formed, and when acquisitions proves to be completely contrary to this image, it leads many junior officers to be disappointed.

Standard outgoing surveys to all that separate: As originally proposed elsewhere¹⁵, outgoing surveys should be a mandatory part of the separation process, thereby creating a database of real data to understand the real situations. The data should be anonymous, or ideally, conducted by a non-government third party to insure genuine and authentic data. If conducted by the USAF, the data will be less genuine as respondents will not wish to burn bridges.

¹⁵ Malackowski and Keesey for example.

Bibliography

Alreck, Pamela L and Settle, Robert B, "The Survey Research Handbook", 2nd Ed. Irwin/McGraw-Hill, Boston, MA. 1995.

Armstrong, Brenda S., "Changing Demographics and the Impact on Air Force Officer Retention". Air Command and Staff College, Maxwell AFB, AL. April 2000. (AU/ACSC/018/2000-4)
Available at <https://research.maxwell.af.mil>

Arreola, David and Soper, Nancy A., "Air Force Scientist and Engineer Focus Group Results". Prepared for the Air Force Science and Engineer Career Field Policy Council. April 2001.
Available at <http://www.afpc.randolph.af.mil/cp/secp/docs.htm>

Asch, Beth and Warner, John, "A Theory of Military Compensation & Personnel Policy". RAND, Santa Monica, CA. 1994. (MR-439-OSD)
Available at <http://www.rand.org/publications/MR/MR1594/MR1594.refs.pdf>

Butler, Timothy and Waldroop, James, "Job Sculpting: The Art of Retaining Your Best People". Harvard Business Review. Watertown, MA. Sept-Oct 1999. pp. 144-152.
Available at <http://harvardbusinessonline.hbsp.harvard.edu>

"Career Influences of Company Grade 62EX Personnel with 3 to 5 Years of Service". Unpublished. Prepared by SAF/AQR, Pentagon, Washington, D.C. July 2003.

Forseth, Christopher E., "The Pursuit of Acquisition Intrapreneurs". Unpublished. Prepared under the support of and available from the Lean Aerospace Initiative, MIT, Cambridge, MA. 2002.

Lin, Jeffrey H. S., "A Study of Voluntary Turnover of Air Force Officers in Critically-Manned Career Fields". Air Force Institute of Technology, Wright-Patterson AFB, OH. Mar 2003. (AFIT/GEE/ENV/03-17)
Available at <https://research.maxwell.af.mil>

Malackowski, Patrick C. and Keeseey, R. Miller, "Retention Problems and the USAF Approach". Air Command and Staff College, Maxwell AFB, AL. April 1999. (AU/ACSC/116/1999-04)
Available at <https://research.maxwell.af.mil>

"The Next Greatest Generation: Junior Force Study" Final Report. Unpublished. Prepared by the Pelletier Group for AFMC HQ. 2004.

Scheuchner, Gerald A., "A Statistical Analysis of Variables Related to Officer Retention." Air Force Institute of Technology, Wright-Patterson AFB, OH. Sept 1996. (AFIT/GTM/LAL/96S-14)
Available at <https://research.maxwell.af.mil>

S&E CONOPS (aka Concept of Operations for Scientists and Engineers in the United States Air Force). SAF/AQR, Pentagon, Washington, D.C. 2001.
Available at <http://www.safaq.hq.af.mil/aqre/conops/index.html>

Soper, Nancy A., "Recruitment and Retention Lessons from Industry and High Tech Organizations: Winning the War for Scientists and Engineers". Air Force Research Labs, Space Vehicles Directorate, Kirtland AFB, NM. August 2001.
Available at <http://www.afpc.randolph.af.mil/cp/secp/docs.htm>

Wayland, Bradley A., "The Current Officer Evaluation and Promotion System". Air & Space Power Chronicles, Maxwell AFB, AL. 2 Dec 02.
Available at <http://www.airpower.maxwell.af.mil/airchronicles/cc/wayland.html>